
This document contains guidance material intended to assist CASA officers, delegates and the aviation industry in understanding the operation of the aviation legislation. However, you should not rely on this document as a legal reference. Refer to the civil aviation legislation including the Civil Aviation Act 1988 (Cth), its related regulations and any other legislative instruments—to ascertain the requirements of, and the obligations imposed by or under, the law.
Preface

As a Commonwealth government authority, CASA must ensure that the decisions we make, and the processes by which we make them, are effective, efficient, fair, timely, transparent, properly documented and otherwise comply with the requirements of the law. At the same time, we are committed to ensuring that all of our actions are consistent with the principles reflected in our Regulatory Philosophy.

Most of the regulatory decisions CASA makes are such that conformity with authoritative policy and established procedures will lead to the achievement of these outcomes. Frequently, however, CASA decision-makers will encounter situations in which the strict application of policy may not be appropriate. In such cases, striking a proper balance between the need for consistency and a corresponding need for flexibility, the responsible exercise of discretion is required.

In conjunction with a clear understanding of the considerations mentioned above, and a thorough knowledge of the relevant provisions of the civil aviation legislation, adherence to the procedures described in this manual will help to guide and inform the decisions you make, with a view to better ensuring the achievement of optimal outcomes in the interest of safety and fairness alike.

Shane Carmody
Chief Executive Officer and
Director of Aviation Safety
Work health and safety (WHS) for employees

All CASA workers (including contractors) have legal duties under the WHS legislation. Your duty as a worker includes taking reasonable care of your own health and safety and ensuring that nothing you do (or omit) causes harm to others. You must comply so far as reasonably practicable with any reasonable instruction given to you by CASA and you must co-operate with any reasonable WHS policy or procedure. Your duty of care is proportionate to the control you can exercise over your work activities and work environment.

Different roles in CASA bring different hazards which, if not managed effectively, may create a safety risk. For example, working airside, working outdoors, driving long distances, or dealing with client aggression.

The management of health and safety is integrated into how we conduct our daily work e.g. use of personal protective equipment, training and our work protocols. The WHS Risk Register and Safe Work Practices document identified risks and their management. However, if you identify something that poses an unacceptable risk, you should not place yourself or others at risk of injury; ensure that you discuss the risk with your supervisor as soon as practicable and (if necessary) report the hazard in ESS. Continuous improvement of our health and safety management system is essential to keeping everyone safe at work.

For further information go to the WHS Horace page or contact WHS@casa.gov.au.
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### Glossary

#### Acronyms and abbreviations

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<td>AFM</td>
<td>Aircraft Flight Manual</td>
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<td>APC</td>
<td>Aerial Application Rating Proficiency Check</td>
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<td>CASA</td>
<td>Civil Aviation Safety Authority</td>
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<td>CASR</td>
<td>Civil Aviation Safety Regulations 1998</td>
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<td>CRM</td>
<td>Crew Resource Management</td>
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<td>EPC</td>
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<td>Flight Instructor Rating</td>
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<td>FPC</td>
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<td>FSTD</td>
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<td>Flight Test Management</td>
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<td>HF</td>
<td>Human Factors</td>
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<td>HOO</td>
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<td>Instrument Rating Proficiency Check</td>
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<td>MEL</td>
<td>Minimum Equipment List</td>
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<td>Manual of Standards</td>
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<td>NVIS</td>
<td>Night Vision Imaging System</td>
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#### Definitions

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<td>Applicant</td>
<td>A person who is being assessed during a flight test or proficiency check</td>
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<td>Conduct</td>
<td>Means to take an active role in all phases of an assessment, including pre-flight preparation and briefing, the control and pace of the various sequences, the assessment of the applicant’s performance, the debriefing and completion of post-test/proficiency check administration.</td>
</tr>
<tr>
<td>Term</td>
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<td>Competency standard</td>
<td>The competency standards for a flight test for a flight crew licence with an aircraft category rating, a flight crew rating on a licence, or an endorsement on a rating are as set out in the Appendix in Schedule 5 of the Part 61 MOS that is for the licence, rating or endorsement flight test.</td>
</tr>
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<td>Credit</td>
<td>Any assessable item assessed as satisfactory by an examiner during an examination, recorded as a pass, and taken into account by an examiner during a subsequent test for the grant of the same licence, rating or endorsement, within 28 days. Credits are only valid for one retest.</td>
</tr>
<tr>
<td>Discontinued</td>
<td>A flight test or PC is discontinued only when it cannot be completed due to circumstances beyond the applicant's control (eg: unforecast weather, unserviceability etc) and the flight is terminated. If another examiner is nominated to complete a discontinued flight test or PC, the new examiner must notify a new flight test/PC and may apply the credits given by the first examiner within the normal 28 day limit.</td>
</tr>
<tr>
<td>Examiner</td>
<td>A person who holds a flight examiner rating with associated flight examiner endorsements or a person approved to conduct flight tests and/or proficiency checks.</td>
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<td>Examiner requirements</td>
<td>Specific requirements which examiners must comply with.</td>
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<td>Flight component</td>
<td>The activity of assessment involving practical demonstration in an aircraft of the skills and knowledge specified for the requested licence, rating or endorsement.</td>
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<td>Flight examiner rating</td>
<td>A rating on a pilot licence that authorises the holder to conduct flight tests, to grant ratings and endorsements, to conduct proficiency checks and to conduct ELP assessments.</td>
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<td>Flight test</td>
<td>A process conducted by an examiner that assesses the applicant’s demonstration of knowledge, skills and attitudes for a licence, rating or endorsement and includes ground and flight components. The applicant’s performance in the flight test must meet the competency standards mentioned in the Part 61 Manual of Standards for the flight test.</td>
</tr>
<tr>
<td>Flight test endorsement</td>
<td>A kind of flight examiner endorsement that authorises the flight examiner rating holder to conduct the flight test activities and proficiency check activities authorised by the flight test endorsement.</td>
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<td>Flight test item</td>
<td>A task, manoeuvre or exercise listed on the flight test report.</td>
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<td>Flight test notification</td>
<td>Notification given by the examiner to CASA of the examiner’s intention to conduct a flight test or proficiency check. The minimum notification period prior to commencement is 24 hours.</td>
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<td>Flight test management system</td>
<td>The CASA system used by examiners to notify a flight test or proficiency check and to record the result, including the required examiner, flight test/proficiency check and applicant details.</td>
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<td>FSTD approved for the purpose</td>
<td>The examiner should reference, as applicable:</td>
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<td></td>
<td>• the flight simulator Qualification Certificate, issued under CASR 60.035</td>
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<td></td>
<td>• the synthetic trainer Legislative Instrument, issued under CAO 45.0</td>
</tr>
<tr>
<td></td>
<td>• the approval for a device that meets the qualification standards prescribed by a Legislative Instrument, issued under 61.045</td>
</tr>
<tr>
<td></td>
<td>• the approval for a device that is qualified (however described) by the NAA of a recognised foreign state</td>
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<tr>
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<td>The simulator certificate lists the “Training, Testing and Checking Considerations” and the synthetic trainer instrument lists “Approvals” and “Credits”.</td>
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<td>The FEH flight test/PC chapters identify the CASR Part 61 references that apply to the use of FSTDs. Some flight tests/PCs specify a flight simulator, rather than other types of trainers or devices.</td>
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<td>Also refer to CASR 61.010 for further definitions.</td>
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<td>Ground component</td>
<td>The activity of assessment, completed prior to the flight component, encompassing the knowledge and skills specified for the requested licence, rating or endorsement.</td>
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<td>Knowledge deficiency report</td>
<td>A report, prepared when a candidate for an aeronautical knowledge examination gains a score between 51% and 99%, about the competency standards in which the candidate’s knowledge is deficient.</td>
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<td>May</td>
<td>Used to indicate discretion.</td>
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<td>Must</td>
<td>Used to indicate a mandatory item which is a requirement of the Flight Examiner Handbook.</td>
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<td>Proficiency check</td>
<td>A process conducted by an examiner that assesses the applicant’s demonstration of knowledge, skills and attitudes to exercise the privileges of an operational rating on a licence and includes ground and flight components. The applicant’s performance in the proficiency check must meet the competency standards mentioned in the Part 61 Manual of Standards for the proficiency check.</td>
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<td>Revalidation</td>
<td>The administrative action taken with regards to the validity of a rating or approval that allows the holder to continue to exercise the privileges of a rating or approval for a further specified period, consequent upon the fulfilment of specified requirements.</td>
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<td>Should</td>
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<td>Terminated</td>
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## Revision history

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<td>Renumber all tables</td>
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<td></td>
<td>Chapter 32 Para 32.2.2</td>
<td>Additional detail added to assessment scope and conditions</td>
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<td></td>
<td></td>
<td>Para 33.4.4</td>
<td>Added detail to non safety critical items</td>
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<td>Chapter 34 Para 34.3.6</td>
<td>Removed assessment of flight planning</td>
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<td></td>
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<td>Chapter 35 Para 35.2.2</td>
<td>Additional detail added to assessment scope and conditions</td>
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<td>Para 35.4.7</td>
<td>Added detail added non safety critical items</td>
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<td></td>
<td></td>
<td>Chapter 36 Para 36.2.2</td>
<td>Additional detail added to assessment scope and conditions</td>
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<td></td>
<td></td>
<td>Para 36.4.7</td>
<td>Added detail to non safety critical items</td>
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<td>2.2</td>
<td>August 2019</td>
<td>Chapter 12</td>
<td>Update Air transport pilot licence - aeroplane</td>
</tr>
<tr>
<td>2.1</td>
<td>July 2018</td>
<td>All</td>
<td>Update IAW new CASR Part 61 MOS</td>
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<td>2.0</td>
<td>July 2017</td>
<td>All</td>
<td>Re-issue</td>
</tr>
</tbody>
</table>
1 Introduction

1.1 Purpose and scope of the handbook

This handbook contains the standards, policy, procedures and guidelines to be used by CASR Part 61 flight examiner rating holders (examiners), CASA flying operations inspectors (FOI), persons approved under regulation 61.040 of CASR and flight training examiners (FTE) in the conduct of flight tests and proficiency checks.

The audience for this handbook includes:

- examiners, as a guide to their duties, responsibilities and conduct
- CASA staff who have a role in the oversight of the flight test or proficiency check process
- training providers who train applicants for the grant of a flight crew qualification
- flying training applicants for a flight crew qualification
- the aviation industry for information about approvals and the conduct of flight testing.

When performing their duties examiners have, as their primary responsibility, the safety of air navigation.

- This handbook is designed to assist examiners to:
- understand their responsibilities and duties as an examiner
- understand the principles of flight testing
- conduct flight tests for flight crew qualifications and proficiency checks.

Note: Throughout this handbook a reference to an examiner is taken to be a reference to CASR Part 61 flight examiner rating holders, CASR 61.040 approval holders, CASA flying operations inspectors and CASA flight training examiners.

1.2 Authority of the handbook

The Part 61 Manual of Standards (Part 61 MOS) provides the legislative head of power for the Flight Examiner Handbook (FEH). This instrument states that examiners are required to comply with the requirements of, and to take into account the recommendations in, this handbook.

1.3 How to use the handbook

Chapters 1 to 4 of this handbook provide general guidance for examiners, with chapter 3 providing detailed methodology and chapter 4 focusing on the assessment of human factors and non-technical skills.

Chapters 5 to 35 provide detailed instructions specific to each type of licence, rating and endorsement flight test or proficiency check.

Chapters 5 to 35 are divided into subsections:

- Examiner requirements, which lists the mandatory requirements pertaining to the specific flight test or proficiency check.
• Plan, Conduct and Complete, which each provide additional requirements and detailed guidance material to assist examiners in the planning, conduct and completion of each specific flight test or proficiency check.

1.4 CASA’s expectations of examiners

The examiner rating is one that CASA and the aviation industry values highly, particularly because of the inherent recognition of an examiner’s integrity and experience and the important role they play as part of the aviation safety system. CASA stresses the independence of an examiner and relies upon an examiner to withstand the sometimes subtle pressures from employers, training providers and applicants.

By virtue of holding the examiner rating, an examiner has a high standing within the aviation community and is uniquely placed to monitor and positively influence the piloting skills, experience, knowledge, behaviours and attitudes of those with whom they come in contact.

CASA requires an examiner to:

• maintain an exemplary standard of professionalism, integrity and ethics
• diligently exercise the privileges of the rating, complying with all applicable legislation, conditions and directions, as well as being mindful of relevant guidance material
• properly assess an applicant’s skills, knowledge, behaviours and attitudes to ensure a competent and safe pilot is produced
• engender and influence the attainment of continuously improving safety and standards in applicants and training providers
• diligently complete all relevant administrative procedures within time-frames required by legislation and CASA policy
• accurately report the outcomes of examiner activities in a timely manner to assist CASA in monitoring the safety health of the pilot community.

Further examiner requirements are explicitly described within each flight test and proficiency check chapter (chapters 5 to 35). These requirements are mandatory. The remainder of the manual content constitutes guidance material for standardisation applicable to flight tests and proficiency checks.

1.5 Responsibility for the handbook and amendment status

The sponsor of this handbook is the Group Executive Manager - Aviation.

The responsibility for maintaining the general status of the handbook and recommending changes to the handbook sponsor rests with the Branch Manager General, Recreational and Sport Aviation Branch.

The responsibility for generating change requests, updating the handbook via the content management system and ensuring that the content is aligned with current legislation and practices rests with the Manager - Flight Testing Office.

Suggestions for improvement are welcome. This handbook is a living document. As a result of experience, legislative change, new technology, your comments or suggestions, it will be amended and reissued when required.
If you would like to suggest changes to this document or find that the handbook is inconsistent with other advice provided by CASA, please notify:

Flight Testing Office
General, Recreational & Sport Aviation Branch
CASA Aviation Group
Civil Aviation Safety Authority
GPO Box 2005
CANBERRA ACT 2601
Email: flighttesting@casa.gov.au
2 Administration

2.1 Overview

This section of the Flight Examiner Handbook sets out the policy and procedures for the management of all examiners and those holding the privileges of an examiner. CASA may determine an alternate procedure and approval method for providing the privileges of a flight examiner rating.

2.2 Application for a flight examiner rating or endorsement

A person wishing to be granted a flight examiner rating or to add a flight examiner endorsement to their rating must meet the experience criteria and follow the application procedures described within CASA Form 61-FER. This form is available on the CASA website.

An applicant must provide all the documentation and information requested in Form 61-FER. Failure to provide all the requested information and documents may result in the application being refused. CASA Form 61-FER should be submitted in accordance with the instructions described on the form – refer to the submission checklist to ensure the application is complete.

An applicant may provide additional supporting documents with an application. All supporting documents should show the name and aviation reference number (ARN) of the applicant on each page.

Additional pages may be added to the application if there is insufficient space provided on the application form. All additional pages must show the name and ARN of the applicant on each page.

2.2.1 Qualifications and experience

As described in paragraph 11.055 (4) (c) of CASR, CASA may take into account an applicant’s experience in aviation when considering the grant of a flight examiner qualification.

To this end, CASA has defined the minimum experience levels in the CASA Form 61-FER and 61-TCO for each examiner endorsement. Where an applicant has alternate but equivalent experience levels the following procedures apply.

General aviation applicants (Form 61-FER)

The application will be assessed by the Flight Test Office.

It is mandatory that an applicant holds the requirements for the relevant flight examiner endorsement listed in column 3 of table 61.1310. Additionally, in accordance with CASR 11.055(4), when receiving an application for an examiner authorisation, CASA will also take into account the applicant’s relevant and necessary aviation related experience. The minimum flight crew qualifications and experience requirements for each flight examiner endorsement are detailed in Form 61-FER.

Applicants must provide satisfactory documentary evidence of the qualifications and experience when submitting this application. All experience claims declared by the applicant in
Section E will be further validated on the day of the flight test by a CASA Officer (against pilot logbook evidence).

**Training and Checking organisation (TCO) applicants (Form 61-TCO)**

For an initial FER or additional flight test endorsement the application will be assessed by the Flight Test Office.

This form should be used to apply for a Part 61 Flight examiner rating if you are employed full-time within a Training and Checking organisation (TCO) - and that TCO is able to apply CASA EX 52/19, or the TCO has a course of training described in their manual for the particular qualification outcome.

TCO applicants who are able to apply CASA exemption EX 52/19, or where the TCO holds a CASR 61.040 approval for CASR 61.1290 (2)(a)(i) and 61.1320 (2)(a)(i) may make application for a FER / FEE in Section A. Other TCO applicants may lodge an application for a CASR 61.040 approval for flight testing; however, these applicants must also meet the same qualification and experience requirements listed.

It is mandatory that an applicant holds the requirements for the relevant flight examiner endorsement listed in column 3 of Table 61.1310. Additionally, in accordance with CASR 11.055(4), when receiving an application for an examiner authorisation, CASA will also take into account the applicant’s relevant and necessary aviation related experience. The minimum flight crew qualifications and experience requirements for each flight examiner endorsement are detailed in Form 61-TCO.

Applicants must provide satisfactory documentary evidence of the qualifications and experience when submitting this application. All experience claims declared by the applicant in Section E will be further validated on the day of the flight test by a CASA Officer (against pilot logbook evidence).

Where a TCO has a course of training and assessment that meets all requirements in CASA EX 52/19, applicants shall complete eLearning modules 1, 2 and 3 of the CASA FERC, followed by; the prescribed TCO training, an interview conducted by CASA (as applicable) and a flight test.

**2.2.2 Application review**

Each application for the grant of a flight examiner rating or flight examiner endorsement will be reviewed for completeness and eligibility.

CASA may seek further information regarding the applicant and/or their application where this is considered necessary. The applicant will be advised if further information is to be sought.

The review of an application will take into account the eligibility criteria described in this section.

Where CASA is of the view that an applicant does not meet the specified eligibility criteria, the applicant will be advised accordingly, and any shortcomings and deficiencies identified will be described in that advice. An applicant may re-apply once they have met the specified eligibility criteria.
2.3 Flight examiner rating course

CASA has developed a training course to cover the units and elements listed in the Part 61 MOS.

The flight examiner rating course (FERC) is designed to enable applicants for a flight examiner rating (FER) and endorsement or CASR 61.040 approval to gain the required knowledge, skills and attitudes to exercise the privileges of the rating and flight test endorsement(s).

Course phases

The FERC consists of five phases, each of which must be successfully completed to progress to the next phase. It has been designed in a practical manner using examples that relate to aeroplane, helicopter and multi-crew operations. It is deliberately generic and therefore is applicable to a variety of flight test endorsements and geographic locations.

The five phases of the FERC are:
- eLearning modules
- a classroom workshop
- practical competency development
- an interview, and
- a flight test.

eLearning modules

The eLearning phase consists of six modules:
- Legal and administration
- Understanding assessment
- Assessment of human factors and non-technical skills
- Core principles - plan
- Core principles - conduct
- Core principles - complete.

Applicants are required to complete a workbook during the eLearning phase.

Classroom workshop

The classroom workshop is a one day face-to-face classroom session conducted by CASA. It involves group work and individual activities with facilitated discussion and case studies.

During the workshop the applicant’s workbook (completed during the eLearning phase) will be used to present a flight testing scenario relevant to the applicant’s flight test endorsement(s) and location.

Practical Competency Development gives the FERC applicant practical experience in flight testing. Consisting of observation and practice. It is undertaken under the guidance of an approved industry examiner.

Initially the applicant will observe the industry examiner conducting actual tests, and then practise conducting tests under the direct supervision of the industry examiner.
Interview

The interview is conducted by CASA on an individual basis to ensure the applicant has the necessary skills and experience, and understands any knowledge deficiency report (KDR) topics produced by the eLearning assessments (if applicable), from workshop participation and from the mentoring program.

The interview also allows the applicant to have a personalised discussion regarding the flight testing process.

Flight test

The course is completed when the applicant has successfully passed a flight test for the grant of the FER or an additional flight test endorsement.

The FER flight test is conducted by CASA at a time and place arranged with the applicant.

2.3.1 Learner pathways

The FERC is designed with various learner pathways. This includes an entry level pathway for new examiners, and for existing examiners, a pathway to apply for the grant of additional flight test endorsement(s) which recognises prior experience. CASA will advise the pathway which is applicable to each applicant.
3  Adult Education and Competency Based Assessment

This chapter of the handbook is provided to assist examiners with their preparation for undertaking a standardised approach to all aspects of conducting flight tests and proficiency checks.

3.1  Flight test and proficiency check

The purpose of the flight test and proficiency check is to determine that the applicant meets the skills, competency and proficiency requirements for the grant of a licence, rating or endorsement, or the ongoing proficiency of a rating or endorsement.

There is often confusion about the difference between skills, competency and proficiency. These terms are sometimes used interchangeably, but they have varying definitions.

Skills

A skill is an ability and capacity acquired through deliberate, systematic, and sustained effort to smoothly and adaptively carry out complex activities or job functions involving ideas or concepts, things (technical skills), and interaction with people (human factors / non-technical skills).

In summary, skills are specific learned activities such as the use of an aircraft navigation system.

Competency

Competency is a combination of skills, knowledge and attributes required to perform a task to the prescribed standard. It is the achievement of specified competency standards and performance criteria outlined in an appropriate syllabus, usually involving an objective yes/no assessment.

A competency based approach typically includes a long list of items to train and assess, the downside being that what is often missed is how competencies work together in different combinations to produce a desired result. This desired result is what is considered to be proficiency.

Proficiency

Proficiency is the result or output of demonstrating a series of defined competencies. Rather than being able to demonstrate knowledge about a concept or subject matter, it is demonstrating a level of performance. Whereas competency is a baseline, proficiency may vary with currency, revision and experience.

One of the things that differentiate competency from proficiency is the factor of context. A person would be described as being proficient in the operation of an aircraft if they are able to effectively manage the aircraft in a wide range of variables, situations and contexts, especially when under pressure.

Another factor in being proficient is agility or flexibility; the ability to change and develop the competence in the light of new situations and to apply knowledge.

In summary, think of proficiency as a picture or snapshot of what success looks like on the job. To be proficient in something suggests an advanced level of competency or expertise.
So what does this mean for the examiner? The examiner can only determine if an applicant for the grant of a licence or rating is proficient after having observed a representative number of competencies in a range of situations and contexts.

3.1.1 Flight test and proficiency check aims

There are three main aims of a flight test and proficiency check:

1. To determine, through observation of practical demonstrations, that an applicant has acquired or has maintained the required level of proficiency for the qualification as prescribed in the Part 61 MOS.

2. To improve and standardise flight instruction processes and training outcomes provided by training providers, through feedback from the examiner to the HOO of information concerning items or components of the test or check that are most frequently below the desired competency, and those that consistently exceed the desired competency.

3. To assist in maintaining and, where possible, improving flight safety standards by having examiners display exemplary attitudes and behaviours during flight tests and proficiency checks.

To achieve these aims, it is essential that a common standard is applied by all examiners. Because every flight will be conducted in different and sometimes widely varying conditions and circumstances, the examiner must consider a range of factors which may affect the assessment process. However, it is not appropriate to make allowance for poor training. Applicants must be assessed according to the required competencies for the licence, rating or endorsement sought. Examiners must exercise sound judgement and impartiality throughout their duties, and clearly understand the principles, methods and factors affecting the assessment process.

3.2 Assessment principles, methods and factors

The principles, methods and factors outlined apply as much to knowledge assessment in the briefing room as to practical assessment in the aircraft or flight simulation training device (FSTD).

The role of the examiner is to observe the performance of the applicant without influencing their performance.

Applicants and assessment situations vary. An effective examiner must be able to adapt to different personality types and assessment situations.

To accurately assess levels of performance and provide constructive feedback to the applicant the examiner will need to use a number of assessment tools and techniques, including:

- the Flight Examiner Handbook
- CASA flight test forms
- operator test and proficiency check forms
- specific questions or activities
- simulation and real-world scenarios.
3.2.1 Principles of effective assessment

The term assessment is generally used to describe the process of gathering measurable information and evidence about the performance of an individual or team and comparing this with a defined set of competency standards. A judgement is then made as to whether the competency standards have been met.

Assessment is an essential and continuous (ongoing) component of the flight crew licensing process. An effective assessment provides critical information to the examiner and CASA as the regulator, as well as providing vital feedback to the applicant. Both the examiner and the applicant need to know how well the applicant is performing with regard to a clearly defined and acceptable level of competency.

A good assessment provides practical and specific feedback to applicants, including direction and guidance on how to raise their level of performance. Most importantly, a well-designed and effective assessment process contributes to the development of aeronautical decision-making and judgment skills by helping to develop the applicant’s ability to evaluate his or her own knowledge and performance accurately.

A well-designed and effective assessment allows the examiner to assess the performance of the applicant over a comprehensive set of competency standards, thus highlighting the areas in which an applicant’s performance is not yet competent. If, however, several applicants have problems at the same point in the flight test, the examiner may recognise the need for clearer or more detailed instructions by the examiner, or special emphasis in the assessment of subsequent performance.

An assessment may be made about the performance of an individual, or individual members operating as a team. Assessment involves a degree of judgement by the examiner against established principles of effective assessment.

Alternatively, if several applicants demonstrate an unacceptable level of competency in a particular flight manoeuvre, such as basic instrument flying, the examiner might recognise the need for a detailed debrief with the training provider’s HOO to address any organisational factors which may be present, such as inadequate instrument scan training, or poor instrument flight instruction.

An effective assessment must be rigorous, credible and defensible. A number of key assessment principles are recognised within the aviation and training system. The four key assessment principles are summarised below.
Table 1: Assessment principles

<table>
<thead>
<tr>
<th>Assessment Principles</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validity</td>
<td>Validity is concerned with whether an assessment accurately measures what it is designed to measure and nothing else. That is, the scope of a flight test or proficiency check must be such that when applicants are assessed as proficient, they have met the competency requirements for the grant or revalidation of the licence, rating or endorsement.</td>
</tr>
<tr>
<td>Reliability</td>
<td>Reliability is concerned with whether an assessment measures consistently between repeated situations, to ensure comparable (similar) results between applicants over time. In the context of the flight test, assessment reliability ensures that two identical performances would result in the same assessment result.</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Flexibility is concerned with making appropriate modifications to assessment procedures and methods to better suit the particular needs and personality of the applicant. In the flight test context, the examiner must also allow for variables to suit the context and environment in which the flight test is undertaken. For example, allowance should be made for flying accuracy in turbulent conditions. However, it must be noted that flexibility is intended to apply to the context and process of assessment, and not to the assessment standards.</td>
</tr>
<tr>
<td>Objectivity</td>
<td>Objectivity is concerned with ensuring that the examiner’s personal opinions will not affect the outcome or assessment of the test. While it is inevitable that all flight test assessments are influenced to some degree by subjective opinions, examiners must ensure, as far as possible, that assessments are made in accordance with the applicable competency standards. Assessments will be less subjective, and therefore more valid, if the examiner has in-depth knowledge of the evaluation process and the expertise to accurately assess applicants without prejudice. To achieve objectivity, the assessment process should be well documented and should not go beyond the requirements for the grant or revalidation of the licence, rating or endorsement.</td>
</tr>
</tbody>
</table>
3.2.2 **Types and methods of assessment**

Types of assessment are outlined below.

**Table 2: Types of assessment**

<table>
<thead>
<tr>
<th>Types of Assessment</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognition of prior learning</td>
<td>Recognition of prior learning (RPL) is the acknowledgement of knowledge, skills or competencies gained as a result of previous experience or formal training or study undertaken. In the aviation context, this is especially beneficial for applicants transferring formal qualifications gained through the Defence Forces or other National Aviation Authorities.</td>
</tr>
<tr>
<td>Diagnostic assessment</td>
<td>Diagnostic assessment is used to assist learners, and trainers to determine the training needs of the learner. A diagnostic assessment indicates the gap between the learner’s current knowledge, skills and competencies, and the desired level of knowledge, skill or competency for a particular task or role.</td>
</tr>
<tr>
<td>Traditional assessment</td>
<td>Traditional assessment involves the kind of written or oral testing (for example, multiple choice, matching) and grading that is most familiar to assessors and applicants. To achieve a passing score on a traditional assessment, the applicant generally has a set amount of time to recognise or reproduce memorised terms, definitions and data. There is usually only one correct answer.</td>
</tr>
<tr>
<td>Formative assessment</td>
<td>Formative assessment occurs progressively throughout a training program and is used to provide feedback to trainees on their progress during training. As the term suggests, formative assessment helps trainees to form the desired knowledge, skills and understanding that will eventually be needed to demonstrate the required competencies. The emphasis of formative assessment is on providing feedback to learners during the learning process. This is beneficial to learners in developing their own self-assessment skills for the improvement of their own performance and progress.</td>
</tr>
</tbody>
</table>
Types of Assessment

<table>
<thead>
<tr>
<th>Types of Assessment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summative assessment</td>
<td>Summative assessment is the most common form of assessment. It usually occurs at the end of a learning segment or formal training program. This is the formal process of collecting sufficient evidence to assess whether a person is competent in relation to a particular set of performance criteria. In the aviation context, summative assessments are used to determine competency for the grant of a licence, rating or endorsement. The flight test is a demonstration of the applied knowledge, skills and competencies, and comprises the assessment upon which granting of the formal qualification is based. The main approach to summative assessment is competency based assessment, by which defined standards or specific performance criteria are used to assess the applicant’s acceptable performance on a task. This type of assessment is preferable in the aviation context, since competence or the ability to meet performance criteria is desirable when assessing skilled performance.</td>
</tr>
<tr>
<td>Authentic or holistic assessment</td>
<td>Authentic assessment requires the applicant to perform real-world tasks and actively demonstrate a meaningful application of knowledge, skills and competencies. Rather than develop separate assessment tasks to assess each unit of competency, a holistic approach seeks to integrate the assessment of knowledge, skills and performance in one assessment task or activity. That is, the applicant must demonstrate in-depth knowledge by formulating a solution to demonstrate application of skills, or competency, rather than merely choosing an outcome or response.</td>
</tr>
</tbody>
</table>

Generally, there are a number of assessment methods that examiners may use to make judgements regarding an applicant’s overall proficiency. These are not mutually exclusive, and in practice, are often used together to formulate a more accurate ‘overall’ assessment.

Examples of assessment methods include:

- observation of actual performance such as observing a flight sequence
- using a range of different question types in order to assess the applicant’s ability to listen, interpret and communicate ideas about information
- simulating a situation such as role-play interaction between the applicant and examiner
- presentation by the applicant of a variety of evidence of previous experience or training which addresses current standards.

3.2.3 Dimensions of competency

The above described types and methods of assessment may be used independently or in a more holistic way by conducting the assessment against all ‘dimensions of competency’. This means that the assessment is not narrowly based on a specific task or skill, but embraces all aspects of proficiency, utilises some or all of the methods described above, and represents an integrated and holistic approach to the assessment.
The assessment may take into account the dimensions of competency outlined below.

**Table 3 Dimensions of competency**

<table>
<thead>
<tr>
<th>Dimensions of Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task skills</td>
</tr>
<tr>
<td>Performing at an acceptable level of competency. This may include carrying out individual tasks such as conducting a level turn.</td>
</tr>
<tr>
<td>Task management skills</td>
</tr>
<tr>
<td>Managing a number of different tasks at any one time. This involves being able to integrate several tasks to complete an outcome. For example, operating aeronautical radio whilst taxiing an aircraft.</td>
</tr>
<tr>
<td>Contingency management skills</td>
</tr>
<tr>
<td>Responding and reacting appropriately to unexpected problems, changes in routine and breakdown. For example, if the weather unexpectedly deteriorates, alternative strategies are employed to ensure a safe outcome.</td>
</tr>
<tr>
<td>Job or role environment skills</td>
</tr>
<tr>
<td>Fulfilling the responsibilities and expectations of the workplace. Each workplace is unique and requires the individual to be able to adjust to the environment in which they are working. This may include, for example, working with different flight crews, following workplace procedures or complying with organisational policies.</td>
</tr>
<tr>
<td>Transferability skills</td>
</tr>
<tr>
<td>Transferring skills and knowledge to new situations and contexts. This requires the ability to adapt to different work situations and demands. For example, a pilot should be able to transfer baseline skills and knowledge from one situation to another. For example, instead of just assessing the applicant’s performance while executing a level turn against the specified competency standard (task skills), it may be more realistic to observe the applicant performing the manoeuvre to avoid a simulated cloud bank (contingency skills) where the turn is required to position the aircraft to avoid the un-forecast weather and conduct a diversion procedure to an alternate aerodrome in accordance with the procedures contained within the company manuals (role and transferability skills).</td>
</tr>
</tbody>
</table>

By assessing all dimensions of competency, the skill is being applied to a new circumstance (transfer of skill), while managing a somewhat complex undertaking. This approach combines knowledge, understanding, problem solving, technical skills and application into the assessment.

### 3.2.4 Evidence as an assessment method

Evidence is the information gathered which, when matched against current standards, provides proof of competence or proficiency. Evidence can take many forms and be gathered from a number of sources. Evidence can be direct, indirect or supplementary.

**Direct evidence**

Examples of direct evidence include:

- direct observation
- oral questioning
- demonstration of specific skills.
Indirect evidence

Examples of indirect evidence include:

- assessment of qualities of a final product
- review of previous work undertaken
- written tests of underpinning knowledge.

Supplementary

Examples of supplementary evidence include:

- testimonials from colleagues
- reports from supervisors
- work diaries or logbooks
- examples of reports or work documents.

No single form of evidence is better than another. Quality evidence should be provided by the applicant and should meet the four ‘rules’ of evidence, as set out below.

**Table 4: Rules of evidence**

<table>
<thead>
<tr>
<th>Rules of Evidence</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Relates to the competency standards for the licence, rating or endorsement being assessed.</td>
</tr>
<tr>
<td>Sufficient</td>
<td>Provides enough evidence to make a judgement about the competence of the individual in relation to the current standards for the licence, rating or endorsement being sought.</td>
</tr>
<tr>
<td>Current</td>
<td>Is recent enough to show that the evidence produced is still able to be applied to the current standards for the applicable licence, rating or endorsement.</td>
</tr>
<tr>
<td>Authentic</td>
<td>Can be verified that the evidence is the applicant's own work.</td>
</tr>
</tbody>
</table>

There are many potential sources of evidence which may be used to make judgements regarding an individual's competency. These are not mutually exclusive and, in practice, are often used together to formulate a more accurate ‘overall’ assessment.

**3.2.5 Effective questioning techniques as an assessment method**

Most assessment types described above will require some form of questioning. While factual recall questions provide an indication of an applicant’s knowledge, it is important for the examiner to create a climate of enquiry and engagement in high quality, high order questioning if formative assessment is to be effective.

Effective questioning is vital because it makes the applicant’s thinking visible. It identifies prior knowledge, reasoning ability and the specified degree of applicant understanding. Questioning techniques are set out in the table below.
### Questioning Techniques

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key questions</strong></td>
<td>A good way to foster a culture of inquiry is to open with a big question that gets the applicant to think critically about what they have learnt. By asking a big question you can start thinking that immediately engages the applicant about their learning and it can raise motivation. For example, you might ask the applicant how important they think effective non-technical skills are in their assessment.</td>
</tr>
<tr>
<td><strong>Open and closed questions</strong></td>
<td>Open questions require learners to think and formulate a response. If an examiner asks an applicant to explain why they performed that manoeuvre then the applicant has to provide the explanation in their own words. This gives the examiner feedback especially if the examiner observes the applicant’s body language. Closed questions usually only require the applicant to answer ‘yes’ or ‘no’ and as such are not particularly valuable.</td>
</tr>
<tr>
<td><strong>The strategic pause</strong></td>
<td>The thinking time at the ‘pause’ point is crucial – the quality of the response and the confidence level of applicant are raised by even a short amount of thinking time.</td>
</tr>
</tbody>
</table>
| **Socratic questioning and Socratic circles** | The six steps of Socratic questioning (named after the classical Greek philosopher Socrates) create a critical atmosphere that probes thinking:  
  - Clarification of thinking - ‘Why do you say that?’ ‘Could you explain that further?’
  - Challenging assumptions - ‘Is this always the case?’ ‘Why do you think that assumption holds here?’
  - Evidence as a basis for argument – ‘Why do you say that?’ ‘Is there reason to doubt this evidence?’
  - Viewpoints and perspectives, which challenge the applicant to investigate other ways of looking at the same issue - ‘What is the counter argument for…?’ or ‘Can you look at this in another way?’
  - Implications and consequences, given that actions have consequences, this is an area ripe for questioning – ‘But if that happened, what else would result?’ or ‘How does… affect ….?’
  - Question the question, just when applicants think they have a valid answer this is where you can further challenge misunderstandings – ‘Why do you think I asked that question?’ or ‘Why was the question important?’ |

### 3.2.6 Types of questions to avoid

Asking, ‘Do you understand?’ or ‘Do you have any questions?’ has limited effect in an assessment environment. Assurance by the applicant that they do understand or that they have no questions provides no evidence of their comprehension, or that they even know the subject under discussion.
Other typical types of questions that must be avoided are provided below.

### Table 6: Type of questions to avoid

<table>
<thead>
<tr>
<th>Types of Questions to Avoid</th>
<th>Question Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Puzzle</td>
<td>‘What is the first action you should take if a conventional gear airplane with a weak right brake is swerving left in a right crosswind during a full flap, power-on wheel landing?’</td>
</tr>
<tr>
<td>Oversize</td>
<td>‘What do you do before beginning an engine overhaul?’</td>
</tr>
<tr>
<td>Toss-up</td>
<td>‘In an emergency, should you squawk 7700 or pick a landing spot?’</td>
</tr>
<tr>
<td>Bewilderment</td>
<td>‘In reading the altimeter, you know you set the QNH for the nearest station pressure. If you take temperature into account, as when flying from a cold air mass through a warm front, what precaution should you take when in a mountainous area?’</td>
</tr>
<tr>
<td>Trick questions</td>
<td>These questions will cause the applicant to develop the feeling that they are engaged in a battle of wits with the examiner, and the whole significance of the subject involved will be lost. An example of a trick question would be where the alternatives are 1, 2, 3, and 4, but they are placed in the reverse order of choices to trick the applicant to inadvertently answer incorrectly. If attention to detail is an objective, detailed construction of alternatives is preferable to trick.</td>
</tr>
<tr>
<td>Irrelevant questions</td>
<td>Diversions, which introduce unrelated facts and thoughts, will only obscure the orderly assessment process. Answers to unrelated questions are not helpful in evaluating the applicant’s knowledge of the subject at hand.</td>
</tr>
</tbody>
</table>

### 3.2.7 Questioning in the context of multi-crew operations

When considering an assessment with knowledge requirements, examiners should consider their question distribution strategy to ensure the knowledge requirements for both applicants are assessed in all required competencies. Posing a question to both applicants and pausing for them to think without naming the applicant can lead to one applicant answering all the questions. The examiner should ensure the questioning technique is robust to satisfy the testing knowledge requirements of both applicants.

### 3.3 Factors affecting assessment

Two key considerations for the reliability and validity of flight test and proficiency check assessments are the accuracy and consistency of the examiner. The accuracy of assessments depends largely on the examiner’s knowledge of the assessment criteria, the assessment scenarios, and the assessment forms to be used.

#### 3.3.1 Inter-rater reliability

Inter-rater reliability refers to consistency (or agreement) between examiners regarding both their behavioural observations and their performance ratings. Agreement is important for consistent application of assessment criteria to maintain flight crew licensing standards and
improve flight safety. Appropriately trained examiners should be interchangeable; the assessment should not be dependent on any particular examiner.

3.3.2 Accuracy

Two forms of accuracy are important; observation accuracy and rating accuracy.

Observation accuracy is the extent to which observers can correctly identify and record behavioural information. This is critical, as the assessment of non-technical skills typically requires examiners to observe and assess an applicant’s NTS while the applicant is performing a simulated or actual task.

Rating accuracy is the extent to which the examiner assigns the correct rating (i.e. competent or not competent) to the particular level of performance observed. This is critical in order to provide a valid assessment of the applicant’s skills.

The assessment of an applicant’s ability to perform a task is primarily made by determining that the task is conducted achieving the required MOS Schedule 5 or 6 standards, referencing the MOS Schedule 2 performance criteria and within the prescribed MOS Schedule 8 tolerances.

One of the greatest inconsistencies in achieving inter-rater reliability is the examiner’s perception of what is an acceptable degree of error and an acceptable deviation from tolerance (i.e.: how long can that deviation be sustained before the deviation is recognized and that immediate and appropriate corrective action is taken).

Where an observed error has not become safety critical, the examiner should look for evidence that the applicant has the skills to recognize and correct the error. The Examiner should not accept errors where tolerances are critical, such as descent below a Minimum Descent Altitude or a Decision Height.

When an applicant is demonstrating sound technique, but minor deviations occur outside the MOS Schedule 8 tolerances, the examiner must permit an acceptable opportunity for the applicant to demonstrate NTS competencies in order to apply corrective action.

3.3.3 Errors and biases

In order to conduct effective and objective flight tests, the examiner requires not only a sound knowledge of the characteristics of assessment, but also a good understanding of the possible personal biases and judgement errors that can occur throughout the assessment process.

The errors in assessment fall into two categories:

1. The biases that the examiner may bring to the process.
2. Those exhibited by the applicant being assessed.
Examiner biases

Examples of examiner biases are set out in the table below.

Table 7: Examiner biases

<table>
<thead>
<tr>
<th>Examiner Biases</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal bias error</td>
<td>Personal bias errors lead to assessing applicants or a particular group of applicants identically.</td>
</tr>
<tr>
<td>Confirmation bias</td>
<td>The tendency to seek out information that supports a pre-conceived belief about the applicant that has been formed before the end of the assessment. This means the examiner may look to confirm a possibly shallow impression they may have formed of the applicant pre-assessment, as opposed to having a more open outlook on the applicant’s abilities throughout the assessment process.</td>
</tr>
<tr>
<td>Central tendency error</td>
<td>These errors result in all or most applicants being assessed as ‘average’. The examiner really feels that the performance of most applicants is not as good as it should be and therefore ‘underscores’ an applicant’s good performance.</td>
</tr>
<tr>
<td>Generosity error</td>
<td>This results in all applicants being assessed as competent. This could be caused by an examiner’s desire to be known as a nice person, or reluctance to cope with the possible emotional response of an applicant or a recommending instructor in the event of a fail assessment.</td>
</tr>
<tr>
<td>Severity error</td>
<td>This error results in all applicants being assessed as not competent. In this situation, the examiner may feel that the published standards are too low and they should make assessments against their own standards, or the examiner may be overly critical of an applicant’s performance, requiring too high a standard.</td>
</tr>
<tr>
<td>Halo effect</td>
<td>This occurs when the examiner’s impression of the applicant is allowed to influence the assessment of performance. For example, when testing a friend, acquaintance, high profile individual, or their own trainees, an examiner may assess the individual as competent in error.</td>
</tr>
<tr>
<td>Leniency</td>
<td>This is a form of halo effect. It has its source in the examiner’s likes, dislikes, opinions, prejudices, moods and political or community influence of people.</td>
</tr>
<tr>
<td>Stereotyping</td>
<td>This occurs when an examiner assumes that a member of a group has certain characteristics (for example national culture prejudice) without having actual information about that individual.</td>
</tr>
<tr>
<td>Logical error</td>
<td>This error occurs when an examiner assumes that a high degree of ability in one area means a similar degree of competence in another. A competent assessment of one or two items does not mean the applicant is also competent on all items to be tested. The full test must be completed and assessed.</td>
</tr>
<tr>
<td>Error of narrow criterion</td>
<td>This error occurs when there is a group of applicants to test. The examiner may, in these circumstances, rate each applicant against the others within the group instead of against the standards.</td>
</tr>
</tbody>
</table>
## Examiner Biases

<table>
<thead>
<tr>
<th>Error of delayed grading</th>
<th>By delaying a 'not competent' assessment which will terminate the test, examiners may award a final 'competent' assessment based upon the overall impression of the flight test. This results in an erroneous assessment and a flight test report that is of little value to the training system.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bias blind spot</td>
<td>Examiners must be aware of their own biases. For example, an examiner may believe an applicant is too young or their accent suggests a poor English proficiency. Both age and accents are irrelevant; rather it is the performance of the applicant on all aspects of the flight test that should be considered.</td>
</tr>
<tr>
<td>Fundamental attribution error</td>
<td>The tendency for people to over emphasise personality-based explanations for behaviours observed in others while under emphasising the role and power of situational influences on the same behaviour. The examiner should always consider the context (environmental influences or task demands) in which the behaviour is being displayed.</td>
</tr>
</tbody>
</table>
Applicant biases

Examples of applicant biases are set out below.

Table 8: Applicant biases

<table>
<thead>
<tr>
<th>Applicant Biases</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Just-world hypothesis</td>
<td>The tendency for people to want to believe that the world is fundamentally just, causing them to rationalise the reasons for being assessed as not competent. This can be a potential problem exhibited by the applicant when receiving negative feedback, perhaps believing the feedback to be unjust. How the examiner delivers a negative or ‘fail’ result is therefore crucial.</td>
</tr>
<tr>
<td>Over confidence effect</td>
<td>This is when an applicant’s subjective confidence in his or her judgments is greater than the objective accuracy of those judgments. Over-confidence causes people to overestimate their knowledge, underestimate risks, and exaggerate their ability to control events. Examiners may find that applicants challenge their post-test debrief, particularly if the applicant has an over inflated view about their performance.</td>
</tr>
</tbody>
</table>

Whilst all these errors may appear obvious on paper, they may not be under flight-test conditions, especially as the judgement of the examiner may be obscured by a combination of two or more errors. Examiners must therefore be aware of these errors to consciously prevent them from influencing the validity of the flight tests and proficiency checks they conduct.

To avoid the above errors and biases it is recommended that the examiner consider adopting the following actions:

- allow plenty of time to conduct the flight test or proficiency check, to increase the effectiveness of the assessment process by allowing observation of the applicant over a sufficient time frame
- maintain the structured flight examination process that you have planned. A structured and organised process for recording observations increases accuracy and reduces bias. Make sure that this process is repeatable
- when making conclusions about an applicant’s performance, do not rely completely on memory; always refer to notes
- consider only the information observed and do not make any assumptions
- consider only information relevant to each technical and non-technical skill that is being assessed
- consider if any rating errors are occurring. Ask yourself: ‘Are my ratings unaffected by halo, leniency, severity, or any other types of bias?’
- ensure a structured approach is taken when providing a debrief or giving feedback.
4 Assessment of Human Factors and Non-technical Skills

4.1 Considerations

Most professional air crew would be aware that human behaviour and performance are cited as causal factors in the majority of aircraft accidents. While the aviation industry has benefited from increasing technology, with hardware and software becoming more reliable, human operators still continue to make errors. We know that human error cannot be eliminated, however efforts can be made to minimise and catch or mitigate errors before their consequences become unacceptable.

One of the best ways to ensure errors within aviation are managed is to ensure that applicants under flight examination display a sound knowledge of HF and demonstrate adequate NTS.

Human factors is a field of scientific knowledge that involves the minimisation of human error by optimising the relationship within systems, between people, activities, equipment and the environment.

Non-technical skills are specific human factors competencies (skills) such as critical decision making, teamwork, communication, situational awareness and workload management that complement the technical skills required in a given role. For example, applying the correct technique to land or hover an aircraft is a technical skill for a pilot. However, maintaining situational awareness (attention to the surrounding environment) to prevent a potential runway incursion, is a non-technical skill.

4.1.1 Airmanship

Traditionally, such skills as the consistent use of good judgement and flight discipline, as well as a high state of situational awareness, have been associated with good airmanship. Often, it was considered that knowledge of airmanship was gained through experience and a process of ‘infusion’. However, experience has shown that airmanship was difficult to measure accurately because identifiable performance criteria were not available. Assessment of airmanship was therefore, largely subjective.

Linking airmanship to HF and NTS is, in effect, bringing science to the often nebulous concept of airmanship. By linking airmanship to the performance criteria in the HF and NTS units of the Part 61 MOS schedules, it is possible to more accurately evaluate an applicant’s competency.

For example, it is considered good airmanship for a pilot on a navigation exercise to continually identify potential forced landing areas along the route. But how can this be measured objectively? If an examiner observed the applicant maintaining an adequate lookout, identifying potential forced landing areas along the route, demonstrating that they are maintaining situational awareness by keeping track of (for example, surface wind direction and strength, visibility, aircraft performance) and applying relevant information for realistic contingency planning for a simulated engine failure, then the examiner could assess the applicant’s competency on these observable skills.

The purpose of linking HF and NTS to airmanship is not to diminish the importance of airmanship, but to make the measurement of it valid and reliable.

Pass or fail judgements based solely on airmanship issues must be carefully chosen since they may be entirely subjective. It is not practical to give a comprehensive list of airmanship
considerations, however the main principle is to look for signs that the applicant is effectively dealing with present or evolving flight conditions.

### 4.1.2 Human factors and non-technical skills

It is important for all pilots to recognise and appreciate the importance of HF and NTS knowledge, and the need to integrate these skills into their normal flight operations. Accordingly, examiners must not only incorporate sound HF and NTS principles into their flight tests and proficiency checks, but also develop effective assessment strategies. This requires the development and preparation of comprehensive assessment scenarios by examiners.

The requirement for NTS training and assessment is addressed through the elements in Schedule 2 of the Part 61 MOS:

- NTS 1.1 – Maintain effective lookout
- NTS 1.2 – Maintain situational awareness
- NTS 1.3 – Assess situations and make decisions
- NTS 1.4 – Set priorities and manage tasks
- NTS 1.5 – Maintain effective communications and interpersonal relationships
- NTS 2.1 – Recognise and manage threats
- NTS 2.2 – Recognise and manage errors
- NTS 2.3 – Recognise and manage undesired aircraft state.

A pilot would be expected to demonstrate knowledge of human performance limitations in these units, including physiological, psychological and ergonomic aspects. For example, some knowledge aspects that underpin the application of NTS include:

- fatigue
- illusions
- general health
- drug and alcohol management
- knowledge of the functions of the eyes and ears.

### 4.2 Non-technical skills 1 – Manage safe flight

#### 4.2.1 Examples of proficiency in unit NTS1

Table 9 provides examples of proficiency in the NTS1 unit of competency.

<table>
<thead>
<tr>
<th>NTS1 elements</th>
<th>Examples of proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain effective lookout</td>
<td>Maintains effective lookout at most times during flight.</td>
</tr>
<tr>
<td>Maintain situational awareness</td>
<td>Generally aware of developing situations, able to effectively anticipate future situations to maintain adequate flight safety and efficiency goals.</td>
</tr>
<tr>
<td>Assess situations and make decisions</td>
<td>Sound ability demonstrated to assess situations, consider available options and predict likely outcomes.</td>
</tr>
<tr>
<td>Set priorities and manage tasks</td>
<td>Generally demonstrates adequate planning and prioritisation of tasks to achieve safe and efficient flight operations.</td>
</tr>
<tr>
<td>NTS1 elements</td>
<td>Examples of proficiency</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>--------------------------------------------------------------</td>
</tr>
<tr>
<td>Maintain effective communications and interpersonal relationships</td>
<td>Generally communicates clearly, concisely and consults with others.</td>
</tr>
</tbody>
</table>

## 4.2.2 NTS1.1 Maintain effective lookout

An effective lookout concerns seeing what is ‘out there’ and assessing the information that is received before making an appropriate decision.

Vision is the primary source of information for a pilot. The aircraft attitude, position, physical hazards and other traffic seen by the pilot are processed by the brain and used to build up situational awareness. Therefore, it is important for an examiner to effectively assess the ability of a pilot to best use vision to maintain safety.

Inside an aircraft, vision is used to interpret flight instruments, flight controls and aircraft systems. Externally, vision is used to observe and interpret weather, terrain, aircraft attitude and position.

In this context, lookout must not be thought of as just ‘scanning the skies’ to locate other traffic; it also involves looking at the internal and external environment of the aircraft and maintaining a radio listening watch and interpreting transmissions to determine traffic location and intentions.

### Assessing effective lookout

Lookout is a critical facet of safe flight operations, and assessment of this skill will be ongoing throughout a pilot’s flying career.

The examiner should be looking for competency in two main elements of effective lookout:

- see an object
- react appropriately to what has been seen.

In reacting appropriately, the applicant should be able to determine if the object is a threat and take mitigating (avoiding) action.

The examiner should ensure that the applicant covers the field of view from the cockpit, and varies the scan rate to accommodate the threats.

### Congested airspace

Airspace congestion is usually encountered during busy stages of a flight, such as departure and approach. These high workload periods often focus an applicant’s attention inside the cockpit.

The applicant should pay extra attention to other traffic when operating in congested airspace. Examiners should watch the applicant during these phases of flight to ensure that tasks are prioritised and managed to ensure a good lookout is maintained. This can be achieved by monitoring head and eye movement when possible and questioning the applicant about what they see.

Additionally, the examiner must monitor the applicant for an appropriate reaction to any traffic information received by radio transmissions, TCAD or TCAS. Questions such as ‘where do you think other traffic will be coming from?’ will assist in making this determination.
Hazardous terrain

When operating close to or in hazardous terrain or during periods of reduced visibility, greater effort must be directed outside the aircraft. The examiner should monitor the applicant’s performance and assess any decisions they make to avoid collision with terrain or other aircraft.

Questioning should be used to determine if the applicant is aware of the current threats and whether a plan has been made to address them. The examiner should ask the applicant what they are seeing and whether they have recognised the possible associated hazards. These assessments must occur throughout the flight; however, the examiner must ensure that questions do not adversely impact the safe management of the flight.

Clearing procedure

Pilots must always clear the airspace around them before manoeuvring the aircraft. This ‘clearing procedure’ must be used to locate other aircraft as well as any terrain, weather or other hazards that may compromise safety.

Examiners should observe whether the applicant always uses an acceptable procedure and whether threats are seen and identified.

Given the physiological limitations of ‘see and avoid’, it may be appropriate to supplement continued lookout with other actions (for example, establish vertical separation). To achieve this, examiners themselves must closely monitor the airspace and maintain a good lookout so that they can identify any threats that are missed by the applicant.

Pilots of slow-flying aircraft must also demonstrate awareness of the fact that undetected faster aircraft approaching from the rear quarter are a constant risk to flight safety.

Limitations of vision

Examiners should ensure that applicants are aware of and take into account, the limitations of vision. These limitations include aspects such as blind spots, threshold of acuity, accommodation (focusing on an object), empty field myopia, focal traps, visual field narrowing and cockpit workload. Notwithstanding the applicant’s awareness of visual limitations, the examiner should determine that the applicant sights any threats to safety and takes appropriate mitigating action.

The same “maintain effective lookout” (NTS1.1) items can also be applied during the conduct of an Examiner Proficiency Check (EPC) in an FSTD (approved for the purpose). The EPC applicant should satisfactorily perform the published MOS Schedule 2 NTS1.1 competency within the context of the FSTD instructor operating station.

4.2.3 NTS 1.2 Maintain situational awareness

In the aviation context, situational awareness (SA) is defined by Endsley as:

‘the perception of the elements in the environment within a volume of time and space, the comprehension of their meaning and the projection of the status in the near future.’

This definition is often assigned three levels:

- level 1: perception of the current environment
- level 2: interpretation of the immediate situation
• level 3: anticipation of the future environment.

**Level 1 SA** is achieved through monitoring and gathering information from both within the cockpit and the environment outside the aircraft (perception).

**Level 2 SA** requires the pilot to process the information gathered and interpret the situation (interpretation).

**Level 3 SA** occurs when the pilot recognises the situation and predicts what is likely to occur (anticipation).

In the context of the Part 61 MOS and assessment of SA, it is important to understand that this is the scope of SA. Decision making is assessed as a separate activity.

**Assessing situational awareness**

The most important aspect of assessing SA is to confirm that the applicant’s mental model (or perception) of the environment is accurate.

The next step is to find out what options the applicant has identified and assess whether they are realistic. In other words, the examiner must see if the ‘what ifs’ complement the mental model and provide a basis for an accurate and timely decision (if one is required).

Depending on the applicant’s perception and options, there may be no need to proceed to the next step of making a decision, as SA is a dynamic process—further action only needs to be taken if a perceived situation compromises flight safety.

For example, if there are thunderstorms in the area but they do not conflict with the intended track, and the adverse effects of the storm will not affect the flight, no decision or action would be needed. However, it would indicate a lack of SA if the applicant did not consider the storms and the associated hazards in their planning.

**Objective and responsive assessment**

Observation and questioning are the primary means used by an examiner to make a formative assessment of SA. Questions such as ‘what do you think could happen if….?’ or ‘what would you do if…?’ can be used to assess an applicant’s SA.

Assessment of an applicant’s SA must be conducted throughout the flight test. The limits of an applicant’s SA can be effectively explored through the creation of different scenarios.

The examiner should be prepared to modify the flight test or proficiency check scenarios as appropriate, to ensure a comprehensive assessment of the applicant’s SA is made. If the examiner determines that an applicant’s SA is deficient, they should provide guidance on how to improve SA in the post flight debriefing.

Examiners may gain an intuitive feeling that an applicant’s SA does not meet the required competency standard; however, feelings cannot be used as a basis for an adverse assessment. Evidence must be obtained to support such an assessment. If an applicant’s SA is below the required standard, there will be a contributing factor or factors and it is up to the examiner to discover and record this deficiency as evidence.

**Assumed level of knowledge**

As SA can be adversely affected by a lack of knowledge, examiners must observe the applicant applying appropriate knowledge for any given situation. For example:
• unfamiliarity with air traffic separation rules could result in unsatisfactory descent planning when opposing traffic is present
• deficiencies in aircraft systems knowledge (for example, fuel system mismanagement) could lead to unsatisfactory outcomes.

If an applicant's lack of knowledge contributes to poor SA, the examiner should record the problem and provide appropriate feedback to the applicant. In some cases, lack of adequate knowledge (and its potential effect on SA) may be enough reason for an examiner to deem that an applicant has not achieved competency in non-technical skills.

**High workload**

During periods of high workload, it is possible that information may be overlooked. Examiners must determine if SA is being maintained, regardless of workload.

For example, if the applicant is busy during an approach into a very active terminal area, radio transmissions may be missed, or instructions forgotten. A possible cause for this reduced SA is failure to recall the information received (i.e. short-term memory breakdown causing faulty perception), which can lead to failure to take appropriate action.

**Low workload**

Examiners must also monitor the applicant during periods of low arousal or workload (inactivity) to ensure that an appropriate level of SA is maintained.

During a long navigation leg that is proceeding according to plan, an applicant may relax and stop thinking about what is happening and what could happen. It would be appropriate to confirm that SA is being maintained by the use of questions such as ‘Where would you divert to now if a passenger became seriously ill?’ or ‘If you suffered an engine failure where would you land?’ or ‘What is our endurance now?’

**Specific scenarios**

In the normal course of a flight test, it is likely that many opportunities to assess SA will occur. Despite this, if an examiner wants to investigate a specific situation, they may need to develop a scenario to test the applicant's SA. For example, if the examiner wants to explore the applicant's ability to maintain SA under a high workload, they could create an artificial workload interspersed with distractions. Such a scenario may require some time and thought but, once developed, the scenario could be refined, adapted and used for other flight tests or proficiency checks.

### 4.2.4 NTS 1.3 Assess situations and make decisions

Although this unit is titled ‘Assess situations and make decisions’, the primary area of interest is the decision-making process. By applying SA, a pilot may arrive at a number of options of ‘what could happen’, and the next step is to make a decision that achieves the optimum outcome.

In daily life people are always making decisions—usually sub-consciously. However, in the aviation environment, incorrect or inappropriate decisions can have tragic consequences. Therefore, it is important for pilots to understand and be able to apply the decision-making process and to be aware of the need to make timely and correct decisions.
Assessing decision making

Complex decision making may be difficult for an examiner to assess on a flight test or proficiency check because of the limited timeframe and reduced opportunity. Nevertheless, an applicant’s competence to make decisions must be assessed for the grant of a licence, rating or endorsement. It may be necessary to create scenarios to analyse an applicant’s ability to manage complex decision making.

Decision making process

The ongoing process of acquiring SA, if working correctly, will provide the applicant with a perspective from which to derive any number of options and ultimately determine the best action to follow. The applicant must recognise that a decision has to be made. Problems must be identified, and the examiner must use effective observation and questioning techniques to determine the facts.

The applicant must analyse problems and propose solutions (options). This will require the applicant to gather and process information. The applicant’s actions must be observable, but some questioning may be required to obtain an accurate assessment.

On the basis of the options identified, the applicant must make a decision. Examiners must ensure the decision is the optimal one and is implemented effectively in the time available. The applicant then must monitor progress against their plan and re-evaluate the plan as circumstances change, even if it is to confirm the desired outcome has been or will be achieved.

For a decision such as a ‘go around’ after a mishandled landing, the action and results will be very evident. In such cases, the examiner should ensure that the applicant recognised the mishandled landing soon enough and did not delay the recovery action.

More complicated decisions may require greater analysis by both the applicant and examiner. A complex problem may require a decision that does not lead to the optimum result immediately but could be modified at a later time.

It is acceptable for the applicant to make a decision on the basis that it may require revision if the safety of the flight is not compromised and the applicant continues to re-evaluate and update that initial decision. This situation could occur where a decision is made during flight planning, which may have to be modified after the applicant becomes airborne (for example, operational requirements, insufficient information available or changed weather conditions).

Management of factors affecting information processing

An examiner must observe an applicant’s ability to manage factors that can adversely affect information processing and decision-making. An example would be a pilot who is prepared to press on in bad weather or other adverse circumstances, in an attempt to reach a destination.

Examiners should consider developing scenarios where bad weather, operational requirements or fuel shortage would make it impossible to safely proceed to the destination. In such a case the applicant would be obliged to make a decision not to proceed and to take appropriate action that ensures safe flight, demonstrating competency in critical decision making.
While it is a challenge to assess an applicant's decision making competence on a flight test, if the examiner prepares for the test by creating complex scenarios, the task of evaluating an applicant's decision making competency will be achievable.

### 4.2.5 NTS 1.4 Set priorities and manage tasks

Task management means completing a job or operation competently in the time available. If the workload is high and many tasks have to be completed, they must be prioritised in a logical and efficient sequence.

The saying ‘aviate, navigate, communicate’ forms a sound basis for prioritisation and task management. Many people are able to process information in a well organised and logical manner, but some are not able to operate efficiently in a confined and, at times, demanding and busy environment without additional guidance and direction.

**Assessing prioritisation and task management**

The assessment process will require detailed observation, information gathering and questioning by the examiner, because they will need to determine how an applicant’s mind is functioning while managing tasks. By obtaining this information and combining it with observations, the examiner will be able to judge an applicant’s ability to competently set priorities and manage tasks.

An examiner should observe an applicant's work pattern and task completion to evaluate their competence to set priorities and manage tasks on a flight test. Valid evidence must be obtained to substantiate the assessment. For example, if an applicant is told by ATS to ‘expedite take-off’ and does so before completing pre-take-off checks, rather than advising ATS that they were not ready for take-off, the examiner could reasonably deem the applicant to be not competent at prioritising tasks. The applicant would not have met the 'take-off aeroplane' standard and could compromise safety.

When assessing task management, the examiner must look for competent completion of a task in the time available. In particular, the examiner should seek confirmation that the applicant can manage multiple tasks (although not an excessive workload) in a logical order. It may be necessary for the examiner to create scenarios to support this evaluation.

Examiners must be aware of factors affecting workload management and look for evidence of how these factors impact applicant conduct.

### 4.2.6 NTS 1.5 – Maintain effective communications and interpersonal relationships

Communication is a two-way process. It involves the accurate transmission, receipt and interpretation of information. Communication includes radio, as well as direct verbal and non-verbal exchanges.

A significant and vital component of interpersonal relationships is effective communication. It involves the pilot being able to get a positive or helpful response, rather than negative or obstructive response, from individuals or groups they deal with in order to ensure the effective transfer of information that may be crucial to maintaining SA and safety of flight.
The intent of the NTS1.5 competency unit is to make pilots aware of the need to always foster positive and cooperative relationships with people involved with, or affected by, their flying operations. Affected people may include:

- instructor or examiner
- maintenance engineers
- air traffic controllers
- airport owners and operators
- ground staff, including refuellers.

Examiners are not required to assess an applicant’s manners or personality per se; however they are required to observe the interactions of applicants with other stakeholders and assess their ability to maintain constructive relationships with others in the operational context, in order to achieve safe flight operations.

**Assessing effective communications and interpersonal relationships**

The examiner should evaluate the applicant’s ability to ‘establish communications’, that is, to make the effort to communicate or interact.

The examiner should assess the applicant’s:

- tone of voice and demeanour
- ability to use a non-aggressive approach
- willingness to listen, including active listening
- body language (when applicable)
- level of assertiveness.

These traits apply both to communications and interpersonal relationships and should be assessed by observing the reaction of the other person involved.

The examiner must use evidence based assessment. They should look for brevity and clarity of language, use of standard phraseology and whether the applicant was able to quickly elicit a positive reaction from the person with whom they were dealing.

Examples of feedback on negative communication include:

- ‘You did not communicate competently because the air traffic controller had to ask you twice for clarification of your request’; and
- ‘You got into a shouting match with the engineer when discussing the aircraft’s serviceability’.

The examiner can assess ‘define and explain objectives to involved stakeholders’ by observing an applicant’s cockpit communications and interaction with other flight crew members, or with the examiner.

An applicant who states their intention and explains how they will achieve the desired objectives could be assessed as communicating and interacting well with the examiner. However, assessment of communication and interpersonal skills should not be limited to the cockpit; examiners must make a holistic assessment of this aspect of an applicant’s performance.
To assess assertiveness, the examiner must observe the applicant is able to ‘demonstrate the required level of assertiveness that ensures the optimum completion of the flight’ during the scenarios within the flight test or proficiency check profiles.

For example, if an air traffic clearance is inappropriate or unsafe, an examiner would expect to observe a competent applicant negotiate or suggest alternatives. When faced with a more time critical situation there may be a need to change the normal tone of voice and style of the transmission to maximise the priority and gain the attention necessary to deal with the situation. Accepting the status quo could result in an unsafe outcome, which would be unacceptable.

4.3 Non-technical skills 2 – Threat and error management

Threat and error management (TEM) proposes that threats (such as adverse weather), errors (such as using the wrong instrument settings or the incorrect use of automation) and undesired aircraft states (UAS) (such as altitude deviations) are challenges that pilots must recognise and manage to maintain safety. Pilots who successfully manage these issues regardless of their occurrence increase their potential for maintaining adequate safety margins.

TEM pervades all aspects of flight management, from assessing fitness for duty and pre-flight considerations, to the conduct and completion of a flight. Therefore, TEM must be assessed throughout the flight test. Accordingly, the examiner will need to develop scenarios to ensure adequate assessment opportunities.

The practical flight standards prescribed in the Part 61 MOS unit of competency NTS 2 form the starting point for assessing TEM. The basic concept for TEM is simple:

- identify the threat, error or undesired aircraft state
- manage the threat, error or undesired aircraft state.

All conditions specified in the standard for NTS2 must be met before the applicant can be assessed as competent.

Management in the context of TEM is defined as to ‘plan, direct and control an operation or situation’. In practical terms this means the timely detection of and response to threats or errors that may lead to undesired aircraft states.

Specifically, the applicant should demonstrate the ability to:

- recognise, assess and manage potential threats in the performance of the various task elements, in accordance with TEM techniques
- avoid or trap errors which may occur in performing the various task elements, in accordance with TEM techniques
- follow standard operating procedures with evident situational awareness to avoid and trap errors
- apply strategies which will mitigate the effects of any errors which may occur, in accordance with TEM techniques.
Table 10 provides examples of proficiency in the NTS2 unit of competency.

**Table 10: Examples of proficiency in unit of competency NTS2**

<table>
<thead>
<tr>
<th>NTS 2 Elements</th>
<th>Examples of proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognise and manage threats</td>
<td>Generally recognises and manages threats appropriately, generally uses effective strategies to minimise and mitigate effects of threats</td>
</tr>
<tr>
<td>Recognise and manage errors</td>
<td>Generally recognises and manages errors appropriately, generally uses effective strategies to contain and mitigate effects of errors</td>
</tr>
<tr>
<td>Recognise and manage undesired aircraft states</td>
<td>Generally recognises and takes appropriate steps to manage undesired aircraft states with adequate flight safety goals maintained</td>
</tr>
</tbody>
</table>

### 4.3.1 Evidence-based NTS 2 assessment

Examiners must obtain evidence to ensure that sound TEM techniques are being practised. Examiners cannot assume that just because an applicant completed a faultless trip, competent TEM skills were used. The examiner should question the applicant and observe their actions to ensure the evidence is valid, authentic, sufficient and current.

It is likely that an examiner will need to create scenarios on a flight test or proficiency check to allow proper assessment of TEM. A competent applicant is less likely to get into an undesired aircraft state or would quickly correct an undesired aircraft state (for example, low approach speed), and it may be necessary for the examiner to artificially create such a circumstance.

For example:

- on approach to a destination aerodrome, simulate a thunderstorm over the airfield to duplicate both a threat and an undesired aircraft state
- simulate a radio failure approaching a non-controlled aerodrome with a CTAF
- simulate a system malfunction or engine failure
- simulate an instrument or display failure.

**Assessment of threat and error management**

Evaluation of competence is difficult for an examiner as the TEM assessment must be determined on the basis of a single flight test or proficiency check. Accordingly, the examiner will need to develop scenarios to ensure adequate assessment opportunities throughout the test or check.

During pre-flight planning, the examiner should observe and question the applicant to gain insight into the countermeasures that they apply to anticipated threats. Scrutiny of flight planning activities will also allow the examiner to monitor some aspects of error management.

Throughout general flying and navigation phases of the test, simulation of systems malfunctions and emergencies will afford the opportunity to evaluate threat, error and undesired state management competencies.

The examiner will evaluate NTS competencies at the same time as appraising TEM competencies. Although a flight test involves assessment of a multitude of competencies, with proper planning and some thought, examiners will be able to successfully assess NTS and TEM.
As a practical example, during a PPL flight test it would be possible to assess a number of elements from the NTS1 and NTS2 standards if the examiner sets a scenario during the navigation phase that requires a precautionary search. Consider the list below:

- **Lookout**: selection of a suitable landing area, weather conditions, traffic and terrain avoidance
- **Situational awareness**: monitoring of aircraft systems, weather, location and flight environment. Collecting information from map, charts and ERSA
- **Decision-making**: identifying and assessing options in regard to weather, time of day, endurance and location. Decision to conduct precautionary search and assessment of landing area. Decision to land or re-evaluation and configuring of aircraft for landing
- **Task prioritisation**: organising and managing a logical descent and arrival, aircraft configuration, appropriate radio calls, field selection and briefing of passengers.
- **Communications**: communicating with ATC, other aircraft, passengers and, if possible, ground personnel
- **Threat management**: monitoring, assessing and managing threats, particularly in relation to weather, terrain, low level operations and aircraft handling
- **Error management**: identifying any errors and take action before safety is affected, particularly when flying low level. Use of checklists and standard operating procedures applicable to a precautionary search situation
- **Undesired aircraft state**: recognising and correcting any undesired state particularly in relation to power settings, configurations, IAS, and height during the low level manoeuvres.

### 4.4 Assessment of HF and NTS in multi-crew operations

The units of competency outlined above for NTS 1 and 2 are equally applicable to assessment of HF and NTS in multi-crew operations. In addition, further specific requirements for the assessment of HF and NTS in multi-crew operations (MCO) are also defined. The MCO units of competency, including the specific elements and performance criteria, are outlined in Schedule 2 of the Part 61 MOS.

**MCO unit description**

This unit describes the skills, knowledge and behaviours required to plan, direct and control all aspects of flight operations in a multi-crew environment as either pilot in command or a crew member. The unit contains the following elements:

- **MCO.1** – Operate effectively as a crew member
- **MCO.2** – Demonstrate effective leadership and authority
- **MCO.3** – Maintain situational awareness
- **MCO.4** – Make effective decisions.

The issue regarding the unit of analysis for assessment, that is, assessment of the performance of the individual or the team, in multi-crew operations has been the subject of considerable research. However, it is important to note that while the focus of this unit is on the specific skills required to work in a team, the focus of attention of the examiner is on the performance of the individual operating within the team.
The examiner must assess the performance of the applicant, in the context of the team environment, and how the applicant’s behaviour influences the team’s performance.

Furthermore, the applicant’s performance may vary across scenarios, depending on the demand that each scenarios place on the individuals and the team. Therefore, it is important that the examiner considers several scenarios for assessment across the entire flight, in order to make a holistic assessment of the applicant’s performance.

It can be considered that teams do not perform per se; it is the performance of individuals that contribute to the effectiveness and performance of the team.

**Assessment of team skills**

Assessment of the applicant’s ability to operate effectively as a crew member will require the examiner to design appropriate flight test scenarios to provide the applicant with an opportunity to demonstrate proficiency and perform the tasks associated with each of the specific performance criteria included. These scenario events should vary in difficulty and be presented at various points during the flight test or proficiency check.

The examiner should observe the applicant’s behaviour and record sufficient evidence to provide constructive feedback regarding the applicant’s performance at the end of the flight test.

**4.4.1 MCO.1 – Operate effectively as a crew member**

Considerable research and analysis of safety data has recognised that good teamwork is particularly important to reduce error and maintain safety in aviation. However, teams are seldom constant, and in larger airlines, the composition of the flight crew may change frequently. However, flight crews must function effectively from the moment they are formed in order to achieve their task and manage safety effectively.

It can be considered that when an individual crew member commits an error, and that error is not detected or corrected by another crew member, the error becomes a crew error. The general principles of crew resource management (CRM) may support this approach by focusing on the performance of the crew as a whole. However, a core concept of CRM training is not necessarily to strengthen any particular flight crew but rather to make individuals more effective crew members in the flight crew team that they are operating in.

In high performing crews, the constant high correlation between behavioural ratings for the captain and first officer indicate that these individuals do not act independently of each other. However, in poorly performing crews, there are often observable differences in the behaviours that are rated ‘poor’ for the individual pilots. For example, poor leadership demonstrated by the captain, with no intervention from the first officer, may result in a poor rating for assertiveness for the first officer.

This differentiation is important for the examiner to consider in the context of a flight test for the issue of a flight crew licence, rating or endorsement, which requires individual assessment and feedback for the applicant. The focus of an examiner is not to assess the personality of the applicant, but rather to observe and assess the behaviour of the applicant with respect to proficiency.
The examiner is required to assess the applicant’s proficiency in the specific skills needed to operate effectively as a crew member. These skills fall broadly into two main categories; communication and cooperation, which can be summarised as:

- sending and receiving information
- identifying barriers to communication
- supporting other crew members
- solving conflict, exchanging information, and
- coordinating activities.

The MCO.1 element is broken down into 16 specific performance criteria, such as:

- motivate and support other crew members
- apply strategies to manage stress and conflict
- listen critically and request clarification when necessary, and
- assist other crew members to manage workload.

The main categories, summary and proficiency examples are shown in Table 11.

**Table 11: Element MCO.1 summary and examples of proficiency**

<table>
<thead>
<tr>
<th>MCO.1 summary</th>
<th>Examples of proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td></td>
</tr>
<tr>
<td>Sending information clearly and concisely</td>
<td>Generally communicates clearly and concisely, consults with others</td>
</tr>
<tr>
<td>Including context and intent during information exchange</td>
<td>Generally good use of context with adequate meaning and intent during communication</td>
</tr>
<tr>
<td>Receiving information by listening</td>
<td>Information effectively received and input sought from others</td>
</tr>
<tr>
<td>Identifying and addressing barriers to communication</td>
<td>Identifies and adequately address most barriers</td>
</tr>
<tr>
<td>Co-operation</td>
<td></td>
</tr>
<tr>
<td>Supporting others</td>
<td>Generally considers needs of others, provides timely support and feedback</td>
</tr>
<tr>
<td>Solving conflicts</td>
<td>Generally focuses on what is right, able to suggest solutions as conflict arises</td>
</tr>
<tr>
<td>Exchanging information</td>
<td>Generally communicates effectively, adequately consults with others</td>
</tr>
<tr>
<td>Coordinating activities</td>
<td>Establishes team, creates adequate atmosphere for input and feedback</td>
</tr>
</tbody>
</table>

4.4.2 MCO.2 – Demonstrate effective leadership and authority

Effective leadership is about directing and coordinating the activities of team members, which include:

- encouraging them to work together
- planning and setting priorities
- assigning tasks
- managing workload
monitoring and assessing performance
motivating crew members
establishing a positive team atmosphere.

The thoughts and behaviour of other members are influenced by the team leader’s ideas and actions. Therefore, effective team leadership is essential to team performance and the effectiveness of the team in achieving its objectives.

A summary and proficiency examples for leadership and authority are shown in Table 12 Element MCO.2 summary and examples of proficiency.

### Table 12: Element MCO.2 summary and examples of proficiency

<table>
<thead>
<tr>
<th>MCO.2 summary</th>
<th>Examples of proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using authority</td>
<td>Generally demonstrates appropriate use of authority and assertiveness</td>
</tr>
<tr>
<td>Maintaining standards</td>
<td>Desired standards generally well maintained, with infrequent lapses</td>
</tr>
<tr>
<td>Planning and prioritising</td>
<td>Generally demonstrates adequate planning and prioritisation of tasks to</td>
</tr>
<tr>
<td></td>
<td>achieve safe and efficient flight operations</td>
</tr>
<tr>
<td>Managing workload and resources</td>
<td>Generally demonstrates ability to manage workload and effective use of</td>
</tr>
<tr>
<td></td>
<td>resources to achieve adequate safety and efficiency goals</td>
</tr>
</tbody>
</table>

These skills are not only essential for the team leaders or captains, but are also essential for other crew members, including first and second officers.

Effective leadership has been shown to be crucial to maintaining safe performance in aviation. Research has shown that leaders influence the safety behaviours of other team members, such as compliance with rules and procedures, and the outcome of critical incidents and emergencies.

**Assessment of leadership and authority**

Assessment of the applicant’s leadership and management skills will require the examiner to design appropriate flight test scenarios to provide the applicant with an opportunity to demonstrate proficiency and perform the tasks associated with each of the specific performance criteria included. These scenarios will require the applicant to analyse and assess complex problems and make decisions while directing and monitoring the actions of their support crew member.

Ideally, multiple events should be included for each element and performance criteria against which the applicant’s performance is to be assessed. These events should vary in difficulty and be presented at various points during the flight test scenario. These scenarios should be designed such that the applicant is required to consider and manage the consequences of their decisions and review the actions of the crew as the scenario unfolds.

### 4.4.3 MCO.3 - Maintain situational awareness

Situational awareness is the first step in the decision making process. It relies upon gathering and interpreting information and anticipating the future states, which may require a decision to be made in regard to the anticipated outcome or event.
In a multi-crew environment, it is important that crew members working together on cooperative tasks have some degree of shared situational awareness and a ‘shared mental model’ for the task and the intended outcome, knowing each crew member’s roles and responsibilities.

It is well known that both fatigue and stress can adversely affect the quality of situational awareness. Furthermore, research has found that distractions and interruptions occur surprisingly often in safety-critical domains such as aviation. Therefore, knowing when to interrupt other crew members, and what information is essential at critical phases of flight, are important skills in a multi-crew environment. The use of and adherence to standard operating procedures and standard phraseology are important factors in maintaining situational awareness.

A summary and proficiency examples for situational awareness are shown in Table 13.

### Table 13: Element MCO.3 summary and examples of proficiency

<table>
<thead>
<tr>
<th>MCO.3 summary</th>
<th>Examples of proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gathering information</td>
<td>Information effectively gathered from a number of sources</td>
</tr>
<tr>
<td>Interpreting information</td>
<td>Effectively interprets information to anticipate developing situations</td>
</tr>
<tr>
<td>Anticipating future states</td>
<td>Generally aware of developing situations, able to effectively anticipate future system states with good level of accuracy and reliability</td>
</tr>
</tbody>
</table>

**Assessing situational awareness**

As situational awareness is largely a cognitive skill, it is impossible to observe directly. Therefore, the examiner must design appropriate scenarios that include specific task actions and communications that indicate the applicant is gathering and interpreting information to develop an understanding of the situation that is occurring and anticipating what may happen as the scenario unfolds. Observed behaviours and communications must be used to assess the level of situational awareness demonstrated by the applicant.

### 4.4.4 MCO.4 - Make effective decisions

Decision making can be defined as the process of assessing a situation and reaching a judgement or choosing an option to meet the needs of the situation. Decision making skills are especially important in high-risk environments such as aviation, where the individuals involved may be functioning under time pressures and stress. Different decision making techniques may be required for different scenarios, depending on the nature of the decision to be made and the time available to make a decision.

In stressful situations, decision making may be particularly vulnerable, especially for complex decisions, where time and mental effort are required to evaluate and compare optional courses of action and potential outcomes. Consequently, there are a number of decision making models available to aid the process of decision making in complex and often stressful environments.
A summary and proficiency examples for making effective decisions are shown in Table 14.

### Table 14: Element MCO.4 summary and examples of proficiency

<table>
<thead>
<tr>
<th>MCO.4 summary</th>
<th>Examples of Proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defining the problem</td>
<td>Sound methodology to define problems, considers most factors, generates appropriate solutions and allows for contingencies</td>
</tr>
<tr>
<td>Generating and considering options</td>
<td>Sound methodology to consider options and predict likely outcomes</td>
</tr>
<tr>
<td>Selecting and implementing options</td>
<td>Sound methodology to select and implement satisfactory options, confirms selected course of action to ensure safe outcome</td>
</tr>
<tr>
<td>Reviewing the outcome</td>
<td>Effectively review outcome against plan, modifies plan when required</td>
</tr>
</tbody>
</table>

Examiners must be aware that decision making is significantly influenced by technical expertise, level of experience, familiarity of the situation and practice in responding to problem situations. As decision making is a cognitive skill, it is affected by many of the same factors as situational awareness, such as stress, fatigue, noise, distraction and interruption.

### Assessment of decision making

As with situational awareness, decision making is impossible to observe directly. Therefore, the examiner must design appropriate flight test scenarios that include specific events requiring the applicant to make decisions under different conditions. Observed behaviours and communications must be used to assess the effectiveness of decisions being made.

In some cases, the decision making process may also be observed where the applicant’s communications with other crew members follows a structured sequence of steps to evaluate options and choose the appropriate outcome.

### 4.4.5 Threat and error management in multi-crew operations

The examiner will evaluate HF and NTS competencies at the same time as appraising TEM competencies. Although a flight test involves assessment of a multitude of competencies, with proper planning and some thought, examiners will be able to successfully assess all HF and NTS considerations and TEM requirements on flight tests and proficiency checks.

As a practical example, it would be possible to assess a number of elements from the HF, NTS and TEM standards if an examiner sets up an appropriate scenario during the en route navigation phase. Such a scenario requires management of a non-normal event, such as a system failure, resulting in a decision to divert to the nearest suitable airport for landing.

Consider the lists below.

**Operate effectively as a crewmember:**

- **Use standard operating procedures:** use of normal and non-normal checklists, procedures and phraseology following the first indications of the system failure.
- **Cooperate:** as the consequences of the system failure are assessed, cooperate with other flight crew members; provide timely information, verify receipt of information, encourage input from others, apply assertive strategies.
• **Communicate**: during the immediate and subsequent actions following the system failure, communicate with flight crew, air traffic control, cabin crew, passengers, engineers, company personnel, and other aircraft (as applicable).

• **Monitor and support**: throughout the scenario initiated by the system failure event, consider the ability of other crew members to perform duties, motivate and support other crew, appraise crew performance.

• **Manage**: since stress, conflict and distractions may be heightened during the system malfunction event, manage workload to optimise outcome.

**Demonstrate effective leadership and authority**

• **Briefings**: in addition to normal pre-flight briefings, following the system failure event, the applicant should conduct briefings to establish a plan of action, priorities and crew roles.

• **Communication**: the system failure event allows the applicant excellent opportunities to establish the atmosphere to encourage open communication and input from crew, identify and communicate key issues reinforce roles, and maintain motivation.

• **Management**: one of the prime assessment purposes of the system malfunction event is for the applicant to allocate tasks, establish goals, monitor crew actions and outcomes, manage time and resources to ensure flight is completed safely and effectively.

**Maintain situational awareness**

A system failure event scenario is an ideal opportunity to assess situational awareness. There are a number of competencies that the applicant must demonstrate:

• **Monitor**: flight path, aircraft configuration, system state, flight environment.

• **Perceive**: flight environment, aircraft systems, detect non-normal situations.

• **Interpret**: identify threats and errors, assess options, modify planned operations.

• **Anticipate**: potential hazards, aircraft configuration and performance.

• **Cross-check**: cross-check the actions of other crew members.

**Make effective decisions**

• **Identification**: once the system failure event occurs, identify problems, consider options and outcomes, generate solutions.

• **Management**: the consequences of the system failure need to be managed by the crew. The applicant must manage the non-normal situation, system performance and the diversion plan.

• **Assessment**: once the immediate actions have been completed, a decision to continue the flight or divert needs to be addressed. The applicant should assess suitable airports, assess risks and analyse solutions and options.

• **Prioritisation**: while working effectively with the other crew members and commencing a diversion, the applicant should prioritise workload management, communication and desired actions.

• **Evaluation**: with the diversion initiated as a result of crew management and decision making, the applicant should monitor progress against the agreed plan and evaluate and review decisions.
Threat and error management

As the crew divert to the nearest suitable alternate, the decision itself and the ongoing review involves TEM competencies:

- **Threat management**: weather, terrain, aircraft handling and performance
- **Error management**: recognition of errors, countermeasures, checklist use
- **Undesired aircraft state**: management of a non-normal situation, taking appropriate action to prioritise management of an undesired aircraft state.

### 4.4.6 Do poor non-technical skills constitute a fail assessment?

One final consideration is whether an applicant who lacks the necessary NTS skills required for the grant of a flight crew licence, rating or endorsement, or who fails to demonstrate NTS competency during a flight test or proficiency check, should fail on the basis of NTS alone? The answer is yes, but it should be linked to the performance of a technical skill.

Although applicant behaviour is an indicator that the applicant may be having trouble operating in the aviation environment on the day, it is not necessarily diagnostic. Therefore, further information may be required to identify the causal factors for the applicant's poor performance in order to target effective retraining. These causal factors are typically related to less than optimal technical skills.

The NTS framework focuses simultaneously on the operational environment and the performance of the applicant operating within that environment. As the NTS framework captures performance in the normal operating context, the resulting description is realistic, dynamic and holistic. Therefore, the results can be highly diagnostic.

Nevertheless, assessment of a pass or fail of a flight test based on NTS should be linked to a technical skill as they do not work in isolation. The assessment of NTS should acknowledge this and it is important for examiners to design flight test scenarios that reflect this interconnection.

For example, a pilot who does not adequately consider the implications of an MEL item on aircraft performance could be potentially assessed as not demonstrating effective skills in the following non-technical skills:

- **NTS1.3** - Assess situations and make decisions
- **NTS1.4** - Set priorities and manage tasks
- **NTS2.1** - Recognise and manage threats.

However, this NTS assessment is probably linked to one or more of the technical skills in the Part 61 MOS such as element C2.1, Perform pre-flight actions and procedures.

In other words, the failure to adequately consider the implications of an MEL item on aircraft performance may stem from inadequate knowledge of specific performance data, or a lack of effort in considering the relevance of the data for the operation being undertaken. The applicant would therefore be assessed as not competent in C2.1 and NTS1.3, NTS1.4 and NTS2.1.
5 Recreational pilot licence – aeroplane

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the recreational pilot licence and aeroplane category rating (RPL A).

5.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the RPL A flight test:

1. The examiner must conduct the RPL A flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the RPL A flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

5.2 Plan

5.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended operational task to allow for unhurried preparation and planning (simulating a recreational passenger/cargo carrying operation). The applicant should be given the test route at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.2 hours for the general handling and test specific manoeuvres.
5.2.2 RPL A assessment scope and conditions

The RPL A flight test must be conducted by day under the VFR and in an aeroplane, in accordance with subregulation 61.475 (3) of CASR.

The FEH activities and manoeuvres, listed in the Requirements column of Table 7 below, mirror the RPL A test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the RPL A flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the RPL A test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

RPL A flight tolerances and ground reference tolerances are specified in Table 1 of Schedule 8 of the Part 61 MOS. Sustained deviation outside the applicable flight tolerances is not permitted.

The applicant should demonstrate that control of the aircraft or procedure is maintained at all times but if the successful outcome is in doubt, corrective action is taken promptly to recover to safe flight.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system.

5.3 Conduct (ground component)

5.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

5.3.2 Document review

The examiner must confirm that an applicant for the RPL A satisfies the eligibility requirements to undertake the flight test for the grant of the CASR Part 61 licence. To achieve this, the CASR 61.235 (2) certification, training records, logbook, ARN and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

Minimum age - the examiner must sight one of the following documents to verify that the applicant is at least 16:

- Australian driver licence
RPL A flight test

- CASA issued medical certificate
- Australian passport
- Australian birth certificate.

Aeronautical knowledge examinations – the examiner must review the applicant’s theory examination pass records.

Knowledge deficiency report (KDR) – the examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

Flight training requirements – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

Aeronautical experience – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

English language proficiency – the examiner must ensure that the applicant holds a current GELP or AELP assessment.

Eligibility certification – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

Medical certificate – the examiner must check that the applicant holds either a class 1 or 2 medical certificate, a recreational aviation medical practitioner’s certificate or a medical exemption allowing them to exercise the privileges of the RPL A.

Security check and fit and proper person requirements – regulation 11.055 of CASR and the Aviation Transport Security Regulations require that the applicant has completed the applicable declarations.

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

5.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

5.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:
• fuel plan
• weight and balance calculation
• take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including: forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

5.4 Conduct (flight component)

5.4.1 Assessment of the applicant's performance

When assessing the competency standards for the activities and manoeuvres in this chapter and on the flight test form, the examiner should consider both the technique used to execute the activity or manoeuvre and that tolerances are maintained within required parameters.

The relevant performance criteria for each element frequently use the terms: technique, smoothness, accuracy, judgement, procedures, knowledge and flight management.

The following explanations are provided to assist the examiner in assessing the flight component:

• **Technique** – is the method by which a task is performed. There may be more than one acceptable technique and the examiner should be mindful of this in their assessment. Technique should, however, always involve the application of smooth, coordinated and accurate control inputs. Adjusting power, attitude and trim should be in a timely and coordinated fashion whilst following correct procedures

• **Smoothness** – is the ability to skilfully make the appropriate rate of adjustment to power and attitude during a manoeuvre. The applicant should demonstrate smooth flying in all sequences

• **Accuracy** – is the ability to control height, airspeed, heading, balance and trim within the required MOS flight tolerances. Sustained errors outside the MOS flight tolerances in any of these aspects should result in a fail assessment

• **Judgement** – is applicable to all tasks but is of importance with respect to the effect of environmental conditions such as cloud, visibility, wind and turbulence. It may be that on some occasions the flight conditions are such that even though the applicant's technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique, smoothness, accuracy and judgment should be the determining factors

• **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test. In many circumstances, the adherence to SOP’s may be the reason a committed error has been corrected in a timely manner

• **Knowledge** – during the flight test the applicant’s underpinning knowledge may be further tested. For example, during the management of an aircraft system failure, it may become apparent that there is a lack of knowledge of that system
• **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered when the examiner is observing an error or errors which may have the potential to become safety critical, providing the applicant is demonstrating NTS1, NTS2 and TEM appropriately before the examiner is required to intervene.

### 5.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying recreational operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

### 5.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the **RPL A** flight test.

Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.
Table 15: Assessment of activities and manoeuvres - RPL A

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>The examiner should engage the applicant during the pre-flight with questions relevant to the inspection, without disrupting the inspection or compromising safety. Where the aircraft already has a valid maintenance release certification for the day, the applicant is still required to complete the daily inspection in all respects and should explain the certification process.</td>
</tr>
<tr>
<td></td>
<td>(c) Refuel aircraft</td>
<td>Training record evidence and oral questioning should be used in the absence of an actual refuel event. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>It is recommended that the examiner pose a start malfunction or emergency just prior to the start procedure so the applicant’s touch drills can be assessed.</td>
</tr>
<tr>
<td></td>
<td>(b) Taxi aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Conduct crosswind take-off</td>
<td>Training record evidence of dual or solo competence in crosswinds of at least 70% of the AFM maximum and oral questioning should be used in the absence of a crosswind. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td></td>
<td>(e) Conduct short field take-off</td>
<td>The examiner should attempt to pose scenarios such as an obstacle at 300’ AGL following a short field take off</td>
</tr>
<tr>
<td></td>
<td>(f) Conduct climbs and climbing turns – must include any 2 of maximum rate, maximum angle or cruise climb</td>
<td>The examiner should attempt to pose scenarios such as an obstacle at 300’ AGL following a short field take off; or a requirement for best rate to 2000’ AGL.</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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</tr>
<tr>
<td>(b) Navigate and transit from the circuit area to the training area and return</td>
<td>The applicant should use a VTC or company training area map.</td>
<td></td>
</tr>
<tr>
<td>(c) Operate safely in the local area airspace</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(d) Maintain any 1 cruise configuration for turbulence, flaps selected or high speed</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(a) Enter and recover from stalls – 1 must be in the approach configuration and at least 1 stall and 1 incipient spin</td>
<td>The examiner should place emphasis on the application of correct technique rather than the achievement of a minimum height loss.</td>
<td></td>
</tr>
<tr>
<td>(b) Conduct steep level turns of at least 45° bank</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(c) Perform full panel instrument flying</td>
<td>The examiner should limit this to no longer than 5 minutes and position for sufficient altitude to conduct unusual attitude recoveries.</td>
<td></td>
</tr>
<tr>
<td>(d) Full panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(e) Manage engine failure after take-off</td>
<td>The examiner must consider the airfield terrain, obstacles and noise abatement requirements. Where the aerodrome does not allow the safe practise of EFATO, the examiner should simulate the procedure in the training area at altitude.</td>
<td></td>
</tr>
<tr>
<td>(f) Manage a malfunction during start or shutdown and 1 of: a system malfunction, fire or radio failure</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(g) Perform forced landing</td>
<td>The examiner should initiate the simulated engine failure at least 2,500’AGL to ensure the applicant has sufficient time to perform the procedure.</td>
<td></td>
</tr>
</tbody>
</table>

Descent and arrival

<p>| (a) Conduct descents and descending turns | NSR | |</p>
<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circuit, approach and landing</td>
<td>(b) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Conduct crosswind landing</td>
<td>The examiner is required to assess a crosswind landing unless the applicant’s training records certify dual or solo competence in crosswinds of at least 70% of the AFM maximum. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td></td>
<td>(c) Conduct short field and flapless landings</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Perform a go-around procedure</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td>General requirements</td>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Set priorities and manage tasks</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
</tbody>
</table>

In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.

The examiner should request a copy of company standard operating procedures (SOPs) to ensure familiarity with standard briefs, work-cycles and procedural techniques.
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Use correct radio procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>(j) Manage relevant aircraft systems</td>
<td>NSR</td>
</tr>
<tr>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
<tr>
<td>(l) Manage passengers and the carriage of cargo</td>
<td>The examiner should role play as a passenger for the duration or part of the flight test.</td>
</tr>
</tbody>
</table>

#### 5.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

**Safety critical items**

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued, and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.
Credits are only valid for one retest.

5.5 Complete (post flight)

5.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal de-briefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

5.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days after the day of the test, complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing.
6  Recreational Pilot Licence – Helicopter

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the recreational pilot licence and helicopter category rating (RPL H).

6.1  Examiner requirements

The following examiner requirements are applicable to the conduct of the RPL H flight test:

(1) The examiner must conduct the RPL H flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
(2) The examiner must conduct the RPL H flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
(3) The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
(4) The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
(5) After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
(6) Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

6.2  Plan

6.2.1  Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended operational task to allow for unhurried preparation and planning (simulating a recreational passenger/cargo carrying operation). The applicant should be given the test route at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.2 hours for the general handling and test specific manoeuvres.
6.2.2 RPL H assessment scope and conditions

The RPL H flight test must be conducted by day under the VFR and in a helicopter, in accordance with subregulation 61.475 (3) of CASR.

The FEH activities and manoeuvres, listed in the Requirements column of Table 8 below, mirror the RPL H test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the RPL H flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the RPL H test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

RPL H flight tolerances and ground reference tolerances are specified in Table 3 of Schedule 8 of the Part 61 MOS. Sustained deviation outside the applicable flight tolerances is not permitted.

The applicant should demonstrate that control of the aircraft or procedure is maintained at all times but if the successful outcome is in doubt, corrective action is taken promptly to recover to safe flight.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system.

6.3 Conduct (ground component)

6.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

6.3.2 Document review

The examiner must confirm that an applicant for the RPL H satisfies the eligibility requirements to undertake the flight test for the grant of the CASR Part 61 licence. To achieve this, the CASR 61.235 (2) certification, training records, logbook, ARN and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

Minimum age - the examiner must sight one of the following documents to verify that the applicant is at least 16:

- Australian driver licence
• CASA issued medical certificate
• Australian passport
• Australian birth certificate.

Aeronautical knowledge examinations – the examiner must review the applicant’s theory examination pass records.

Knowledge deficiency report (KDR) – the examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

Flight training requirements – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

Aeronautical experience – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

English language proficiency – The examiner must ensure that the applicant holds a current GELP or AELP assessment.

Eligibility certification – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

Medical certificate – the examiner must check that the applicant holds either a class 1 or 2 medical certificate, a recreational aviation medical practitioner’s certificate or a medical exemption allowing them to exercise the privileges of the RPL H.

Security check and fit and proper person requirements – regulation 11.055 ofCASRand the Aviation Transport Security Regulations require that the applicant has completed the applicable declarations.

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

6.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.
6.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:

- fuel plan
- weight and balance calculation
- take-off and landing data/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

6.4 Conduct (flight component)

6.4.1 Assessment of the applicant's performance

The applicant's performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested.
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test.
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.
Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

6.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying recreational operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

6.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the RPL H flight test. Where there are no specific recommendations, 'NSR' is listed in the table against the unit or element.

Table 16: Assessment of activities and manoeuvres - RPL H

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>The examiner should engage the applicant during the pre-flight with questions relevant to the inspection, without disrupting the inspection or compromising safety. Where the aircraft already has a valid maintenance release certification for the day, the applicant is still required to complete the daily inspection in all respects and should explain the certification process.</td>
</tr>
<tr>
<td></td>
<td>(c) Refuel aircraft</td>
<td>Training record evidence and oral questioning should be used in the absence of an actual refuel event. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
</tbody>
</table>
### Phase of Flight | Requirements | Recommendations
--- | --- | ---
**Ground operations, take-off, departure and climb**

(a) Complete all relevant checks and procedures  
(b) Lift-off and hover helicopter  
(c) Taxi aircraft  
(d) Air transit helicopter  
(e) Plan, brief and conduct take-off and departure procedures  
(f) Conduct climbs and climbing turns – must include any 2 of maximum rate, maximum angle or cruise climb

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>It is recommended that the examiner pose a start malfunction or emergency just prior to the start procedure so the applicant’s touch drills can be assessed.</td>
<td></td>
</tr>
<tr>
<td>The examiner should assess these items during the normal operation of the helicopter in the departure phase.</td>
<td></td>
</tr>
<tr>
<td>The examiner should pose scenarios to achieve the observation of a climb at best angle to achieve obstacle clearance or at best rate during departure and climb phase.</td>
<td></td>
</tr>
</tbody>
</table>

**En route cruise**

(a) Maintain straight and level and turn aircraft  
(b) Navigate and transit from the circuit area to the training area and return  
(c) Operate safely in the local area airspace

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>NSR</td>
<td></td>
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<tr>
<td>The applicant should use a VTC or company training area map.</td>
<td></td>
</tr>
<tr>
<td>NSR</td>
<td></td>
</tr>
</tbody>
</table>

**Test specific activities and manoeuvres**

(a) Hover helicopter in crosswind and tailwind and perform turns around any 1 of the rotor mast, nose or tail  
(b) Perform sideways and backwards flight  
(c) Conduct steep level turns of at least 45° bank  
(d) Perform autorotative flight

<p>| | |</p>
<table>
<thead>
<tr>
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<th></th>
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</thead>
<tbody>
<tr>
<td>The examiner is required to assess headwind/crosswind/tailwind hover and ground taxi unless the applicant’s training records certify dual or solo competence in those wind conditions. In this case the examiner must indicate competency by marking the items on the flight test form with ‘TR’.</td>
<td></td>
</tr>
<tr>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>Recommend a turn through at least 180 degrees is assessed.</td>
<td></td>
</tr>
<tr>
<td>Recommend assessment of at least entry to, stabilised control of and recovery from minimum rate of descent autorotation.</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>(e) Land on and lift-off from sloping ground</td>
</tr>
<tr>
<td></td>
<td>(f) Land, manœuvre and take-off in a confined area</td>
</tr>
<tr>
<td></td>
<td>(g) Execute limited power take-off, approach and landing</td>
</tr>
<tr>
<td></td>
<td>(h) Perform forced landing</td>
</tr>
<tr>
<td></td>
<td>(i) Manage engine failure during hover or taxi</td>
</tr>
<tr>
<td></td>
<td>(j) Manage a control or tail rotor malfunction in flight and at the hover</td>
</tr>
<tr>
<td></td>
<td>(k) Manage a system malfunction – at least 1 from engine fire, electrical failure, hydraulic system, airframe fuel system or engine governor system</td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(a) Conduct descents and descending turns</td>
</tr>
<tr>
<td></td>
<td>(b) Plan and conduct arrival and circuit joining procedures</td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
</tr>
<tr>
<td></td>
<td>(b) Approach to the hover</td>
</tr>
<tr>
<td></td>
<td>(c) Air transit helicopter</td>
</tr>
<tr>
<td></td>
<td>(d) Perform a go-around procedure</td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shut down and post-flight</strong></td>
<td>NSR</td>
</tr>
<tr>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td></td>
</tr>
</tbody>
</table>

### General requirements

<table>
<thead>
<tr>
<th>Recommendations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General requirements</strong></td>
<td>NSR</td>
</tr>
<tr>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td>(c) Assess situations and make decisions</td>
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<tr>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td>NSR</td>
</tr>
<tr>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td>(i) Use correct radio procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>(j) Manage relevant aircraft systems</td>
<td>NSR</td>
</tr>
<tr>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
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</tr>
<tr>
<td>(l) Manage passengers and the carriage of cargo</td>
<td>The examiner should role play as a passenger for the duration or part of the flight test.</td>
</tr>
</tbody>
</table>

### 6.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

**Safety critical items**

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).
Examples of safety critical failure items include, **but are not limited to:**

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

### 6.5 Complete (post flight)

#### 6.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

#### 6.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days after the day of the test, complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).
Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
7 Private Pilot Licence – Aeroplane

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the private pilot licence and aeroplane category rating (PPL A).

7.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the PPL A flight test:

1. The examiner must conduct the PPL A flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the PPL A flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

7.2 Plan

7.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended navigation task to allow for unhurried preparation and planning (simulating a private passenger/cargo carrying operation). The applicant should be given the test route at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an **airborne** time of approximately:

- 1.5 hours for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
• 0.8 hour for the general handling and test specific manoeuvres.

The examiner may choose to conduct the general handling and navigation components in two separate flights.

Use of IFR procedures

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the flight test or be taken into account in the flight test flight time. A landing and shutdown should terminate the IFR flight segment before commencing the PPL A assessment flight sequences.

The PPL A flight test should be concluded by a landing and shutdown in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the PPL A flight test should be considered as the flight time for the flight test.

7.2.2 PPL A assessment scope and conditions

The PPL A flight test must be conducted by day under the VFR and in an aeroplane, in accordance with subregulation 61.515 (3) of CASR.

The FEH activities and manoeuvres, listed in the Requirements column of Table 9 below, mirror the PPL A test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the PPL A flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the PPL A test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

PPL A flight tolerances and ground reference tolerances are specified in Table 1 of Schedule 8 of the Part 61 MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The applicant should demonstrate that control of the aircraft or procedure is maintained at all times but if the successful outcome is in doubt, corrective action is taken promptly to recover to safe flight.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system on at least one leg.

7.3 Conduct (ground component)

7.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

• flight test context, purpose and content
• assessment procedure
• function of the examiner
• standards against which competency will be assessed
• actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

7.3.2 Document review

The examiner must confirm that an applicant for the PPL A satisfies the eligibility requirements to undertake the flight test for the grant of the CASR Part 61 licence. To achieve this, the CASR 61.235 (2) certification, training records, logbook, licence (or ARN if RPL not issued) and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Minimum age** - The examiner must sight one of the following documents to verify that the applicant is at least 17:

- Australian driver licence
- CASA issued medical certificate
- Australian passport
- Australian birth certificate.

**Aeronautical knowledge examinations** – the examiner must review the applicant’s theory examination pass records.

**Knowledge deficiency report (KDR)** – the examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

**English language proficiency** – the examiner must ensure that the applicant holds a current AELP assessment.

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the PPL A.

**Security check and fit and proper person requirements** – regulation 11.055 of CASR and the Aviation Transport Security Regulations require that the applicant has completed the applicable declarations.
If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

7.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

7.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:

- flight plan
- fuel plan
- flight notification
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including: forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

7.4 Conduct (flight component)

7.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
7.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying private operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- the expectations of the examiner during the lost procedure simulation
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

7.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the PPL A flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.
Table 17: Assessment of activities and manoeuvres - PPL A

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>The examiner should conduct a review of the flight plan to assess correct application of wind computations and fuel planning. Gross error checks should also be applied, however where errors are not safety related the applicant should be permitted the opportunity to correct them in flight.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>The examiner should engage the applicant during the pre-flight with questions relevant to the inspection, without disrupting the inspection or compromising safety. Where the aircraft already has a valid maintenance release certification for the day, the applicant is still required to complete the daily inspection in all respects and should explain the certification process.</td>
</tr>
<tr>
<td></td>
<td>(c) Refuel aircraft</td>
<td>Training record evidence and oral questioning should be used in the absence of an actual refuel event. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>It is recommended that the examiner pose a start malfunction or emergency just prior to the start procedure so the applicant’s touch drills can be assessed.</td>
</tr>
<tr>
<td></td>
<td>(b) Taxi aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Conduct crosswind take-off</td>
<td>Training record evidence of dual or solo competence in crosswinds of at least 70% of the AFM maximum and oral questioning should be used in the absence of a crosswind. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td></td>
<td>(e) Conduct short field take-off</td>
<td>The examiner should attempt to pose scenarios such as an obstacle at 300’ AGL following a short field take off</td>
</tr>
<tr>
<td></td>
<td>(f) Conduct climbs and climbing turns – must include any 2 of maximum rate, maximum angle or cruise climb</td>
<td>The examiner should attempt to pose scenarios such as an obstacle at 300’ AGL following a short field take off, or a requirement for best rate to 2000’ AGL.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
</tbody>
</table>
|                | (b) Navigate aircraft en route                                                | The navigation task should be designed such that all of the required competencies can be assessed in a logical sequence. There should be at least one sector of sufficient distance that allows basic navigation technique to be adequately assessed. This sector should be of a sufficient duration to enable the assessment of:  
  - multiple navigation cycles  
  - track correction techniques  
  - continued maintenance of navigation and fuel logs (ETAs and fuel status)  
  - position fixing at suitable intervals.  
  Importantly, the examiner should be satisfied that the applicant is using a suitable navigation methodology that is supported by sound reasoning and application of acceptable VFR navigation procedures. The examiner should give particular attention to the applicant's navigation techniques in and around controlled airspace and how they plan to avoid controlled airspace and/or restricted and prohibited airspace, as applicable. |
<p>|                | (c) Maintain any 1 cruise configuration for turbulence, holding or range       | NSR                                                                              |
|                | (d) Navigate at low level                                                     | NSR                                                                              |
|                | (e) Perform lost procedure                                                    | It is an acceptable practice for the examiner to introduce the ‘lost’ scenario immediately following the instrument flying assessment. In normal circumstances the examiner should ensure the ‘lost position’ is at least several nautical miles laterally displaced from the original planned track. |
|                | (f) Perform diversion procedure                                                | The examiner should provide a suitable scenario that will enable the applicant to ‘self-select’ the ‘diversion route’ to a ‘suitable aerodrome or an alternate aerodrome’. The examiner should not apply any specific time constraints (subject to operational requirements) to execute the diversion. The examiner should ensure that the applicant is at a known position prior to introducing the diversion task. |
|                | (g) Use instrument navigation systems                                          | The examiner should consider selecting an appropriate leg for assessing the applicant’s ability to use the aircraft navigation systems. |</p>
<table>
<thead>
<tr>
<th>Phase of Flight</th>
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<tbody>
<tr>
<td><strong>Test specific activities and manoeuvres</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Enter and recover from stalls – one must be in the approach configuration and at least one stall and one incipient spin</td>
<td>The examiner should place emphasis on the application of correct technique rather than the achievement of a minimum height loss. If ME, at least 2 stalls and no incipient spin required.</td>
<td></td>
</tr>
<tr>
<td>(b) Conduct steep level turns of at least 45° bank</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(c) Perform full panel instrument flying</td>
<td>The examiner should limit this to no longer than 5 minutes and position for sufficient altitude to conduct unusual attitude recoveries.</td>
<td></td>
</tr>
<tr>
<td>(d) Full panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(e) Manage engine failure after take-off</td>
<td>The examiner should initiate the precautionary search with a suitable scenario that allows the applicant to initiate the precautionary search procedure.</td>
<td></td>
</tr>
<tr>
<td>(f) Conduct precautionary search</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(g) Manage a malfunction during start or shutdown and one of: a system malfunction, fire or radio failure</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(h) Perform forced landing</td>
<td>The examiner should initiate the simulated engine failure at least 2,500'AGL to ensure the applicant has sufficient time to perform the procedure.</td>
<td></td>
</tr>
<tr>
<td><strong>Descent and arrival</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Conduct descents and descending turns</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(b) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>Circuit, approach and landing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(b) Conduct crosswind landing</td>
<td>The examiner is required to assess a crosswind landing unless the applicant’s training records certify dual or solo competence in crosswinds of at least 70% of the AFM maximum. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
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<td>Recommendations</td>
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<tr>
<td>-------------------------</td>
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<td></td>
<td>(c) Conduct short field and flapless landings</td>
<td>NSR</td>
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<td>(d) Perform a go-around procedure</td>
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</tr>
<tr>
<td></td>
<td>(e) Perform after-landing actions and procedures</td>
<td>NSR</td>
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<tr>
<td>Shut down and</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
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<td>post-flight</td>
<td></td>
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<tr>
<td></td>
<td>(a) Maintain effective lookout</td>
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<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
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</tbody>
</table>

In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.

The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>(i) Operate in controlled airspace</td>
<td>Where a test cannot be conducted in actual controlled airspace the examiner is required to simulate CTR and CTA. The simulation should include all performance criteria of CTR (Part 61 MOS Schedule 2). At a minimum, the simulation methodology should include simulated: • VTC including – airspace boundaries, classes, frequencies, altitudes • ERSA information • weather and NOTAMS. The examiner should provide the applicant with the simulated charts and ERSA information at the time of advising the flight test route. The examiner is required to accurately replicate the role of air traffic control in the simulated environment. The simulated CTA/CTR environment shall remain ‘active’ for the duration of the flight test (i.e. the simulated CTR shall not be the same aerodrome for the ‘operations at non-towered aerodromes’ assessments).</td>
<td></td>
</tr>
<tr>
<td>(j) Operate in Class G airspace</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(k) Operate at controlled aerodrome</td>
<td>Where a test cannot be conducted at a controlled aerodrome, refer to recommendations in (i) above</td>
<td></td>
</tr>
<tr>
<td>(l) Operate at non-towered aerodrome</td>
<td>NSR</td>
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</tr>
<tr>
<td>(m) Use correct radio procedures</td>
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<td>(n) Manage relevant aircraft systems</td>
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<td>(p) Manage passengers and the carriage of cargo</td>
<td>The examiner should role play as a passenger for the duration or part of the flight test.</td>
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### 7.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.
Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

7.5 Complete (post flight)

7.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.
7.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days after the day of the test, complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
8 Private Pilot Licence – Helicopter

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the private pilot licence and helicopter category rating (PPL H).

8.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the PPL H flight test:

(1) The examiner must conduct the PPL H flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.

(2) The examiner must conduct the PPL H flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.

(3) The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.

(4) The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.

(5) After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.

(6) Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

8.2 Plan

8.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended navigation task to allow for unhurried preparation and planning (simulating a private passenger/cargo carrying operation). The applicant should be given the test route at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hours for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
• 0.8 hour for the general handling and test specific manoeuvres.

The examiner may choose to conduct the general handling and navigation components in two separate flights.

8.2.2 PPL H assessment scope and conditions

The PPL H flight test must be conducted by day under the VFR and in a helicopter, in accordance with subregulation 61.515 (3) of CASR.

The FEH activities and manoeuvres, listed in the Requirements column of Table 10 below, mirror the PPL H test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the PPL H flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the PPL H test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

PPL H flight tolerances and ground reference tolerances are specified in Table 3 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The PPL H applicant should demonstrate that control of the aircraft or procedure is maintained at all times but if the successful outcome is in doubt, corrective action is taken promptly to recover to safe flight.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system on at least one leg.

8.3 Conduct (ground component)

8.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

• flight test context, purpose and content
• assessment procedure
• function of the examiner
• standards against which competency will be assessed
• actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

8.3.2 Document review

The examiner must confirm that an applicant for the PPL H satisfies the eligibility requirements to undertake the flight test for the grant of the CASR Part 61 licence. To achieve this, the CASR 61.235 (2) certification, training records, logbook, licence (or ARN if RPL not issued) and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.
Minimum age - the examiner must sight one of the following documents to verify that the applicant is at least 17:

- Australian driver licence
- CASA issued medical certificate
- Australian passport
- Australian birth certificate.

Aeronautical knowledge examinations – the examiner must review the applicant’s theory examination pass records.

Knowledge deficiency report (KDR) – the examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

Flight training requirements – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

Aeronautical experience – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

English language proficiency – The examiner must ensure that the applicant holds a current AELP assessment.

Eligibility certification – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

Medical certificate – the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the PPL H.

Security check and fit and proper person requirements – regulation 11.055 of CASR and the Aviation Transport Security Regulations require that the applicant has completed the applicable declarations.

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

8.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.
8.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete:

- flight plan
- fuel plan
- flight notification
- weight and balance calculation
- take-off and landing data/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

8.4 Conduct (flight component)

8.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.
Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

8.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying private operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- the expectations of the examiner during the lost procedure simulation
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

8.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the PPL H flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.
### Table 18: Assessment of activities and manoeuvres - PPL H

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>The examiner should conduct a review of the flight plan to assess correct application of wind computations and fuel planning. Gross error checks should also be applied, however where errors are not safety related the applicant should be permitted the opportunity to correct them in flight.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>The examiner should engage the applicant during the pre-flight with questions relevant to the inspection, without disrupting the inspection or compromising safety. Where the aircraft already has a valid maintenance release certification for the day, the applicant is still required to complete the daily inspection in all respects and should explain the certification process.</td>
</tr>
<tr>
<td></td>
<td>(c) Refuel aircraft</td>
<td>Training record evidence and oral questioning should be used in the absence of an actual refuel event. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>It is recommended that the examiner pose a start malfunction or emergency just prior to the start procedure so the applicant’s touch drills can be assessed.</td>
</tr>
<tr>
<td></td>
<td>(b) Lift-off and hover helicopter</td>
<td>The examiner should assess these items during the normal operation of the helicopter in the departure phase.</td>
</tr>
<tr>
<td></td>
<td>(c) Taxi aircraft</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Air transit helicopter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Plan, brief and conduct take-off and departure procedures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) Conduct climbs and climbing turns – must include any 2 of maximum rate, maximum angle or cruise climb</td>
<td>The examiner should pose scenarios to achieve the observation of a climb at best angle to achieve obstacle clearance or at best rate during departure and climb phase.</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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<td>-----------------</td>
</tr>
</tbody>
</table>
| (b) Navigate aircraft en route | The navigation task should be designed such that all of the required competencies can be assessed in a logical sequence. There should be at least one sector of sufficient distance that allows basic navigation technique to be adequately assessed. This sector should be of a sufficient duration to enable the assessment of:  
- multiple navigation cycles  
- track correction techniques  
- continued maintenance of navigation and fuel logs (ETAs and fuel status)  
- position fixing at suitable intervals. | Importantly, the examiner should be satisfied that the applicant is using a suitable navigation methodology that is supported by sound reasoning and application of acceptable VFR navigation procedures. The examiner should give particular attention to the applicant's navigation techniques in and around controlled airspace and how they plan to avoid controlled airspace and/or restricted and prohibited airspace, as applicable. |
| (c) Navigate at low level | NSR | |
| (d) Perform lost procedure | It is an acceptable practice for the examiner to introduce the ‘lost’ scenario immediately following the instrument flying assessment. In normal circumstances the examiner should ensure the ‘lost position’ is at least several nautical miles laterally displaced from the original planned track. | |
| (e) Perform diversion procedure | The examiner should provide a suitable scenario that will enable the applicant to ‘self-select’ the ‘diversion route’ to a ‘suitable aerodrome or an alternate aerodrome’.  
The examiner should not apply any specific time constraints (subject to operational requirements) to execute the diversion. The examiner should ensure that the applicant is at a known position prior to introducing the diversion task. | |
<p>| (f) Use instrument navigation systems | The examiner should consider selecting an appropriate leg for assessing the applicant’s ability to use the aircraft navigation systems. | |
| Test specific activities and manoeuvres | (a) Hover helicopter in crosswind and tailwind and perform turns around any 1 of the rotor mast, nose or tail | The examiner is required to assess headwind/crosswind/tailwind hover and ground taxi unless the applicant’s training records certify dual or solo competence in those wind conditions. In this case the examiner must indicate competency by marking the items on the flight test form with ‘TR’. |</p>
<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b)</td>
<td>Perform sideways and backwards flight</td>
<td>NSR</td>
</tr>
<tr>
<td>(c)</td>
<td>Conduct steep level turns of at least 45˚ bank</td>
<td>Recommend a turn through at least 180 degrees is assessed.</td>
</tr>
<tr>
<td>(d)</td>
<td>Perform full panel instrument flying</td>
<td>The examiner should limit this to no longer than 5 minutes and position for sufficient altitude to conduct unusual attitude recoveries.</td>
</tr>
<tr>
<td>(e)</td>
<td>Full panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>NSR</td>
</tr>
<tr>
<td>(f)</td>
<td>Perform autorotative flight</td>
<td>Recommend assessment of at least entry to, stabilised control of and recovery from minimum rate of descent autorotation.</td>
</tr>
<tr>
<td>(g)</td>
<td>Land on and lift-off from sloping ground</td>
<td>It is not a requirement to demonstrate maximum slope landing limitations.</td>
</tr>
<tr>
<td>(h)</td>
<td>Land, manoeuvre and take-off in a confined area</td>
<td>NSR</td>
</tr>
<tr>
<td>(i)</td>
<td>Execute limited power take-off, approach and landing</td>
<td>NSR</td>
</tr>
<tr>
<td>(j)</td>
<td>Perform forced landing</td>
<td>The examiner should initiate the simulated engine failure at least 2,000’ AGL to ensure the applicant has sufficient time to perform the procedure.</td>
</tr>
<tr>
<td>(k)</td>
<td>Manage engine failure during hover or taxi</td>
<td>NSR</td>
</tr>
<tr>
<td>(l)</td>
<td>Manage a control or tail rotor malfunction in flight and at the hover</td>
<td>NSR</td>
</tr>
<tr>
<td>(m)</td>
<td>Manage a system malfunction – at least 1 from engine fire, electrical failure, hydraulic system, airframe fuel system or engine governor system</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(a) Conduct descents and descending turns</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>These items should be assessed during the normal operation of the helicopter during the circuit phase.</td>
</tr>
<tr>
<td></td>
<td>(b) Approach to the hover</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Air transit helicopter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Perform a go-around procedure</td>
<td>The examiner may need to introduce a reason to conduct the go-around procedure.</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td>General requirements</td>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td></td>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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<td>----------------</td>
</tr>
<tr>
<td>(i) Operate in controlled airspace</td>
<td>Where a test cannot be conducted in actual controlled airspace the examiner is required to simulate CTR and CTA. The simulation should include all performance criteria of CTR (Part 61 MOS Schedule 2). At a minimum, the simulation methodology should include simulated: • VTC including – airspace boundaries, classes, frequencies, altitudes • ERSA information • weather and NOTAMS. The examiner should provide the applicant with the simulated charts and ERSA information at the time of advising the flight test route. The examiner is required to accurately replicate the role of air traffic control in the simulated environment. The simulated CTA/CTR environment shall remain ‘active’ for the duration of the flight test (i.e. the simulated CTR shall not be the same aerodrome for the ‘operations at non-towered aerodromes’ assessments).</td>
<td></td>
</tr>
<tr>
<td>(j) Operate in Class G airspace</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(k) Operate at controlled aerodrome</td>
<td>As per (i) above</td>
<td></td>
</tr>
<tr>
<td>(l) Operate at non-towered aerodrome</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(m) Use correct radio procedures</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(n) Manage relevant aircraft systems</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(o) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(p) Manage passengers and the carriage of cargo</td>
<td>The examiner should role play as a passenger for the duration or part of the flight test.</td>
<td></td>
</tr>
</tbody>
</table>

### 8.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.
Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

8.5 Complete (post flight)

8.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.
8.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days after the day of the test, complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
9 Commercial Pilot Licence - Aeroplane

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the commercial pilot licence and aeroplane category rating (CPL A).

9.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the CPL A flight test:

1. The examiner must conduct the CPL A flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the CPL A flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

9.2 Plan

9.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended navigation task to allow for unhurried preparation and planning (simulating a commercial passenger/cargo carrying operation). The applicant should be given the general test details least 24 hours before the start of the flight test and the specific scenario for the test route at least 2 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:
• 1.7 hours for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
• 0.8 hour for the general handling and test specific manoeuvres.

The examiner may choose to conduct the general handling and navigation components in two separate flights.

**Use of IFR procedures**

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the flight test or be taken into account in the flight test flight time. A landing and shutdown should terminate the IFR flight segment before commencing the CPL A assessment flight sequences.

The CPL A flight test should be concluded by a landing and shutdown in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the CPL A flight test should be considered as the flight time for the flight test.

### 9.2.2 CPL A assessment scope and conditions

The CPL A flight test must be conducted by day under the VFR and in an aeroplane, in accordance with subregulation 61.580 (3) of CASR. The aeroplane must have a cruise TAS of not less than 120 kts and either a turbine engine with a propeller or a piston engine with a variable pitch propeller.

The FEH activities and manoeuvres, listed in the Requirements column of Table 11 below, mirror the CPL A test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the CPL A flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the CPL A test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

CPL A flight tolerances and ground reference tolerances are specified in Table 2 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The CPL A applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system on at least one leg.

### 9.3 Conduct (ground component)

#### 9.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
• assessment procedure
• function of the examiner
• standards against which competency will be assessed
• actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

9.3.2 Document review

The examiner must confirm that an applicant for the CPL A satisfies the eligibility requirements to undertake the flight test for the grant of the CASR Part 61 licence. To achieve this, the CASR 61.235 (2) certification, training records, logbook, licence (or ARN if RPL/PPL not issued) and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

Minimum age - The examiner must sight one of the following documents to verify that the applicant is at least 18:

• Australian driver licence
• CASA issued medical certificate
• Australian passport
• Australian birth certificate.

Aeronautical knowledge examinations – The examiner must review the applicant’s theory examination pass records.

Knowledge deficiency report (KDR) – The examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

Flight training requirements – The examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

Aeronautical experience – The examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

English language proficiency – The examiner must ensure that the applicant holds a current AELP assessment.

Eligibility certification – The examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

Medical certificate – The examiner must check that the applicant holds a class 1 medical certificate, or a medical exemption allowing them to exercise the privileges of the CPL A.

Security check and fit and proper person requirements – regulation 11.055 of CASR and the Aviation Transport Security Regulations require that the applicant has completed the applicable declarations.
If the flight test is a retest following a fail assessment – The examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

9.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

9.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:

- flight plan
- fuel plan
- flight notification
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

9.4 Conduct (flight component)

9.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.
• **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test.

• **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

### 9.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying commercial operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- the expectations of the examiner during the lost procedure simulation
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

### 9.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the **CPL A** flight test. Where there are no specific recommendations, 'NSR' is listed in the table against the unit or element.
### Table 19: Assessment of activities and manoeuvres - CPL A

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-flight</strong></td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>The examiner should conduct a review of the flight plan to assess correct application of wind computations and fuel planning. Gross error checks should also be applied, however where errors are not safety related the applicant should be permitted the opportunity to correct them in flight.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>The examiner should engage the applicant during the pre-flight with questions relevant to the inspection, without disrupting the inspection or compromising safety. Where the aircraft already has a valid maintenance release certification for the day, the applicant is still required to complete the daily inspection in all respects and should explain the certification process.</td>
</tr>
<tr>
<td></td>
<td>(c) Refuel aircraft</td>
<td>Training record evidence and oral questioning should be used in the absence of an actual refuel event. In this case the examiner must indicate competency by marking the item on the flight test form with 'TR'.</td>
</tr>
<tr>
<td><strong>Ground operations, take-off, departure and climb</strong></td>
<td>(a) Complete all relevant checks and procedures</td>
<td>It is recommended that the examiner pose a start malfunction or emergency just prior to the start procedure so the applicant’s touch drills can be assessed.</td>
</tr>
<tr>
<td></td>
<td>(b) Taxi aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Conduct crosswind take-off</td>
<td>Training record evidence of dual or solo competence in crosswinds of at least 70% of the AFM maximum and oral questioning should be used in the absence of a crosswind. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td></td>
<td>(e) Conduct short field take-off</td>
<td>The examiner should attempt to pose scenarios such as an obstacle at 300’ AGL following a short field take off</td>
</tr>
<tr>
<td></td>
<td>(f) Conduct climbs and climbing turns – must include any 2 of maximum rate, maximum angle or cruise climb</td>
<td>The examiner should attempt to pose scenarios such as an obstacle at 300’ AGL following a short field take off, or a requirement for best rate to 2000’ AGL.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Navigate aircraft en route</td>
<td>The navigation task should be designed such that all of the required competencies can be assessed in a logical sequence. There should be at least one sector of sufficient distance that allows basic navigation technique to be adequately assessed. This sector should be of a sufficient duration to enable the assessment of: multiple navigation cycles track correction techniques continued maintenance of navigation and fuel logs (ETAs and fuel status) position fixing at suitable intervals. Importantly, the examiner should be satisfied that the applicant is using a suitable navigation methodology that is supported by sound reasoning and application of acceptable VFR navigation procedures. The examiner should give particular attention to the applicant's navigation techniques in and around controlled airspace and how they plan to avoid controlled airspace and/or restricted and prohibited airspace, as applicable.</td>
</tr>
<tr>
<td></td>
<td>(c) Maintain any 1 cruise configuration for turbulence, holding or range</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Navigate at low level</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) Perform lost procedure</td>
<td>It is an acceptable practice for the examiner to introduce the ‘lost’ scenario immediately following the instrument flying assessment. In normal circumstances the examiner should ensure the ‘lost position’ is at least several nautical miles laterally displaced from the original planned track.</td>
</tr>
<tr>
<td></td>
<td>(f) Perform diversion procedure</td>
<td>The examiner should provide a suitable scenario that will enable the applicant to ‘self-select’ the ‘diversion route’ to a ‘suitable aerodrome or an alternate aerodrome’. The examiner should not apply any specific time constraints (subject to operational requirements) to execute the diversion. The examiner should ensure that the applicant is at a known position prior to introducing the diversion task.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>(g) Use instrument navigation systems</td>
<td>The examiner should consider selecting an appropriate leg for assessing the applicant’s ability to use the aircraft navigation systems.</td>
<td></td>
</tr>
<tr>
<td>(a) Enter and recover from stalls – one must be in the approach configuration and at least: single engine: 1 stall and 1 incipient spin multi engine: 2 stalls</td>
<td>The examiner should place emphasis on the application of correct technique rather than the achievement of a minimum height loss.</td>
<td></td>
</tr>
<tr>
<td>(b) Conduct steep level turns of at least 45° bank</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(c) Perform full and limited panel instrument flying</td>
<td>The examiner should limit this to no longer than five minutes and position for sufficient altitude to conduct unusual attitude recoveries. For the limited panel assessment, the primary attitude indicator/display and the primary heading indicator/display may be ‘failed’ simultaneously. If assessed, unreliable airspeed indications must be a separate exercise. For EFIS cockpits, the use of standby instruments is acceptable for limited panel assessments.</td>
<td></td>
</tr>
<tr>
<td>(d) Full and limited panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>At least one recovery full panel and at least one recovery limited panel must be assessed.</td>
<td></td>
</tr>
<tr>
<td>(e) Manage engine failure after take-off</td>
<td>The examiner must consider the airfield terrain, obstacles and noise abatement requirements. Where the aerodrome does not allow the safe practise of EFATO, the examiner should simulate the procedure elsewhere at altitude.</td>
<td></td>
</tr>
<tr>
<td>(f) Conduct precautionary search</td>
<td>The examiner should initiate the precautionary search with a suitable scenario that allows the applicant to initiate the precautionary search procedure.</td>
<td></td>
</tr>
<tr>
<td>(g) Manage a malfunction during start or shutdown and one of: a system malfunction, fire or radio failure</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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<td>-----------------</td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(h) Perform forced landing (single engine) or manage engine failure in cruise (multi engine)</td>
<td>For SE, the examiner should initiate the simulated engine failure at least 2,500’AGL to ensure the applicant has sufficient time to perform the procedure.</td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct descents and descending turns</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Conduct crosswind landing</td>
<td>The examiner is required to assess a crosswind landing unless the applicant’s training records certify dual or solo competence in crosswinds of at least 70% of the AFM maximum. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td></td>
<td>(c) Conduct short field and flapless landings</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Perform a go-around procedure</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td>General requirements</td>
<td>(a) Maintain effective lookout</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, workcycles and procedural techniques.</td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
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</tr>
<tr>
<td>----------------</td>
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<tr>
<td></td>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
</tbody>
</table>
|                | (i) Operate in controlled airspace                                            | Where a test cannot be conducted in actual controlled airspace the examiner is required to simulate CTR and CTA. The simulation should include all performance criteria of CTR (Part 61 MOS Schedule 2).  
At a minimum, the simulation methodology should include simulated:  
VTC including – airspace boundaries, classes, frequencies, altitudes  
ERSA information  
weather and NOTAMS.  
The examiner should provide the applicant with the simulated charts and ERSA information at the time of advising the flight test route.  
The examiner is required to accurately replicate the role of air traffic control in the simulated environment.  
The simulated CTA/CTR environment shall remain ‘active’ for the duration of the flight test (i.e. the simulated CTR shall not be the same aerodrome for the ‘operations at non-towered aerodromes’ assessments). |
|                | (j) Operate in Class G airspace                                                | NSR                                                                                                                                                                                                                  |
|                | (k) Operate at controlled aerodrome                                            | Where a test cannot be conducted at a controlled aerodrome, refer to recommendations in (i) above                                                                                                                        |
|                | (l) Operate at non-towered aerodrome                                           | NSR                                                                                                                                                                                                                  |
|                | (m) Use correct radio procedures                                               | NSR                                                                                                                                                                                                                  |
|                | (n) Manage relevant aircraft systems                                            | NSR                                                                                                                                                                                                                  |
|                | (o) Manage fuel system and monitor fuel plan and usage                         | NSR                                                                                                                                                                                                                  |
9.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.
9.5 Complete (post flight)

9.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

9.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
10 Commercial Pilot Licence - Helicopter

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the commercial pilot licence and helicopter category rating (CPL H).

10.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the CPL H flight test:

1. The examiner must conduct the CPL H flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.

2. The examiner must conduct the CPL H flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.

3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.

4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.

5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.

6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

10.2 Plan

10.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended navigation task to allow for unhurried preparation and planning (simulating a commercial passenger/cargo carrying operation). The applicant should be given the general test details at least 24 hours before the start of the flight test and the specific scenario for the test route at least 2 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:
• 1.7 hours for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
• 0.8 hour for the general handling and test specific manoeuvres.

The examiner may choose to conduct the general handling and navigation components in two separate flights.

**Use of IFR procedures**

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the flight test or be taken into account in the flight test flight time. A landing and shutdown should terminate the IFR flight segment before commencing the CPL H assessment flight sequences.

The CPL H flight test should be concluded by a landing and shutdown in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the CPL H flight test should be considered as the flight time for the flight test.

**10.2.2 CPL H assessment scope and conditions**

The CPL H flight test must be conducted by day under the VFR and in a helicopter, in accordance with subregulation 61.580 (3) of CASR.

The FEH activities and manoeuvres, listed in the Requirements column of Table 12 below, mirror the CPL H test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the CPL H flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the CPL H test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

CPL H flight tolerances and ground reference tolerances are specified in table 4 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The CPL H applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system on at least one leg.

**10.3 Conduct (ground component)**

**10.3.1 Initial brief to applicant**

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
standards against which competency will be assessed
actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

10.3.2 Document review

The examiner must confirm that an applicant for the CPL H satisfies the eligibility requirements to undertake the flight test for the grant of the CASR Part 61 licence. To achieve this, the CASR 61.235 (2) certification, training records, logbook, licence (or ARN if RPL/PPL not issued) and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

Minimum age - the examiner must sight one of the following documents to verify that the applicant is at least 18:

- Australian driver licence
- CASA issued medical certificate
- Australian passport
- Australian birth certificate.

Aeronautical knowledge examinations – the examiner must review the applicant’s theory examination pass records.

Knowledge deficiency report (KDR) – the examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

Flight training requirements – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

Aeronautical experience – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

English language proficiency – the examiner must ensure that the applicant holds a current AELP assessment.

Eligibility certification – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

Medical certificate – the examiner must check that the applicant holds either a class 1 medical certificate, or a medical exemption allowing them to exercise the privileges of the CPL H.

Security check and fit and proper person requirements – regulation 11.055 of CASR and the Aviation Transport Security Regulations require that the applicant has completed the applicable declarations.
If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

10.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS. The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

10.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:

- flight plan
- fuel plan
- flight notification
- weight and balance calculation
- take-off and landing data/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

10.4 Conduct (flight component)

10.4.1 Assessment of the applicant's performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
• **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test

• **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

### 10.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying commercial operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- the expectations of the examiner during the lost procedure simulation
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

### 10.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the **CPL H** flight test. Where there are no specific recommendations, 'NSR' is listed in the table against the unit or element.
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<td>(a) Perform pre-flight actions and procedures</td>
<td>The examiner should conduct a review of the flight plan to assess correct application of wind computations and fuel planning. Gross error checks should also be applied, however where errors are not safety related the applicant should be permitted the opportunity to correct them in flight.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>The examiner should engage the applicant during the pre-flight with questions relevant to the inspection, without disrupting the inspection or compromising safety. Where the aircraft already has a valid maintenance release certification for the day, the applicant is still required to complete the daily inspection in all respects and should explain the certification process.</td>
</tr>
<tr>
<td></td>
<td>(c) Refuel aircraft</td>
<td>Training record evidence and oral questioning should be used in the absence of an actual refuel event. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>It is recommended that the examiner pose a start malfunction or emergency just prior to the start procedure so the applicant’s touch drills can be assessed.</td>
</tr>
<tr>
<td></td>
<td>(b) Lift-off and hover helicopter</td>
<td>The examiner should assess these items during the normal operation of the helicopter in the departure phase.</td>
</tr>
<tr>
<td></td>
<td>(c) Taxi aircraft</td>
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</tr>
<tr>
<td></td>
<td>(d) Air transit helicopter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Plan, brief and conduct take-off and departure procedures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) Conduct climbs and climbing turns – must include any 2 of maximum rate, maximum angle or cruise climb</td>
<td>The examiner should pose scenarios to achieve the observation of a climb at best angle to achieve obstacle clearance or at best rate during departure and climb phase.</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
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</tbody>
</table>
| (b) Navigate aircraft en route | The navigation task should be designed such that all of the required competencies can be assessed in a logical sequence. There should be at least one sector of sufficient distance that allows basic navigation technique to be adequately assessed. This sector should be of a sufficient duration to enable the assessment of:  
  - multiple navigation cycles  
  - track correction techniques  
  - continued maintenance of navigation and fuel logs (ETAs and fuel status)  
  - position fixing at suitable intervals.  
Importantly, the examiner should be satisfied that the applicant is using a suitable navigation methodology that is supported by sound reasoning and application of acceptable VFR navigation procedures. The examiner should give particular attention to the applicant's navigation techniques in and around controlled airspace and how they plan to avoid controlled airspace and/or restricted and prohibited airspace, as applicable. |  |
| (c) Navigate at low level | NSR |  |
| (d) Perform lost procedure | It is an acceptable practice for the examiner to introduce the 'lost' scenario immediately following the instrument flying assessment. In normal circumstances the examiner should ensure the 'lost position' is at least several nautical miles laterally displaced from the original planned track. |  |
| (e) Perform diversion procedure | The examiner should provide a suitable scenario that will enable the applicant to 'self-select' the 'diversion route' to a 'suitable aerodrome or an alternate aerodrome'.  
The examiner should not apply any specific time constraints (subject to operational requirements) to execute the diversion. The examiner should ensure that the applicant is at a known position prior to introducing the diversion task. |  |
<p>| (f) Use instrument navigation systems | The examiner should consider selecting an appropriate leg for assessing the applicant's ability to use the aircraft navigation systems. |  |
| Test specific activities and manoeuvres | (a) Hover helicopter in crosswind and tailwind and perform turns around any 1 of the rotor mast, nose or tail | The examiner is required to assess headwind/crosswind/tailwind hover and ground taxi unless the applicant's training records certify dual or solo competence in those wind conditions. In this case the examiner must indicate competency by marking the items on the flight test form with 'TR'. |</p>
<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Conduct steep level turns of at least 45˚ bank</td>
<td>Recommend a turn through at least 180 degrees is assessed.</td>
<td></td>
</tr>
<tr>
<td>(c) Perform full and limited panel instrument flying</td>
<td>The examiner should limit this to no longer than five minutes and position for sufficient altitude to conduct unusual attitude recoveries. For the limited panel assessment, the primary attitude indicator/display and the primary heading indicator/display may be ‘failed’ simultaneously. If assessed, unreliable airspeed indications must be a separate exercise. For EFIS cockpits, the use of standby instruments is acceptable for limited panel assessments.</td>
<td></td>
</tr>
<tr>
<td>(d) Full and limited panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>At least one recovery full panel and at least one recovery limited panel must be assessed.</td>
<td></td>
</tr>
<tr>
<td>(e) Perform autorotative flight</td>
<td>Recommend assessment of at least entry to, stabilised control of and recovery from minimum rate of descent autorotation.</td>
<td></td>
</tr>
<tr>
<td>(f) Land on and lift-off from sloping ground</td>
<td>It is not a requirement to demonstrate maximum slope landing limitations.</td>
<td></td>
</tr>
<tr>
<td>(g) Land, manoeuvre and take-off in a confined area or land and take-off from pinnacle or ridgeline</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(h) Execute limited power take-off, approach and landing</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(i) Perform forced landing (single engine) or manage engine failure in cruise (multi engine)</td>
<td>The examiner should initiate the simulated engine failure at a height above ground level and appropriate airspeed to ensure the applicant has sufficient time to perform the procedure.</td>
<td></td>
</tr>
<tr>
<td>(j) Manage engine failure during hover or taxi</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(k) Manage a control or tail rotor malfunction in flight and at the hover</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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<tr>
<td></td>
<td>(l) Manage a system malfunction – at least 1 from engine fire, electrical failure, hydraulic system, airframe fuel system or engine governor system</td>
<td>NSR</td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(a) Conduct descents and descending turns</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan and conduct arrival and circuit joining procedures</td>
<td></td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>These items should be assessed during the normal operation of the helicopter during the circuit phase.</td>
</tr>
<tr>
<td></td>
<td>(b) Approach to the hover</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Air transit helicopter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Perform a go-around procedure</td>
<td>The examiner may need to introduce a reason to conduct the go-around procedure.</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td>General requirements</td>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td></td>
<td>(f) Recognise and manage threats</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
<tr>
<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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</tr>
<tr>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| (i) Operate in controlled airspace |  | Where a test cannot be conducted in actual controlled airspace the examiner is required to simulate CTR and CTA. The simulation should include all performance criteria of CTR (Part 61 MOS Schedule 2). At a minimum, the simulation methodology should include simulated:  
- VTC including – airspace boundaries, classes, frequencies, altitudes  
- ERSA information  
- weather and NOTAMS.  
The examiner should provide the applicant with the simulated charts and ERSA information at the time of advising the flight test route.  
The examiner is required to accurately replicate the role of air traffic control in the simulated environment.  
The simulated CTA/CTR environment shall remain ‘active’ for the duration of the flight test (i.e. the simulated CTR shall not be the same aerodrome for the ‘operations at non-towered aerodromes’ assessments). |
| (j) Operate in Class G airspace | NSR |  |
| (k) Operate at controlled aerodrome | NSR | As per (i) above |
| (l) Operate at non-towered aerodrome | NSR |  |
| (m) Use correct radio procedures | NSR |  |
| (n) Manage relevant aircraft systems | NSR |  |
| (o) Manage fuel system and monitor fuel plan and usage | NSR |  |
| (p) Manage passengers and the carriage of cargo | NSR | The examiner should role play as a passenger for the duration or part of the flight test. |

10.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.
Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

**10.5 Complete (post flight)**

**10.5.1 Debriefings**

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.
10.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
11 Multi-crew Pilot Licence

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the multi-crew pilot licence (MPL) and associated aircraft category rating.

11.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the MPL flight test:

1. The examiner must conduct the MPL flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the MPL flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

11.2 Plan

11.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended navigation task to allow for unhurried preparation and planning (simulating an air transport passenger/cargo carrying operation). The applicant should be given the test route at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 2.0 hours for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
1.0 hour for the general handling and test specific manoeuvres. The examiner may choose to conduct the general handling and navigation components in two separate flights.

11.2.2 MPL assessment scope and conditions

The MPL flight test must be conducted under the IFR and in an aeroplane or an FSTD approved for the purpose, in accordance with subregulation 61.655 (3) of CASR. The aeroplane and FSTD must be multi-engine, turbine-powered and type rated.

The FEH activities and manoeuvres, listed in the Requirements column of Table 13 below, mirror the MPL test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the MPL flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the MPL test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

MPL flight tolerances and ground reference tolerances are specified in Tables 2 and 5 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The MPL applicant should demonstrate safe and effective management of the flight as the co-pilot in a multi-crew environment, that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

The entire flight test should be conducted as a multi-crew operation (2-pilot) for all flight component test items. The applicant may use the aeroplane automation systems, unless otherwise directed by the examiner.

When the flight test is conducted in an aircraft, the examiner may occupy either a control seat or a suitable observer seat (jump seat). Where the examiner occupies a control seat (as captain), the examiner should be the nominated pilot in command (PIC).

Examiners must ensure that they do not impart training or assistance to the applicant during the conduct of the MPL test. If the examiner is occupying a control seat they must provide the normal duties of a captain in that role, but only to the extent required by the operator’s operations manual.

Where the examiner occupies a jump seat, a suitably qualified pilot should occupy the captain seat and be the nominated PIC.

Where the examiner or a suitably qualified pilot occupies a control seat, the examiner should brief all crew members on the following:

- command/safety of flight responsibilities
- flight test profile and scenario
- role of the ‘captain’
- introduction of non-normal sequences
- discontinuation/termination of the flight test
- communication protocols.
When the flight test is conducted in an approved FSTD, the examiner should not position the applicant over the top of a navigation aid or at the commencement of the approach procedure being assessed. The examiner should not speed up or in any other way change the real-time nature of the flight, except when a non-normal sequence has been completed and the simulator returned to its normal operating state.

The applicant must demonstrate competency in performing instrument approach operations for at least two different kinds of procedures, including a 2D instrument approach operation to the published MDA/H, and an ILS or GLS instrument approach to the published DA/H.

Examiners should use only the authorised instrument approach procedures for the aerodromes being used. Overlay instrument approaches are not to be used for an MPL flight test, except where an aeroplane’s navigation system has been approved for such approaches.

The instrument flight assessment should consist of a flight with at least the CIR, IAP2 and IAP3 elements conducted under the IFR. The flight should include a sector to an aerodrome (other than the departure aerodrome) serviced by a published instrument approach which the aeroplane is equipped to use.

The applicant should demonstrate proficiency to operate the aeroplane on at least one instrument approach without the autopilot or flight director being used. Reversion to manual flight must be accomplished prior to the Initial Approach Fix (IAF) or equivalent.

Examiners must be cognisant of the CASR 61.385 ‘general competency requirement’ regarding the authority to exercise the privileges of a rating or an activity in an aircraft. For manoeuvres that involve elevated risk (abnormal and emergency flight manoeuvres) when conducting a flight test in an aircraft, the examiner must be competent in the management of all flight test activities, including the ability to safely manage potential applicant mishandling. This level of competency should be achieved with a targeted program of examiner training in an aircraft or a simulator where one is available.

11.3 Conduct (ground component)

11.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

11.3.2 Document review

The examiner must confirm that an applicant for the MPL satisfies the eligibility requirements to undertake the flight test for the grant of the CASR Part 61 licence. To achieve this, the CASR 61.235 (2) certification, training records, logbook, licence (or ARN if RPL/PPL/CPL not
issued) and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Minimum age** - the examiner must sight one of the following documents to verify that the applicant is at least 18:

- Australian driver licence
- CASA issued medical certificate
- Australian passport
- Australian birth certificate.

**Aeronautical knowledge examinations** – the examiner must review the applicant’s theory examination pass records.

**Knowledge deficiency report** (KDR) – the examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

**English language proficiency** – the examiner must ensure that the applicant holds a current AELP assessment.

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – the examiner must check that the applicant holds either a class 1 medical certificate, or a medical exemption allowing them to exercise the privileges of the MPL.

**Security check and fit and proper person requirements** – regulation 11.055 of CASR and the Aviation Transport Security Regulations require that the applicant has completed the applicable declarations.

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

### 11.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling
down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

**11.3.4 Assessment of flight planning**

As part of the flight test, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- flight notification
- loading system
- take-off and landing data/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

**11.4 Conduct (flight component)**

**11.4.1 Assessment of the applicant's performance**

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.
- **Knowledge** – during the course of the flight test the applicant's knowledge may be further tested.
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test.
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

The examiner should assess adherence to either company SOPs, training provider SOPs or the aeroplane manufacturer’s SOPs, e.g., operator specific, Boeing or Airbus, as nominated by the applicant.
Assessment should be based on the technique used by the applicant to satisfy compliance with SOPs in a multi-crew environment, and not just the technique used by the applicant and the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

Sound judgement and decision-making should be displayed. It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

### 11.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying air transport operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- clarification of crew responsibilities in the event of actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable)

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

### 11.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the MPL flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

**Table 21: Assessment of activities and manoeuvres - MPL**

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Plan an IFR flight</td>
<td>Applicants should be given notice and pre-flight material of the intended flight test route in accordance with their operation.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight actions and procedures</td>
<td>An applicant may apply operator specific fuel policies for carriage over and above the minimum legal statutory fuel requirements.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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</tr>
<tr>
<td><strong>Ground operations, take-off, departure and climb</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Perform pre-flight inspection</td>
<td>In-transit (aircraft turnaround) pre-flight cockpit preparation is acceptable for the purposes of the pre-flight inspection.</td>
<td></td>
</tr>
<tr>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(b) Taxi aircraft</td>
<td>Taxiing – only applicable in simulator/aircraft types for which ground steering is controlled from either operating seat.</td>
<td></td>
</tr>
<tr>
<td>(c) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(d) Conduct crosswind take-off</td>
<td>Training record evidence of dual or solo competence in crosswinds of at least 70% of the AFM maximum and oral questioning should be used in the absence of a crosswind. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
<td></td>
</tr>
<tr>
<td>(e) Conduct an instrument departure (normal operations)</td>
<td>If available, the departure should be published or ATC cleared.</td>
<td></td>
</tr>
<tr>
<td>(f) Conduct climb profiles and climbing turns</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>En route cruise</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Navigate aircraft en route using ground and satellite navigation systems</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(b) Perform navigation systems integrity checks</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(c) Identify and avoid hazardous weather conditions</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(d) Maintain any 1 cruise configuration for turbulence, holding or range</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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</tr>
<tr>
<td>(a) Perform full and limited panel instrument flying</td>
<td>Where a failure of the primary attitude system is introduced, the examiner should not simulate a failure of the system when the aircraft is flying in IMC or at night. In complex aircraft types with multiple primary instrument display redundancy capability; intent of the MOS (IFL unit of competency) is satisfied with a reduction of full primary instrument display as a result of a system(s) failure. This MOS competency should be accomplished by the applicant demonstrating system / checklist knowledge (recovering instrumentation where applicable) to a level whereby satisfactory manoeuvring can be conducted, albeit on an altered instrument scan. Forcing the aircraft into a situation of multiple unrealistic failures, whereby the standby artificial horizon and magnetic compass are the only primary means of instrumentation, is not necessary.</td>
<td></td>
</tr>
<tr>
<td>(b) Full and limited panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>If the flight test is being conducted in an aeroplane and not an approved simulator, recovery from unusual attitudes should only be conducted by day and the examiner should have a clear horizon. At least one recovery full panel and at least one recovery limited panel must be assessed.</td>
<td></td>
</tr>
<tr>
<td>(c) Manage engine failure during take-off - IAS ≥ V1</td>
<td>The applicant shall attain optimum aeroplane performance following failure of an engine. The speed at which that failure may be simulated shall be as follows: (i) aeroplanes for which the take-off performance is predicated on the establishment of a V1, failure of the engine shall be simulated at a speed greater than V1; (ii) aeroplanes other than those described in subparagraph (i) above, failure of the engine shall be simulated at a speed greater than either, (a) the 1 engine inoperative best rate of climb speed or (b) the take-off safety speed plus 10 knots, whichever is the higher. In an aircraft the simulated engine failure should not be conducted at night or in IMC and the examiner should have visual reference at all times during the manoeuvre.</td>
<td></td>
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<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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<tr>
<td>(d) Conduct instrument departure OEI</td>
<td>The departure must be a separate event to the one engine inoperative (OEI) missed approach.</td>
<td></td>
</tr>
<tr>
<td>(e) Conduct instrument approach OEI</td>
<td>The applicant should demonstrate proficiency in the management of the aircraft with OEI during an approach. The simulated engine failure should be introduced at or before the Final Approach Fix (FAF).</td>
<td></td>
</tr>
<tr>
<td>(f) Conduct missed approach OEI</td>
<td>The applicant should fly the published approach followed by the published missed approach whilst maintaining the specified flight path tolerances for OEI operations.</td>
<td></td>
</tr>
<tr>
<td>(g) Manage an event – system malfunction, fire or radio failure</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(a) Perform a descent or published arrival procedure to an aerodrome</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Track to holding fix and conduct a holding pattern or sector 3 entry procedure</td>
<td>If a sector 3 entry into a holding pattern is conducted, an additional holding pattern is not required.</td>
</tr>
<tr>
<td></td>
<td>(c) 2D, prepare for approach</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) 2D, conduct approach</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) 3D, prepare for approach</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(f) 3D, conduct approach</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(g) Conduct missed approach</td>
<td>Since a OEI missed approach is required in the test, an all engines operating (AEO) missed approach may be included but is not required. Only one missed approach is required. If the applicant conducts a 2D missed approach, they must be able to describe the 3D DA procedure. If a 3D missed approach is conducted, they must describe the 2D MDA procedure. This is best completed during the ground component.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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<tr>
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</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct circling approach if required</td>
<td>The circling approach must be demonstrated as the continuation of the instrument approach from the specified circling minima, must be flown over the aerodrome specified on the instrument approach plate and must be at least a 90° heading change to the runway. It must not be flown as a standalone low level circuit. For simulators, the environmental settings should be set to not more than 1.5 times the visibility minima of the circling approach minima. The circling approach may not be demonstrated in a flight simulator unless it is specifically approved for visual operations.</td>
</tr>
<tr>
<td></td>
<td>(b) Conduct crosswind landing</td>
<td>Training record evidence of dual or solo competence in crosswinds of at least 70% of the AFM maximum and oral questioning should be used in the absence of a crosswind. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td></td>
<td>(c) Land and perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td>General requirements</td>
<td>(a) Maintain effective lookout</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS and MCO competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
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<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
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<td></td>
<td>(d) Set priorities and manage tasks</td>
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<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
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<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
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<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
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<tr>
<td></td>
<td>(h) Recognise and manage undesired aircraft state</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
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</table>

NSR: Not specified requirement
<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
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<tbody>
<tr>
<td></td>
<td>(i) Operate effectively as a crew member</td>
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<td></td>
<td>(j) Demonstrate effective leadership and authority</td>
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<td></td>
<td>(k) Maintain multi-crew situational awareness</td>
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<td>(l) Make effective decisions</td>
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<td></td>
<td>(m) Operate in controlled airspace</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(n) Operate in Class G airspace</td>
<td>If applicable to test profile</td>
</tr>
<tr>
<td></td>
<td>(o) Operate at controlled aerodrome</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(p) Operate at non-towered aerodrome</td>
<td>If applicable to test profile</td>
</tr>
<tr>
<td></td>
<td>(q) Use correct radio procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(r) Manage relevant aircraft systems</td>
<td>The applicant should demonstrate a sound working knowledge of the aeroplane’s automation system, including use of the Flight Management Computer System (FMCS), the Autopilot Flight Director System (AFDS) and the Mode Control Panel (MCP) (or however these systems are described).</td>
</tr>
<tr>
<td></td>
<td>(s) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(t) Manage passengers and the carriage of cargo</td>
<td>The examiner should role play ground crew and passengers as applicable.</td>
</tr>
</tbody>
</table>

### 11.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

#### Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).
Examples of safety critical failure items include, **but are not limited to**: 

- failure to complete checklist items mandated by the AFM and in accordance with the flight check system (FCS), including failure to recall memory items (however described)
- sustained failure to maintain SOPs
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM or operations manual
- failure to demonstrate sound working knowledge of aeroplane automation (ie: FMS, AFDS, and/or MCP) or incorrect use of the aeroplane automation systems
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes or any specified altitude limitations when operating in IMC or simulated IMC
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2 and MCO.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

**11.5 Complete (post flight)**

**11.5.1 Debriefings**

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.
11.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
12 Air Transport Pilot Licence - Aeroplane

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the air transport pilot licence and aeroplane category rating (ATPL A).

12.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the ATPL A flight test:

1. The examiner must conduct the ATPL A flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the ATPL A flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before commencing in-aircraft or FSTD flight test components.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. If the flight test is conducted in an aircraft, from a safety of flight perspective, after a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

12.2 Plan

12.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended flight test route to allow for unhurried preparation and planning (simulating an air transport passenger/cargo carrying operation). The applicant should be given the test route at least 24 hours before the start of the flight test.

Approximately 3 hours flight time is required to adequately assess the ATPL flight test competencies.
The examiner may choose to conduct the general handling and navigation components in two separate flights.

### 12.2.2 ATPL A assessment scope and conditions

The ATPL A flight test must be conducted under the IFR and in an aeroplane or an FSTD approved for the purpose, in accordance with subregulation 61.700(5) of CASR. The aeroplane or FSTD must be multi-engine, turbine-powered and configured for flight, and operated, with a co-pilot.

**Note 1:** Multi-engine, turbine powered aircraft that are single pilot type certificated, must have a CAR 232 approved multi-pilot Flight Check System to be used for ATPL flight tests.

**Note 2:** Where the examiner is not familiar with the SOPs, the examiner must obtain the abbreviated and expanded format multi crew procedures in sufficient time to achieve familiarity.

The FEH activities and manoeuvres, listed in the Requirements column of Table 14 below, mirror the ATPL A test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the ATPL A flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the ATPL A test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

ATPL A flight tolerances and ground reference tolerances are specified in Tables 2 and 5 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The ATPL A applicant should demonstrate safe and effective management of the flight as the pilot in command (PIC) in a multi-crew environment, that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

The entire flight test must be conducted as a multi-crew operation (2-pilot) for all flight component test items. The applicant may use the aeroplane automation systems unless otherwise directed by the examiner.

The applicant should occupy the normal command seat for the aircraft type and operation. Approval for applicants to occupy other than as described above must be obtained from the CASA Manager FTO.

Examiners must ensure that they do not impart training or provide assistance to the applicant during the conduct of the ATPL A test. If the examiner is occupying a control seat they must provide the normal duties of a co-pilot in that role, but only to the extent required by the operator’s operations manual.

### In-Aircraft Flight Test

When the flight test is conducted in an aircraft, the examiner may occupy either a control seat or a suitable observer seat (jump seat). Where the examiner occupies a co-pilot control seat (as co-pilot), the examiner must be the nominated pilot in command (PIC).

Where the examiner occupies a jump seat, a suitably qualified pilot should occupy the co-pilot seat and be the nominated PIC. A suitably qualified pilot means:
(1) A company CA0 82 check pilot who is approved to conduct asymmetric operations in the flight test aircraft from the co-pilot seat and has flown all the intended flight test manoeuvres within the preceding 90 days in the flight test aircraft type.

(2) A pilot who is current on the flight test aircraft type, holds a valid FPC, holds a training endorsement for the flight test aircraft type, is familiar with and competent in the multicrew procedures intended to be used during the flight test and has flown all the intended flight test manoeuvres within the preceding 90 days in the flight test aircraft type.

Where the examiner or a suitably qualified pilot occupies a control seat, the examiner should brief all crew members on the following:

- command/safety of flight responsibilities
- flight test profile and scenario
- role of the ‘co-pilot’
- introduction of non-normal sequences
- discontinuation/termination of the flight test
- communication protocols.

Examiners must be cognisant of the CASR 61.385 ‘general competency requirement’ regarding the authority to exercise the privileges of a rating or an activity in an aircraft. For manoeuvres that involve elevated risk (abnormal and emergency flight manoeuvres) when conducting a flight test in an aircraft, the examiner must be competent in the management of all flight test activities including the ability to safely manage potential applicant mishandling. This level of competency should be achieved with a targeted program of examiner training in an aircraft or a simulator where one is available.

**FSTD Flight Test**

When the flight test is conducted in an approved FSTD, during the navigation component, the examiner should not accelerate or in any other way change the real-time nature of the flight.

The applicant must demonstrate competency in performing instrument approach operations for at least two different kinds of procedure. One must be a 2D instrument approach operation. Additionally, the applicant must demonstrate competency in performing a 3D ILS or GLS instrument approach operation.

Examiners should use only the authorised instrument approach procedures for the aerodromes being used. Overlay instrument approaches are not to be used for an ATPL flight test, except where an aeroplane’s navigation system has been approved for such approaches.

The flight should be planned to include a sector to an aerodrome serviced by a published instrument approach which the aeroplane is equipped to use.

The applicant must demonstrate proficiency to operate the aeroplane on at least one instrument approach without the autopilot and flight director being used (raw data and hand flown), auto throttle/autothrust and flight path vector information may be used. Reversion to this mode must be accomplished prior to the Initial Approach Fix (IAF) or equivalent.

**ATPL flight test profile development guidance**

To assist examiners with the development of suitable ATPL flight test profiles, the following guidance is provided:
The ATPL flight test profile could be designed into 4 components:

1. **Line orientated evaluation (LOE)** – a simulated commercial flight (normally passenger carrying) planned between a pre-determined aerodrome pairing. To assist with time management and competency assessment, this may involve a diversion.

2. **Manoeuvre based sequence (MBS #1)** – an air exercise involving an abnormal event originating and terminating at the same aerodrome. Commonly (simulated) passengers, cabin crew or freight are not carried for this or the remaining sequences.

3. **Manoeuvre based sequence (MBS #2)** – commencing at altitude for the purpose of demonstrating the remaining CIR competencies:
   - Basic manoeuvres by reference to standby flight instruments and
   - Unusual attitude recovery assessment using normal and standby instrument displays.

4. **Manoeuvre based sequence (MBS #3)** – a short sector to assess the applicant’s command presence including NTS and MCO competencies while operating as PM.

The design of the LOE is simplified by the development of a table of two levels of contingency events categorised abnormal and emergency. The abnormal event could be defined as a resolvable technical or procedural event with a low level of complexity. The emergency event could be either technical or non-technical in nature with a high level of complexity requiring a command decision to continue, return or divert. These events should be designed to assess the competencies as outlined on the relevant flight test form and the FEH.

The design of the MBS could be such that it commences from the original LOE departure aerodrome using the pre-determined take-off performance data. This could commence from the runway threshold with aircraft state being at the ready with engines running. This sequence could include any further abnormal (e.g., one engine inoperative at >V1) with a return to aerodrome for the conduct of any of the flight component competencies not yet included.

### 12.3 Conduct (ground component)

#### 12.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

#### 12.3.2 Document review

The examiner must confirm that an applicant for the ATPL A satisfies the eligibility requirements to undertake the flight test for the grant of the CASR Part 61 licence. To achieve this, the training records (if applicable), logbook, licence (CPL A, MPL or foreign ATPL) and
medical certificate must be checked, refer CASR 61.235 (2). Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Minimum age** - the examiner must sight one of the following documents to verify that the applicant is at least 21:

- Australian driver licence
- CASA issued medical certificate
- Australian passport
- Australian birth certificate.

**Aeronautical knowledge examinations** – the examiner must review the applicant’s theory examination pass records.

**Knowledge deficiency report** (KDR) – N/A (Refer CASA EX33/19)

**Training requirements** – CASR 61.700(3)(b) requires that the applicant must have completed flight training for the ATPL and the associated category rating. CASR 61.235(2)(aa) excludes the ATPL from the requirement for course completion certification. On this basis, the examiner will need to satisfy themselves that the applicant has received the required training prior to commencing the flight test.

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

**English language proficiency** – the examiner must ensure that the applicant holds a current AELP assessment.

**Eligibility certification** – N/A

**Medical certificate** – the examiner must check that the applicant holds either a class 1 medical certificate, or a medical exemption allowing them to exercise the privileges of the ATPL A.

**Security check and fit and proper person requirements** – regulation 11.055 of CASR and the Aviation Transport Security Regulations require that the applicant has completed the applicable declarations.

**Note:** A CASA Flight Crew Licence cannot be issued until the applicant has been issued with an ASIC or AVID.

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

### 12.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS. In addition, as the ATPL (A) incorporates the privileges of an instrument rating, the examiner should also assess the CIR knowledge requirements as a safety of flight requirement.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funneling
12.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- flight notification
- loading system
- take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

12.4 Conduct (flight component)

12.4.1 Assessment of the applicant's performance

The applicant's performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant's knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

The examiner should assess adherence to either company SOPs, training provider SOPs or the aeroplane manufacturer’s SOPs. For example, operator specific, Boeing or Airbus, as nominated by the applicant.
Assessment should be based on the technique used by the applicant to satisfy compliance with SOPs in a multi-crew environment, not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

Sound judgement and decision-making should be displayed. It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

12.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (for example, passenger carrying air transport operation / simulation of passengers and flight attendant roles)
- pilot in command
- transfer of control
- flight tolerances
- simulating emergencies, methods and calls
- clarification of crew responsibilities in the event of actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

12.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the ATPL flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

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<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
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<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Plan an IFR flight</td>
<td>Applicants should be given notice and pre-flight material of the intended flight test route in accordance with their operation.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight actions and procedures</td>
<td>An applicant may apply operator specific fuel policies for carriage over and above the minimum legal statutory fuel requirements.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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<tr>
<td>Ground operations, take-off,</td>
<td>(c) Perform pre-flight inspection</td>
<td>In-transit (aircraft turnaround) pre-flight cockpit preparation is acceptable for</td>
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<tr>
<td>departure and climb</td>
<td></td>
<td>the purposes of the pre-flight inspection. External pre-flight inspection</td>
</tr>
<tr>
<td></td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
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<tr>
<td></td>
<td>(b) Taxi aircraft</td>
<td>The applicant should have full access to braking and nosewheel steering capability.</td>
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<tr>
<td></td>
<td>(c) Plan, brief and conduct take-off and departure procedures</td>
<td>If the test is conducted in an aircraft and the conditions prevent a crosswind</td>
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<td></td>
<td></td>
<td>take-off, it is acceptable for the examiner to satisfy competency through verbal</td>
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<td>questioning of the type specific crosswind technique.</td>
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<td></td>
<td>(d) Conduct instrument departure (normal operations)</td>
<td>If available, the departure should be published, or ATC cleared.</td>
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<td></td>
<td>(e) Conduct climb profiles and climbing turns</td>
<td>NSR</td>
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<tr>
<td>En route cruise</td>
<td>(a) Navigate aircraft en route using ground and satellite navigation systems</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform navigation systems integrity checks</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Identify and avoid hazardous weather conditions</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Maintain any 1 cruise configuration for turbulence, holding or range</td>
<td>NSR</td>
</tr>
<tr>
<td>Test specific activities and</td>
<td>(a) Perform instrument flying using normal and standby instrument displays</td>
<td>In-Aircraft - In an aircraft where a failure of the primary attitude, heading</td>
</tr>
<tr>
<td>manoeuvres</td>
<td></td>
<td>or airspeed indication is introduced, the examiner should not simulate a failure</td>
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<tr>
<td></td>
<td></td>
<td>of the system when the aircraft is flying in IMC or at night.</td>
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<td></td>
<td></td>
<td>NSR - FSTD</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>-----------------</td>
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</tr>
<tr>
<td>(b) Instrument flying using normal displays and standby displays, recover from at least 2 unusual attitudes</td>
<td>In-aircraft - If the flight test is being conducted in an aircraft and not a FSTD, recovery from unusual attitudes should only be conducted by day and the examiner should have a clear horizon. NSR - FSTD</td>
<td></td>
</tr>
<tr>
<td>(c) Manage engine failure during take-off - IAS ≥ V1</td>
<td>The applicant shall attain optimum aeroplane performance following failure of an engine. The speed at which that failure may be simulated shall be as follows: (i) aeroplanes for which the take-off performance is predicated on the establishment of a V1, failure of the engine shall be simulated at a speed greater than V1; (ii) aeroplanes other than those described in subparagraph (i) above, failure of the engine shall be simulated at a speed greater than either, (a) the 1 engine inoperative best rate of climb speed or (b) the take-off safety speed plus 10 knots, whichever is the higher. In an aircraft the simulated engine failure should not be conducted at night or in IMC and the examiner should have visual reference at all times during the manoeuvre.</td>
<td></td>
</tr>
<tr>
<td>(d) Conduct instrument departure OEI</td>
<td>The departure must be a separate event to the one engine inoperative (OEI) missed approach.</td>
<td></td>
</tr>
<tr>
<td>(e) Conduct instrument approach OEI</td>
<td>The simulated engine failure should be introduced before the Initial Approach Fix (IAF).</td>
<td></td>
</tr>
<tr>
<td>(f) Conduct missed approach OEI</td>
<td>The applicant should fly the published approach followed by the published missed approach whilst maintaining the specified flight path tolerances for OEI operations.</td>
<td></td>
</tr>
<tr>
<td>(g) Manage an event – system malfunction, fire or radio failure</td>
<td>This event must be one that is not included in other test specific activities and manoeuvres.</td>
<td></td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(a) Perform a descent or published arrival procedure to an aerodrome</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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</tr>
<tr>
<td>(b) Track to holding fix and conduct a holding pattern or sector 3 entry procedure</td>
<td>If a sector 3 entry into a holding pattern is conducted, an additional holding pattern is not required. If conducting an RNAV(GNSS) approach, the applicant must conduct RNAV(GNSS) holding or sector 3. Only one holding procedure is required for the flight test.</td>
<td></td>
</tr>
<tr>
<td>(c) 2D, prepare for approach</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(d) 2D, conduct approach</td>
<td>NSR - For an ATPL applicant who does hold an Australian instrument rating with 2D, 3D and MEA endorsements. For an ATPL applicant who does hold an Australian instrument rating but is missing one or more of the above endorsements, the examiner must contact the Manager FTO for advice. For an ATPL applicant who does not hold an Australian instrument rating, 2 X 2D approaches of different kinds must be demonstrated.</td>
<td></td>
</tr>
<tr>
<td>(e) 3D, prepare for approach</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(f) 3D, conduct approach</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(g) Conduct missed approach</td>
<td>Only one missed approach is required to be demonstrated. Since a OEI missed approach is required in the flight test, an all engines operating (AEO) missed approach may be included but is not required. If the applicant conducts a 2D missed approach, they must be able to describe the 3D DA procedure. If a 3D missed approach is conducted, they must describe the 2D MDA procedure. This is best completed during the ground component.</td>
<td></td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(a) Conduct circling approach if required</em></td>
<td>For an ATPL applicant who does not hold an Australian instrument rating, the ATPL flight test must include assessment of a circling approach. The circling approach must be demonstrated as the continuation of the instrument approach from the specified circling minima, must be flown over the aerodrome specified on the instrument approach plate and must be at least a 90° heading change to the runway. It must not be flown as a standalone low-level circuit. For simulators, the environmental settings should be set to not more than 1.5 times the visibility minima of the circling approach minima. The circling approach may not be demonstrated in a flight simulator unless it is specifically approved for this manoeuvre.</td>
</tr>
<tr>
<td><em>(b) Land and perform after-landing actions and procedures</em></td>
<td><strong>NSA</strong></td>
</tr>
</tbody>
</table>

### Shut down and post-flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(a) Park, shut down, secure aircraft and complete post-flight administration</em></td>
<td>Post-flight actions and procedures may be assessed by oral questioning if the flight test is conducted in an FSTD.</td>
</tr>
</tbody>
</table>

### General requirements

<table>
<thead>
<tr>
<th>Requirements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(a) Maintain effective lookout</em></td>
<td></td>
</tr>
<tr>
<td><em>(b) Maintain situational awareness</em></td>
<td></td>
</tr>
<tr>
<td><em>(c) Assess situations and make decisions</em></td>
<td></td>
</tr>
<tr>
<td><em>(d) Set priorities and manage tasks</em></td>
<td></td>
</tr>
<tr>
<td><em>(e) Maintain effective communications and interpersonal relationships</em></td>
<td></td>
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<tr>
<td><em>(f) Recognise and manage threats</em></td>
<td></td>
</tr>
<tr>
<td><em>(g) Recognise and manage errors</em></td>
<td></td>
</tr>
<tr>
<td><em>(h) Recognise and manage undesired aircraft state</em></td>
<td></td>
</tr>
<tr>
<td><em>(i) Operate effectively as a crew member</em></td>
<td></td>
</tr>
</tbody>
</table>

In most flight tests, the assessment of emergency and abnormal events will provide sufficient evidence of the NTS and MCO competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.

The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.

For MCO, the flight test will examine the ability of the applicant to operate effectively and safely as the pilot in command (PIC) in a multi-crew environment. To this end the applicant must be assessed during operations as pilot flying (PF) and pilot monitoring (PM). The examiner should ensure that the flight test is structured in such a way that the applicant demonstrates command skills while nominated as PM.
<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(j) Demonstrate effective leadership and authority</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(k) Maintain multi-crew situational awareness</td>
<td></td>
<td></td>
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<tr>
<td>(l) Make effective decisions as multi-crew</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(m) Operate in controlled airspace</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(n) Operate in Class G airspace</td>
<td>If applicable to test profile.</td>
<td></td>
</tr>
<tr>
<td>(o) Operate at controlled aerodrome</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(p) Operate at non-towered aerodrome</td>
<td>If applicable to test profile.</td>
<td></td>
</tr>
<tr>
<td>(q) Use correct radio procedures</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(r) Manage relevant aircraft systems</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(s) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(t) Manage passengers and the carriage of cargo</td>
<td>The examiner should role-play ground crew, flight attendant and passengers in the context of the nominated company operating procedures. Examples: Hi capacity RPT – the applicant should provide a cabin crew pre-flight briefing. Freight operations where there is provision for carriage of persons other than the flight crew – the applicant should provide a passenger pre-flight safety briefing. During the flight test, the applicant should demonstrate cabin crew and/or passenger management IAW nominated company procedures. With respect to cargo management, this item may be assessed via oral questioning on; loading, dangerous good, LMC procedures etc.</td>
<td></td>
</tr>
</tbody>
</table>
12.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM and in accordance with the flight check system (FCS), including failure to recall memory items (however described)
- sustained failure to maintain SOPs
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM or operations manual
- failure to demonstrate sound working knowledge of aeroplane automation (i.e., FMS, AFDS, and/or MCP) or incorrect use of the aeroplane automation systems
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes or any specified altitude limitations when operating in IMC or simulated IMC
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1, NTS2 and MCO.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued at the discretion of the examiner and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.
12.5 Complete (post flight)

12.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant's training records to allow the training provider to construct a remedial training program.

12.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
13 Air Transport Pilot Licence - Helicopter

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the air transport pilot licence and helicopter category rating (ATPL H).

13.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the ATPL H flight test:

1. The examiner must conduct the ATPL H flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the ATPL H flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

13.2 Plan

13.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended flight test route to allow for unhurried preparation and planning (simulating an air transport passenger/cargo carrying operation). The applicant should be given the test route at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.8 hours (2.0 in an FSTD) for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
• 0.8 hour for the general handling and test specific manoeuvres. The examiner may choose to conduct the general handling and navigation components in two separate flights.

Use of IFR procedures

Examiners must ensure that the practical flight standards of CIR, IAP2 and IAP3 are conducted under the instrument flight rules (IFR).

13.2.2 ATPL H assessment scope and conditions

The ATPL H flight test must be conducted in a helicopter or an FSTD approved for the purpose, in accordance with subregulation 61.700 (6) of CASR. The helicopter and FSTD must be certified for night operations, turbine-powered and configured for flight, and operated, with a co-pilot.

Note: Multi-engine, turbine powered aircraft that are single pilot type certificated, must use 'CASA approved' multi-crew checklists and standard operating procedures.

Note: Where the examiner is not familiar with the SOPs, the examiner must obtain the abbreviated and expanded format multi crew procedures in sufficient time to achieve familiarity.

If an IFR option is requested by the applicant, the helicopter and FSTD must be certified for and operated under the IFR.

The FEH activities and manoeuvres, listed in the Requirements column of Table 15 below, mirror the ATPL H test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the ATPL H flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the ATPL H test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

IFR activities and manoeuvres are performed in accordance with published procedures.

ATPL H flight tolerances and ground reference tolerances are specified in Tables 4 and 5 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The ATPL H applicant should demonstrate safe and effective management of the flight as the pilot in command (PIC) in a multi-crew environment, that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

The entire flight test must be conducted as a multi-crew operation (2-pilot) for all flight component test items. The applicant may use the helicopter automation systems unless otherwise directed by the examiner.

When the flight test is conducted in an aircraft, the examiner may occupy either a control seat or a suitable observer seat (jump seat). Where the examiner occupies a co-pilot control seat (as co-pilot), the examiner must be the nominated pilot in command (PIC).

Examiners must ensure that they do not impart training or assistance to the applicant during the conduct of the ATPL H test. If the examiner is occupying a control seat, they must provide
the normal duties of a co-pilot in that role, but only to the extent required by the operator’s operations manual.

Where the examiner occupies a jump seat, a suitably qualified pilot should occupy the co-pilot seat and be the nominated PIC.

Where the examiner or a suitably qualified pilot occupies a control seat, the examiner should brief all crew members on the following:

- command/safety of flight responsibilities
- flight test profile and scenario
- role of the ‘co-pilot’
- introduction of non-normal sequences
- discontinuation/termination of the flight test
- communication protocols.

When the flight test is conducted in an approved FSTD, the examiner should not position the applicant over the top of a navigation aid or at the commencement of the approach procedure being assessed. The examiner should not speed up or in any other way change the real-time nature of the flight, except when a non-normal sequence has been completed and the simulator returned to its normal operating state.

Where the test involves IFR operations, the applicant must demonstrate competency in performing instrument approach operations for at least two different kinds of procedures including a 2D instrument approach operation to the published MDA/H, and an ILS or GLS instrument approach to the published DA/H.

Examiners should use only the authorised instrument approach procedures for the aerodromes being used. Overlay instrument approaches are not to be used for an ATPL flight test, except where a helicopter’s navigation system has been approved for such approaches.

The instrument flight assessment should consist of a flight with at least the CIR, IAP2 and IAP3 elements conducted under the IFR. The flight should be planned to include a sector to an aerodrome (other than the departure aerodrome) serviced by a published instrument approach which the helicopter is equipped to use.

The applicant must demonstrate proficiency to operate the helicopter on at least one instrument approach without the autopilot and flight director being used. Reversion to manual flight must be accomplished prior to the Initial Approach Fix (IAF) or equivalent.

Examiners must be cognisant of the CASR 61.385 ‘general competency requirement’ regarding the authority to exercise the privileges of a rating or an activity in an aircraft. For manoeuvres that involve elevated risk (abnormal and emergency flight manoeuvres) when conducting a flight test in an aircraft, the examiner must be competent in the management of all flight test activities including the ability to safely manage potential applicant mishandling. This level of competency should be achieved with a targeted program of examiner training in an aircraft or a simulator where one is available.
13.3 Conduct (ground component)

13.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

13.3.2 Document review

The examiner must confirm that an applicant for the ATPL H satisfies the eligibility requirements to undertake the flight test for the grant of the CASR Part 61 licence. To achieve this, the training records (if applicable), logbook, licence (CPL H or foreign ATPL) and medical certificate must be checked, refer CASR 61.235 (2). Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Minimum age** - the examiner must sight one of the following documents to verify that the applicant is at least 21:

- Australian driver licence
- CASA issued medical certificate
- Australian passport
- Australian birth certificate.

**Aeronautical knowledge examinations** – the examiner must review the applicant’s theory examination pass records.

**Knowledge deficiency report (KDR) – N/A**

**Training requirements** – the applicant must have completed an approved course of training in multi-crew cooperation or equivalent.

The examiner must ensure that the applicant has:

- completed a CASA approved course of MCC training and provided acceptable evidence of completion OR
- met the requirements for alternative of Schedule 1 of CASA Instrument EX102/18 and provided acceptable evidence iaw Schedule 2 clause 1-6 of the Instrument OR
- applicant is a current or former member of the ADF and has provided acceptable evidence iaw Section 6 of CASA Instrument EX102/18.

**Note:** All sighted evidence must be submitted to CASA with the flight test report form.

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.
English language proficiency – the examiner must ensure that the applicant holds a current AELP assessment.

Eligibility certification – N/A

Medical certificate – the examiner must check that the applicant holds either a class 1 medical certificate, or a medical exemption allowing them to exercise the privileges of the ATPL H.

Security check and fit and proper person requirements – regulation 11.055 of CASR and the Aviation Transport Security Regulations require that the applicant has completed the applicable declarations.

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

13.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

13.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- flight notification
- loading system
- take-off and landing data/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

13.4 Conduct (flight component)

13.4.1 Assessment of the applicant’s performance

When assessing the competency standards for the activities and manoeuvres in this chapter and on the flight test form, the examiner should consider both the technique used to execute the activity or manoeuvre and that tolerances are maintained within required parameters.
The relevant performance criteria for each element frequently use the terms: technique, smoothness, accuracy, judgement, procedures, knowledge and flight management.

The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – is the method by which a task is performed. There may be more than one acceptable technique and the examiner should be mindful of this in their assessment. Technique should, however, always involve the application of smooth, coordinated and accurate control inputs. Adjusting power, attitude and trim should be in a timely and coordinated fashion whilst following correct procedures.

- **Smoothness** – is the ability to skilfully make the appropriate rate of adjustment to power and attitude during a manoeuvre. The applicant should demonstrate smooth flying in all sequences.

- **Accuracy** – is the ability to control height, airspeed, heading, balance and trim within the required MOS flight tolerances. Sustained errors outside the MOS flight tolerances in any of these aspects should result in a fail assessment.

- **Judgement** – is applicable to all tasks but is of importance with respect to the effect of environmental conditions such as cloud, visibility, wind and turbulence. It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique, smoothness, accuracy and judgment should be the determining factors.

- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test. In many circumstances, the adherence to SOP’s may be the reason a committed error has been corrected in a timely manner.

- **Knowledge** – during the flight test the applicant’s underpinning knowledge may be further tested. For example, during the management of an aircraft system failure, it may become apparent that there is a lack of knowledge of that system.

- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

The examiner should assess adherence to either company SOPs, training provider SOPs or the aeroplane manufacturer’s SOPs, e.g., operator specific, Bell or Sikorsky, as nominated by the applicant.

Assessment should be based on the technique used by the applicant to satisfy compliance with SOPs in a multi-crew environment, and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.
13.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying air transport operation / simulation of passengers and flight attendant roles)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- clarification of crew responsibilities in the event of actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

13.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the ATPL H flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

Table 23: Assessment of activities and manoeuvres - ATPL H

<table>
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<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Plan an IFR flight</td>
<td>If the flight test is conducted VFR, the applicant is to plan accordingly.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight actions and procedures</td>
<td>An applicant may apply operator specific fuel policies for carriage over and above the minimum legal statutory fuel requirements.</td>
</tr>
<tr>
<td></td>
<td>(c) Perform pre-flight inspection</td>
<td>In-transit (aircraft turnaround) pre-flight cockpit preparation is acceptable for the purposes of the pre-flight inspection. A pre-flight inspection may be assessed verbally if the test is conducted in an FSTD.</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Conduct instrument departure (normal operations)</td>
<td>For IFR operations only.</td>
</tr>
<tr>
<td></td>
<td>(d) Conduct climb profiles and climbing turns</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>En route cruise</strong></td>
<td>(a) Navigate aircraft en route</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform diversion procedure</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Use instrument navigation systems</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Perform navigation systems integrity checks</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Test specific activities and manoeuvres</strong></td>
<td>(a) Perform instrument flying using normal and standby instrument displays</td>
<td>In an aircraft, where a failure of the primary attitude, heading or airspeed indication is introduced, the examiner should not simulate a failure of the system when the aircraft is flying in IMC or at night.</td>
</tr>
<tr>
<td></td>
<td>In complex aircraft types with multiple primary instrument display redundancy capability, the intent of the MOS (IFL unit of competency) is satisfied with a reduction of full primary instrument displays as a result of a system(s) failure. This MOS competency requires the applicant to demonstrate instrument flying using an altered instrument scan. This should be accomplished by the applicant demonstrating system / checklist knowledge (recovering instrumentation where applicable) to a level whereby satisfactory manoeuvring can be conducted.</td>
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</tr>
<tr>
<td></td>
<td>Forcing the aircraft into a situation of multiple unrealistic failures, whereby the standby artificial horizon and magnetic compass are the only primary means of instrumentation, is not necessary.</td>
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</tr>
<tr>
<td></td>
<td>(b) Instrument flying using normal displays and standby displays, recover from at least 2 unusual attitudes</td>
<td>If the flight test is being conducted in a helicopter and not an approved simulator, recovery from unusual attitudes should only be conducted by day and the examiner should have a clear horizon. At least one recovery using normal displays and at least one recovery using standby displays must be assessed.</td>
</tr>
<tr>
<td></td>
<td>(c) Land on and lift off from sloping ground</td>
<td>This item may be assessed as part of item (e) below.</td>
</tr>
<tr>
<td></td>
<td>(d) Execute limited power take-off, approach and landing</td>
<td>This item may be assessed as part of item (e) below.</td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e) Land, manoeuvre and take-off in a confined area or land and take-off from pinnacle or ridgeline</td>
<td>NSR</td>
</tr>
<tr>
<td>(f) Manage engine failure - at least 1 from take-off, cruise flight, approach and landing</td>
<td>The applicant shall attain optimum helicopter performance following failure of an engine. In an aircraft the simulated engine failure should not be conducted at night or in IMC and the examiner should have visual reference at all times during the manoeuvre.</td>
</tr>
<tr>
<td>(g) Manage a control or tail rotor malfunction in flight and at the hover</td>
<td>NSR</td>
</tr>
<tr>
<td>(h) Manage a system malfunction - at least 1 from engine fire, electrical failure, hydraulic system, airframe fuel system or engine governor system</td>
<td>NSR</td>
</tr>
</tbody>
</table>

### Descent and arrival

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)(i) Perform a descent or published arrival procedure to aerodrome</td>
<td>For IFR operations only.</td>
</tr>
</tbody>
</table>
| (b)(ii) Track to holding fix and conduct holding pattern or sector 3 entry procedure | For IFR operations only  
Must be IAW published procedures.  
If a sector 3 entry into a holding pattern is conducted, an additional holding pattern is not required.  
If conducting an RNAV(GNSS) approach, the applicant must conduct RNAV(GNSS) published holding or sector 3 associated with the instrument approach procedure to be flown.  
Only one holding procedure is required for the test. |
<p>| (b)(iii) 2D, prepare for approach                                            | For IFR operations only.                                                                                               |
| (b)(iv) 2D, conduct approach                                                | For IFR operations only.                                                                                               |</p>
<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b)(v) 3D, prepare for approach</td>
<td>For IFR operations only.</td>
<td></td>
</tr>
<tr>
<td>(b)(vi) 3D, conduct approach</td>
<td>For IFR operations only.</td>
<td></td>
</tr>
<tr>
<td>(b)(vii) Conduct missed approach</td>
<td>For IFR operations only. Only one missed approach is required. If the applicant conducts a 2D missed approach, they must be able to describe the 3D DA procedure. If a 3D missed approach is conducted, they must describe the 2D MDA procedure. This is best completed during the ground component.</td>
<td></td>
</tr>
<tr>
<td>(a) Conduct circling approach if required</td>
<td>For IFR operations only. For an ATPL applicant who does not hold an Australian Instrument Rating, part of the ATPL flight test is the conduct of a circling approach. The circling approach must be demonstrated as the continuation of the instrument approach from the specified circling minima, must be flown over the aerodrome specified on the instrument approach plate and must be at least a 90° heading change to the runway. It must not be flown as a standalone low level circuit. For simulators, the environmental settings should be set to not more than 1.5 times the visibility minima of the circling approach minima. The circling approach may not be demonstrated in a flight simulator unless it is specifically approved for visual operations.</td>
<td></td>
</tr>
<tr>
<td>(b) Conduct normal circuit pattern, approach and landing</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>Post-flight actions and procedures may be assessed verbally if the flight test is conducted in an FSTD.</td>
<td></td>
</tr>
<tr>
<td>(a) Maintain effective lookout</td>
<td>In most flight tests, the assessment of emergency and abnormal events will provide sufficient evidence of the NTS and MCO competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
<td></td>
</tr>
<tr>
<td>(b) Maintain situational awareness</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
<td></td>
</tr>
<tr>
<td>(c) Assess situations and make decisions</td>
<td>For MCO, the flight test will examine the ability of the applicant to operate effectively and safely as the pilot</td>
<td></td>
</tr>
<tr>
<td>(d) Set priorities and manage tasks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(f)</td>
<td>Recognise and manage threats</td>
<td>In command (PIC) in a multi-crew environment. To this end the applicant must be assessed during operations as pilot flying (PF) and pilot monitoring (PM). The examiner should ensure that the flight test is structured in such a way that the applicant demonstrates command skills while nominated as PM. As an example, this may involve a takeover decision due to an event such as windshear.</td>
</tr>
<tr>
<td>(g)</td>
<td>Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td>(h)</td>
<td>Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td>(i)</td>
<td>Operate effectively as a crew member</td>
<td></td>
</tr>
<tr>
<td>(j)</td>
<td>Demonstrate effective leadership and authority</td>
<td></td>
</tr>
<tr>
<td>(k)</td>
<td>Maintain multi-crew situational awareness</td>
<td></td>
</tr>
<tr>
<td>(l)</td>
<td>Make effective decisions as multi-crew</td>
<td></td>
</tr>
<tr>
<td>(m)</td>
<td>Operate in controlled airspace</td>
<td>NSR</td>
</tr>
<tr>
<td>(n)</td>
<td>Operate in Class G airspace</td>
<td>If applicable to test profile.</td>
</tr>
<tr>
<td>(o)</td>
<td>Operate at controlled aerodrome</td>
<td>NSR</td>
</tr>
<tr>
<td>(p)</td>
<td>Operate at non-towered aerodrome</td>
<td>If applicable to test profile.</td>
</tr>
<tr>
<td>(q)</td>
<td>Use correct radio procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>(r)</td>
<td>Manage relevant aircraft systems</td>
<td>The applicant should demonstrate a sound working knowledge of the helicopter’s automation system, including use of the Flight Management Computer System (FMCS), the Autopilot Flight Director System (AFDS) and the Mode Control Panel (MCP) (or however these systems are described).</td>
</tr>
<tr>
<td>(s)</td>
<td>Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
<tr>
<td>(t)</td>
<td>Manage passengers and the carriage of cargo</td>
<td>The examiner should role play ground crew, flight attendant and passengers as applicable.</td>
</tr>
</tbody>
</table>
13.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM and in accordance with the flight check system (FCS), including failure to recall memory items (however described)
- sustained failure to maintain SOPs
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM or operations manual
- failure to demonstrate sound working knowledge of helicopter automation (ie: FMS, AFDS, and/or MCP) or incorrect use of the helicopter automation systems
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes or any specified altitude limitations when operating in IMC or simulated IMC
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1, NTS2 and MCO.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued at the discretion of the examiner and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.
13.5 Complete (post flight)

13.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

13.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA;
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
14 Class Rating – Single Engine Aeroplane

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the class rating – single engine aeroplane (SEA).

14.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the SEA flight test:

1. The examiner must conduct the SEA flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the SEA flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

14.2 Plan

14.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a private passenger/cargo carrying operation). The applicant should be given the test scenario at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.2 hours for the general handling and test specific manoeuvres.
The examiner may choose to conduct the flight test in combination with a licence or operational rating flight test to avoid two separate flights.

**Use of IFR procedures**

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the flight test or be taken into account in the flight test flight time. A landing and shutdown should terminate the IFR flight segment before commencing the SEA assessment flight sequences.

The SEA flight test should be concluded by a landing and shutdown in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the SEA flight test should be considered as the flight time for the flight test.

### 14.2.2 SEA assessment scope and conditions

The SEA flight test must be conducted by day under the VFR and in an aeroplane or an FSTD approved for the purpose, in accordance with subregulation 61.750 (3) and the limitation of subregulation 61.245 (2) of CASR.

The aeroplane and FSTD must be of the class covered by the SEA. The aeroplane must have operational dual controls, electronic intercom and dual control brakes.

The FEH activities and manoeuvres, listed in the Requirements column of Table 16 below, mirror the SEA test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the SEA flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the SEA test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

SEA flight tolerances and ground reference tolerances are specified in Table 1 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The SEA applicant should demonstrate that control of the aircraft or procedure is maintained at all times but if the successful outcome is in doubt, corrective action is taken promptly to recover to safe flight.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system. If an auto-pilot is not available, the examiner must not ‘act’ as the auto-pilot.

### 14.3 Conduct (ground component)

#### 14.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

14.3.2 Document review

The examiner must confirm that an applicant for the SEA satisfies the eligibility requirements to undertake the flight test for the grant of the class rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

Licence – the applicant for the SEA must hold an aeroplane category RPL, PPL, CPL, MPL or ATPL (or be applying for the licence simultaneously with the SEA).

Aeronautical knowledge examinations – N/A

Knowledge deficiency report (KDR) – N/A

Flight training requirements – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

Aeronautical experience – N/A

English language proficiency – N/A

Eligibility certification – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

Medical certificate – the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the SEA.

Security check and fit and proper person requirements – N/A

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

14.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.
14.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete:

- flight plan
- fuel plan
- flight notification – N/A
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

14.4 Conduct (flight component)

14.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested.
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test.
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.
Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

14.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying private operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable)

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

14.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the SEA flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

Table 24: Assessment of activities and manoeuvres - SEA

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>The examiner should engage the applicant during the pre-flight with questions relevant to the inspection, without disrupting the inspection or compromising safety. Where the aircraft already has a valid maintenance release certification for the day, the applicant is still required to complete the daily inspection in all respects and should explain the certification process.</td>
</tr>
<tr>
<td></td>
<td>(c) Refuel aircraft</td>
<td>Training record evidence and oral questioning should be used in the absence of an actual refuel event. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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<tr>
<td>----------------</td>
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<td>-----------------</td>
</tr>
<tr>
<td><strong>Ground operations, take-off, departure and climb</strong></td>
<td>(a) Complete all relevant checks and procedures</td>
<td>It is recommended that the examiner pose a start malfunction or emergency just prior to the start procedure so the applicant's touch drills can be assessed.</td>
</tr>
<tr>
<td></td>
<td>(b) Taxi aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Conduct crosswind take-off</td>
<td>Training record evidence of dual or solo competence in crosswinds of at least 70% of the AFM maximum and oral questioning should be used in the absence of a crosswind. In this case the examiner must indicate competency by marking the item on the flight test form with 'TR'.</td>
</tr>
<tr>
<td></td>
<td>(e) Conduct short field take-off</td>
<td>The examiner should attempt to pose scenarios such as an obstacle at 300’ AGL following a short field take off</td>
</tr>
<tr>
<td></td>
<td>(f) Conduct climbs and climbing turns – must include any 2 of maximum rate, maximum angle or cruise climb</td>
<td>The examiner should attempt to pose scenarios such as an obstacle at 300’ AGL following a short field take off; or a requirement for best rate to 2000’ AGL.</td>
</tr>
<tr>
<td><strong>En route cruise</strong></td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Navigate and transit from the circuit area to the training area and return</td>
<td>NSR.</td>
</tr>
<tr>
<td></td>
<td>(c) Operate safely in the local area airspace</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Maintain any 1 cruise configuration for turbulence, flaps selected or high speed</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Test specific activities and manoeuvres</strong></td>
<td>(a) Enter and recover from stalls – 1 must be in the approach configuration and at least 1 stall and 1 incipient spin</td>
<td>The examiner should place emphasis on the application of correct technique rather than the achievement of a minimum height loss.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>(b)</strong> Conduct steep level turns of at least 45˚ bank</td>
<td></td>
<td>NSR</td>
</tr>
<tr>
<td><strong>(c)</strong> Perform full panel instrument flying</td>
<td>The examiner should limit this to no longer than 5 minutes and position for sufficient altitude to conduct unusual attitude recoveries.</td>
<td></td>
</tr>
<tr>
<td><strong>(d)</strong> Full panel instrument flying, recover from at least 2 unusual attitudes</td>
<td></td>
<td>NSR</td>
</tr>
<tr>
<td><strong>(e)</strong> Manage engine failure after take-off</td>
<td>The examiner must consider the airfield terrain, obstacles and noise abatement requirements. Where the aerodrome does not allow the safe practise of EFATO, the examiner should simulate the procedure elsewhere at altitude.</td>
<td></td>
</tr>
<tr>
<td><strong>(f)</strong> Manage a malfunction during start or shutdown and 1 of: a system malfunction, fire or radio failure</td>
<td></td>
<td>NSR</td>
</tr>
<tr>
<td><strong>(g)</strong> Perform forced landing</td>
<td>The examiner should initiate the simulated engine failure at least 2,500’ AGL to ensure the applicant has sufficient time to perform the procedure.</td>
<td></td>
</tr>
<tr>
<td><strong>Descent and arrival</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(a)</strong> Conduct descents and descending turns</td>
<td></td>
<td>NSR</td>
</tr>
<tr>
<td><strong>(b)</strong> Plan and conduct arrival and circuit joining procedures</td>
<td></td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Circuit, approach and landing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(a)</strong> Conduct normal circuit pattern, approach and landing</td>
<td></td>
<td>NSR</td>
</tr>
<tr>
<td><strong>(b)</strong> Conduct crosswind landing</td>
<td>The examiner is required to assess a crosswind landing unless the applicant’s training records certify dual or solo competence in crosswinds of at least 70% of the AFM maximum. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
<td></td>
</tr>
<tr>
<td><strong>(c)</strong> Conduct short field and flapless landings</td>
<td></td>
<td>NSR</td>
</tr>
<tr>
<td><strong>(d)</strong> Perform a go-around procedure</td>
<td></td>
<td>NSR</td>
</tr>
</tbody>
</table>
### 14.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>General requirements</td>
<td>(a) Maintain effective lookout</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
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<td>(d) Set priorities and manage tasks</td>
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<tr>
<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
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<td></td>
<td>(f) Recognise and manage threats</td>
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<tr>
<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Use correct radio procedures</td>
<td>Communication and radio procedures relevant to the airspace within which the test is conducted.</td>
</tr>
<tr>
<td></td>
<td>(j) Manage relevant aircraft systems</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(l) Manage passengers and the carriage of cargo</td>
<td>The examiner should role play as a passenger.</td>
</tr>
</tbody>
</table>
Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

14.5 Complete (post flight)

14.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.
14.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
15 Class Rating - Single Engine Helicopter

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the class rating – single engine helicopter (SEH).

15.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the SEH flight test:

1. The examiner must conduct the SEH flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the SEH flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

15.2 Plan

15.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a private passenger/cargo carrying operation). The applicant should be given the test scenario at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.2 hours for the general handling and test specific manoeuvres.
The examiner may choose to conduct the flight test in combination with a licence or operational rating flight test to avoid two separate flights.

### 15.2.2 SEH assessment scope and conditions

The SEH flight test must be conducted by day under the VFR and in a helicopter or an FSTD approved for the purpose, in accordance with subregulation 61.750 (3) and the limitation of subregulation 61.245 (2) of CASR.

The helicopter and FSTD must be of the class covered by the SEH. The helicopter must have operational dual controls, electronic intercom and, if fitted with a wheeled undercarriage, dual control brakes.

The FEH activities and manoeuvres, listed in the Requirements column of Table 17 below, mirror the SEH test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the SEH flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the SEH test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

SEH flight tolerances and ground reference tolerances are specified in Table 1 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The SEH applicant should demonstrate that control of the aircraft or procedure is maintained at all times but if the successful outcome is in doubt, corrective action is taken promptly to recover to safe flight.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system. If an auto-pilot is not available, the examiner must not ‘act’ as the auto-pilot.

### 15.3 Conduct (ground component)

#### 15.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

#### 15.3.2 Document review

The examiner must confirm that an applicant for the SEH satisfies the eligibility requirements to undertake the flight test for the grant of the class rating. To achieve this, the CASR 61.235
(4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the SEH must hold a helicopter category RPL, PPL, CPL or ATPL (or be applying for the licence simultaneously with the SEH).

**Aeronautical knowledge examinations** – N/A

**Knowledge deficiency report (KDR)** – N/A

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

**Aeronautical experience** – N/A

**English language proficiency** – N/A

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the SEH.

**Security check and fit and proper person requirements** – N/A

**If the flight test is a retest following a fail assessment** – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

### 15.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.
15.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:

- flight plan
- fuel plan
- flight notification – N/A
- weight and balance calculation
- take-off and landing data/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

15.4 Conduct (flight component)

15.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested.
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test.
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.
Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

15.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (eg passenger carrying private operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

15.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the SEH flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

**Table 25: Assessment of activities and manoeuvres - SEH**

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>The examiner should engage the applicant during the pre-flight with questions relevant to the inspection, without disrupting the inspection or compromising safety. Where the aircraft already has a valid maintenance release certification for the day, the applicant is still required to complete the daily inspection in all respects and should explain the certification process.</td>
</tr>
<tr>
<td></td>
<td>(c) Refuel aircraft</td>
<td>Training record evidence and oral questioning should be used in the absence of an actual refuel event. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>Ground operations, take-off, departure and climb</strong></td>
<td>(a) Complete all relevant checks and procedures</td>
<td>It is recommended that the examiner pose a start malfunction or emergency just prior to the start procedure so the applicant’s touch drills can be assessed.</td>
</tr>
<tr>
<td></td>
<td>(b) Lift-off and hover helicopter</td>
<td>The examiner should assess these items during the normal operation of the helicopter in the departure phase.</td>
</tr>
<tr>
<td></td>
<td>(c) Taxi aircraft</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Air transit helicopter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Plan, brief and conduct take-off and departure procedures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) Conduct climbs and climbing turns – must include any 2 of maximum rate, maximum angle or cruise climb</td>
<td>The examiner should pose scenarios to achieve the observation of a climb at best angle to achieve obstacle clearance or at best rate during departure and climb phase.</td>
</tr>
<tr>
<td><strong>En route cruise</strong></td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Navigate and transit from the circuit area to the training area and return</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Operate safely in the local area airspace</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Test specific activities and manoeuvres</strong></td>
<td>(a) Hover helicopter in crosswind and tailwind and perform turns around any 1 of the rotor mast, nose or tail</td>
<td>The examiner is required to assess headwind/crosswind/tailwind hover and ground taxi unless the applicant’s training records certify dual or solo competence in those wind conditions. In this case the examiner must indicate competency by marking the items on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform sideways and backwards flight</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Conduct steep level turns of at least 45° bank</td>
<td>Recommend a turn through at least 180 degrees is assessed.</td>
</tr>
<tr>
<td></td>
<td>(d) Perform autorotative flight</td>
<td>Recommend assessment of at least entry to, stabilised control of and recovery from minimum rate of descent autorotation.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(e) Land on and lift-off from sloping ground</td>
<td>It is not a requirement to demonstrate maximum slope landing limitations.</td>
<td><strong>(f) Land, manoeuvre and take-off in a confined area</strong></td>
</tr>
<tr>
<td>(g) Execute limited power take-off, approach and landing</td>
<td></td>
<td><strong>(h) Perform forced landing</strong></td>
</tr>
<tr>
<td>(i) Manage engine failure during hover or taxi</td>
<td>NSR</td>
<td><strong>(j) Manage a control or tail rotor malfunction in flight and at the hover</strong></td>
</tr>
<tr>
<td>(k) Manage a system malfunction – at least 1 from engine fire, electrical failure, hydraulic system, airframe fuel system or engine governor system</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(a) Conduct descents and descending turns</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>These items should be assessed during the normal operation of the helicopter during the circuit phase.</td>
</tr>
<tr>
<td></td>
<td>(b) Approach to the hover</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Air transit helicopter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Perform a go-around procedure</td>
<td>The examiner may need to introduce a reason to conduct the go-around procedure.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
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<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
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<td>General requirements</td>
<td>(a) Maintain effective lookout</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
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<td>(b) Maintain situational awareness</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
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<td></td>
<td>(c) Assess situations and make decisions</td>
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<tr>
<td></td>
<td>(j) Manage relevant aircraft systems</td>
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<td>(k) Manage fuel system and monitor fuel plan and usage</td>
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<td>(l) Manage passengers and the carriage of cargo</td>
<td>The examiner should role play as a passenger.</td>
</tr>
</tbody>
</table>

### 15.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.
Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

15.5 Complete (post flight)

15.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.
15.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
16 Class Rating - Multi Engine Aeroplane

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the class rating – multi engine aeroplane (MEA).

16.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the MEA flight test:

1. The examiner must conduct the MEA flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the MEA flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

16.2 Plan

16.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a private passenger/cargo carrying operation). The applicant should be given the test scenario at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.3 hours for the general handling and test specific manoeuvres.
The examiner may choose to conduct the flight test in combination with a licence or operational rating flight test to avoid two separate flights.

**Use of IFR procedures**

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the flight test or be taken into account in the flight test flight time. A landing and shutdown should terminate the IFR flight segment before commencing the MEA assessment flight sequences.

The MEA flight test should be concluded by a landing and shutdown in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the MEA flight test should be considered as the flight time for the flight test.

### 16.2.2 MEA assessment scope and conditions

The MEA flight test must be conducted by day under the VFR and in an aeroplane or an FSTD approved for the purpose, in accordance with subregulation 61.750 (3) and the limitation of subregulation 61.245 (2) of CASR.

The aeroplane and FSTD must be of the class covered by the MEA. The aeroplane must have operational dual controls, electronic intercom and dual control brakes.

The FEH activities and manoeuvres, listed in the Requirements column of Table 18 below, mirror the MEA test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the MEA flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the MEA test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

MEA flight tolerances and ground reference tolerances are specified in Table 1 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The MEA applicant should demonstrate that control of the aircraft or procedure is maintained at all times but if the successful outcome is in doubt, corrective action is taken promptly to recover to safe flight.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system. If an auto-pilot is not available, the examiner must not ‘act’ as the auto-pilot.

A simulated engine failure after take-off must not be initiated at a height less than 400ft AGL.

### 16.3 Conduct (ground component)

#### 16.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
• assessment procedure
• function of the examiner
• standards against which competency will be assessed
• actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

16.3.2 Document review

The examiner must confirm that an applicant for the MEA satisfies the eligibility requirements to undertake the flight test for the grant of the class rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the MEA must hold an aeroplane category PPL, CPL, MPL or ATPL (or be applying for the licence simultaneously with the MEA).

**Aeronautical knowledge examinations** – N/A

**Knowledge deficiency report (KDR)** – N/A

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

**Aeronautical experience** – N/A

**English language proficiency** – N/A

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the MEA.

**Security check and fit and proper person requirements** – N/A

**If the flight test is a retest following a fail assessment** – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

16.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.
16.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:

- flight plan
- fuel plan
- flight notification – N/A
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including: forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

16.4 Conduct (flight component)

16.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.
Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

16.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (eg passenger carrying private operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

16.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the MEA flight test. Where there are no specific recommendations, 'NSR' is listed in the table against the unit or element.

Table 26: Assessment of activities and manoeuvres - MEA

<table>
<thead>
<tr>
<th>Phase of flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>The examiner should engage the applicant during the pre-flight with questions relevant to the inspection, without disrupting the inspection or compromising safety. Where the aircraft already has a valid maintenance release certification for the day, the applicant is still required to complete the daily inspection in all respects and should explain the certification process.</td>
</tr>
<tr>
<td></td>
<td>(c) Refuel aircraft</td>
<td>Training record evidence and oral questioning should be used in the absence of an actual refuel event. In this case the examiner must indicate competency by marking the item on the flight test form with 'TR'.</td>
</tr>
<tr>
<td>Phase of flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>Ground operations, take-off, departure and climb</strong></td>
<td>(a) Complete all relevant checks and procedures</td>
<td>It is recommended that the examiner pose a start malfunction or emergency just prior to the start procedure so the applicant's touch drills can be assessed.</td>
</tr>
<tr>
<td></td>
<td>(b) Taxi aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Conduct crosswind take-off</td>
<td>Training record evidence of dual or solo competence in crosswinds of at least 70% of the AFM maximum and oral questioning should be used in the absence of a crosswind. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td></td>
<td>(e) Conduct short field take-off</td>
<td>The examiner should attempt to pose scenarios such as an obstacle at 300’ AGL following a short field take off</td>
</tr>
<tr>
<td></td>
<td>(f) Conduct climbs and climbing turns – must include any 2 of maximum rate, maximum angle or cruise climb</td>
<td>The examiner should attempt to pose scenarios such as an obstacle at 300’ AGL following a short field take off; or a requirement for best rate to 2000’ AGL.</td>
</tr>
<tr>
<td><strong>En route cruise</strong></td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Maintain any 1 cruise configuration for turbulence, holding or range</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Use instrument navigation systems</td>
<td>The examiner should set appropriate tasks that do not require a cross country navigation leg for the applicant to demonstrate competency.</td>
</tr>
<tr>
<td><strong>Test specific activities and manoeuvres</strong></td>
<td>(a) Enter and recover from stalls – 1 must be in the approach configuration and at least 2 stalls</td>
<td>The examiner should place emphasis on the application of correct technique rather than the achievement of a minimum height loss.</td>
</tr>
<tr>
<td></td>
<td>(b) Conduct steep level turns of at least 45˚ bank</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Perform full panel instrument flying</td>
<td>The examiner should limit this to no longer than 5 minutes and position for sufficient altitude to conduct unusual attitude recoveries.</td>
</tr>
<tr>
<td>Phase of flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>(d)</td>
<td>Full panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>NSR</td>
</tr>
<tr>
<td>(e)</td>
<td>Manage engine failure after take-off</td>
<td>The examiner must consider the airfield terrain, obstacles and noise abatement requirements. Where the aerodrome does not allow the safe practise of EFATO, the examiner should simulate the procedure elsewhere at altitude.</td>
</tr>
<tr>
<td>(f)</td>
<td>Manage engine failure in cruise</td>
<td>NSR</td>
</tr>
<tr>
<td>(g)</td>
<td>Conduct approach OEI</td>
<td>NSR</td>
</tr>
<tr>
<td>(h)</td>
<td>Conduct missed approach OEI</td>
<td>NSR</td>
</tr>
<tr>
<td>(i)</td>
<td>Manage a malfunction during start or shutdown and 1 of: a system malfunction, fire or radio failure</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Descent and arrival</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td>Conduct descents and descending turns</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)</td>
<td>Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Circuit, approach and landing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td>Conduct normal circuit pattern, approach and landing</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)</td>
<td>Conduct cross-wind landing</td>
<td>The examiner is required to assess a crosswind landing unless the applicant’s training records certify dual or solo competence in crosswinds of at least 70% of the AFM maximum. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td>(c)</td>
<td>Conduct short field and flapless landings</td>
<td>NSR</td>
</tr>
<tr>
<td>(d)</td>
<td>Perform a go-around procedure</td>
<td>Perform with all engines operating.</td>
</tr>
<tr>
<td>(e)</td>
<td>Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Use correct radio procedures</td>
<td>Communication and radio procedures relevant to the airspace within which the test is conducted.</td>
</tr>
<tr>
<td></td>
<td>(j) Manage relevant aircraft systems</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(l) Manage passengers and the carriage of cargo</td>
<td>The examiner should role play as a passenger.</td>
</tr>
</tbody>
</table>

### 16.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

**Safety critical items**

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).
Examples of safety critical failure items include, **but are not limited to:**

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

**16.5 Complete (post flight)**

**16.5.1 Debriefings**

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

**16.5.2 Flight test administration**

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).
Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
17 Type Rating - Single Engine Aeroplane

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the type rating – single engine aeroplane (TR SEA).

17.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the TR SEA flight test:

1. The examiner must conduct the TR SEA flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the TR SEA flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

17.2 Plan

17.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a commercial passenger/cargo carrying operation). The applicant should be given the test scenario at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hours (2.0 in an FSTD) for the general handling and test specific manoeuvres.
The examiner may choose to conduct the flight test in combination with a licence or operational rating flight test to avoid two separate flights. In this case, the total time should not exceed 4 hours.

**Use of IFR procedures**

To authorise the applicant to pilot the type under the IFR, the examiner must ensure that the flight test is conducted under the IFR (regulation 61.790 of CASR).

**17.2.2 TR SEA assessment scope and conditions**

The TR SEA flight test must be conducted under the IFR or by day under the VFR in an aeroplane or an FSTD approved for the purpose, in accordance with subregulations 61.245 (1), 61.810 (3) and the limitation of subregulation 61.245 (2) of CASR. The aeroplane and FSTD must be of the type covered by the pilot type rating. The aeroplane must have operational dual controls, electronic intercom and dual control brakes.

The FEH activities and manoeuvres, listed in the Requirements column of Table 19 below, mirror the TR SEA test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the TR SEA flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the TR SEA test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

TR SEA flight tolerances and ground reference tolerances are specified in Table 2 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The TR SEA applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system.

When the flight test is conducted in an aircraft, the examiner may occupy either a control seat or a suitable observer seat (jump seat). Where the examiner occupies a control seat (as co-pilot), the examiner should be the nominated pilot in command (PIC).

If the examiner is occupying a control seat in a multi-crew operation, they must provide the normal duties of a co-pilot in that role, but only to the extent required by the operator’s operations manual.

Where the examiner occupies a jump seat, a suitably qualified pilot should occupy the co-pilot seat and be the nominated PIC.

Where the examiner or a suitably qualified pilot occupies a control seat, the examiner should brief all crew members on the following:

- command/safety of flight responsibilities
- flight test profile and scenario
- role of the ‘co-pilot’
- introduction of non-normal sequences
• discontinuation/termination of the flight test
• communication protocols.

When the flight test is conducted in an approved FSTD, the examiner should not speed up or in any other way change the real-time nature of the flight, except when a non-normal sequence has been completed and the simulator returned to its normal operating state. The examiner may ‘re-position the aircraft’ when required to meet the flight test requirements e.g., after a landing, the ‘aircraft’ may be re-positioned to the start of the runway to facilitate another take-off without the requirement to taxi to the holding point once again.

Examiners must be cognisant of the CASR 61.385 ‘general competency requirement’ regarding the authority to exercise the privileges of a rating or an activity in an aircraft. For manoeuvres that involve elevated risk (abnormal and emergency flight manoeuvres) when conducting a flight test in an aircraft, the examiner must be competent in the management of all flight test activities including the ability to safely manage potential applicant mishandling. This level of competency should be achieved with a targeted program of examiner training in an aircraft or a simulator where one is available.

17.3 Conduct (ground component)

17.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

• flight test context, purpose and content
• assessment procedure
• function of the examiner
• standards against which competency will be assessed
• actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

17.3.2 Document review

The examiner must confirm that an applicant for the TR SEA satisfies the eligibility requirements to undertake the flight test for the grant of the type rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

Licence – the applicant for the TR SEA must hold an aeroplane category PPL, CPL, MPL or ATPL.

Aeronautical knowledge examinations – the examiner must review the applicant’s theory examination pass records, as conducted by the training provider.

Knowledge deficiency report (KDR) – N/A

Flight training requirements – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at
least be a course completion certificate. For multi-crew operations, the applicant must also have completed an approved course of training in multi-crew cooperation or equivalent (regulation 61.785 of CASR).

**Aeronautical experience** – N/A

**English language proficiency** – N/A

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – for flight tests conducted in an aeroplane, the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the TR SEA.

**Security check and fit and proper person requirements** – N/A

**If the flight test is a retest following a fail assessment** – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

### 17.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS. For a flight test conducted under the IFR, the topics must also be applied to IFR operations.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

### 17.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- flight notification
- loading system
- take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.
17.4 Conduct (flight component)

17.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested.
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test.
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

The examiner should assess adherence to either company SOPs, training provider SOPs or the aeroplane manufacturer’s AFM, e.g. operator specific or manufacturer, as nominated by the applicant.

Assessment should be based on the technique used by the applicant to satisfy compliance with SOPs, and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

Sound judgement and decision-making should be displayed. It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.
17.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying commercial operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- clarification of crew responsibilities in the event of actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable)

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

17.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the TR SEA flight test. Where there are no specific recommendations, 'NSR' is listed in the table against the unit or element.

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<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>An applicant may apply operator specific fuel policies for carriage over and above the minimum legal statutory fuel requirements.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>The examiner should engage the applicant during the pre-flight with questions relevant to the inspection, without disrupting the inspection or compromising safety. Where the aircraft already has a valid maintenance release certification for the day, the applicant is still required to complete the daily inspection in all respects and should explain the certification process.</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>It is recommended that the examiner pose a start malfunction or emergency just prior to the start procedure so the applicant’s touch drills can be assessed.</td>
</tr>
<tr>
<td></td>
<td>(b) Taxi aircraft</td>
<td>If aircraft design precludes taxiing from a particular operating seat, the applicant must demonstrate competency taxing the aircraft.</td>
</tr>
<tr>
<td></td>
<td>(c)(i) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
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<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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</tr>
<tr>
<td><strong>(c)(ii) Conduct instrument departure</strong> – published if available or ATC cleared if available</td>
<td>For IFR operations only. Simulated IMC must not be introduced before the take-off minima. A Class G overhead departure procedure may be flown if a SID or ATC departure is not available.</td>
<td></td>
</tr>
<tr>
<td><strong>(d) Conduct crosswind take-off</strong></td>
<td>For tests conducted in an aircraft, training record evidence of competence in crosswinds of at least 70% of the AFM maximum and oral questioning should be used in the absence of a crosswind. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
<td></td>
</tr>
<tr>
<td><strong>(e) Conduct climb profiles and climbing turns</strong></td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>En route cruise</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(a) Maintain straight and level and turn aircraft</strong></td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>(b) Maintain any 1 cruise configuration for turbulence, holding or range</strong></td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>(c) Use instrument navigation systems</strong></td>
<td>If the flight test is conducted under the IFR, the instrument flight assessment should consist of a segment with at least the IAP2 elements conducted under the IFR. The flight should include a sector to an aerodrome (other than the departure aerodrome) serviced by a published instrument approach which the aeroplane is equipped to use.</td>
<td></td>
</tr>
<tr>
<td><strong>Test specific activities and manoeuvres</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(a) Conduct approach to stall and recovery</strong> – 1 must be in the approach configuration and at least 2 stalls</td>
<td>The examiner should place emphasis on the application of correct technique rather than the achievement of a minimum height loss.</td>
<td></td>
</tr>
<tr>
<td><strong>(b) Conduct steep level turns of at least 45˚ bank</strong></td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>(c) Perform full panel instrument flying</strong></td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>(d) Full panel instrument flying, recover from at least 2 unusual attitudes</strong></td>
<td>In an aircraft, the unusual attitude recoveries should be conducted by day in VMC and the examiner should have visual reference at all times during the manoeuvre.</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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</tr>
<tr>
<td></td>
<td>(e) Manage engine failure after take-off</td>
<td>The examiner must consider the airfield terrain, obstacles and noise abatement requirements. Where aerodromes do not allow the safe practise of EFATO, the examiner should simulate the procedure elsewhere at altitude.</td>
</tr>
<tr>
<td></td>
<td>(f) Manage a malfunction during start or shutdown and 1 of: a system malfunction, fire or radio failure</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(g) Perform forced landing</td>
<td>NSR</td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(a) Conduct descent profiles and descending turns</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b)(i) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b)(ii)(A) Perform a descent or published arrival procedure to an aerodrome</td>
<td>For IFR operations only. The descent may be a normal descent to MSA/LSALT or a DGA.</td>
</tr>
<tr>
<td></td>
<td>(b)(ii)(B) 2D, conduct approach</td>
<td>For IFR operations only.</td>
</tr>
<tr>
<td></td>
<td>(b)(ii)(C) Conduct missed approach</td>
<td>For IFR operations only.</td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Conduct crosswind landing</td>
<td>For tests conducted in an aircraft, training record evidence of competence in crosswinds of at least 70% of the AFM maximum and oral questioning should be used in the absence of a crosswind. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td></td>
<td>(c) Perform a go-around procedure</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
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<td></td>
<td>(b) Maintain situational awareness</td>
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<td>(c) Assess situations and make decisions</td>
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<td>(d) Set priorities and manage tasks</td>
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<td>(e) Maintain effective communications and interpersonal relationships</td>
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<td></td>
<td>(f) Recognise and manage threats</td>
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<td>(g) Recognise and manage errors</td>
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<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Use correct radio procedures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(j) Manage relevant aircraft systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td></td>
</tr>
</tbody>
</table>

17.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).
Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

### 17.5 Complete (post flight)

#### 17.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

#### 17.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).
Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
18 Type Rating - Single Engine Helicopter

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the type rating – single engine helicopter (TR SEH).

18.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the TR SEH flight test:

1. The examiner must conduct the TR SEH flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.

2. The examiner must conduct the TR SEH flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.

3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.

4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.

5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.

6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

18.2 Plan

18.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a commercial passenger/cargo carrying operation). The applicant should be given the test scenario at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hour (2.0 in an FSTD) for the general handling and test specific manoeuvres.
The examiner may choose to conduct the flight test in combination with a licence or operational rating flight test to avoid two separate flights. In this case, the total time should not exceed 4 hours.

**Use of IFR procedures**

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the flight test or be taken into account in the flight test flight time. A landing and shutdown should terminate the IFR flight segment before commencing the SEH assessment flight sequences.

The SEH flight test should be concluded by a landing and shutdown in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the SEH flight test should be considered as the flight time for the flight test.

**18.2.2 TR SEH assessment scope and conditions**

The TR SEH flight test must be conducted by day under the VFR in a helicopter or an FSTD approved for the purpose, in accordance with subregulations 61.245 (1), 61.810 (3) and the limitation of subregulation 61.245 (2) of CASR. The helicopter and FSTD must be of the type covered by the pilot type rating. The helicopter must have operational dual controls, electronic intercom and, if fitted with a wheeled undercarriage, dual control brakes.

The FEH activities and manoeuvres, listed in the Requirements column of Table 20 below, mirror the TR SEH test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the TR SEH flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the TR SEH test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

TR SEH flight tolerances and ground reference tolerances are specified in Table 2 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The TR SEH applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system.

When the flight test is conducted in an approved FSTD, the examiner should not speed up or in any other way change the real-time nature of the flight, except when a non-normal sequence has been completed and the simulator returned to its normal operating state. The examiner may ‘re-position the aircraft’ when required to meet the flight test requirements e.g., after the engine failure during hover or taxi, the ‘aircraft’ may be re-positioned to facilitate another take-off without the requirement to taxi to the helipad once again.

Examiners must be cognisant of the CASR 61.385 ‘general competency requirement’ regarding the authority to exercise the privileges of a rating or an activity in an aircraft. For
manoeuvres that involve elevated risk (abnormal and emergency flight manoeuvres) when conducting a flight test in an aircraft, the examiner must be competent in the management of all flight test activities including the ability to safely manage potential applicant mishandling. This level of competency should be achieved with a targeted program of examiner training in an aircraft or a simulator where one is available.

18.3 Conduct (ground component)

18.3.1 Initial brief to applicant
In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

18.3.2 Document review
The examiner must confirm that an applicant for the TR SEH satisfies the eligibility requirements to undertake the flight test for the grant of the type rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the TR SEH must hold a helicopter category PPL, CPL or ATPL.

**Aeronautical knowledge examinations** – the examiner must review the applicant’s theory examination pass records, as conducted by the training provider.

**Knowledge deficiency report (KDR)** – N/A

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

**Aeronautical experience** – N/A

**English language proficiency** – N/A

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – for flight tests conducted in a helicopter, the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the TR SEH.

**Security check and fit and proper person requirements** – N/A
If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

18.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

18.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- flight notification
- loading system
- take-off and landing data/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

18.4 Conduct (flight component)

18.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
• **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.

• **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test.

• **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

The examiner should assess adherence to either company SOPs, training provider SOPs or the helicopter manufacturer’s AFM, e.g. operator specific or manufacturer, as nominated by the applicant.

Assessment should be based on the technique used by the applicant to satisfy compliance with SOPs and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

Sound judgement and decision-making should be displayed. It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

### 18.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

• the scenario applied to the test environment (e.g. passenger carrying commercial operation / simulation of passengers)
• pilot in command
• transfer of control
• flight tolerances and ground references
• simulating emergencies, methods and calls
• clarification of crew responsibilities in the event of actual emergencies
• procedures for simulating IMC.
• multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.
18.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the TR SEH flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

Table 28: Assessment of activities and manoeuvres – TR SEH

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>An applicant may apply operator specific fuel policies for carriage over and above the minimum legal statutory fuel requirements.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>In-transit (aircraft turnaround) pre-flight cockpit preparation is acceptable for the purposes of the pre-flight inspection.</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Lift-off and hover helicopter</td>
<td></td>
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<td></td>
<td>(c) Taxi aircraft</td>
<td>The examiner should assess these items during the normal operation of the helicopter in the departure phase.</td>
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<tr>
<td></td>
<td>(d) Air transit helicopter</td>
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</tr>
<tr>
<td></td>
<td>(e) Plan, brief and conduct take-off and departure procedures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) Conduct maximum performance take-off</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(g) Conduct climbs and climbing turns – must include any 2 of maximum rate, maximum angle or cruise climb</td>
<td>The examiner should pose scenarios to achieve the observation of a climb at best angle to achieve obstacle clearance or at best rate during departure and climb phase.</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Use instrument navigation systems</td>
<td></td>
</tr>
<tr>
<td>Test specific activities and manoeuvres</td>
<td>(a) Hover helicopter in crosswind and tailwind and perform turns around any 1 of the rotor mast, nose or tail</td>
<td>The examiner is required to assess headwind/crosswind/tailwind hover and ground taxi unless the applicant’s training records certify dual or solo competence in those wind conditions. In this case the examiner must indicate competency by marking the items on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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<tr>
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</tr>
<tr>
<td><strong>(b)</strong> Perform sideways and backwards flight</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>(c)</strong> Conduct steep level turns of at least 45˚ bank</td>
<td>Recommend a turn through at least 180 degrees is assessed.</td>
<td></td>
</tr>
<tr>
<td><strong>(d)</strong> Perform autorotative flight</td>
<td>Recommend assessment of at least entry to, stabilised control of and recovery from minimum rate of descent autorotation.</td>
<td></td>
</tr>
<tr>
<td><strong>(e)</strong> Land on and lift-off from sloping ground</td>
<td>It is not a requirement to demonstrate maximum slope landing limitations.</td>
<td></td>
</tr>
<tr>
<td><strong>(f)</strong> Execute limited power take-off, approach and landing</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>(g)</strong> Perform forced landing</td>
<td>The examiner should initiate the simulated engine failure at least 2,000' AGL to ensure the applicant has sufficient time to perform the procedure.</td>
<td></td>
</tr>
<tr>
<td><strong>(h)</strong> Manage engine failure during hover or taxi</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>(i)</strong> Manage a control or tail rotor malfunction in flight and at the hover</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>(j)</strong> Manage a system malfunction – at least 1 from engine fire, electrical failure, hydraulic system, airframe fuel system or engine governor system</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>Descent and arrival</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>(a)</strong> Conduct descents and descending turns</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>(b)</strong> Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>Circuit, approach and landing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(a)</strong> Conduct normal circuit pattern, approach and landing</td>
<td>These items should be assessed during the normal operation of the helicopter during the circuit phase.</td>
<td></td>
</tr>
<tr>
<td><strong>(b)</strong> Approach to the hover</td>
<td></td>
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</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(c) Air transit helicopter</td>
<td></td>
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</tr>
<tr>
<td>(d) Perform a go-around procedure</td>
<td></td>
<td>The examiner may need to introduce a reason to conduct the go-around procedure.</td>
</tr>
<tr>
<td>(e) Perform after-landing actions and procedures</td>
<td></td>
<td>NSR</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
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<td>(a) Maintain effective lookout</td>
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<td>(g) Recognise and manage errors</td>
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<td>(h) Recognise and manage undesired aircraft state</td>
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<td></td>
</tr>
<tr>
<td>(i) Use correct radio procedures</td>
<td></td>
<td>Communication and radio procedures relevant to the airspace within which the test is conducted.</td>
</tr>
<tr>
<td>(j) Manage relevant aircraft systems</td>
<td></td>
<td>The applicant should demonstrate a sound working knowledge of the helicopter’s automation system, including use of the Flight Management Computer System (FMCS), the Autopilot Flight Director System (AFDS) and the Mode Control Panel (MCP) (or however these systems are described).</td>
</tr>
<tr>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td></td>
<td>NSR</td>
</tr>
</tbody>
</table>
18.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

18.5 Complete (post flight)

18.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.
18.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
19 Type Rating - Multi Engine Aeroplane

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the type rating – multi engine aeroplane (TR MEA).

19.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the TR MEA flight test:

1. The examiner must conduct the TR MEA flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the TR MEA flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

19.2 Plan

19.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a commercial passenger/cargo carrying operation). The applicant should be given the test scenario at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hours (2.0 in an FSTD) for the general handling and test specific manoeuvres.
The examiner may choose to conduct the flight test in combination with a licence or operational rating flight test to avoid two separate flights. In this case, the total time should not exceed 4 hours.

**Use of IFR procedures**

To authorise the applicant to pilot the type under the IFR, the examiner must ensure that the flight test is conducted under the IFR (regulation 61.790 of CASR).

**19.2.2 TR MEA assessment scope and conditions**

The TR MEA flight test must be conducted under the IFR or by day under the VFR in an aeroplane or an FSTD approved for the purpose, in accordance with subregulations 61.245 (1), 61.810 (3) and the limitation of subregulation 61.245 (2) of CASR. The aeroplane and FSTD must be of the type covered by the pilot type rating. The aeroplane must have operational dual controls, electronic intercom and dual control brakes.

The FEH activities and manoeuvres, listed in the Requirements column of Table 21 below, mirror the TR MEA test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the TR MEA flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the TR MEA test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

TR MEA flight tolerances and ground reference tolerances are specified in Table 2 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The TR MEA applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system.

When the flight test is conducted in an aircraft, the rejected take-off is not required and an engine failure during take-off is to be replaced by an engine failure after take-off. In an aircraft, the simulated engine failure should not be conducted at night or in IMC and the examiner should have visual reference at all times during the manoeuvre.

When the flight test is conducted in an aircraft, the examiner may occupy either a control seat or a suitable observer seat (jump seat). Where the examiner occupies a control seat (as copilot), the examiner should be the nominated pilot in command (PIC).

If the examiner is occupying a control seat in a multi-crew operation, they must provide the normal duties of a co-pilot in that role, but only to the extent required by the operator's operations manual.

Where the examiner occupies a jump seat, a suitably qualified pilot should occupy the co-pilot seat and be the nominated PIC.
Where the examiner or a suitably qualified pilot occupies a control seat, the examiner should brief all crew members on the following:

- command/safety of flight responsibilities
- flight test profile and scenario
- role of the ‘co-pilot’
- introduction of non-normal sequences
- discontinuation/termination of the flight test
- communication protocols.

When the flight test is conducted in an approved FSTD, the examiner should not speed up or in any other way change the real-time nature of the flight, except when a non-normal sequence has been completed and the simulator returned to its normal operating state. The examiner may ‘re-position the aircraft’ when required to meet the flight test requirements e.g., after an RTO, the ‘aircraft’ may be re-positioned to the start of the runway to facilitate another take-off without the requirement to taxi to the holding point once again.

Examiners must be cognisant of the CASR 61.385 ‘general competency requirement’ regarding the authority to exercise the privileges of a rating or an activity in an aircraft. For manoeuvres that involve elevated risk (abnormal and emergency flight manoeuvres) when conducting a flight test in an aircraft, the examiner must be competent in the management of all flight test activities including the ability to safely manage potential applicant mishandling. This level of competency should be achieved with a targeted program of examiner training in an aircraft or a simulator where one is available.

19.3 Conduct (ground component)

19.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

19.3.2 Document review

The examiner must confirm that an applicant for the TR MEA satisfies the eligibility requirements to undertake the flight test for the grant of the type rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the TR MEA must hold an aeroplane category PPL, CPL, MPL or ATPL.
Aeronautical knowledge examinations – the examiner must review the applicant’s theory examination pass records, as conducted by the training provider.

Knowledge deficiency report (KDR) – N/A

Flight training requirements – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate. For multi-crew operations, the applicant must also have completed an approved course of training in multi-crew cooperation or equivalent (regulation 61.785 of CASR).

Aeronautical experience – N/A

English language proficiency – N/A

Eligibility certification – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

Medical certificate – for flight tests conducted in an aeroplane, the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the TR MEA.

Security check and fit and proper person requirements – N/A

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

19.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS. For a flight test conducted under the IFR, the topics must also be applied to IFR operations.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funneling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

19.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- flight notification
- loading system
- take-off and landing distance/performance calculation.

When reviewing the applicant’s flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).
The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

19.4 Conduct (flight component)

19.4.1 Assessment of the applicant's performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

The examiner should assess adherence to either company SOPs, training provider SOPs or the aeroplane manufacturer’s AFM, e.g. operator specific or manufacturer, as nominated by the applicant.

Assessment should be based on the technique used by the applicant to satisfy compliance with SOPs and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

Sound judgement and decision-making should be displayed. It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.
19.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying commercial operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- clarification of crew responsibilities in the event of actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

19.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the TR MEA flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

Table 29: Assessment of activities and manoeuvres - TR MEA

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>An applicant may apply operator specific fuel policies for carriage over and above the minimum legal statutory fuel requirements.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>In-transit (aircraft turnaround) pre-flight cockpit preparation is acceptable for the purposes of the pre-flight inspection.</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Taxi aircraft</td>
<td>If aircraft design precludes taxiing from a particular operating seat, the applicant must demonstrate competency taxiing the aircraft.</td>
</tr>
<tr>
<td></td>
<td>(c)(i) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c)(ii) Conduct instrument departure – published if available or ATC cleared if available</td>
<td>For IFR operations only. Simulated IMC must not be introduced before the take-off minima. A Class G overhead departure procedure may be flown if a SID or ATC departure is not available.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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<tr>
<td></td>
<td>(d) Conduct crosswind take-off</td>
<td>For tests conducted in an aircraft, training record evidence of competence in crosswinds of at least 70% of the AFM maximum and oral questioning should be used in the absence of a crosswind. In this case the examiner must indicate competency by marking the item on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td></td>
<td>(e) Conduct climb profiles and climbing turns</td>
<td>NSR</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Maintain any 1 cruise configuration for turbulence, holding or range</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Use instrument navigation systems</td>
<td>If the flight test is conducted under the IFR, the instrument flight assessment should consist of a segment with at least the IAP2 elements conducted under the IFR. The flight should include a sector to an aerodrome (other than the departure aerodrome) serviced by a published instrument approach which the aeroplane is equipped to use.</td>
</tr>
<tr>
<td>Test specific activities and manoeuvres</td>
<td>(a) Conduct approach to stall and recovery – 1 must be in the approach configuration and at least 2 stalls</td>
<td>The examiner should place emphasis on the application of correct technique rather than the achievement of a minimum height loss.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform full panel instrument flying</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Full panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>In an aircraft, the unusual attitude recoveries should be conducted by day in VMC and the examiner should have visual reference at all times during the manoeuvre.</td>
</tr>
<tr>
<td></td>
<td>(d) Manage incident or malfunction during take-off – reject</td>
<td>If the flight test is conducted in an aircraft, the examiner must assess the rejected take-off procedure verbally only.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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<tr>
<td>----------------</td>
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<td>-------------------------------------------------------------------------------</td>
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<tr>
<td></td>
<td>(e) Manage engine failure during take-off – IAS greater than or equal to V1</td>
<td>If the flight test is conducted in an aircraft, the examiner must only introduce a simulated engine failure after take-off, not during the take-off. The speed at which that failure may be simulated shall be as follows: (i) aeroplanes for which the take-off performance is predicated on the establishment of a V1, failure of the engine shall be simulated at a speed greater than V1; (ii) aeroplanes other than those described in subparagraph (i) above, failure of the engine shall be simulated at a speed greater than either, (a) the one engine inoperative best rate of climb speed or (b) the take-off safety speed plus 10 knots, whichever is the higher.</td>
</tr>
<tr>
<td></td>
<td>(f) Manage engine failure in flight</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(g) Conduct approach OEI</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(h) Conduct missed approach OEI</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(i) Manage any 1 system malfunction – must be separate event to OEI approach and OEI missed approach</td>
<td>The aircraft system malfunction must be other than the one that has been applied in (d) to (g) above, must be a separate event to the OEI approach and the OEI missed approach.</td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(a) Conduct descent profiles and descending turns</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b)(i) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b)(ii)(A) Perform a descent or published arrival procedure to an aerodrome</td>
<td>For IFR operations only. The descent may be a normal descent to MSA/LSALT or a DGA.</td>
</tr>
<tr>
<td></td>
<td>(b)(ii)(B) 2D, conduct approach</td>
<td>For IFR operations only.</td>
</tr>
<tr>
<td></td>
<td>(b)(ii)(C) Conduct missed approach</td>
<td>For IFR operations only.</td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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</tr>
<tr>
<td></td>
<td>(b) Conduct crosswind landing</td>
<td>For tests conducted in an aircraft, training record evidence of competence in crosswinds of at least 70% of the AFM maximum and oral questioning should be used in the absence of a crosswind. In this case the examiner must indicate competency by marking the item on the flight test form with 'TR'.</td>
</tr>
<tr>
<td></td>
<td>(c) Perform a go-around procedure</td>
<td>Perform with all engines operating.</td>
</tr>
<tr>
<td></td>
<td>(d) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td>General requirements</td>
<td>(a) Maintain effective lookout</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Use correct radio procedures</td>
<td>Communication and radio procedures relevant to the airspace within which the test is conducted.</td>
</tr>
<tr>
<td></td>
<td>(j) Manage relevant aircraft systems</td>
<td>The applicant should demonstrate a sound working knowledge of the aeroplane’s automation system, including use of the Flight Management Computer System (FMCS), the Autopilot Flight Director System (AFDS) and the Mode Control Panel (MCP) (or however these systems are described).</td>
</tr>
</tbody>
</table>
19.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.
19.5 Complete (post flight)

19.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

19.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
20 Type Rating - Multi Engine Helicopter

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the type rating – multi engine helicopter (TR MEH).

20.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the TR MEH flight test:

(1) The examiner must conduct the TR MEH flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS

(2) The examiner must conduct the TR MEH flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS

(3) The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test

(4) The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM

(5) After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures

(6) Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

20.2 Plan

20.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a commercial passenger/cargo carrying operation). The applicant should be given the test scenario at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hour (2.0 in an FSTD) for the general handling and test specific manoeuvres.
The examiner may choose to conduct the flight test in combination with a licence or operational rating flight test to avoid two separate flights. In this case, the total time should not exceed 4 hours.

**Use of IFR procedures**

To authorise the applicant to pilot the type under the IFR, the examiner must ensure that the flight test is conducted under the IFR (regulation 61.790 of CASR).

### 20.2.2 TR MEH assessment scope and conditions

The TR MEH flight test must be conducted under the IFR or by day under the VFR in a helicopter or an FSTD approved for the purpose, in accordance with subregulations 61.245 (1), 61.810 (3) and the limitation of subregulation 61.245 (2) of CASR. The helicopter and FSTD must be of the type covered by the pilot type rating. The helicopter must have operational dual controls, electronic intercom and, if fitted with a wheeled undercarriage, dual control brakes.

The FEH activities and manoeuvres, listed in the Requirements column of Table 22 below, mirror the TR MEH test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the TR MEH flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the TR MEH test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

TR MEH flight tolerances and ground reference tolerances are specified in Table 2 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The TR MEH applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system.

In an aircraft, the simulated engine failure should not be conducted at night or in IMC and the examiner should have visual reference at all times during the manoeuvre.

When the flight test is conducted in an aircraft, the examiner may occupy either a control seat or a suitable observer seat (jump seat). Where the examiner occupies a control seat (as co-pilot), the examiner should be the nominated pilot in command (PIC).

If the examiner is occupying a control seat in a multi-crew operation, they must provide the normal duties of a co-pilot in that role, but only to the extent required by the operator’s operations manual.

Where the examiner occupies a jump seat, a suitably qualified pilot should occupy the co-pilot seat and be the nominated PIC.
Where the examiner or a suitably qualified pilot occupies a control seat, the examiner should brief all crew members on the following:

- command/safety of flight responsibilities
- flight test profile and scenario
- role of the ‘co-pilot’
- introduction of non-normal sequences
- discontinuation/termination of the flight test
- communication protocols.

When the flight test is conducted in an approved FSTD, the examiner should not speed up or in any other way change the real-time nature of the flight, except when a non-normal sequence has been completed and the simulator returned to its normal operating state. The examiner may ‘re-position the aircraft’ when required to meet the flight test requirements e.g., after the engine failure during hover or taxi, the ‘aircraft’ may be re-positioned to facilitate another take-off without the requirement to taxi to the helipad once again.

Examiners must be cognisant of the CASR 61.385 ‘general competency requirement’ regarding the authority to exercise the privileges of a rating or an activity in an aircraft. For manoeuvres that involve elevated risk (abnormal and emergency flight manoeuvres) when conducting a flight test in an aircraft, the examiner must be competent in the management of all flight test activities including the ability to safely manage potential applicant mishandling. This level of competency should be achieved with a targeted program of examiner training in an aircraft or a simulator where one is available.

20.3 Conduct (ground component)

20.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

20.3.2 Document review

The examiner must confirm that an applicant for the TR MEH satisfies the eligibility requirements to undertake the flight test for the grant of the type rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

Licence – the applicant for the TR MEH must hold a helicopter category PPL, CPL or ATPL.
Aeronautical knowledge examinations – the examiner must review the applicant’s theory examination pass records, as conducted by the training provider.

Knowledge deficiency report (KDR) – N/A

Flight training requirements – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate. For multi-crew operations, the applicant must also have completed an approved course of training in multi-crew cooperation or equivalent (regulation 61.785 of CASR).

Aeronautical experience – N/A

English language proficiency – N/A

Eligibility certification – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

Medical certificate – for flight tests conducted in a helicopter, the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the TR MEH.

Security check and fit and proper person requirements – N/A

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

20.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

20.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- flight notification
- loading system
- take-off and landing data/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).
The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

20.4 Conduct (flight component)

20.4.1 Assessment of the applicant's performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

The examiner should assess adherence to either company SOPs, training provider SOPs or the helicopter manufacturer’s AFM, e.g. operator specific or manufacturer, as nominated by the applicant.

Assessment should be based on the technique used by the applicant to satisfy compliance with SOPs and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

Sound judgement and decision-making should be displayed. It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.
20.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying commercial operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- clarification of crew responsibilities in the event of actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

20.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the TR MEH flight test. Where there are no specific recommendations, 'NSR' is listed in the table against the unit or element.

Table 30: Assessment of activities and manoeuvres  TR MEH

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>An applicant may apply operator specific fuel policies for carriage over and above the minimum legal statutory fuel requirements.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight inspection</td>
<td>In-transit (aircraft turnaround) pre-flight cockpit preparation is acceptable for the purposes of the pre-flight inspection.</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Lift-off and hover helicopter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Taxi aircraft</td>
<td>The examiner should assess these items during the normal operation of the helicopter in the departure phase.</td>
</tr>
<tr>
<td></td>
<td>(d) Air transit helicopter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e)(i) Plan, brief and conduct take-off and departure procedures</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>(e)(ii) Conduct instrument departure – published if available or ATC cleared if available</td>
<td>For IFR operations only. Simulated IMC must not be introduced before the take-off minima. A Class G overhead departure procedure may be flown if a SID or ATC departure is not available.</td>
</tr>
<tr>
<td></td>
<td>(f) Conduct maximum performance take-off</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(g) Conduct climbs and climbing turns – must include any 2 of maximum rate, maximum angle or cruise climb</td>
<td>The examiner should pose scenarios to achieve the observation of a climb at best angle to achieve obstacle clearance or at best rate during departure and climb phase.</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Use instrument navigation systems</td>
<td>If the flight test is conducted under the IFR, the instrument flight assessment should consist of a segment with at least the IAP2 elements conducted under the IFR. The flight should include a sector to an aerodrome (other than the departure aerodrome) serviced by a published instrument approach which the helicopter is equipped to use.</td>
</tr>
<tr>
<td>Test specific activities and manoeuvres</td>
<td>(a) Hover helicopter in crosswind and tailwind and perform turns around any 1 of the rotor mast, nose or tail</td>
<td>The examiner is required to assess headwind/crosswind/tailwind hover and ground taxi unless the applicant's training records certify dual or solo competence in those wind conditions. In this case the examiner must indicate competency by marking the items on the flight test form with ‘TR’.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform sideways and backwards flight</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Conduct steep level turns of at least 45˚ bank</td>
<td>Recommend a turn through at least 180 degrees is assessed.</td>
</tr>
<tr>
<td></td>
<td>(d) Perform full panel instrument flying</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) Full panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>In an aircraft, the unusual attitude recoveries should be conducted by day in VMC and the examiner should have visual reference at all times during the manoeuvre.</td>
</tr>
<tr>
<td></td>
<td>(f) Land on and lift-off from sloping ground</td>
<td>It is not a requirement to demonstrate maximum slope landing limitations.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>(g) Execute limited power take-off, approach and landing</td>
<td>All engines operating</td>
<td></td>
</tr>
<tr>
<td>(h) Manage engine failure - at least 1 from take-off, cruise flight, approach and landing</td>
<td>The applicant shall attain optimum helicopter performance following failure of an engine. At least one from a take-off, cruise flight or approach configuration; and must include an OEI landing. In an aircraft the simulated engine failure should not be conducted at night or in IMC and the examiner should have visual reference at all times during the manoeuvre.</td>
<td></td>
</tr>
<tr>
<td>(i) Manage engine failure during hover or taxi</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(j) Manage a control or tail rotor malfunction in flight and at the hover</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(k) Manage a system malfunction – at least 1 from engine fire, electrical failure, hydraulic system, airframe fuel system or engine governor system</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(a) Conduct descents and descending turns</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)(i) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(b)(ii)(A) Perform a descent or published arrival procedure to an aerodrome</td>
<td>For IFR operations only. The descent may be a normal descent to MSA/LSALT or a DGA.</td>
<td></td>
</tr>
<tr>
<td>(b)(ii)(B) 2D, conduct approach</td>
<td>For IFR operations only.</td>
<td></td>
</tr>
<tr>
<td>(b)(ii)(C) Conduct missed approach</td>
<td>For IFR operations only.</td>
<td></td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>These items should be assessed during the normal operation of the helicopter during the circuit phase.</td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Approach to the hover</td>
<td></td>
</tr>
<tr>
<td>(c) Air transit helicopter</td>
<td></td>
</tr>
<tr>
<td>(d) Perform a go-around procedure</td>
<td>The examiner may need to introduce a reason to conduct the go-around procedure.</td>
</tr>
<tr>
<td>(e) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>NSR</td>
</tr>
<tr>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td></td>
</tr>
</tbody>
</table>

### General requirements

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td>(d) Set priorities and manage tasks</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
<tr>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td>(i) Use correct radio procedures</td>
<td>Communication and radio procedures relevant to the airspace within which the test is conducted.</td>
</tr>
<tr>
<td>(j) Manage relevant aircraft systems</td>
<td>The applicant should demonstrate a sound working knowledge of the helicopter’s automation system, including use of the Flight Management Computer System (FMCS), the Autopilot Flight Director System (AFDS) and the Mode Control Panel (MCP) (or however these systems are described).</td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
</tbody>
</table>

#### 20.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

**Safety critical items**

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.
20.5 Complete (post flight)

20.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

20.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
21 Type Rating - Cruise Relief Co-Pilot

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the cruise relief type rating – co-pilot (CRTR-CP) and associated aircraft category rating.

21.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the CRTR-CP flight test:

The examiner must conduct the CRTR-CP flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.

1. The examiner must conduct the CRTR-CP flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.

2. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.

3. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.

4. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.

5. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

21.2 Plan

21.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a commercial passenger/cargo carrying operation). The applicant should be given the test route at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.0 hour for the general handling and test specific manoeuvres.
21.2.2 CRTR – CP assessment scope and conditions

The CRTR-CP flight test must be conducted under the IFR in an FSTD approved for the purpose, in accordance with subregulations 61.245 (1), 61.845 (3) and the limitation of subregulation 61.245 (2) of CASR. The FSTD must be of the type covered by the cruise relief type rating.

The FEH activities and manoeuvres, listed in the Requirements column of Table 23 below, mirror the CRTR-CP test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the CRTR-CP flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the CRTR-CP test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

CRTR-CP flight tolerances and ground reference tolerances are specified in tables 2 and 4 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The CRTR-CP applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system. If the examiner is occupying a control seat in a multi-crew operation, they must provide the normal duties of pilot in command in that role, but only to the extent required by the operator’s operations manual.

Where the examiner occupies a jump seat, a suitably qualified pilot should be the nominated PIC.

Where the examiner or a suitably qualified pilot occupies a control seat, the examiner should brief all crew members on the following:

- command/safety of flight responsibilities
- flight test profile and scenario
- role of the ‘pilot in command’
- introduction of non-normal sequences
- discontinuation/termination of the flight test
- communication protocols.

When conducting the flight test in an approved FSTD, the examiner should not speed up or in any other way change the real-time nature of the flight, except when a non-normal sequence has been completed and the simulator returned to its normal operating state.
21.3 Conduct (ground component)

21.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

21.3.2 Document review

The examiner must confirm that an applicant for the CRTR-CP satisfies the eligibility requirements to undertake the flight test for the grant of the type rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the CRTR-CP must hold a CPL, MPL or ATPL (or be applying for the licence simultaneously with the CRTR-CP) of the same category as the aircraft in which the flight test is conducted.

**Aeronautical knowledge examinations** – the examiner must review the applicant’s theory examination pass records, as conducted by the training provider.

**Knowledge deficiency report (KDR)** – N/A

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate. The applicant must also have completed an approved course of training in multi-crew cooperation (subregulation 61.845 (3) of CASR).

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

**English language proficiency** – N/A

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – for flight tests conducted in an aircraft, the examiner must check that the applicant holds a class 1 medical certificate, or a medical exemption allowing them to exercise the privileges of the CRTR-CP.

**Security check and fit and proper person requirements** – N/A

**If the flight test is a retest following a fail assessment** – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.
21.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

21.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- flight notification
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

21.4 Conduct (flight component)

21.4.1 Assessment of the applicant's performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test
• **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

The examiner should assess adherence to either company SOPs, training provider SOPs or the aeroplane manufacturer’s AFM, e.g. operator specific or manufacturer, as nominated by the applicant.

Assessment should be based on the technique used by the applicant to satisfy compliance with SOPs, and not just the ability to perform the task within specified numerical tolerances.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered when the examiner is observing an error or errors which may have the potential to become safety critical, providing the applicant is demonstrating NTS1, NTS2 and TEM appropriately before the examiner is required to intervene.

### 21.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying commercial operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- clarification of crew responsibilities in the event of actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

### 21.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the CRTR-CP flight test. Where there are no specific recommendations, 'NSR' is listed in the table against the unit or element.
Table 31: Assessment of activities and manoeuvres - CRTR-CP

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-flight</strong></td>
<td>(a) Perform pre-flight actions and procedures</td>
<td>An applicant may apply operator specific fuel policies for carriage over and above the minimum legal statutory fuel requirements.</td>
</tr>
<tr>
<td><strong>Ground operations, take-off, departure and climb</strong></td>
<td>(a) Conduct climb profiles and climbing turns</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>En route cruise</strong></td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Maintain any 1 cruise configuration for turbulence, holding or range</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Use instrument navigation systems</td>
<td>The flight should include a sector to an aerodrome serviced by a published instrument approach which the aircraft is equipped to use so that the applicant can demonstrate an approach IAW company procedures.</td>
</tr>
<tr>
<td><strong>Test specific activities and manoeuvres</strong></td>
<td>(a) Conduct approach to stall and recovery – 1 must be in the approach configuration and at least 2 stalls</td>
<td>The examiner should place emphasis on the application of correct technique rather than the achievement of a minimum height loss.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform full panel instrument flying</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Full panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Manage engine failure in flight</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) Conduct approach OEI</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(f) Conduct missed approach OEI</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td></td>
<td>(g) Manage any 1 system malfunction – must be separate event to OEI approach and OEI missed approach</td>
<td>NSR</td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(a) Conduct descent profiles and descending turns</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Conduct crosswind landing</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Perform a go-around procedure</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td>General requirements</td>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
</tbody>
</table>

In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.

The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td>(i) Use correct radio procedures</td>
<td>Communication and radio procedures relevant to the airspace within which the test is conducted.</td>
</tr>
<tr>
<td>(j) Manage relevant aircraft systems</td>
<td>The applicant should demonstrate a sound working knowledge of the aeroplane’s automation system, including use of the Flight Management Computer System (FMCS), the Autopilot Flight Director System (AFDS) and the Mode Control Panel (MCP) (or however these systems are described).</td>
</tr>
<tr>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
</tbody>
</table>

#### 21.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

**Safety critical items**

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the
technique is unsatisfactory. Under these circumstances the flight test may be continued and
credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid
the situation where the error becomes safety critical.

Credits are only valid for one retest.

21.5 Complete (post flight)

21.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after
the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should
ensure sufficient detail is entered into the applicant's training records to allow the training
provider to construct a remedial training program.

21.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a
copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X
(fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight
Crew Licensing Manual.
22 Instrument Rating

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the instrument rating (IR).

22.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the IR flight test:

1. The examiner must conduct the IR flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the IR flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

22.2 Plan

22.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended navigation task to allow for unhurried preparation and planning (simulating either a private or commercial operation as applicable to the licence the applicant holds). The applicant should be given the test route at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hours for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
0.8 hour for the general handling and test specific manoeuvres.

Use of IFR procedures

Although the flight is conducted under the IFR, some simulated emergencies must be conducted by day and in VMC (refer to IR Assessment below).

22.2.2 IR assessment scope and conditions

The IR flight test must be conducted under the IFR and in an aircraft, in accordance with subregulation 61.885 (4) of CASR.

The aircraft used for the IR flight test must be of the appropriate category and be capable of being operated for the kind of operations relevant to the instrument endorsement(s) covered by the flight test.

The FEH activities and manoeuvres, listed in the Requirements column of Table 24 below, mirror the IR test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the IR flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the IR test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

IFR activities and manoeuvres are performed in accordance with published procedures.

IR flight tolerances and ground reference tolerances are specified in Tables 2, 4 and 5 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The IR applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system. If an auto-pilot is not available, the examiner must not ‘act’ as the auto-pilot.

The applicant must demonstrate proficiency to operate the aircraft for at least one instrument approach without the autopilot and flight director being used (manually manipulating the flight and power controls).

For ME aircraft, a simulated engine failure after take-off must not be initiated at a height less than 400ft AGL.

For ME aircraft, simulated engine failures after take-off, in the cruise or during instrument approach procedures must be conducted by day in VMC.

Recoveries from unusual attitudes must be conducted by day in VMC.

For the above procedures, the concept is that IMC is simulated, and the examiner has a clear view of the horizon.

The applicant for the IR must demonstrate competency by performing at least two different kinds of 2D instrument approach procedures and, if the flight test includes a 3D endorsement, an additional ILS or GLS kind of instrument approach procedure.
For a flight test that is for the grant of an additional aircraft category/class instrument endorsement, the applicant must demonstrate competency by performing at least one 2D instrument approach operation.

For a flight test that is for the grant of an additional approach instrument endorsement, the applicant must demonstrate competency as applicable to 3D instrument approach operations and perform at least one ILS or GLS kind of instrument approach procedure.

The examiner should be mindful when conducting the flight test for an additional instrument endorsement, if the flight test is completed more than six months after the granting of the IR, sub-regulation 61.880(3) allows the flight test to be recognised as an IPC. In this case the examiner should consider developing the flight test profile to include the proficiency check scope and conditions. Only one (1) FTM notification is required for the flight test. The test should be recorded on Form 61-2AE and 61-1503 for the initial issue of the instrument endorsement. There is no requirement to submit paperwork for the IPC as the regulations recognise this automatically.

For all instrument approach operations, the approach procedures must be flown to the published and applicable MDA/H or DA/H.

22.3 Conduct (ground component)

22.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

22.3.2 Document review

The examiner must confirm that an applicant for the IR satisfies the eligibility requirements to undertake the flight test for the grant of the Instrument Rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the IR must hold a PPL, CPL or ATPL (or be applying for the licence simultaneously with the IR) of the same category as the aircraft in which the flight test is conducted.

**Aeronautical knowledge examinations** – the examiner must review the applicant’s theory examination pass records.
Knowledge deficiency report (KDR) – the examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

Flight training requirements – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

Aeronautical experience – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

English language proficiency – N/A

Eligibility certification – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

Medical certificate – the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the IR.

Security check and fit and proper person requirements – N/A

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

22.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

22.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- flight notification
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant’s flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).
The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

22.4 Conduct (flight component)

22.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested.
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test.
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

22.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:
• the scenario applied to the test environment (e.g. passenger carrying private or commercial operation / simulation of passengers)
• pilot in command
• transfer of control
• flight tolerances and ground references
• simulating emergencies, methods and calls
• actual emergencies
• procedures for simulating IMC.
• the expectations of the applicant during the simulation of instrument conditions, visual flight conditions and any simulated weather when advised ‘visual’ by the examiner
• the expectations when operating the aircraft at the minima (e.g. numerical tolerances).
• multiple flights and the assessment of competencies (if applicable)

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

22.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the IR flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

Table 32: Assessment of activities and manoeuvres - IR

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Plan an IFR flight For aircraft where CAO 20.7.1B applies, use of appropriate performance data must be demonstrated.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight actions and procedures NSR</td>
<td></td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures NSR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Plan, brief and conduct take-off and departure procedures NSR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Conduct instrument departure – published if available or ATC cleared if available</td>
<td>Simulated IMC must not be introduced before the take-off minima. A Class G overhead departure procedure may be flown if a SID or ATC departure is not available.</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Navigate aircraft en route using ground and satellite navigation systems NSR</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>(b) Perform navigation systems integrity checks</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Identify and avoid hazardous weather conditions</td>
<td>Verbal scenario(s) may be introduced if hazardous conditions are not present.</td>
</tr>
<tr>
<td></td>
<td>(a) Perform full and limited panel instrument flying</td>
<td>For the limited panel assessment, the primary attitude indicator/display and the primary heading indicator/display may be ‘failed’ simultaneously. If assessed, unreliable airspeed indications must be a separate exercise. For EFIS cockpits, the use of standby instruments is acceptable for limited panel assessments.</td>
</tr>
<tr>
<td></td>
<td>(b) Full and limited panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>The unusual attitude recoveries must be conducted by day in VMC and the examiner should have visual reference at all times during the manoeuvre. At least one recovery full panel and at least one recovery limited panel must be assessed.</td>
</tr>
<tr>
<td></td>
<td>(c) Conduct instrument departure OEI – ME aircraft only</td>
<td>The departure must be a separate event to the one engine inoperative (OEI) missed approach.</td>
</tr>
<tr>
<td></td>
<td>(d) Conduct instrument approach OEI – ME aircraft only</td>
<td>The applicant should demonstrate proficiency in the management of the aircraft with OEI during an approach. The simulated engine failure should be introduced before the Final Approach Fix (FAF).</td>
</tr>
<tr>
<td></td>
<td>(e) Conduct missed approach OEI or visual circling OEI – ME aircraft only</td>
<td>The applicant should fly the published approach OEI, followed by either the published missed approach or visual circling whilst maintaining the specified flight path tolerances for OEI operations.</td>
</tr>
<tr>
<td></td>
<td>(a) Perform a descent or published arrival procedure to an aerodrome</td>
<td>The descent may be a normal descent to MSA/LSALT or a DGA.</td>
</tr>
<tr>
<td></td>
<td>(b) Track to holding fix and conduct a holding pattern or sector 3 entry procedure</td>
<td>Must be IAW published procedures. If a sector 3 entry into a holding pattern is conducted, an additional holding pattern is not required. If conducting an RNAV(GNSS) approach, the applicant must conduct RNAV(GNSS) published holding or sector 3 associated with the instrument approach procedure to be flown Only one holding procedure is required for the test.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>(c)(i) 2D, prepare for approach</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(c)(ii) 2D, conduct approach</td>
<td>At least one 2D approach must be a CDI operation.</td>
<td></td>
</tr>
<tr>
<td>(c)(iii) 2D, prepare for approach - 2nd approach</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(c)(iv) 2D, conduct approach - 2nd approach</td>
<td>The approach may be a CDI or azimuth operation.</td>
<td></td>
</tr>
<tr>
<td>(d)(i) 3D, prepare for approach</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(d)(ii) 3D, conduct approach</td>
<td>A 3D approach is only required for the 3D instrument endorsement. Holding is not required if conducted 2D and radar vectoring is available.</td>
<td></td>
</tr>
<tr>
<td>(e) Conduct missed approach</td>
<td>Only one missed approach is required for the test.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If the missed approach is conducted from a 3D approach, the applicant must be able to describe the MDA procedure for a 2D missed approach. If the missed approach is conducted from a 2D approach, the applicant must be able to describe the DA procedure for a 3D missed approach (if applying for a 3D endorsement). This is best completed during the ground component.</td>
<td></td>
</tr>
<tr>
<td>(a) Conduct visual circling with at least 90° heading change</td>
<td>The circling approach should be demonstrated as the continuation of the published aerodrome instrument approach from the specified minima. The instrument approach and circling manoeuvres should be flown onto the actual aerodrome named on the instrument approach plate. The circling approach should not be flown as a standalone low level circuit and must commence from at least a 90° heading change to the runway.</td>
<td></td>
</tr>
<tr>
<td>(b) Perform after-landing actions and procedures</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(a) Maintain effective lookout</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of</td>
<td></td>
</tr>
</tbody>
</table>
Phase of Flight | Requirements | Recommendations
---|---|---
(b) Maintain situational awareness | the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.
(c) Assess situations and make decisions | The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.
(d) Set priorities and manage tasks | 
(e) Maintain effective communications and interpersonal relationships | 
(f) Recognise and manage threats | 
(g) Recognise and manage errors | 
(h) Recognise and manage undesired aircraft state | 
(i) Use correct radio procedures | NSR
(j) Manage relevant aircraft systems | NSR
(k) Manage fuel system and monitor fuel plan and usage | NSR

22.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
• failure to maintain minimum traffic separation standards
• failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
• failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items
The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

22.5 Complete (post flight)

22.5.1 Debriefings
The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

22.5.2 Flight test administration
At the conclusion of the flight test, the examiner must:

• within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
• within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
23 Instrument Proficiency Check

The aim of this proficiency check is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 6 of the Part 61 MOS for the instrument proficiency check (IPC).

23.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the IPC:

1. The examiner must conduct the IPC in accordance with clauses 1 to 3 of Schedule 6 of the Part 61 MOS.
2. The examiner must conduct the IPC within the operational scope and conditions described in clause 4 of Schedule 6 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the proficiency check is successfully completed before conducting the pre-flight briefing and flight component of the proficiency check.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. At the conclusion of the proficiency check when reporting the result in FTM, the examiner must enter the following details:
   - the route, including the departure location, major turning points and the destination
   - the specific kinds of instrument approach procedures flown, using the name on the instrument approach chart.
7. Where credits are available for proficiency check items, they are valid for 28 days only. After 28 days, the proficiency check must be conducted in full.

23.2 Plan

23.2.1 Testing methodology

The examiner should apply the proficiency check methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The proficiency check should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the proficiency check cannot be completed.
The examiner must ensure the applicant is given adequate notice of the intended navigation task to allow for unhurried preparation and planning (simulating either a private or commercial operation as applicable to the licence the applicant holds). The applicant should be given the test route at least 24 hours before the start of the proficiency check.

It is recommended that the examiner plans an **airborne** time of approximately:

- 0.8 hour for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
- 0.5 hour for the general handling and test specific manoeuvres.

**Use of IFR procedures**

Although the flight is conducted under the IFR, some simulated emergencies must be conducted by day and in VMC (refer to IPC scope and conditions below).

### 23.2.2 IPC scope and conditions

The IPC must be conducted under the IFR and in an aircraft or an FSTD approved for the purpose, in accordance with subregulation 61.880 (6) of CASR.

The aircraft and FSTD used for the IPC must be of the appropriate category and be capable of being operated for the kind of operations relevant to the instrument endorsement(s) the applicant holds and that are assessed in the IPC.

The FEH activities and manoeuvres, listed in the Requirements column of Table 25 below, mirror the IPC test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 6 for the IPC.

These activities and manoeuvres, described in clause 3 of Schedule 6 of the MOS and the IPC test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

Non Precision Approach procedures are not to be used when assessing an applicant for the 3D instrument approach. AIP ENR 1.5 states an NPA procedure used with advisory vertical guidance calculated and provided by on-board navigation equipment can be flown as a 3D instrument approach operation. It goes on to warn no assurance of compliance with descent limitations specified for the NPA procedure and accordingly the pilot must conform with segment MSA and MDA requirements. Also, when flying an NPA as a 3D operation pilots should initiate any missed approach at an altitude above the MDA to ensure the aircraft does not descend below published MDA. In this case an applicant would not be demonstrating the full competency in a precision approach procedure and does not descend to a published DA/H and then land or conduct the missed approach.

IFR activities and manoeuvres are performed in accordance with published procedures.

IPC flight tolerances and ground reference tolerances are specified in Tables 2, 4 and 5 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The IPC applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.
Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system. If an auto-pilot is not available, the examiner must not ‘act’ as the auto-pilot.

The applicant must demonstrate proficiency to operate the aircraft for at least one instrument approach without the autopilot and flight director being used (manually manipulating the flight and power controls).

For ME aircraft, a simulated engine failure after take-off must not be initiated at a height less than 400ft AGL.

For ME aircraft, simulated engine failures after take-off, in the cruise or during instrument approach procedures must be conducted by day in VMC.

In an aircraft, recoveries from unusual attitudes must be conducted by day in VMC.

For the above procedures, the concept is that IMC is simulated, and the examiner has a clear view of the horizon.

The applicant for the IPC must demonstrate competency by performing at least two different kinds of instrument approach procedures, including at least one 2D instrument approach operation.

A 3D approach is not mandatory, however if the applicant holds the IAP 3D instrument endorsement and a 3D approach is not included in the check, limitations apply to exercising the privileges of that endorsement – refer to regulation 61.900 of CASR.

The MOS Schedule 6 Appendix 1 Clause 3.6 requires a circling approach to be assessed. The intent is for the circling approach to be optional. However, if a circling approach is not included in the check, limitations apply to exercising the privileges of the instrument rating – refer to regulation 61.860 of CASR.

For all instrument approach operations, the approach procedures must be flown to the published and applicable MDA/H or DA/H.

Instrument Proficiency Check (IPC) conducted in an overseas simulator

For an Australian CASA Part 61 licence holder to undertake an IPC partially conducted by a foreign-authorised person, the following applies:

The process requires the applicant to contact an Australian flight examiner or CASA authorised person who in turn must notify CASA of the intent to conduct the ground component of an IPC partially conducted by a foreign authorised person using the CASA Flight Test Management System (FTM). This notification must be lodged 10 working days prior to conducting the check. The flight test number is to be included on CASA Forms 61-1512 and 61-4P.

The FTM proficiency check selection in the drop-down menu is “IPC - partially conducted by a foreign authorised person”.

The IPC must be completed in full (ground & flight component) within 35 days of the nominated FTM notification date. The FTM further requires the examiner who conducted the ground component to report the pass/fail result within 14 days after the day of the check and record the successful completion of the IPC on the person’s licence if the person has been assessed as competent by a person authorised to conduct foreign IPC by a recognised State.
Prior to attempting the flight component of the IPC, an Australian flight examiner or CASA authorised person must:

1. Assess the licence holder against the knowledge standards mentioned in the CASR Part 61 MOS for IPC’s in accordance with the FEH.
2. Be satisfied the holder meets the knowledge standards.
3. Record the flight test number and result on CASA Form 61-4P.

The assessment of the candidate’s knowledge must be conducted “face-to-face” by an Australian flight examiner.

The Australian flight examiner conducting the IPC ground component is not required to be type rated on the aircraft type used in the flight component, however they must themselves hold a valid IPC.

On successful completion of the practical assessment of the IPC conducted overseas, an Australian flight examiner or CASA authorised person must comply with CASR 202.279. by endorsing the holder’s licence document, and complete and submit all the required documentation.

CASA Forms 61-1512 and 61-4P are to be used by the Australian flight examiner to:

- record the flight test number
- assess the flight test component and be satisfied that all competencies have been successfully completed
- record the pass/fail result.

The examiner should sign both forms, and send both forms to applications@casa.gov.au

The simulator used for the IPC must be approved by the National Aviation Authority (NAA) of a Recognised Foreign State (RFS) as defined under CASR 61.010. A copy of the Qualification Certificate for the simulator used in the IPC must be provided by attaching the relevant documentation to CASA Form 61-4P.

The Foreign Authorised Person must be approved by the NAA of a RFS to conduct IPCs – a copy of the foreign authorised person’s certificate setting out their approval to conduct IPCs must be provided by attaching the relevant documentation to CASA Form 61-4P.

The IPC must comply in all respects to the CASR Part 61 MOS Schedule 6 requirements for an IPC (refer CASA Form 61-1512).

It is recommended that the simulator used for the IPC should have a current Australian aerodrome and navigation aids database. The licence holder should confirm this with the overseas simulator training provider. If the overseas simulator does not have such capability pilots should be aware that ICAO PANS OPS and FAA TERPS instrument approach procedures have different requirements that apply for the instrument approach procedures used in the practical assessment.

23.3 Conduct (ground component)

23.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the proficiency check with a brief to the applicant on the following items:
• proficiency check context, purpose and content
• assessment procedure
• function of the examiner
• standards against which competency will be assessed
• actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the proficiency check elements.

23.3.2 Document review

The examiner must confirm the identity of the applicant for the IPC. To achieve this, the logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the proficiency check.

Licence – the applicant for the IPC must hold a PPL, CPL or ATPL of the same category as the aircraft in which the proficiency check is conducted and hold the IR.

Aeronautical knowledge examinations – N/A
Knowledge deficiency report (KDR) – N/A
Flight training requirements – N/A
Aeronautical experience – N/A
English language proficiency – N/A
Eligibility certification – N/A

Medical certificate – for proficiency checks conducted in an aircraft, the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the IR.

Security check and fit and proper person requirements – N/A

If the proficiency check is a retest following a fail assessment, requiring remedial training – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

23.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 6 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

23.3.4 Assessment of flight planning

As part of the proficiency check, the applicant must complete or demonstrate knowledge of (if computer generated):
• flight plan
• fuel plan
• flight notification
• weight and balance calculation
• take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

23.4 Conduct (flight component)

23.4.1 Assessment of the applicant's performance

The applicant's performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- Technique – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- Judgement – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- Knowledge – during the course of the proficiency check the applicant’s knowledge may be further tested
- Smoothness – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- Accuracy – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
- Procedures – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the proficiency check
- Flight management – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside
the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

23.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the proficiency check environment (e.g. passenger carrying private or commercial operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- the expectations of the applicant during the simulation of instrument conditions, visual flight conditions and any simulated weather when advised ‘visual’ by the examiner
- the expectations when operating the aircraft at the minima (e.g. numerical tolerances).
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

23.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the IPC. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

Table 33: Assessment of activities and manoeuvres - IPC

<table>
<thead>
<tr>
<th>Phase of flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Plan an IFR flight</td>
<td>For aircraft where CAO 20.7.1B applies, use of appropriate performance data must be demonstrated.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR.</td>
</tr>
<tr>
<td>Phase of flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
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</tr>
<tr>
<td><strong>En route cruise</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Conduct instrument departure – published if available or ATC cleared if available</td>
<td>Simulated IMC must not be introduced before the take-off minima. A Class G overhead departure procedure may be flown if a SID or ATC departure is not available.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a) Navigate aircraft en route using ground and satellite navigation systems</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform navigation systems integrity checks</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Identify and avoid hazardous weather conditions</td>
<td>Verbal scenario(s) may be introduced if hazardous conditions are not present.</td>
</tr>
<tr>
<td><strong>Test specific activities and manoeuvres</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Perform full and limited panel instrument flying</td>
<td>For the limited panel assessment, the primary attitude indicator/display and the primary heading indicator/display may be ‘failed’ simultaneously. If assessed, unreliable airspeed indications must be a separate exercise. For EFIS cockpits, the use of standby instruments is acceptable for limited panel assessments.</td>
<td></td>
</tr>
<tr>
<td>(b) Full and limited panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>The unusual attitude recoveries must be conducted by day in VMC and the examiner should have visual reference at all times during the manoeuvre. At least one recovery full panel and at least one recovery limited panel must be assessed.</td>
<td></td>
</tr>
<tr>
<td>(c) Conduct instrument departure OEI – ME aircraft only</td>
<td>The departure must be a separate event to the one engine inoperative (OEI) missed approach.</td>
<td></td>
</tr>
<tr>
<td>(d) Conduct instrument approach OEI – ME aircraft only</td>
<td>The applicant should demonstrate proficiency in the management of the aircraft with OEI during an approach. The simulated engine failure should be introduced before the Final Approach Fix (FAF).</td>
<td></td>
</tr>
<tr>
<td>(e) Conduct missed approach OEI or visual circling OEI – ME aircraft only</td>
<td>The applicant should fly the published approach OEI, followed by either the published missed approach or visual circling whilst maintaining the specified flight path tolerances for OEI operations.</td>
<td></td>
</tr>
<tr>
<td><strong>Descent and arrival</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Perform a descent or published arrival procedure to an aerodrome</td>
<td>The descent may be a normal descent to MSA/LSALT or a DGA.</td>
<td></td>
</tr>
</tbody>
</table>
### Phase of flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Track to holding fix and conduct a holding pattern or sector 3 entry procedure</td>
<td>Must be IAW published procedures. If a sector 3 entry into a holding pattern is conducted, an additional holding pattern is not required. If conducting an RNAV(GNSS) approach, the applicant must conduct RNAV(GNSS) published holding or sector 3 associated with the instrument approach procedure to be flown. Only one holding procedure is required for the proficiency check.</td>
</tr>
<tr>
<td>(c)(i) 2D, prepare for approach</td>
<td>NSR</td>
</tr>
<tr>
<td>(c)(ii) 2D, conduct approach</td>
<td>NSR</td>
</tr>
<tr>
<td>(d)(i) 3D, prepare for approach</td>
<td>Refer to limitations if not conducted (61.900).</td>
</tr>
<tr>
<td>(d)(ii) 3D, conduct approach</td>
<td>Refer to limitations if not conducted (61.900). Holding is not required if conducted 2D and radar vectoring is available.</td>
</tr>
<tr>
<td>(e) Conduct missed approach</td>
<td>Only one missed approach is required for the proficiency check. If the missed approach is conducted from a 3D approach, the applicant must be able to describe the MDA procedure for a 2D missed approach. If the missed approach is conducted from a 2D approach, the applicant must be able to describe the DA procedure for a 3D missed approach. This is best completed during the ground component.</td>
</tr>
<tr>
<td>(a) Conduct visual circling with at least 90° heading change</td>
<td>Optional – see scope and conditions Refer to limitations if not conducted (61.860). The circling approach should be demonstrated as the continuation of the published aerodrome instrument approach from the specified minima. The instrument approach and circling manoeuvres should be flown onto the actual aerodrome named on the instrument approach plate. The circling approach should not be flown as a standalone low level circuit and must commence from at least a 90° heading change to the runway.</td>
</tr>
<tr>
<td>(b) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
</tbody>
</table>

### Circuit, approach and landing

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
</table>
## Phase of flight

<table>
<thead>
<tr>
<th></th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shut down and post-flight</strong></td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td>General requirements</td>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Use correct radio procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(j) Manage relevant aircraft systems</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
</tbody>
</table>

### 23.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the proficiency check. Both levels result in a fail assessment.

#### Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
• failure to comply with ATC clearances and airspace requirements
• failure to operate the aircraft within the limitations of the AFM
• failure to maintain required flight visibility and cloud separation during a visual segment
• failure to maintain required terrain clearance
• failure to comply with minimum descent altitudes
• failure to maintain minimum traffic separation standards
• failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
• failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the proficiency check must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the proficiency check may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

23.5 Complete (post flight)

23.5.1 Debriefings

The examiner must debrief the applicant and, if applicable, the operator as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the operator to construct a remedial training program.

23.5.2 Proficiency check administration

At the conclusion of the proficiency check, the examiner must:

• Enter in FTM, in accordance with the Examiner Requirements of 23.1 (6):
  • The route details
    o include the departure location, major turning points and the destination
    o formatting example: YMMB – AV – ESDIG – YBLT – LLOYD – AV - YMMB
  • The specific kinds of instrument approach procedures flown
    o use the name on the instrument approach chart
    o formatting example: YBLT RNAV-Z (GNSS) RWY 36.
• within 14 days after the day of the check, complete the proficiency check report and provide a copy of the report to the applicant and operator
• within 14 days after the day of the check, complete the flight test management system notification requirements.

All items on the proficiency check form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner must be in accordance with the Flight Crew Licensing Manual.
24 Private Instrument Rating

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the private instrument rating (PIR).

24.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the PIR flight test:

1. The examiner must conduct the PIR flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the PIR flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

24.2 Plan

24.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended navigation task to allow for unhurried preparation and planning (simulating a private operation). The applicant should be given the test route at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hours for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
- 0.2 hour per endorsement for the general handling and test specific manoeuvres.
Use of IFR procedures

Although the flight is conducted under the IFR, some simulated emergencies must be conducted by day and in VMC (refer to PIR Assessment below).

24.2.2 PIR assessment scope and conditions

The PIR flight test must be conducted under the IFR and in an aircraft or an FSTD approved for the purpose, in accordance with subregulation 61.930 (2) of CASR.

The aircraft and FSTD used for the PIR flight test must be of the appropriate category and be capable of being operated for the kind of operations relevant to the private instrument endorsement(s) covered by the flight test.

The FEH activities and manoeuvres, listed in the Requirements column of Table 26 below, mirror the PIR test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the PIR flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the PIR test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

PIR flight tolerances and ground reference tolerances are specified in Tables 2, 4 and 5 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The PIR applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system. If an auto-pilot is not available, the examiner must not ‘act’ as the auto-pilot. For Approach/Arrival Endorsements, the applicant must demonstrate proficiency to operate the aircraft for at least one instrument approach without the autopilot and flight director being used (manually manipulating flight and power controls).

For ME aircraft, a simulated engine failure after take-off must not be initiated at a height less than 400ft AGL.

For ME aircraft, simulated engine failures after take-off, in the cruise or during instrument approach procedures must be conducted by day in VMC.

In an aircraft, recoveries from unusual attitudes must be conducted by day in VMC.

For the above procedures, the concept is that IMC is simulated and the examiner has a clear view of the horizon.

IFR activities and manoeuvres are performed in accordance with published procedures.

The PIR applicant must demonstrate competency by performing enroute navigation and holding using the navigation system that is for each Navigation Endorsement included in the test.
For a flight test that is for a departure endorsement, the PIR applicant must demonstrate competency by performing a take-off and departure other than a standard instrument departure, in an aircraft that is covered by the endorsement.

For a flight test that is for an approach/arrival endorsement, the PIR applicant must demonstrate competency by performing an approach or arrival using the navigation system that is covered by the endorsement.

For a flight test that is for an approach/arrival – category specific endorsement, the PIR applicant must demonstrate competency by performing an approach or arrival in a multi-engine aircraft of the applicable category, using the navigation system that is covered by the endorsement.

For a flight test that is for a night endorsement and the applicant is not the holder of a night VFR rating with the applicable category night VFR endorsement, the PIR applicant must demonstrate competency by performing an operation at night under the IFR in an aircraft of the category covered by the night endorsement.

For a flight test that is for the grant of an additional aircraft category/class endorsement, the PIR applicant must demonstrate competency by performing the 2D approach operations that the applicant is authorised to conduct.

For a flight test that is for the grant of an additional private instrument endorsement, competency need only be assessed in the units and elements applicable to the endorsement sought.

For all instrument approach operations, the approach procedures must be flown to the published and applicable MDA/H or DA/H.

24.3 Conduct (ground component)

24.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

24.3.2 Document review

The examiner must confirm that an applicant for the PIR satisfies the eligibility requirements to undertake the flight test for the grant of the Private Instrument Rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.
Licence – the applicant for the PIR must hold a PPL or CPL (or be applying for the licence simultaneously with the PIR) of the same category as the aircraft in which the flight test is conducted.

Aeronautical knowledge examinations – the examiner must review the applicant’s theory examination pass records.

Knowledge deficiency report (KDR) – the examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

Flight training requirements – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

Aeronautical experience – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

English language proficiency – N/A

Eligibility certification – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

Medical certificate – the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the PIR.

Security check and fit and proper person requirements – N/A

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

24.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

24.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:

- flight plan
- fuel plan
- flight notification
- weight and balance calculation
take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

24.4 Conduct (flight component)

24.4.1 Assessment of the applicant's performance

The applicant's performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.
- **Knowledge** – during the course of the flight test the applicant's knowledge may be further tested.
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test.
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant's technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.
24.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying private operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- the expectations of the applicant during the simulation of instrument conditions, visual flight conditions and any simulated weather when advised ‘visual’ by the examiner
- the expectations when operating the aircraft at the minima (e.g. numerical tolerances).
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

24.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the PIR flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

Table 34: Assessment of activities and manoeuvres - PIR

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Plan an IFR flight</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) For DEP endorsement, plan, brief and conduct an instrument departure</td>
<td>Simulated IMC must not be introduced before the take-off minima.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(d) For SID endorsement, perform a SID or published procedure</td>
<td>Simulated IMC must not be introduced before the take-off minima.</td>
</tr>
<tr>
<td></td>
<td>(a) Navigate aircraft en route using ground and satellite navigation systems</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform navigation systems integrity checks</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Identify and avoid hazardous weather conditions</td>
<td>Verbal scenario(s) may be introduced if hazardous conditions are not present.</td>
</tr>
<tr>
<td></td>
<td>(d) For NAV endorsement, use nav system to track to holding fix and conduct a holding pattern or sector 3 entry procedure</td>
<td>If a sector 3 entry into a holding pattern is conducted, an additional holding pattern is not required.</td>
</tr>
<tr>
<td>Test specific activities and manoeuvres</td>
<td>(a) Perform full panel instrument flying</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b)(i) For initial PIR issue, perform limited panel instrument flying</td>
<td>For the limited panel assessment, the primary attitude indicator/display and the primary heading indicator/display may be ‘failed’ simultaneously. If assessed, unreliable airspeed indications must be a separate exercise. For EFIS cockpits, the use of standby instruments is acceptable for limited panel assessments.</td>
</tr>
<tr>
<td></td>
<td>(b)(ii) For initial PIR issue, full and limited panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>The unusual attitude recoveries must be conducted by day in VMC and the examiner should have visual reference at all times during the manoeuvre. At least one recovery full panel and at least one recovery limited panel must be assessed.</td>
</tr>
<tr>
<td></td>
<td>(c) For DEP endorsement, conduct instrument departure OEI - ME aircraft only</td>
<td>The departure must be a separate event to the one engine inoperative (OEI) missed approach.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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</tr>
<tr>
<td>(d)(i) For APP/ARR endorsement, conduct instrument approach OEI - ME aircraft</td>
<td>The applicant should demonstrate proficiency in the management of the aircraft with OEI during an approach. The simulated engine failure should be introduced before the Final Approach Fix (FAF).</td>
<td></td>
</tr>
<tr>
<td>(d)(ii) For APP/ARR endorsement, conduct missed approach OEI or visual circling OEI - ME aircraft only</td>
<td>The applicant should fly the published approach OEI, followed by either the published missed approach or visual circling whilst maintaining the specified flight path tolerances for OEI operations.</td>
<td></td>
</tr>
<tr>
<td>(e)(i) For NGT endorsement, control aircraft on the ground</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(e)(ii) For NGT endorsement, conduct normal circuit patterns and landings at night, with and without landing lights</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(e)(iii) For NGT endorsement, manage cockpit lighting failure</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(e)(iv) For NGT endorsement, perform a go-around at night</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(a) Perform a descent to establish and maintain VMC above or at the LSALT/MSA</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(b) Perform a visual approach</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(c) For STAR endorsement, conduct a published STAR procedure</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(d)(i)(A) For APP NDB endorsement, conduct NDB approach procedure</td>
<td>If the flight test includes an NDB approach endorsement, the assessment should be conducted at the actual aerodrome of the published approach procedure and include a holding pattern or sector 3 entry procedure. If a sector 3 entry into a holding pattern is conducted, an additional holding pattern is not required.</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(d)(i)(B)</td>
<td>For APP VOR/LLZ endorsement, conduct VOR or LOC approach procedure</td>
<td>If the flight test includes a VOR/LLZ approach endorsement, the assessment should be conducted at the actual aerodrome of the published approach procedure and include a holding pattern or sector 3 entry procedure. If a sector 3 entry into a holding pattern is conducted, an additional holding pattern is not required.</td>
</tr>
<tr>
<td>(d)(i)(C)</td>
<td>For APP DME or GNSS endorsement, conduct DME or GNSS arrival procedure</td>
<td>NSR</td>
</tr>
<tr>
<td>(d)(i)(D)</td>
<td>For APP RNP APCH-2D endorsement, conduct an RNP approach procedure</td>
<td>If the flight test includes an RNP APCH-2D approach endorsement, the assessment should be conducted at the actual aerodrome of the published approach procedure and include a holding pattern or sector 3 entry procedure. If a sector 3 entry into a holding pattern is conducted, an additional holding pattern is not required.</td>
</tr>
<tr>
<td>(d)(i)(E)</td>
<td>For APP RNP APCH-3D endorsement, conduct an RNP approach procedure using Baro vertical guidance</td>
<td>If the flight test includes an RNP APCH-3D private instrument endorsement the examiner should ensure the applicant already holds the Navigation – GNSS private instrument endorsement and Approach - RNP APCH - 2D private instrument endorsement (refer table 61.935).</td>
</tr>
<tr>
<td>(d)(i)(F)</td>
<td>For APP ILS endorsement, conduct an ILS approach procedure</td>
<td>Holding is not required if conducted 2D and radar vectoring is available.</td>
</tr>
<tr>
<td>(d)(ii)</td>
<td>For APP/ARR endorsement, conduct missed approach</td>
<td>Only one missed approach is required for a test that includes multiple approach endorsements. If the missed approach is conducted from a 3D approach, the applicant must be able to describe the MDA procedure for a 2D missed approach. If the missed approach is conducted from a 2D approach, the applicant must be able to describe the DA procedure for a 3D missed approach. This is best completed during the ground component.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------------</td>
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<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td></td>
<td>(d)(iii) For APP/ARR endorsement, conduct visual circling with at least 90° heading change</td>
<td>If the flight test includes a circling approach, the circling approach should be demonstrated as the continuation of the aerodrome instrument approach from the specified minima. The instrument approach and circling manoeuvres should be flown onto the actual aerodrome named on the instrument approach plate. The circling approach should not be flown as a standalone low level circuit.</td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td>General requirements</td>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Use correct radio procedures</td>
<td>In most proficiency checks, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events. The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
<tr>
<td></td>
<td>(j) Manage relevant aircraft systems</td>
<td>NSR</td>
</tr>
</tbody>
</table>

NSR: No specific recommendations
24.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.
24.5 Complete (post flight)

24.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

24.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
25 Night VFR Rating

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the night VFR rating (NVFR).

25.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the NVFR flight test:

1. The examiner must conduct the NVFR flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the NVFR flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

25.2 Plan

25.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended navigation task to allow for unhurried preparation and planning (simulating a private or commercial operation as applicable to the licence the applicant holds). The applicant should be given the test route at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an **airborne** time of approximately:

- 1.5 hours for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
• 0.8 hour for the general handling and test specific manoeuvres.

Use of IFR procedures

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the flight test or be taken into account in the flight test flight time. A landing and shutdown should terminate the IFR flight segment before commencing the NVFR assessment flight sequences.

The NVFR flight test should be concluded by a landing and shutdown in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the NVFR flight test should be considered as the flight time for the flight test.

If the NVFR applicant holds a valid IR and elects to convert to IFR during the NVFR assessment flight, then a fail assessment should be recorded and no NVFR flight component test credits are to be given.

25.2.2 NVFR assessment scope and conditions

The NVFR flight test must be conducted by night under the VFR and in an aircraft or an FSTD approved for the purpose, in accordance with subregulation 61.975 (2) of CASR.

The aircraft and FSTD used for the NVFR flight test must be of the appropriate category and be capable of being operated for the kind of operations relevant to the night VFR endorsement(s) covered by the flight test.

The FEH activities and manoeuvres, listed in the Requirements column of Table 27 below, mirror the NVFR test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the NVFR flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the NVFR test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

NVFR flight tolerances and ground reference tolerances are specified in Tables 1 and 3 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The NVFR applicant should demonstrate that control of the aircraft or procedure is maintained at all times but if the successful outcome is in doubt, corrective action is taken promptly to recover to safe flight.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system. If an auto-pilot is not available, the examiner must not ‘act’ as the auto-pilot.

The examiner must ensure that the navigation and circuit components of the flight test are conducted by night under the VFR.

For ME aircraft, a simulated engine failure in the cruise at night must be conducted not below the route LSALT.

In an aircraft, recoveries from unusual attitudes must be conducted by day in VMC.
For the above procedures the concept is that the examiner has a clear view of the horizon.

For a flight test that is for the grant of an additional Night VFR endorsement, the applicant must demonstrate competency by performing all the activities and manoeuvres described on the NVFR flight test form.

25.3 Conduct (ground component)

25.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

25.3.2 Document review

The examiner must confirm that an applicant for the NVFR satisfies the eligibility requirements to undertake the flight test for the grant of the night VFR rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the NVFR must hold a PPL, CPL or ATPL (or be applying for the licence simultaneously with the NVFR) of the same category as the aircraft in which the flight test is conducted.

**Aeronautical knowledge examinations** – N/A

**Knowledge deficiency report** (KDR) – N/A

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

**English language proficiency** – N/A

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – for flight tests conducted in an aircraft, the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the NVFR.

**Security check and fit and proper person requirements** – N/A
If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

25.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

25.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:

- flight plan
- fuel plan
- flight notification
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

25.4 Conduct (flight component)

25.4.1 Assessment of the applicant's performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

### 25.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. passenger carrying private or commercial operation / simulation of passengers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

### 25.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the NVFR flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.
### Table 35: Assessment of activities and manoeuvres - NVFR

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-flight</strong></td>
<td>(a) Plan a night VFR flight</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Ground operations, take-off, departure and climb</strong></td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Conduct take-off and departure from aerodrome remote from ground lighting</td>
<td>Class D capital city airports are unsuitable for this assessment. If applicable, an intermediate airport remote from ground lighting should be planned.</td>
</tr>
<tr>
<td><strong>En route cruise</strong></td>
<td>(a) Navigate aircraft en route using visual tracking and visual position fixes</td>
<td>The navigation task should be designed such that all of the components can be assessed in a logical sequence. There should be at least one sector of sufficient distance that allows the applicant’s navigation technique to be adequately assessed. This sector should be of a sufficient duration to enable the opportunity to assess multiple navigation cycles, track correction techniques, continued maintenance of navigation and fuel logs (ETAs and fuel status) and position fixing at suitable intervals. Importantly, examiners should be satisfied that the applicant is using a suitable navigation methodology that is supported by sound reasoning and application of recognised NVFR navigation procedures.</td>
</tr>
<tr>
<td></td>
<td>(b) Navigate aircraft en route using ground and satellite navigation systems</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Perform navigation systems integrity checks</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Identify and avoid hazardous weather conditions</td>
<td>Verbal scenario(s) may be introduced if hazardous conditions are not present.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Test specific activities and manoeuvres</strong></td>
<td>(a) Perform full and limited panel instrument flying</td>
<td>For the limited panel assessment, the primary attitude indicator/display and the primary heading indicator/display may be ‘failed’ simultaneously. If assessed, unreliable airspeed indications must be a separate exercise. For EFIS cockpits, the use of standby instruments is acceptable for limited panel assessments.</td>
</tr>
<tr>
<td></td>
<td>(b) Full and limited panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>The unusual attitude recoveries must be conducted by day in VMC and the examiner should have visual reference at all times during the manoeuvre. At least one recovery full panel and at least one recovery limited panel must be assessed.</td>
</tr>
<tr>
<td></td>
<td>(c) Manage a cockpit lighting failure</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) &amp; (e) For ME end, manage an engine failure during cruise</td>
<td>The one engine inoperative (OEI) assessment must be conducted not below the route LSALT.</td>
</tr>
<tr>
<td><strong>Descent and arrival</strong></td>
<td>(a) Conduct a descent and visual approach procedure to an aerodrome</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Circuit, approach and landing</strong></td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Conduct approach and landing to aerodrome remote from ground lighting</td>
<td>Class D capital city airports are unsuitable for this assessment. If applicable, an intermediate airport remote from ground lighting should be planned.</td>
</tr>
<tr>
<td></td>
<td>(c) Land with and without landing lights</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Perform a go-around procedure</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Shut down and post-flight</strong></td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>General requirements</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(a) Maintain effective lookout</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td></td>
<td>(b) Maintain situational awareness</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Maintain effective communications and interpersonal relationships</td>
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</tr>
<tr>
<td></td>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Use correct radio procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(j) Manage relevant aircraft systems</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
</tbody>
</table>

### 25.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

**Safety critical items**

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to:**

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
• failure to maintain required terrain clearance
• failure to comply with minimum descent altitudes
• failure to maintain minimum traffic separation standards
• failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
• failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

### 25.5 Complete (post flight)

#### 25.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

#### 25.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
26 Night Vision Imaging System Rating

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the night vision imaging system rating (NVIS).

26.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the NVIS flight test:

1. The examiner must conduct the NVIS flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the NVIS flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

26.2 Plan

26.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended navigation task to allow for unhurried preparation and planning (simulating a commercial operation). The applicant should be given the test route at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an NVG airborne time of approximately:

- 0.4 hour for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
- 1.1 hour for the general handling and test specific manoeuvres.
26.2.2 NVIS assessment scope and conditions

The NVIS flight test must be conducted by night under the VFR and in a helicopter or an FSTD approved for the purpose, in accordance with subregulation 61.1035 (2) of CASR.

For a grade 2 NVIS endorsement, the aircraft must be certificated for flight under the night VFR and be appropriate for the endorsement covered by the flight test.

For a grade 1 NVIS endorsement, the aircraft must be certificated for flight under the IFR and be appropriate for the endorsement covered by the flight test.

The FEH activities and manoeuvres, listed in the Requirements column of Table 28 below, mirror the NVIS test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the NVIS flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the NVIS test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

NVIS flight tolerances and ground reference tolerances are specified in table 4 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The NVIS applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system. If an auto-pilot is not available, the examiner must not ‘act’ as the auto-pilot.

For ME aircraft, the examiner must simulate at least one engine failure under NVG flight (e.g. an engine failure during landing or engine failure during the cruise).

Recoveries from unusual attitudes must be conducted goggled and in VMC.

For the above procedures, the examiner is to have a clear NVG horizontal and vertical view or view of the horizon.

*For a flight test that is for the grant of a grade 1 NVIS endorsement, the applicant must demonstrate competency by performing IFR operations.

*Note: CASA Flight Standards Branch are in the process of amending subpart 61.P and CAO 82.6 which will likely replace the two NVIS grade endorsements with a single endorsement. Therefore, the items marked * within this chapter will require review for IFR operations. Check the current requirements in the Part 61 MOS schedule 5.

26.3 Conduct (ground component)

26.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
• function of the examiner
• standards against which competency will be assessed
• actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

26.3.2 Document review

The examiner must confirm that an applicant for the NVIS satisfies the eligibility requirements to undertake the flight test for the grant of the night vision imaging system rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the NVIS must hold a helicopter category CPL or ATPL.

**Aeronautical knowledge examinations** – N/A

**Knowledge deficiency report** (KDR) – N/A

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

**English language proficiency** – N/A

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – for flight tests conducted in a helicopter, the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the NVIS.

**Security check and fit and proper person requirements** – N/A

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

26.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.
26.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:

- flight plan
- fuel plan
- flight notification
- weight and balance calculation
- take-off and landing data/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

26.4 Conduct (flight component)

26.4.1 Assessment of the applicant’s performance

The applicant's performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.
Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

26.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

26.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the NVIS flight test. Where there are no specific recommendations, 'NSR' is listed in the table against the unit or element.
<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Plan NVIS operations and determine serviceability of NVG equipment and aircraft</td>
<td>The applicant should pay particular attention to battery management and control.</td>
</tr>
<tr>
<td></td>
<td>(b) Consult and brief stakeholders</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Plan a night VFR flight</td>
<td>For NVG considerations, the applicant should take into account lunar, stellar and cultural illumination along with normal WX requirements.</td>
</tr>
<tr>
<td></td>
<td>(d) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Lift-off, hover and taxi helicopter using NVG</td>
<td>The examiner should note hover height with skidded aircraft and taxi speed with wheeled aircraft.</td>
</tr>
<tr>
<td></td>
<td>(c) Plan, brief and conduct take-off and departure procedures using NVG</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Establish stable hover, take-off from and climb out from an unlit HLS using NVG</td>
<td>NSR</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Navigate aircraft en route</td>
<td>The navigation component should be designed such that all of the components may be assessed in a logical sequence. There should be at least one sector of sufficient distance that allows the applicant’s navigation technique to be adequately assessed, navigation on an appropriate route taking into account ambient illumination and obstacles/hazards. Examiners should be satisfied that the applicant is using a suitable navigation methodology that is supported by sound decision making and application of appropriate NVIS navigation techniques. In addition to NVFR procedures, *an IFR segment should be included for a Grade 1 endorsement assessment.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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<td>-----------------</td>
</tr>
<tr>
<td>(b) Transit to and from area of operation using NVG</td>
<td>The applicant should maintain appropriate altitudes and speeds and should navigate on the route most appropriate for weather conditions.</td>
<td></td>
</tr>
<tr>
<td>(a) Perform full and limited panel instrument flying</td>
<td>*For the limited panel assessment, the primary attitude indicator/display and the primary heading indicator/display may be ‘failed’ simultaneously. If assessed, unreliable airspeed indications must be a separate exercise. For EFIS cockpits, the use of standby instruments is acceptable for limited panel assessments.</td>
<td></td>
</tr>
<tr>
<td>(b) Full and limited panel instrument flying, recover from at least 2 unusual attitudes</td>
<td>Recoveries from unusual attitudes must be conducted goggled and in VMC. The applicant is to conduct recovery looking under the goggles at the aircraft instruments, then confirm the aircraft attitude looking through the NVG. The examiner should have visual reference at all times during the manoeuvre. At least one recovery full panel and at least one recovery limited panel must be assessed.</td>
<td></td>
</tr>
<tr>
<td>(c) Perform cockpit procedures and checks during goggled and de-goggled flight</td>
<td>These should be memory items and should consider handover of controls.</td>
<td></td>
</tr>
<tr>
<td>(d) Maintain control of aircraft during transition to and from goggled and de-goggled flight</td>
<td>The applicant should maintain emphasis on maintaining obstacle clearance.</td>
<td></td>
</tr>
<tr>
<td>(e) Land and take-off from sloping ground using NVG or land and take-off from a pinnacle or ridgeline using NVG</td>
<td>The applicant should use appropriate NVG pinnacle/ridgeline technique.</td>
<td></td>
</tr>
<tr>
<td>(f) Manage abnormal and emergency situations using NVG</td>
<td>The emphasis should be on crew utilisation where appropriate.</td>
<td></td>
</tr>
<tr>
<td>(g) Manage inadvertent entry into IMC and re-establish VMC</td>
<td>The applicant should perform transition from NVIS flight to IFR following simulated inadvertent failure of NVG equipment.</td>
<td></td>
</tr>
<tr>
<td>(h) Manage flight during multi-crew NVIS operations</td>
<td>NSR</td>
<td></td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Descent and arrival</strong></td>
<td></td>
</tr>
<tr>
<td>(a) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>(b) Descend to unlit HLS while using NVG</td>
<td>The emphasis should be on a stable approach.</td>
</tr>
<tr>
<td><strong>Circuit, approach and landing</strong></td>
<td></td>
</tr>
<tr>
<td>(a) Conduct a circuit pattern, approach and landing using NVG</td>
<td>The examiner should ensure the applicant conducts an approach to the hover in addition to the required manoeuvres within the HLS.</td>
</tr>
<tr>
<td>(b) Approach and land on an unlit HLS using NVG</td>
<td>The emphasis should be on a stable approach.</td>
</tr>
<tr>
<td>(c) Conduct a baulked landing using NVG</td>
<td>NSR</td>
</tr>
<tr>
<td>(d) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Shut down and post-flight</strong></td>
<td></td>
</tr>
<tr>
<td>(a)&amp;(b) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td>(c) Conduct post-flight operational debriefing</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>General requirements</strong></td>
<td></td>
</tr>
<tr>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td>(f) Recognise and manage threats</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
<tr>
<td>(g) Recognise and manage errors</td>
<td></td>
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<tr>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
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</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Use correct radio procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>(j) Manage relevant aircraft systems</td>
<td>NSR</td>
</tr>
<tr>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
</tbody>
</table>

#### 26.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

**Safety critical items**

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.
26.5 Complete (post flight)

26.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

26.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA.
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
27 Night Vision Imaging System Proficiency Check

The aim of this proficiency check is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 6 of the Part 61 MOS for the night vision imaging system proficiency check (NPC).

27.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the NPC:

1. The examiner must conduct the NPC in accordance with clauses 1 to 3 of Schedule 6 of the Part 61 MOS.
2. The examiner must conduct the NPC within the operational scope and conditions described in clause 4 of Schedule 6 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the proficiency check is successfully completed before conducting the pre-flight briefing and flight component of the proficiency check.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for proficiency check items, they are valid for 28 days only. After 28 days, the proficiency check must be conducted in full.

27.2 Plan

27.2.1 Testing methodology

The examiner should apply the proficiency check methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The proficiency check should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the proficiency check cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended navigation task to allow for unhurried preparation and planning (simulating a commercial operation). The applicant should be given the test route at least 24 hours before the start of the proficiency check.

It is recommended that the examiner plans an NVG airborne time of approximately:

- 0.4 hour for the navigation task (this should not include time delays which may be experienced at a busy Class C or D airport)
1.1 hour for the general handling and test specific manoeuvres.

27.2.2 NPC scope and conditions

The NPC must be conducted under the night VFR and in a helicopter or an FSTD approved for the purpose, in accordance with subregulation 61.1015 (4) of CASR.

*For the holder of a grade 2 NVIS endorsement, the aircraft must be certificated for flight under the night VFR and be appropriate for the proficiency check.

*For the holder of a grade 1 NVIS endorsement, the aircraft must be certificated for flight under the IFR and be appropriate for the proficiency check.

The FEH activities and manoeuvres, listed in the Requirements column of Table 29 below, mirror the NPC test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 6 for the NPC.

These activities and manoeuvres, described in clause 3 of Schedule 6 of the MOS and the NPC test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

NPC flight tolerances and ground reference tolerances are specified in table 4 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The NPC applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

Where the aircraft is fitted with an autopilot system, the applicant must demonstrate competency in the system. If an auto-pilot is not available, the examiner must not ‘act’ as the auto-pilot.

For ME aircraft, the examiner must simulate at least one engine failure under NVIS flight (e.g. an engine failure during landing or engine failure during the cruise).

Recoveries from unusual attitudes must be conducted goggled and in VMC.

For the above procedures, the examiner is to have a clear NVG horizontal and vertical view or view of the horizon.

*Note: At the time of document review (August 2019) for version 2.3 CASA Flight Standards Branch are in the process of amending subpart 61.P and CAO 82.6 which will likely replace the two NVIS grade endorsements with a single endorsement. Therefore, the items marked * within this chapter will require review for IFR operations. Check the current requirements in the Part 61 MOS schedule 6.

27.3 Conduct (ground component)

27.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the proficiency check with a brief to the applicant on the following items:

- proficiency check context, purpose and content
• assessment procedure
• function of the examiner
• standards against which competency will be assessed
• actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the proficiency check elements.

### 27.3.2 Document review

The examiner must confirm the identity of the applicant for the NPC. To achieve this, the logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the proficiency check.

**Licence** – the applicant for the NPC must hold a helicopter category CPL or ATPL and hold the NVIS rating.

**Aeronautical knowledge examinations** – N/A

**Knowledge deficiency report** (KDR) – N/A

**Flight training requirements** – N/A

**Aeronautical experience** – N/A

**English language proficiency** – N/A

**Eligibility certification** – N/A

**Medical certificate** – for proficiency checks conducted in a helicopter, the examiner must check that the applicant holds a class 1 medical certificate, or a medical exemption allowing them to exercise the privileges of the NVIS.

**Security check and fit and proper person requirements** – N/A

If the proficiency check is a retest following a fail assessment, requiring remedial training – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

### 27.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 6 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

### 27.3.4 Assessment of flight planning

As part of the proficiency check, the applicant must complete a:

• flight plan
• fuel plan
• flight notification
• weight and balance calculation
• take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

27.4 Conduct (flight component)

27.4.1 Assessment of the applicant's performance

The applicant's performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

• **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
• **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
• **Knowledge** – during the course of the proficiency check the applicant’s knowledge may be further tested
• **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
• **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
• **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the proficiency check
• **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and
self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

### 27.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the proficiency check environment
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC.
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

### 27.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the NPC. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

<table>
<thead>
<tr>
<th>Table 37: Assessment of activities and manoeuvres - NPC</th>
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<tbody>
<tr>
<td><strong>Phase of Flight</strong></td>
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<tr>
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<tr>
<td><strong>Pre-flight</strong></td>
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<tr>
<td><strong>Ground operations, take-off, departure and climb</strong></td>
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<tr>
<td>Phase of Flight</td>
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<td>Descent and arrival</td>
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<td>Circuit, approach and landing</td>
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<tr>
<td>Phase of Flight</td>
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<td>--------------------------</td>
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<tr>
<td>Shut down and post-flight</td>
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</table>

**27.4.4 Failure assessment**

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the proficiency check. Both levels result in a fail assessment.

In most proficiency checks, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.

The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, workcycles and procedural techniques.
Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the proficiency check must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the proficiency check may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

27.5 Complete (post flight)

27.5.1 Debriefings

The examiner must debrief the applicant and, if applicable, the operator as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the operator to construct a remedial training program.
27.5.2 Proficiency check administration

At the conclusion of the proficiency check, the examiner must:

- within 14 days after the day of the check, complete the flight test report and provide a copy of the report to the applicant, the operator and CASA
- within 14 days after the day of the check, complete the flight test management system notification requirements.

All items on the proficiency check form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner must be in accordance with the Flight Crew Licensing Manual.
28 Low Level Rating

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the low level rating (LL).

28.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the LL flight test:

1. The examiner must conduct the LL flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the LL flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

28.2 Plan

28.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating either a private or commercial operation as applicable to the licence the applicant holds). The applicant should be given the test scenario at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hours for the general handling and test specific manoeuvres.
**Use of IFR procedures**

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the flight test or be taken into account in the flight test flight time. A landing should terminate the IFR flight segment before commencing the LL assessment flight sequences.

The LL flight test should be concluded by a landing in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the LL flight test should be considered as the flight time for the flight test.

### 28.2.2 LL assessment scope and conditions

The LL flight test must be conducted by day under the VFR and in an aircraft, in accordance with subregulation 61.1070 (2) of CASR.

The aircraft used for the LL flight test must be of the appropriate category and be capable of being operated for the kind of operations relevant to the low level endorsement(s) covered by the flight test.

The FEH activities and manoeuvres, listed in the Requirements column of Table 30 below, mirror the LL test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the LL flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the LL test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

LL flight tolerances and ground reference tolerances are specified in Tables 2, 4 and 7 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The LL applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

For aeroplanes a simulated engine failure in low level operations must not be initiated below a height of 200 ft AGL.

For single engine helicopters only, a simulated engine failure in low level operations must not be initiated below a height of 150 ft AGL and not below Vy speed. (Not applicable to hover or taxi simulated engine failures).

### 28.3 Conduct (ground component)

#### 28.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
28.3.2  Document review

The examiner must confirm that an applicant for the LL satisfies the eligibility requirements to undertake the flight test for the grant of the low level rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the LL must hold a PPL, CPL or ATPL (or be applying for the licence simultaneously with the LL) of the same category as the aircraft in which the flight test is conducted.

**Aeronautical knowledge examinations** – N/A

**Knowledge deficiency report (KDR)** – N/A

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

**English language proficiency** – N/A

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the LL.

**Security check and fit and proper person requirements** – N/A

**If the flight test is a retest following a fail assessment** – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

28.3.3  Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.
28.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:

- flight plan
- fuel plan
- flight notification
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

28.4 Conduct (flight component)

28.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

Technique – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.

Judgement – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.

Knowledge – during the course of the flight test the applicant’s knowledge may be further tested.

Smoothness – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.

Accuracy – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.

Procedures – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test.

Flight management – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short
periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

28.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (eg private or commercial survey operation / simulation of observers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

28.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the LL flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

Table 38: Assessment of activities and manoeuvres - LL

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-flight</strong></td>
<td>(a) Plan the low-level operations to ensure a safe outcome</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Identify hazards and manage risks</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Ensure aircraft performance capability</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Consult and brief stakeholders</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Ground operations, take-off, departure and climb</strong></td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Conduct appropriate checks and procedures before descending below 500ft AGL</td>
<td>NSR</td>
</tr>
<tr>
<td>(a) Navigate at low level</td>
<td>NSR</td>
</tr>
<tr>
<td>(b) At low level, demonstrate use of escape routes</td>
<td>NSR</td>
</tr>
<tr>
<td>(c) At low level, identify and operate in vicinity of powerlines or wires</td>
<td>NSR</td>
</tr>
<tr>
<td>(d) At low level, operate in hilly terrain</td>
<td>NSR</td>
</tr>
<tr>
<td>(e) At low level, manage wind effects, sloping terrain, false horizons and sun glare</td>
<td>NSR</td>
</tr>
<tr>
<td>(f)(i) For LL A, conduct steep, max rate and min radius turns</td>
<td>NSR</td>
</tr>
<tr>
<td>(f)(ii) For LL A, conduct procedure turns</td>
<td>NSR</td>
</tr>
<tr>
<td>(f)(iii) For LL A, recover from approach to stalls - level and turning</td>
<td>NSR</td>
</tr>
<tr>
<td>(f)(iv) For LL A, recover from high energy and low energy unusual attitudes</td>
<td>NSR</td>
</tr>
<tr>
<td>(f)(v)(A) For LL A, recover from incipient spin - SE only</td>
<td>NSR</td>
</tr>
<tr>
<td>(f)(v)(B) For LL A, perform forced landing (SE only)</td>
<td>NSR</td>
</tr>
<tr>
<td>(f)(vi) For LL A, manage engine failure (ME only)</td>
<td>NSR</td>
</tr>
<tr>
<td>(g)(i) For LL H, conduct steep turns</td>
<td>NSR</td>
</tr>
<tr>
<td>(g)(ii) For LL H, at low level conduct flight at various speeds and configurations</td>
<td>NSR</td>
</tr>
<tr>
<td>(g)(iii) For LL H, perform forced landing (SE only)</td>
<td>For single engine helicopters a simulated engine failure in low level operations must not be initiated below a height of 150 ft AGL and not below Vy speed. Note: not applicable to hover or taxi simulated engine failures</td>
</tr>
<tr>
<td>(g)(iv) For LL H, manage engine failure (ME only)</td>
<td>NSR</td>
</tr>
<tr>
<td>(g)(v) For LL H, at low level perform quick stop manoeuvres into wind and downwind</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>(g)(vi) For LL H, recover from high energy and low energy unusual attitudes</td>
</tr>
<tr>
<td></td>
<td>(h)(i) For LL AM, plan a stock mustering operation</td>
</tr>
<tr>
<td></td>
<td>(h)(ii) For LL AM, manoeuvre aircraft in all planes below 500 ft AGL</td>
</tr>
<tr>
<td></td>
<td>(h)(iii) For LL AM, perform climb, descent, low speed and high speed manoeuvres</td>
</tr>
<tr>
<td></td>
<td>(h)(iv) For LL AM, perform reversal turns, decelerations and steep turns</td>
</tr>
<tr>
<td></td>
<td>(h)(v) For LL AM, conduct stock mustering operations</td>
</tr>
<tr>
<td></td>
<td>(i)(i) For LL SLING, prepare for a sling load operation</td>
</tr>
<tr>
<td></td>
<td>(i)(ii) For LL SLING, plan a sling operation and conduct pre-flight briefing</td>
</tr>
<tr>
<td></td>
<td>(i)(iii) For LL SLING, operate the aircraft during external load operations</td>
</tr>
<tr>
<td></td>
<td>(i)(iv) For LL SLING, manage abnormal and emergency situations during external load operations</td>
</tr>
<tr>
<td></td>
<td>(j)(i) For LL WINCH, plan for a winch or rappelling operation and conduct pre-flight briefing</td>
</tr>
<tr>
<td></td>
<td>(j)(ii) For LL WINCH, operate the helicopter during winch or rappelling operations</td>
</tr>
<tr>
<td></td>
<td>(j)(iii) For LL WINCH, manage abnormal and emergency situations during winch or rappelling operations</td>
</tr>
<tr>
<td></td>
<td>(j)(iv) For LL WINCH, conduct post flight activities</td>
</tr>
<tr>
<td>Descent and arrival</td>
<td>(a) Plan and conduct arrival and circuit joining procedures</td>
</tr>
<tr>
<td>Circuit, approach and landing</td>
<td>(a) Conduct low level circuit, approach and landing</td>
</tr>
<tr>
<td></td>
<td>(b) Perform after-landing actions and procedures</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
</tr>
<tr>
<td></td>
<td>(a) Maintain effective lookout</td>
</tr>
</tbody>
</table>
## Phase of Flight

<table>
<thead>
<tr>
<th>General requirements</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Maintain situational awareness</td>
<td></td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td>(c) Assess situations and make decisions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Set priorities and manage tasks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
<td></td>
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<tr>
<td>(f) Recognise and manage threats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(g) Recognise and manage errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Use correct radio procedures</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(j) Manage relevant aircraft systems</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
<td></td>
</tr>
</tbody>
</table>

### 28.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

#### Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.
If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

### 28.5 Complete (post flight)

#### 28.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

#### 28.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
29 Aerial Application Rating

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the aerial application rating (AA).

29.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the AA flight test:

1. The examiner must conduct the AA flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the AA flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

29.2 Plan

29.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a commercial operation). The applicant should be given the test scenario at least 24 hours before the start of the flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hours for the general handling and test specific manoeuvres.
Use of IFR procedures

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the flight test or be taken into account in the flight test flight time. A landing should terminate the IFR flight segment before commencing the AA assessment flight sequences.

The AA flight test should be concluded by a landing in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the AA flight test should be considered as the flight time for the flight test.

29.2.2 AA assessment scope and conditions

The AA flight test must be conducted under the VFR and in an aircraft, in accordance with subregulation 61.1115 (2) of CASR.

The aircraft used for the AA flight test must be of the appropriate category and be capable of being operated for the kind of operations relevant to the aerial application endorsement(s) covered by the flight test.

The FEH activities and manoeuvres, listed in the Requirements column of Table 31 below, mirror the AA test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the AA flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the AA test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

AA flight tolerances and ground reference tolerances are specified in tables 2 and 4 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The AA applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

For aeroplanes a simulated engine failure in low level operations must not be initiated below a height of 200 ft AGL.

For single engine helicopters only, a simulated engine failure in low level operations must not be initiated below a height of 150 ft AGL and not below Vy speed. (Not applicable to hover or taxi simulated engine failures).

Recoveries from unusual attitudes must be conducted by day in VMC.

For the above procedure, the concept is that IMC is simulated, and the examiner has a clear view of the horizon.
29.3 Conduct (ground component)

29.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

29.3.2 Document review

The examiner must confirm that an applicant for the AA satisfies the eligibility requirements to undertake the flight test for the grant of the aerial application rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the AA must hold a CPL or ATPL (or be applying for the licence simultaneously with the AA) of the same category as the aircraft in which the flight test is conducted.

**Aeronautical knowledge examinations** – the examiner must review the applicant’s theory examination pass records.

**Knowledge deficiency report** (KDR) – the examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

**English language proficiency** – N/A.

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – the examiner must check that the applicant holds either a class 1 medical certificate, or a medical exemption allowing them to exercise the privileges of the AA.

**Security check and fit and proper person requirements** – N/A.
If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

### 29.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

### 29.3.4 Assessment of flight planning

As part of the flight test, the applicant must complete a:

- flight plan
- fuel plan
- flight notification
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

### 29.4 Conduct (flight component)

#### 29.4.1 Assessment of the applicant's performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

**Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.

**Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.

**Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested.

**Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.
Accuracy – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.

Procedures – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test.

Flight management – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

29.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. aerial application commercial operation / simulation of observers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

29.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the AA flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.
### Table 39: Assessment of activities and manoeuvres - AA

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-flight</strong></td>
<td>(a) Plan an aerial application operation to ensure a safe outcome</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Identify hazards and manage risks</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Ensure aircraft performance capability</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Consult and brief stakeholders</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Ground operations, take-off, departure and climb</strong></td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>En route cruise</strong></td>
<td>(a) Conduct appropriate checks and procedures before descending below 500ft AGL</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Test specific activities and manoeuvres</strong></td>
<td>(a)(i) At low level, perform straight flight, steep turns and procedure turns</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(ii) Navigate at low level</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(iii) At low level, manage wind effects, sloping terrain, false horizons and sun glare</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(iv) At low level, demonstrate use of escape routes</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(v) Recover from high energy and low energy unusual attitudes</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(vi)(A) At low level, perform forced landing (SE only)</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(vi)(B) At low level, manage engine failure (ME only)</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(vii) For application ops, fly to, assess, land and take-off from an operational airstrip or HLS</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(viii) For application ops, fly between operational airstrip or HLS and application area</td>
<td>NSR</td>
</tr>
</tbody>
</table>

For single engine helicopters a simulated engine failure in low level operations must not be initiated below a height of 150 ft AGL and not below Vy speed. Note: not applicable to hover or taxi simulated engine failures.
<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)(ix)</td>
<td>(a) For application ops, conduct an aerial survey of a treatment area</td>
<td>NSR</td>
</tr>
<tr>
<td>(a)(x)</td>
<td>(a) For application ops, conduct operations over and under power lines</td>
<td>NSR</td>
</tr>
<tr>
<td>(a)(xi)</td>
<td>(a) For application ops, apply substances</td>
<td>NSR</td>
</tr>
<tr>
<td>(a)(xii)</td>
<td>(a) For application ops, operate aircraft safely and effectively using GNSS swath guidance equipment</td>
<td>NSR</td>
</tr>
<tr>
<td>(a)(xiii)</td>
<td>(a) For application ops, operate at low level in hilly terrain</td>
<td>NSR</td>
</tr>
<tr>
<td>(a)(xiv)</td>
<td>(a) For application ops, jettison load</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)(i)</td>
<td>(b) For AA A, conduct steep, max rate and min radius turns</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)(ii)</td>
<td>(b) For AA A, recognise and avoid the stall and recover from a simulated low altitude stall</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)(iii)</td>
<td>(b) For AA A, recover from incipient spin (SE only)</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)(iv)</td>
<td>(b) For AA A, conduct operations at a certified or registered aerodrome</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)(v)</td>
<td>(b) For AA A, manage abnormal and emergency situations during low-level operations</td>
<td>NSR</td>
</tr>
<tr>
<td>(c)(i)</td>
<td>(c) For AA H, at low level conduct flight at various speeds and configurations</td>
<td>NSR</td>
</tr>
<tr>
<td>(c)(ii)</td>
<td>(c) For AA H, at low level perform quick stop manoeuvres into wind and downwind</td>
<td>NSR</td>
</tr>
<tr>
<td>(c)(iii)</td>
<td>(c) For AA H, manage helicopter risks during application operations</td>
<td>NSR</td>
</tr>
<tr>
<td>(d)(i)</td>
<td>(d) For AA FIRE, apply human factors</td>
<td>NSR</td>
</tr>
<tr>
<td>(d)(ii)</td>
<td>(d) For AA FIRE, conduct pre-flight actions</td>
<td>NSR</td>
</tr>
<tr>
<td>(d)(iii)</td>
<td>(d) For AA FIRE, demonstrate understanding of fire agency procedures, fire traffic management and other aircraft separation requirements</td>
<td>NSR</td>
</tr>
<tr>
<td>(d)(iv)</td>
<td>(d) For AA FIRE, perform planning and risk management</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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<tr>
<td>(d)(v) For AA FIRE, fly to, assess, land and take-off from an operational airstrip or HLS or pick up point</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(d)(vi) For AA FIRE, fly between operational airstrip or HLS and drop zone</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(d)(vii) For AA FIRE, conduct an aerial survey of a fire area</td>
<td>NSR</td>
<td></td>
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<tr>
<td>(d)(viii) For AA FIRE, apply substances</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(d)(ix) For AA FIRE, operate aircraft at maximum permissible weights for fire operations</td>
<td>NSR</td>
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<tr>
<td>(d)(x) For AA FIRE, operate at low-level in hilly terrain</td>
<td>NSR</td>
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<tr>
<td>(d)(xi) For AA FIRE, operate in high winds, high density altitude and high turbulence</td>
<td>NSR</td>
<td></td>
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<tr>
<td>(d)(xii) For AA FIRE, conduct low-visibility operations</td>
<td>NSR</td>
<td></td>
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<tr>
<td>(d)(xiii) For AA FIRE, manage abnormal or emergency situations during operations on a fire ground</td>
<td>NSR</td>
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<tr>
<td>(d)(xiv) For AA FIRE, jettison load</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(e)(i) For AA FIRE H, replenish helicopter load with snorkel or bucket</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(e)(ii) For AA FIRE H, manage known helicopter risks during firefighting operations</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(f)(i) For AA NGT, complete aircraft and equipment serviceability check</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(f)(ii) For AA NGT, conduct a risk assessment</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(f)(iii) For AA NGT, conduct pre-flight actions</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(f)(iv) For AA NGT, determine whether an airstrip or HLS is suitable for night operations</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(f)(v) For AA NGT, take-off and land at night at an airstrip or HLS remote from ground lighting</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(f)(vi) For AA NGT, conduct safe transit from airstrip to treatment area</td>
<td>NSR</td>
<td></td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(f)(vii) For AA NGT, operate work lights to illuminate treatment area</td>
<td>NSR</td>
</tr>
</tbody>
</table>

### Descent and arrival

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
</tbody>
</table>

### Circuit, approach and landing

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Conduct low level circuit, approach and landing (day only)</td>
<td>NSR</td>
</tr>
<tr>
<td>(b) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
</tbody>
</table>

### Shut down and post-flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
</tbody>
</table>

### General requirements

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td>(i) Use correct radio procedures</td>
<td></td>
</tr>
<tr>
<td>(j) Manage relevant aircraft systems</td>
<td></td>
</tr>
<tr>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td></td>
</tr>
</tbody>
</table>

#### 29.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

**Safety critical items**

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements

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• failure to operate the aircraft within the limitations of the AFM
• failure to maintain required flight visibility and cloud separation during a visual segment
• failure to maintain required terrain clearance
• failure to comply with minimum descent altitudes
• failure to maintain minimum traffic separation standards
• failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
• failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

29.5 Complete (post flight)

29.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

29.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

• within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
• within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
30 Aerial Application Proficiency Check

The aim of this proficiency check is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 6 of the Part 61 MOS for the aerial application proficiency check (APC).

30.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the APC:

1. The examiner must conduct the APC in accordance with clauses 1 to 3 of Schedule 6 of the Part 61 MOS.

2. The examiner must conduct the APC within the operational scope and conditions described in clause 4 of Schedule 6 of the Part 61 MOS.

3. The examiner must ensure that the ground component of the proficiency check is successfully completed before conducting the pre-flight briefing and flight component of the proficiency check.

4. The examiner must not introduce simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.

5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.

6. Where credits are available for proficiency check items, they are valid for 28 days only. After 28 days, the proficiency check must be conducted in full.

30.2 Plan

30.2.1 Testing methodology

The examiner should apply the proficiency check methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The proficiency check should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the proficiency check cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a commercial operation). The applicant should be given the test scenario at least 24 hours before the start of the proficiency check.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hours for the general handling and test specific manoeuvres.
Use of IFR procedures

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the proficiency check or be taken into account in the proficiency check flight time. A landing should terminate the IFR flight segment before commencing the APC assessment flight sequences.

The APC should be concluded by a landing in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the APC should be considered as the flight time for the proficiency check.

30.2.2 APC scope and conditions

The APC must be conducted by day under the VFR and in an aircraft, in accordance with subregulation 61.1115 (2) of CASR.

The aircraft used for the APC must be of the appropriate category and be capable of being operated for the kind of operations relevant to the aerial application endorsement(s) the applicant holds and that are assessed in the APC.

The FEH activities and manoeuvres, listed in the Requirements column of Table 32 below, mirror the APC test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 6 for the APC.

These activities and manoeuvres, described in clause 3 of Schedule 6 of the MOS and the APC test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

APC flight tolerances and ground reference tolerances are specified in Tables 2 and 4 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The APC applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

For aeroplanes a simulated engine failure in low level operations must not be initiated below a height of 200 ft AGL.

For single engine helicopters only, a simulated engine failure in low level operations must not be initiated below a height of 150 ft AGL and not below Vy speed. (Not applicable to hover or taxi simulated engine failures).

30.3 Conduct (ground component)

30.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the proficiency check with a brief to the applicant on the following items:

- proficiency check context, purpose and content
• assessment procedure
• function of the examiner
• standards against which competency will be assessed
• actions in the event of a failure assessment.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the proficiency check elements.

30.3.2 Document review

The examiner must confirm the identity of the applicant for the APC. To achieve this, the logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the proficiency check.

Licence – the applicant for the APC must hold a CPL or ATPL of the same category as the aircraft in which the proficiency check is conducted and hold the AA.

Aeronautical knowledge examinations – N/A
Knowledge deficiency report (KDR) – N/A
Flight training requirements – N/A
Aeronautical experience – N/A
English language proficiency – N/A
Eligibility certification – N/A

Medical certificate – the examiner must check that the applicant holds a class 1 medical certificate, or a medical exemption allowing them to exercise the privileges of the AA.

Security check and fit and proper person requirements – N/A

If the proficiency check is a retest following a fail assessment, requiring remedial training – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

30.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 6 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

30.3.4 Assessment of flight planning

As part of the proficiency check, the applicant must complete:

• flight plan
• fuel plan
• flight notification
• weight and balance calculation
• take-off and landing distance/performance calculation.

When reviewing the applicant’s flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

30.4 Conduct (flight component)

30.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

• **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.

• **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.

• **Knowledge** – during the course of the proficiency check the applicant’s knowledge may be further tested.

• **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.

• **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.

• **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the proficiency check.

• **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.
30.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the proficiency check environment (e.g. aerial application commercial operation / simulation of observers)
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

30.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the APC. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

Table 40: Assessment of activities and manoeuvres - APC

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Plan an aerial application operation to ensure a safe outcome</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Identify hazards and manage risks</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Ensure aircraft performance capability</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>Ground operations, take-off, departure and climb</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Plan, brief and conduct take-off and departure procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Conduct appropriate checks and procedures before descending below 500ft AGL</td>
<td>NSR</td>
</tr>
<tr>
<td>Test specific activities and manoeuvres</td>
<td>(a) For application ops, fly aircraft, manoeuvre and navigate at low-level</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) For application ops, apply substances</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) For application ops, jettison load</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) For A application ops, perform steep turns and procedure turns at or below 500 ft AGL</td>
<td>NSR</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>(e) For A application ops, recognise and avoid the stall and recover from a</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>simulated low altitude stall</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) For A application ops, perform forced landing from below 500 ft AGL (SE</td>
<td>For single engine helicopters a simulated engine failure in low level operations</td>
</tr>
<tr>
<td></td>
<td>only)</td>
<td>must not be initiated below a height of 150 ft AGL and not below Vy speed.</td>
</tr>
<tr>
<td></td>
<td>(g) For A application ops, manage abnormal and emergency situations during</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>low-level operations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h) For firefighting end, operate in accordance with fire traffic management</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>and other aircraft separation requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) For firefighting end, conduct an aerial survey of a fire area</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(j) For firefighting end, apply substances</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(k) For firefighting end, operate aircraft at maximum permissible weights for</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>fire operations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(l) For firefighting end, manage abnormal or emergency situations during</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>low-level operations on a fire ground</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(m) For H firefighting end, replenish helicopter load with snorkel or bucket</td>
<td>NSR</td>
</tr>
<tr>
<td>Descent and</td>
<td>(a) Plan and conduct arrival and circuit joining procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>arrival</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circuit,</td>
<td>(a) Conduct low level circuit, approach and landing (day only)</td>
<td>NSR</td>
</tr>
<tr>
<td>approach and</td>
<td>(b) Perform after-landing actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>landing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shut down and</td>
<td>(a) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>NSR</td>
</tr>
<tr>
<td>post-flight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>(a) Maintain effective lookout</td>
<td>In most proficiency checks, the assessment of emergency and non-normal events</td>
</tr>
<tr>
<td>requirements</td>
<td>(b) Maintain situational awareness</td>
<td>will provide sufficient evidence of the NTS competencies. The examiner</td>
</tr>
<tr>
<td></td>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
</tbody>
</table>
## Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td>should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td>(h) Recognise and manage undesired aircraft state</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
<tr>
<td>(i) Use correct radio procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>(j) Manage relevant aircraft systems</td>
<td>NSR</td>
</tr>
<tr>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
</tbody>
</table>

### 30.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the proficiency check. Both levels result in a fail assessment.

#### Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the proficiency check must be terminated immediately. Some credits may be given for test items already assessed that are not associated with or relevant to the safety critical event.

#### Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the
technique is unsatisfactory. Under these circumstances the proficiency check may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

30.5 Complete (post flight)

30.5.1 Debriefings

The examiner must debrief the applicant and, if applicable, the operator as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the operator to construct a remedial training program.

30.5.2 Proficiency check administration

At the conclusion of the proficiency check, the examiner must:

- within 14 days after the day of the check, complete the proficiency check report and provide a copy of the report to the applicant, the operator and CASA
- within 14 days after the day of the check, complete the flight test management system notification requirements.

All items on the proficiency check form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner must be in accordance with the Flight Crew Licensing Manual.
31 Flight Instructor Rating

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the flight instructor rating (FIR).

31.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the FIR flight test:

1. The examiner must conduct the FIR flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the FIR flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.
4. The examiner must not introduce or permit simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. The examiner must give the pre-flight briefing sequence on the day of the flight test.
7. The examiner must not give credits for any items of the ground component of the flight test if that component of the flight test is terminated due to failure of an item.
8. The examiner must terminate the flight test at the point where a fail assessment is made. This applies to either the ground or the flight components. If the flight component error is safety critical, no credits are to be given.
9. The examiner must complete and de-brief the ground component of the flight test prior to the commencement of the flight component of the flight test. The flight component includes the pre-flight briefing.
10. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

31.2 Plan

31.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.
The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a training flight). The applicant should be given the test scenario at least 48 hours before the start of the flight test. However, long briefing and pre-flight briefing topics are sometimes given on the day of the test (refer training endorsement test requirements).

It is recommended that the examiner plans for briefing times of approximately:

- 0.7 hour for each long briefing
- 0.2 hour for a pre-flight briefing.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hours for the general handling and test specific manoeuvres.

**Use of IFR procedures (FIR conducted VFR)**

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the flight test or be taken into account in the flight test flight time. A landing and shutdown should terminate the IFR flight segment before commencing the FIR assessment flight sequences.

The FIR flight test should be concluded by a landing and shutdown in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the FIR flight test should be considered as the flight time for the flight test.

### 31.2.2 FIR assessment scope and conditions

The FIR flight test must be conducted under the VFR or IFR as applicable and in an aircraft or an FSTD approved for the purpose, in accordance with subregulations 61.1185 (2) and (3), regulation 61.1245 and subregulations 61.1250 (2) and (3) of CASR.

The aircraft and FSTD used for the FIR flight test must be of the appropriate category and be capable of being operated for the kind of operations relevant to the training endorsement(s) covered by the flight test.

For testing in a FSTD, the examiner must be type rated so as to assess the applicant demonstrating knowledge, conducting aeronautical knowledge training and the conduct of activities and manoeuvres which are applicable to, or which are relevant to, the endorsements that are being assessed during the flight test.

The FEH activities and manoeuvres, listed in the Requirements column of Table 34 below, mirror the FIR test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the FIR flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the FIR test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

FIR flight tolerances and ground reference tolerances are specified in Tables 2, 4 and 7 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.
The FIR applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

To assist in the assessment of the FIR applicant's flight management ability, the applicant should decide positioning, height and orientation for all flight sequences and manage all relevant radio communications.

A competent performance in operating the aircraft is one in which the FIR applicant is in control of the aircraft and is able to manage unplanned situations to achieve the desired task outcome.

Additionally, FIR applicants should demonstrate efficient and effective decision making, continuous situational awareness and confident task management whilst maintaining positive and smooth aircraft control.

For ME aircraft, a simulated engine failure after take-off must not be initiated at a height less than 400ft AGL.

For ME aircraft, simulated engine failures after take-off, in the cruise or during instrument approach procedures must be conducted by day in VMC.

Recoveries from unusual attitudes must be conducted by day in VMC.

For the above procedures, the concept is that IMC is simulated, and the applicant has a clear view of the horizon.

**Training endorsement test requirements**

**Grade 1**

- Long briefing 1: nominated on the day of the test, an RPL, PPL or CPL syllabus sequence.
- Long briefing 2: nominated in advance to allow for research and preparation, any subject involving flying standards or aviation knowledge as described in Part 61 MOS Schedule 3, relevant to the licence and aircraft category held by the FIR applicant.
- Aircraft: a representative basic training aircraft.
- Flight conditions: by day under the VFR.

**Grade 2**

- Long briefing: nominated on the day of the test, an RPL, PPL or CPL syllabus sequence.
- Aircraft: a representative basic training aircraft.
- Flight conditions: by day under the VFR.

**Grade 3 or class rating**

- Long briefing: nominated on the day of the test, an RPL syllabus sequence.
- Aircraft: a representative basic training aircraft.
- Flight conditions: by day under the VFR.

**Multi-crew pilot**

- Long briefing 1: an IR syllabus sequence.
- Long briefing 2: an MCO syllabus sequence.
• Aircraft/FSTD: a representative air transport aircraft.

Type rating
• Long briefing 1: a sequence associated with theory or technical training on the aircraft type.
• Long briefing 2: a sequence associated with an aerodynamic aspect of the aircraft type.
• Aircraft/FSTD: the type proposed.

Multi engine aeroplane
• Long briefing 1: an MEA syllabus sequence.
• Long briefing 2: the ‘asymmetric control problem’.
• Aircraft: a representative MEA training aircraft.
• Flight conditions: by day under the VFR.

Design feature endorsement
• Long briefing: a DF syllabus sequence.
• Aircraft: an aircraft that has the DF described in the pre-flight briefing.
• Flight conditions: by day under the VFR.

Instrument rating
• Long briefing 1: an IR syllabus sequence.
• Long briefing 2: a second IR syllabus sequence.
• Aircraft: certified to IFR standard on the maintenance release.
• Flight conditions: under the IFR.

Night VFR rating
• Long briefing: a NVFR syllabus sequence.
• Aircraft: certified to NVFR standard on the maintenance release.
• Flight conditions: by night under the VFR.

Night vision imaging system rating
• Long briefing 1: an NVIS syllabus sequence.
• Long briefing 2: a second NVIS syllabus sequence.
• Aircraft: certified to NVFR or IFR standard on the Maintenance Release and equipped for NVG operations.
• Flight conditions: by night.

Low Level Rating
• Long briefing: a LL syllabus sequence.
• Aircraft: a representative LL operations aircraft.
• Flight conditions: by day under the VFR.

Aerial application rating (day)
• Long briefing 1: an AA (day) syllabus sequence.
• Long briefing 2: a second AA (day) syllabus sequence (not required if applicant holds the FIR).
• Aircraft: a representative AA operations aircraft with dual controls.
• Flight conditions: by day under the VFR.

Aerial application rating (night)
• Long briefing: an AA (night) syllabus sequence.
• Aircraft: a representative AA operations aircraft with dual controls.
• Flight conditions: by night under the VFR.

Instructor rating
• Long briefing: a sequence associated with the ‘principles of training’ for a training endorsement held by the applicant.
• Aircraft: a representative training aircraft used for one of the applicant’s existing training endorsements.

MEA class rating instructor
• Long briefing 1: a sequence associated with the ‘principles of training’ of MEA instructors.
• Long briefing 2: the ‘asymmetric control problem’.
• Aircraft: a representative MEA training aircraft.
• Flight conditions: by day under the VFR.

Sling operations, winch and rappelling operations or spinning or aerobatics
• Long briefing: an applicable operation syllabus sequence.
• Aircraft: equipped and approved to undertake the applicable operation.
• Flight conditions: by day under the VFR.

Formation or formation aerobatics
• Long briefing: an applicable formation syllabus sequence.
• Aircraft: the applicant must provide two aircraft approved to undertake the operation(s) described in the pre-flight briefing. The second aircraft must be flown by a pilot who is the holder of the applicable formation flight activity endorsement. The pre-flight briefing must include all pilots within the formation.
• Flight conditions: by day under the VFR.

31.3 Conduct (ground component)

31.3.1 Initial brief to applicant
In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:
• flight test context, purpose and content
• assessment procedure
• function of the examiner
• standards against which competency will be assessed
• actions in the event of a failure assessment
• the ‘trainee’ profile for the flight test scenario.
The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

### 31.3.2 Document review

The examiner must confirm that an applicant for the FIR satisfies the eligibility requirements to undertake the flight test for the grant of the flight instructor rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the FIR must hold a PPL, CPL or ATPL (or be applying for the licence simultaneously with the FIR) of the same category as the aircraft in which the flight test is conducted.

**Aeronautical knowledge examinations** – the examiner must review the applicant’s theory examination pass records.

The applicant must also have completed an approved course of training in principles and methods of instruction, or hold a Certificate IV in Training and Assessment, or hold a tertiary qualification in teaching.

**Knowledge deficiency report** (KDR) – the examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

FIR applicants for the multi-crew pilot training endorsement must have completed an MCC course.

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

**English language proficiency** – N/A

**Eligibility certification** – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

**Medical certificate** – for flight tests conducted in an aircraft, the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the FIR.

**Security check and fit and proper person requirements** – N/A

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.
31.3.3  Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

Conducting the aeronautical knowledge quiz

The examiner should include questions from the knowledge standards defined in Schedule 3 of the Part 61 MOS, relating to the training endorsement being tested. The assessment of aeronautical knowledge is related to the applicant’s 'own knowledge', not an ability to transfer knowledge, therefore, the examiner should not require 'teaching' during this assessment.

Where they are relevant, the bank of questions should cover multiple 'themes' of knowledge, such as:

- general aeronautical knowledge
- aerodynamics
- flight rules and air law
- human factors principles
- navigation
- meteorology.

31.3.4  The long briefing

The flight test should include a long briefing(s) as prescribed for the specific training endorsement to satisfy the test report. Prior notice of the briefing topic should be given to the applicant prior to the day of the flight test, unless the specific requirements state ‘this is to be given on the day of the test’.

During the long briefing, the examiner should not interrupt the applicant to explore their theoretical knowledge; rather, any occasional interjection should be as the 'trainee' reacting to the briefing content and delivery. The examiner may query the applicant upon conclusion of the briefing.

31.3.5  Ground component debriefing

At the conclusion of the ground component, the examiner shall de-brief the FIR applicant on that portion of the flight test so far. The debriefing shall include feedback against the specific performance criteria.

31.3.6  Assessment of flight planning

As part of the flight test, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- flight notification (if applicable)
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant's flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

### 31.4 Conduct (flight component)

#### 31.4.1 Assessment of the applicant's performance

The applicant's performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence
- **Knowledge** – during the course of the flight test the applicant's knowledge may be further tested
- **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment
- **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant's technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and
self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

31.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. simulated training flight)
- the trainee profile
- the format of the flight component to ensure that the FIR applicant is in no doubt about what is required
- requirement to de-brief the ‘trainee’ on air exercise one
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC (if applicable)
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

31.4.3 Instructor development gradient

The instructor development gradient (IDG) demonstrates the progressive skills capability required, as a flight instructor gains experience and hence transitions through the grades of training endorsements. In particular, the IDG shows five key criteria, where the skill requirements (between the grades of instructor training endorsements) are clearly distinguishable. The word picture scenarios provide guidance to an examiner, by describing how the verb phrase from those performance criteria changes in the depth of capability. The table below provides guidance that an examiner may use when developing the trainee profile for a given grade of training endorsement.
<table>
<thead>
<tr>
<th>FIR element</th>
<th>Grade 3 / 3A</th>
<th>Grade 2</th>
<th>Grade 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIR 1.2(d)</strong>&lt;br&gt;Lesson plan is followed and modified where applicable to achieve training objectives and transfer of knowledge.</td>
<td>Is able to explain a concept with minor modifications.</td>
<td>Is able to use an analogy to explain a concept.</td>
<td>Is able to use an analogy to explain a concept which is relevant to the trainee’s profile.</td>
</tr>
<tr>
<td><strong>FIR 3.1(a)</strong>&lt;br&gt;Review a trainee’s performance records, identify the appropriate units and elements of training to be delivered and develop an appropriate lesson plan, including remedial training if required.</td>
<td>Is able to identify a trainee’s weakness and apply a remedial training technique.</td>
<td>Is able to identify trainee’s weaknesses and apply several remedial training techniques.</td>
<td>Is able to identify trainee’s weaknesses and apply multiple remedial training techniques, specifically tailored to remedy faults identified.</td>
</tr>
<tr>
<td><strong>FIR 3.3(a)</strong>&lt;br&gt;Coordinate demonstration with explanation of manoeuvre.</td>
<td>The accurate demonstration, the aircraft performance and the key words, are coordinated.</td>
<td>The accurate demonstration is targeted to emphasise key elements of the correct technique.</td>
<td>The accurate demonstration is targeted to emphasise key elements of the correct technique. The specific needs of the trainee are considered.</td>
</tr>
<tr>
<td><strong>FIR 3.3(c)</strong>&lt;br&gt;Identify the trainee’s deficiencies and provide feedback to assist the trainee in achieving the standard.</td>
<td>The feedback identifies deviations from the required standards and the instructor directs, or demonstrates another attempt.</td>
<td>The feedback describes general technique improvement for the next attempt.</td>
<td>The feedback describes, very specifically, the action that is required to improve the deficiency.</td>
</tr>
<tr>
<td><strong>FIR 3.5(c)</strong>&lt;br&gt;Identify any deficiencies in performance and suggest remedial actions and training.</td>
<td>The training suggested is simple, such as repeating a sequence with basic guidance.</td>
<td>The training suggested incorporates appropriate corrections for the performance deficiencies.</td>
<td>The training suggested is tailored to the root cause of the deficiency.</td>
</tr>
<tr>
<td><strong>FIR 3.7(b) and (c)</strong>&lt;br&gt;Evaluate final session outcomes against desired session outcomes and identify and incorporate adjustments to delivery, presentation and content of training when appropriate.</td>
<td>The Grade 3/3A is able to manage the training of the average trainee and approve the conduct of solo flight, other than the trainee’s first solo.</td>
<td>The Grade 2 is able to manage the training of most trainees, approve the conduct of solo flight and assess KDRs.</td>
<td>The Grade 1 is able to manage the training for all trainee pilots, including those with difficulties, approve the conduct of solo flight, assess KDRs and supervise holders of grade 2 and 3 TEs.</td>
</tr>
</tbody>
</table>
### 31.4.4 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the FIR flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

<table>
<thead>
<tr>
<th>Phase of flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Plan a flight training exercise</td>
<td>The applicant should conduct a daily inspection which will be assessed by the examiner as a segment of planning flight training. This does not have to be the daily inspection used for maintenance release certification.</td>
<td></td>
</tr>
<tr>
<td>(b) Perform pre-flight actions and procedures</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(c)(i) Pre-flight brief - Confirm the trainee is prepared and can recall underpinning knowledge</td>
<td>The pre-flight briefing sequence should be the same sequence as the air exercise one. The applicant should check essential knowledge is ‘recalled’, as related to the practical aspects of flight (i.e. not unnecessarily re-teaching the long briefing theory).</td>
<td></td>
</tr>
<tr>
<td>(c)(ii) Pre-flight brief - training outcomes and performance criteria are briefed</td>
<td>The applicant should question the examiner on the expected standards to be demonstrated.</td>
<td></td>
</tr>
<tr>
<td>(c)(iii) Pre-flight brief - conduct of the flight and actions required by the trainee during the flight are briefed</td>
<td>The applicant should ensure the trainee is made aware of what will be seen and done during the flight.</td>
<td></td>
</tr>
<tr>
<td>(c)(iv) Pre-flight brief - TEM issues applicable to the proposed flight are discussed</td>
<td>The applicant should question the examiner on expected TEM risks relevant to the flight.</td>
<td></td>
</tr>
<tr>
<td>(a) Complete all relevant checks and procedures</td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
<td></td>
</tr>
<tr>
<td>(b) Plan, brief and conduct take-off and departure procedures</td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
<td></td>
</tr>
<tr>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
<td></td>
</tr>
<tr>
<td>(a) Implement handover and takeover procedure</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>Phase of flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(b) Intervene to manage undesired aircraft state</td>
<td>When the undesired state is initiated by the examiner.</td>
<td></td>
</tr>
</tbody>
</table>
| (c)(i) Air Ex 1 - Conduct airborne training - demonstrate manoeuvres with clear explanations | When conducting the air exercises, examiners should ensure the flight time reflects a thorough assessment of the units and elements of the training endorsement. This duration should not include any transit time to assessment training areas.                                       | Air exercise 1 should:  
  - be the same as the pre-flight briefing sequence  
  - if applicable, be different from the long briefing sequence so that the examiner has the opportunity to review skills associated with a greater scope of instructional sequences.                                    |
| (c)(ii) Air Ex 1 - Conduct airborne training - direct trainee task performance | The applicant should direct a period of simulated in-flight instruction.        |                                                                                                                                                                                                                                                                                                                                                     |
| (c)(iii) Air Ex 1 - Conduct airborne training - monitor and assess trainee performance and give instruction | The applicant should be able to assess and provide remedial training following any poor flight demonstration by the examiner.                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                     |
| (d)(i) Air Ex 2 - Demonstrate manoeuvres - manage PIC responsibilities | Air exercise 2 should include:                                                 |  
  - a demonstration and handling of in-flight emergencies  
  - additional pattered sequence(s) as relevant to the training endorsement  
  - narrated sequences with no simulated trainee response  
  - fault analysis of simulated trainee flying  
  - a demonstration of pure flying ability.                                                                                                                                                                                                |
<p>| (d)(ii) Air Ex 2 - Demonstrate manoeuvres - demonstrate and direct manoeuvres with clear explanations | The applicant must demonstrate a high standard in each of the manoeuvres requested by the examiner.                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                     |
| (d)(iii) Air Ex 2 - Demonstrate manoeuvres - monitor and assess trainee performance and give instruction | The applicant should be able to assess and provide remedial training following any poor flight demonstration by the examiner.                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                     |</p>
<table>
<thead>
<tr>
<th>Phase of flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Descent and arrival</strong></td>
<td>(a) Plan and conduct arrival and circuit joining procedures</td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
</tr>
<tr>
<td><strong>Circuit, approach and landing</strong></td>
<td>(a) Conduct normal circuit pattern, approach and landing</td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform after-landing actions and procedures</td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
</tr>
<tr>
<td><strong>Shut down and post-flight</strong></td>
<td>(a)&amp;(b) Park, shut down, secure aircraft and complete post-flight administration</td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
</tr>
<tr>
<td></td>
<td>(c)(i) Post-flight brief - trainee is given the opportunity to self-assess their performance against performance criteria</td>
<td>On conclusion of the flight, the FIR applicant shall de-brief the examiner on air exercise one as they would de-brief a real trainee following an instructional flight.</td>
</tr>
<tr>
<td></td>
<td>(c)(ii) Post-flight brief - trainee's performance is assessed accurately and discussed</td>
<td>Each of the examiner's acceptable 'trainee demonstrations' must be de-briefed.</td>
</tr>
<tr>
<td></td>
<td>(c)(iii) Post-flight brief - performance deficiencies are identified, and remedial actions and proposed training is discussed</td>
<td>Each of the examiner's unacceptable 'trainee demonstrations' must be de-briefed.</td>
</tr>
</tbody>
</table>
### Phase of flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c)(iv) Post-flight brief - TEM issues encountered during the flight are discussed</td>
<td>As created and demonstrated by the examiner during the flight component.</td>
</tr>
<tr>
<td>(a) Maintain effective lookout</td>
<td></td>
</tr>
<tr>
<td>(b) Maintain situational awareness</td>
<td></td>
</tr>
<tr>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td>(i) Use correct radio procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>(j) Manage relevant aircraft systems</td>
<td>NSR</td>
</tr>
<tr>
<td>(k) Manage fuel system and monitor fuel plan and usage</td>
<td>NSR</td>
</tr>
</tbody>
</table>

#### General requirements

31.4.5 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

**Safety critical items**

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
• failure to comply with ATC clearances and airspace requirements
• failure to operate the aircraft within the limitations of the AFM
• failure to maintain required flight visibility and cloud separation during a visual segment
• failure to maintain required terrain clearance
• failure to comply with minimum descent altitudes
• failure to maintain minimum traffic separation standards
• failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
• failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. For the FIR, no credits are to be given.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory.

The examiner has the discretion to enable the applicant to demonstrate TEM to avoid the situation where the error becomes safety critical.

The examiner must terminate the flight test at the point where a fail assessment is made. This applies to either the ground or the flight components.

Credits are only valid for one retest.

### 31.5 Complete (post flight)

#### 31.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

#### 31.5.2 Flight test administration

At the conclusion of the flight test, the examiner must:

- within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
32 Simulator Instructor Rating

The aim of this flight test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the simulator instructor rating (SIR).

32.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the SIR flight test:

1. The examiner must conduct the SIR flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.

2. The examiner must conduct the SIR flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.

3. The examiner must ensure that the ground component of the flight test is successfully completed before conducting the pre-flight briefing and flight component of the flight test.

4. The examiner must not introduce or permit simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.

5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked.

6. The examiner must give the pre-flight briefing sequence on the day of the flight test.

7. The examiner must not give credits for any items of the ground component of the flight test if that component of the flight test is terminated due to failure of an item.

8. The examiner must terminate the flight test at the point where a fail assessment is made. This applies to either the ground or the flight components. If the flight component error is safety critical, no credits are to be given.

9. The examiner must complete and de-brief the ground component of the flight test prior to the commencement of the flight component of the flight test. The flight component includes the pre-flight briefing.

10. Where credits are available for flight test items, they are valid for 28 days only. After 28 days, the flight test must be conducted in full.

32.2 Plan

32.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the flight test cannot be completed.
The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a training session). The applicant should be given the test scenario at least 48 hours before the start of the flight test.

It is recommended that the examiner plans for briefing times of approximately:

- 0.7 hour for each long briefing(s)
- 0.2 hour for a pre-flight briefing.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hour for the test specific activities and manoeuvres.

32.2.2 SIR assessment scope and conditions

The SIR flight test must be conducted under the VFR or IFR as applicable and in an FSTD approved for the purpose, in accordance with subregulation 61.1210 (4), regulation 61.1245 and subregulations 61.1250 (2) and (3) of CASR.

The FSTD used for the SIR flight test must be of the appropriate category and be capable of being operated for the kind of operations relevant to the training endorsement(s) covered by the flight test.

For the test the examiner must be type rated so as to assess the applicant demonstrating knowledge, conducting aeronautical knowledge training and the conduct of activities and manoeuvres which are applicable to, or which are relevant to, the endorsements that are being assessed during the flight test.

The FEH activities and manoeuvres, listed in the Requirements column of Table 35 below, mirror the SIR test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the SIR flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the SIR test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

The SIR applicant should demonstrate that control of the FSTD instructor operating station is maintained at all times, that the successful and safe outcome of any training session is not in doubt and that any corrective action is taken promptly.

To assist in the assessment of the SIR applicant's flight management ability, the applicant should decide positioning, height and orientation for all flight sequences and manage all relevant radio communications.

A competent performance in operating the FSTD IOS is one in which the SIR applicant is in control of the session and is able to manage unplanned situations to achieve the desired task outcome.

Additionally, SIR applicants should demonstrate efficient and effective decision making, continuous situational awareness and confident task management.

Training endorsement test requirements

Refer to chapter 0, flight instructor rating, for the full list of training endorsement test requirements.
Multi-crew pilot
- Long briefing 1: an IR syllabus sequence.
- Long briefing 2: an MCO syllabus sequence.
- FSTD: a representative air transport aircraft.

Type rating
- Long briefing 1: a sequence associated with theory or technical training on the aircraft type.
- Long briefing 2: a sequence associated with an aerodynamic aspect of the aircraft type.
- FSTD: the type proposed.

Multi engine aeroplane
- Long briefing 1: an MEA syllabus sequence.
- FSTD: a representative MEA training aircraft.
- Flight conditions: by day under the VFR.

Design feature endorsement
- Long briefing: a DF syllabus sequence.
- FSTD: an aircraft that has the design feature described in the pre-flight briefing.
- Flight conditions: by day under the VFR.

Instrument rating
- Long briefing 1: an IR syllabus sequence.
- Long briefing 2: a second IR syllabus sequence.
- FSTD: certified to IFR standard
- Flight conditions: under the IFR.

Night vision imaging system rating
- Long briefing 1: an NVIS syllabus sequence.
- Long briefing 2: a second NVIS syllabus sequence.
- FSTD: certified to NVFR or IFR standard and equipped for NVG operations.
- Flight conditions: by night.

Instructor rating
- Long briefing: a sequence associated with the ‘principles of training’ for a training endorsement held by the applicant.
- FSTD: a representative training aircraft used for one of the applicant’s existing training endorsements.

MEA Class rating instructor
- Long briefing 1: a sequence associated with the ‘principles of training’ of MEA instructors.
- FSTD: a representative MEA training aircraft.
- Flight conditions: by day under the VFR.
32.3 Conduct (ground component)

32.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the flight test with a brief to the applicant on the following items:

- flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment
- the ‘trainee’ profile for the flight test scenario.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the flight test elements.

32.3.2 Document review

The examiner must confirm that an applicant for the SIR satisfies the eligibility requirements to undertake the flight test for the grant of the simulator instructor rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook and licence must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the SIR must hold a CPL or ATPL of the same category as the FSTD in which the flight test is conducted.

**Aeronautical knowledge examinations** – the examiner must review the applicant’s theory examination pass records.

The applicant must also have completed an approved course of training in principles and methods of instruction, or hold a Certificate IV in Training and Assessment, or hold a tertiary qualification in teaching.

**Knowledge deficiency report** (KDR) – the examiner must ascertain whether the training provider has completed the KDR requirements. It is strongly recommended that the KDR assessment be conducted by an instructor before the flight test.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of flight test.

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training requirements have been met. Normal evidence should at least be a course completion certificate.

SIR applicants for the multi-crew pilot training endorsement must have completed an MCC course.

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met.

**English language proficiency** – N/A
Eligibility certification – the examiner must ensure that an appropriate person of the training provider has certified in writing that the applicant is eligible to take the flight test.

Medical certificate – N/A

Security check and fit and proper person requirements – N/A

If the flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

32.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

Conducting the Aeronautical Knowledge Quiz

The examiner should include questions from the knowledge standards defined in Schedule 3 of the Part 61 MOS, relating to the training endorsement being tested. The assessment of aeronautical knowledge is related to the applicant’s ‘own knowledge’, not an ability to transfer knowledge, therefore, the examiner should not require ‘teaching’ during this assessment.

Where they are relevant, the bank of questions should cover multiple ‘themes’ of knowledge, such as:

- general aeronautical knowledge
- aerodynamics
- flight rules and air law
- human factors principles
- navigation
- meteorology.

32.3.4 The long briefing

The flight test should include a long briefing(s) as prescribed for the specific training endorsement to satisfy the test report. Prior notice of the briefing topic should be given to the applicant prior to the day of the flight test, unless the specific requirements state ‘this is to be given on the day of the test’.

During the long briefing, the examiner should not interrupt the applicant to explore their theoretical knowledge; rather, any occasional interjection should be as the ‘trainee’ reacting to the briefing content and delivery. The examiner may query the applicant upon conclusion of the briefing.
32.3.5 **Ground component debriefing**

At the conclusion of the ground component, the examiner shall debrief the SIR applicant on that portion of the flight test so far. The debriefing shall include feedback against the specific performance criteria.

32.3.6 **Assessment of flight planning**

As part of the flight test, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant’s flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

32.4 **Conduct (flight component)**

32.4.1 **Assessment of the applicant’s performance**

The applicant’s performance is assessed for technique, judgement, knowledge, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
- **Judgement** – is applicable to all tasks
- **Knowledge** – during the course of the flight test the applicant’s knowledge may be further tested
- **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the flight test
- **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the session.

32.4.2 **Pre-flight briefing**

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the test environment (e.g. simulated training session)
- the trainee profile
- the format of the flight component to ensure that the SIR applicant is in no doubt about what is required.
• requirement to de-brief the ‘trainee’ on air exercise one
• flight tolerances and ground references
• simulating emergencies, methods and calls
• actual emergencies
• procedures for simulating IMC (if applicable)
• multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

32.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the SIR flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

Table 43: Assessment of activities and manoeuvres - SIR

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Plan a flight training exercise</td>
<td>Confirm the technical and human factors requirements, including simulator sickness, safety and emergency procedures.</td>
<td></td>
</tr>
<tr>
<td>(b) Perform pre-flight actions and procedures</td>
<td>Perform pre-flight FSTD and instructor station procedures</td>
<td></td>
</tr>
<tr>
<td>(c)(i) Pre-flight brief - confirm the trainee is prepared and can recall underpinning knowledge</td>
<td>The pre-flight briefing sequence should be the same sequence as the air exercise one. The applicant should check essential knowledge is ‘recalled’, as related to the practical aspects of flight (i.e. not unnecessarily re-teaching the long briefing theory). The limitations of the FSTD should be discussed.</td>
<td></td>
</tr>
<tr>
<td>(c)(ii) Pre-flight brief - training outcomes and performance criteria are briefed</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(c)(iii) Pre-flight brief - conduct of the flight and actions required by the trainee during the flight are briefed</td>
<td>The applicant should ensure the trainee is made aware of what will be seen and done during the flight.</td>
<td></td>
</tr>
<tr>
<td>(c)(iv) Pre-flight brief - TEM issues applicable to the proposed flight are discussed</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>----------------</td>
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<td>-----------------</td>
</tr>
<tr>
<td></td>
<td>(a)(i) Air Ex - Conduct FSTD training - guide and facilitate learning and manage trainee cognitive load</td>
<td>Throughout all phases of the training, demonstrate the ability to avoid unnecessary interruptions to the flow of the training sequence. Improve training outcomes by, where necessary, freezing the simulator or repositioning the simulator to a designated position in space.</td>
</tr>
<tr>
<td></td>
<td>(a)(ii) Air Ex - Conduct FSTD training - monitor and assess trainee performance and provide instruction</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(iii) Air Ex - Conduct FSTD training - address any technical issues or unusual conditions as required</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(iv) Air Ex - Conduct FSTD training - demonstrate ability to operate the instructor station</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(v) Air Ex - Conduct FSTD training - demonstrate ability to operate the functional controls of the pilot station</td>
<td>The applicant should demonstrate a working knowledge of cockpit systems and be able to direct the trainee to resolve uncertainties with operating the systems or performing checklists.</td>
</tr>
<tr>
<td></td>
<td>(a)(vi) Air Ex - Conduct FSTD training – demonstrate a flight sequence</td>
<td>The applicant must demonstrate a high standard in each of the manoeuvres requested by the examiner.</td>
</tr>
<tr>
<td></td>
<td>(b)(i) For multi-crew pilot training endorsement - teamwork and problem solving are emphasised</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b)(ii) For multi-crew pilot training endorsement - NTS rather than manipulative skills are emphasised</td>
<td>The applicant shall demonstrate a good working knowledge of the MCO competencies.</td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b)(iii) For multi-crew pilot training endorsement - SOPs, cockpit discipline and use of automation</td>
<td>NSR</td>
</tr>
<tr>
<td>(a) Perform post-flight FSTD and instructor station procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)(i) Post-flight brief - trainee is given the opportunity to self-assess their performance against performance criteria</td>
<td>On conclusion of the flight, the SIR applicant shall de-brief the examiner on air exercise one as they would de-brief a real trainee following an instructional flight.</td>
</tr>
<tr>
<td>(b)(ii) Post-flight brief - trainee’s performance is assessed accurately and discussed</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)(iii) Post-flight brief – trainee’s performance deficiencies are identified and remedial actions and proposed training discussed</td>
<td>NSR</td>
</tr>
<tr>
<td>(b)(iv) Post-flight brief - TEM issues encountered during the flight are discussed</td>
<td>NSR</td>
</tr>
</tbody>
</table>

#### Shut down and post-flight

<table>
<thead>
<tr>
<th>General requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Use correct radio procedures</td>
<td>NSR</td>
</tr>
</tbody>
</table>

### 32.4.4 Failure assessment

The failure to perform an activity or procedure may be broken into two levels depending on the safety implications during the flight test. Both levels result in a fail assessment.

#### Safety critical items

The highest level, being safety critical, is where the control of the FSTD Instructor Operating Station is such that the safe outcome of the activity or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete FSTD checklist items mandated by the manufacturer
• failure to correctly prepare the FSTD for flight
• failure to operate the IOS within the limitations of the FSTD
• failure to comply with the hand-over/take-over technique (as applicable to FSTD training sessions).

If the error is safety critical and the examiner needs to take control or intervene, the flight test must be terminated immediately. For the SIR, no credits are to be given.

Non safety critical items

The second level is where the control of the FSTD is such that the safe outcome of the activity or procedure is certain, but the technique is unsatisfactory. Under these circumstances the flight test may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.

32.4.5 Complete (post flight)

32.4.6 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

32.4.7 Flight test administration

At the conclusion of the flight test, the examiner must:

• within 14 days after the day of the test, complete the flight test report and provide a copy of the report to the applicant, training provider and CASA
• within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
33 Flight Instructor Proficiency Check

The aim of this proficiency check is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 6 of the Part 61 MOS for the flight instructor proficiency check (FPC).

33.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the FPC:

(1) The examiner must conduct the FPC in accordance with clauses 1 to 3 of Schedule 6 of the Part 61 MOS.

(2) The examiner must conduct the FPC within the operational scope and conditions described in clause 4 of Schedule 6 of the Part 61 MOS.

(3) The examiner must ensure that the ground component of the proficiency check is successfully completed before conducting the pre-flight briefing and flight component of the proficiency check.

(4) The examiner must not introduce or permit simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.

(5) After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.

(6) The examiner must give the pre-flight briefing sequence on the day of the proficiency check.

(7) The examiner must not give credits for any items of the ground component of the proficiency check if that component of the proficiency check is terminated due to failure of an item.

(8) The examiner must terminate the proficiency check at the point where a fail assessment is made. This applies to either the ground or the flight component. If the flight component error is safety critical, no credits are to be given.

(9) The examiner must complete and de-brief the ground component of the proficiency check prior to the commencement of the flight component. The flight component includes the pre-flight briefing.

(10) The examiner must review the applicant’s logbook to determine (or confirm) the proficiency check assessment content relates to a training endorsement (or endorsements) which have been active in the preceding 12 months.

(11) Where an applicant for a proficiency check holds a class rating training endorsement (multi-engine) or a type rating training endorsement for a multi-engine aircraft, then at least each alternate proficiency check should be conducted in a multi-engine aircraft or an FSTD approved for the purpose.

(12) At the conclusion of the proficiency check when reporting the result in FTM, the examiner must enter the following details:

- the long briefing topic
- the pre-flight briefing topic
• the air exercise 1 sequence
• the air exercise 2 sequences.

(13) Where credits are available for proficiency check items, they are valid for 28 days only. After 28 days, the proficiency check must be conducted in full.

33.2 Plan

33.2.1 Testing methodology
The examiner should apply the proficiency check methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The proficiency check should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the proficiency check cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a training flight applicable to the training endorsement(s) the applicant holds). The applicant should be given the test scenario at least 24 hours before the start of the proficiency check.

It is recommended that the examiner plans for briefing times of approximately:

- 0.7 hour for a long briefing
- 0.2 hour for a pre-flight briefing.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hours for the general handling and test specific manoeuvres.

**Use of IFR procedures (FPC conducted VFR)**
If IFR procedures are used for a positioning flight, this part of the flight should not form part of the proficiency check or be taken into account in the proficiency check flight time. A landing and shutdown should terminate the IFR flight segment before commencing the FPC assessment flight sequences.

The FPC should be concluded by a landing and shutdown in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the FPC should be considered as the flight time for the proficiency check.

33.2.2 FPC scope and conditions
The FPC must be conducted under the VFR or IFR as applicable and in an aircraft or an FSTD approved for the purpose, in accordance with subregulation 61.1180 (4) of CASR.

The aircraft or FSTD used for the FPC must be of the appropriate category and be capable of being operated for the kind of operations relevant to the training endorsement(s) the applicant holds and that are assessed in the FPC.
For testing in a FSTD, the examiner must be type rated so as to assess the applicant demonstrating knowledge, conducting aeronautical knowledge training and the conduct of activities and manoeuvres which are applicable to, or which are relevant to, the endorsements that are being assessed during the flight test.

The FEH activities and manoeuvres, listed in the Requirements column of Table 36 below, mirror the FPC test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 6 for the FPC.

These activities and manoeuvres, described in clause 3 of Schedule 6 of the MOS and the FPC test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

FPC flight tolerances and ground reference tolerances are specified in tables 2, 4 and 7 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The FPC applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

To assist in the assessment of the FPC applicant's flight management ability, the applicant should decide positioning, height and orientation for all flight sequences and manage all relevant radio communications.

A competent performance in operating the aircraft is one in which the FPC applicant is in control of the aircraft and is able to manage unplanned situations to achieve the desired task outcome.

Additionally, FPC applicants should demonstrate efficient and effective decision making, continuous situational awareness and confident task management whilst maintaining positive and smooth aircraft control.

For ME aircraft, a simulated engine failure after take-off must not be initiated at a height less than 400ft AGL.

For ME aircraft, simulated engine failures after take-off, in the cruise or during instrument approach procedures must be conducted by day in VMC.

Recoveries from unusual attitudes must be conducted by day in VMC.

For the above procedures, the concept is that IMC is simulated and the applicant has a clear view of the horizon.

### 33.3 Conduct (ground component)

#### 33.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the proficiency check with a brief to the applicant on the following items:

- proficiency check context, purpose and content
- assessment procedure
• function of the examiner
• standards against which competency will be assessed
• actions in the event of a failure assessment
• the ‘trainee profile’ for the proficiency check scenario.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the proficiency check elements.

33.3.2 Document review

The examiner must confirm the identity of the applicant for the FPC. To achieve this, the logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the proficiency check.

**Licence** – the applicant for the FPC must hold a PPL, CPL or ATPL of the same category as the aircraft in which the proficiency check is conducted and hold the FIR.

**Aeronautical knowledge examinations** – N/A

**Knowledge deficiency report (KDR)** – N/A

**Flight training requirements** – N/A

**Aeronautical experience** – N/A

**English language proficiency** – N/A

**Eligibility certification** – N/A

**Medical certificate** – for proficiency checks conducted in an aircraft, the examiner must check that the applicant holds either a class 1 or 2 medical certificate, or a medical exemption allowing them to exercise the privileges of the FIR.

**Security check and fit and proper person requirements** – N/A

If the proficiency check is a retest following a fail assessment, requiring remedial training – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

33.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 6 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

**Conducting the Aeronautical Knowledge Quiz**

The examiner should include questions from the knowledge standards defined in Schedule 3 of the Part 61 MOS, relating to the training endorsement being tested. The assessment of aeronautical knowledge is related to the applicant’s ‘own knowledge’, not an ability to transfer knowledge, therefore, the examiner should not require ‘teaching’ during this assessment.
Where they are relevant, the bank of questions should cover multiple ‘themes’ of knowledge, such as:

- general aeronautical knowledge
- aerodynamics
- flight rules and air law
- human factors principles
- navigation
- meteorology.

### 33.3.4 The long briefing

The FPC should include a long briefing and prior notice of the briefing topic should be given to the applicant prior to the day of the proficiency check.

During the long briefing, the examiner should not interrupt the applicant to explore their theoretical knowledge; rather, any occasional interjection should be as the ‘trainee’ reacting to the briefing content and delivery. The examiner may query the applicant upon conclusion of the briefing.

### 33.3.5 Ground component debriefing

At the conclusion of the ground component, the examiner shall de-brief the FPC applicant on that portion of the proficiency check so far. The debriefing shall include feedback against the specific performance criteria.

### 33.3.6 Assessment of flight planning

As part of the proficiency check, the applicant must complete or demonstrate knowledge of (if computer generated):

- flight plan
- fuel plan
- flight notification (if applicable)
- weight and balance calculation
- take-off and landing distance/performance calculation.

When reviewing the applicant’s flight preparation documents, the examiner must be satisfied that the applicant is able to validate the data on which the planning decisions and calculations have been made (including, forecast weather, NOTAMs, aircraft data, chart validity).

The examiner must ensure, through considered questioning, that the preparation is solely the work of the applicant and meets the knowledge standards as applicable.

### 33.4 Conduct (flight component)

#### 33.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:
• **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.

• **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.

• **Knowledge** – during the course of the proficiency check the applicant’s knowledge may be further tested.

• **Smoothness** – the applicant should demonstrate smooth flying in all sequences. Anything less is unacceptable and should result in a fail assessment.

• **Accuracy** – accuracy in the control of height, airspeed, direction, balance and trim are all important. Persistent errors in any of these aspects should result in a fail assessment.

• **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the proficiency check.

• **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

Assessment should be based on the technique used by the applicant and not just the ability to perform the task within specified numerical tolerances. Technique involves smooth and accurate control application in adjusting power, attitude, trim and balance in a timely and coordinated fashion whilst following correct procedures.

It may be that on some occasions the flight conditions are such that even though the applicant’s technique is sound, the aircraft may deviate outside specified tolerances for short periods. In such cases the assessment of technique and judgment should be the determining factors.

Applicants should not be given a second opportunity to demonstrate a manoeuvre unless, in the opinion of the examiner, the circumstances causing failure of the first attempt were outside the control of the applicant in the test environment or the applicant recognised the error and self-managed corrective actions. This should be considered in relation to safety critical items where the applicant is demonstrating NTS2 TEM appropriately.

### 33.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

• the scenario applied to the proficiency check environment (e.g. simulated training flight)

• the trainee profile

• the format of the flight component to ensure that the FPC applicant is in no doubt about what is required

• requirement to de-brief the ‘trainee’ on air exercise one

• pilot in command

• transfer of control

• flight tolerances and ground references

• simulating emergencies, methods and calls

• actual emergencies
• procedures for simulating IMC (if applicable)
• multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

### 33.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the FPC. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

#### Table 44: Assessment of activities and manoeuvres - FPC

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Plan a flight training exercise</td>
<td>The applicant should conduct a daily inspection which will be assessed by the examiner as a segment of planning flight training. This does not have to be the daily inspection used for maintenance release certification.</td>
</tr>
<tr>
<td></td>
<td>(b) Perform pre-flight actions and procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c)(i) Pre-flight brief - confirm the trainee is prepared and can recall underpinning knowledge</td>
<td>The pre-flight briefing sequence should be the same sequence as the air exercise one. The applicant should check essential knowledge is ‘recalled’, as related to the practical aspects of flight (i.e. not unnecessarily re-teaching the long briefing theory).</td>
</tr>
<tr>
<td></td>
<td>(c)(ii) Pre-flight brief - training outcomes and performance criteria are briefed</td>
<td>The applicant should question the examiner on the expected standards to be demonstrated.</td>
</tr>
<tr>
<td></td>
<td>(c)(iii) Pre-flight brief - conduct of the flight and actions required by the trainee during the flight are briefed</td>
<td>The applicant should ensure the trainee is made aware of what will be seen and done during the flight.</td>
</tr>
<tr>
<td></td>
<td>(c)(iv) Pre-flight brief - TEM issues applicable to the proposed flight are discussed</td>
<td>The applicant should question the examiner on expected TEM risks relevant to the flight.</td>
</tr>
<tr>
<td>Ground operations, take-</td>
<td>(a) Complete all relevant checks and procedures</td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>off, departure and climb</td>
<td>(b) Plan, brief and conduct take-off and departure procedures</td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
</tr>
<tr>
<td>En route cruise</td>
<td>(a) Maintain straight and level and turn aircraft</td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
</tr>
<tr>
<td></td>
<td>(a) Implement handover and takeover procedure</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Intervene to manage undesired aircraft state</td>
<td>When the undesired state is initiated by the examiner.</td>
</tr>
<tr>
<td>Test specific activities and</td>
<td>(c)(i) Air Ex 1 - Conduct airborne training - demonstrate manoeuvres with clear explanations</td>
<td>When conducting the air exercises, examiners should ensure the flight time reflects a thorough assessment of the units and elements of the training endorsement. This duration should not include any transit time to assessment training areas. Air exercise 1 should: • be the same as the pre-flight briefing sequence • if applicable, be different from the long briefing sequence so that the examiner has the opportunity to review skills associated with a greater scope of instructional sequences.</td>
</tr>
<tr>
<td>manoeuvres</td>
<td></td>
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<tr>
<td></td>
<td>(c)(ii) Air Ex 1 - Conduct airborne training - direct trainee task performance</td>
<td>The applicant should direct a period of simulated in-flight instruction.</td>
</tr>
<tr>
<td></td>
<td>(c)(iii) Air Ex 1 - Conduct airborne training - monitor and assess trainee performance and give instruction</td>
<td>The applicant should be able to assess and provide remedial training following any poor flight demonstration by the examiner.</td>
</tr>
<tr>
<td></td>
<td>(d)(i) Air Ex 2 - Demonstrate manoeuvres - manage PIC responsibilities</td>
<td>Air exercise 2 should include: • a demonstration and handling of in-flight emergencies • additional pattered sequence(s) as relevant to the training endorsement • narrated sequences with no simulated trainee response • fault analysis of simulated trainee flying • a demonstration of pure flying ability.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
</tr>
<tr>
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<td>-----------------</td>
</tr>
<tr>
<td><strong>(d)(ii) Air Ex 2</strong> - Demonstrate manoeuvres - demonstrate and direct manoeuvres with clear explanations</td>
<td>The applicant must demonstrate a high standard in each of the manoeuvres requested by the examiner.</td>
<td></td>
</tr>
<tr>
<td><strong>(d)(iii) Air Ex 2</strong> - Demonstrate manoeuvres - monitor and assess trainee performance and give instruction</td>
<td>The applicant should be able to assess and provide remedial training following any poor flight demonstration by the examiner.</td>
<td></td>
</tr>
<tr>
<td><strong>(e)(i) For multi-crew pilot training endorsement</strong> - teamwork and problem solving are emphasised</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>(e)(ii) For multi-crew pilot training endorsement</strong> - NTS rather than manipulative skills are emphasised</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>(e)(iii) For multi-crew pilot training endorsement</strong> - SOPs, cockpit discipline and use of automation</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td><strong>Descent and arrival</strong></td>
<td><strong>(a) Plan and conduct arrival and circuit joining procedures</strong></td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
</tr>
<tr>
<td><strong>Circuit, approach and landing</strong></td>
<td><strong>(a) Conduct normal circuit pattern, approach and landing</strong></td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
</tr>
<tr>
<td></td>
<td><strong>(b) Perform after-landing actions and procedures</strong></td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
</tr>
<tr>
<td><strong>Shut down and post-flight</strong></td>
<td><strong>(a) Park, shut down, secure aircraft and complete post-flight administration</strong></td>
<td>Should be conducted by the applicant to demonstrate flying ability.</td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c)(i) Post-flight brief - trainee is given the opportunity to self-assess their performance against performance criteria</td>
<td>On conclusion of the flight, the FIR applicant shall de-brief the examiner on air exercise one as they would de-brief a real trainee following an instructional flight.</td>
</tr>
<tr>
<td>(c)(ii) Post-flight brief - trainee’s performance is assessed accurately and discussed</td>
<td>Each of the examiner’s acceptable ‘trainee demonstrations’ must be de-briefed.</td>
</tr>
<tr>
<td>(c)(iii) Post-flight brief - performance deficiencies are identified and remedial actions and proposed training is discussed</td>
<td>Each of the examiner’s unacceptable ‘trainee demonstrations’ must be de-briefed.</td>
</tr>
<tr>
<td>(c)(iv) Post-flight brief - TEM issues encountered during the flight are discussed</td>
<td>As created and demonstrated by the examiner during the flight component.</td>
</tr>
</tbody>
</table>

### General requirements

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Maintain effective lookout</td>
<td>In most proficiency checks, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td>(b) Maintain situational awareness</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
<tr>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
<tr>
<td>(i) Use correct radio procedures</td>
<td>NSR</td>
</tr>
</tbody>
</table>
Phase of Flight | Requirements | Recommendations
---|---|---
(j) Manage relevant aircraft systems | NSR | 
(k) Manage fuel system and monitor fuel plan and usage | NSR | 

33.4.4 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the proficiency check. Both levels result in a fail assessment.

Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the proficiency check must be terminated immediately. For the FPC, no credits are to be given.

Non safety critical items

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

The examiner must terminate the flight test at the point where a fail assessment is made. This applies to either the ground or the flight components.

Credits are only valid for one retest.
33.5 Complete (post flight)

33.5.1 Debriefings

The examiner must debrief the applicant and, if applicable, the operator as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the operator to construct a remedial training program.

33.5.2 Proficiency check administration

At the conclusion of the proficiency check, the examiner must:

- enter in FTM, in accordance with the Examiner Requirements of 33.1 (12):
  - the long briefing topic
  - the pre-flight briefing topic
  - the air exercise 1 sequence
  - the air exercise 2 sequences
- within 14 days after the day of the check, complete the proficiency check report and provide a copy of the report to the applicant and the operator
- within 14 days after the day of the check, complete the flight test management system notification requirements.

All items on the proficiency check form must be marked to indicate the assessment, with either ✔ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner must be in accordance with the Flight Crew Licensing Manual.
34 Simulator Instructor Proficiency Check

The aim of this proficiency check is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 6 of the Part 61 MOS for the simulator instructor proficiency check (SPC).

34.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the SPC:

1. The examiner must conduct the SPC in accordance with clauses 1 to 3 of Schedule 6 of the Part 61 MOS.
2. The examiner must conduct the SPC within the operational scope and conditions described in clause 4 of Schedule 6 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the proficiency check is successfully completed before conducting the pre-flight briefing and flight component of the proficiency check.
4. The examiner must not introduce or permit simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked.
6. The examiner must give the pre-flight briefing sequence on the day of the proficiency check.
7. The examiner must not give credits for any items of the ground component of the proficiency check if that component of the proficiency check is terminated due to failure of an item.
8. The examiner must terminate the proficiency check at the point where a fail assessment is made. This applies to either the ground or the flight components. If the flight component error is safety critical, no credits are to be given.
9. The examiner must complete and de-brief the ground component of the proficiency check prior to the commencement of the flight component of the proficiency check. The flight component includes the pre-flight briefing.
10. The examiner must review the applicant’s logbook to determine (or confirm) the proficiency check assessment content relates to a training endorsement (or endorsements) which have been active in the preceding 12 months.
11. Where an applicant for a proficiency check holds a class rating training endorsement (multi-engine) or a type rating training endorsement for a multi-engine aircraft, then at least each alternate proficiency check should be conducted in a multi-engine FSTD approved for the purpose.
12. At the conclusion of the proficiency check when reporting the result in FTM, the examiner must enter the following details:
   - the long briefing topic
   - the pre-flight briefing topic
   - the air exercise sequences.
(13) Where credits are available for proficiency check items, they are valid for 28 days only. After 28 days, the proficiency check must be conducted in full.

34.2 Plan

34.2.1 Testing methodology

The examiner should apply the proficiency check methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The proficiency check should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the proficiency check cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a training flight applicable to the training endorsement(s) the applicant holds). The applicant should be given the test scenario at least 24 hours before the start of the proficiency check.

It is recommended that the examiner plan briefing times of approximately:

- 0.7 hour for the long briefing
- 0.2 hour for a pre-flight briefing.

It is recommended that the examiner plans an airborne time of approximately:

- 1.5 hours for the general handling and test specific manoeuvres.

34.2.2 SPC scope and conditions

The SPC must be conducted under the VFR or IFR as applicable and in an FSTD approved for the purpose, in accordance with subregulation 61.1205 (4) of CASR.

The FSTD used for the SPC must be of the appropriate category and be capable of being operated for the kind of operations relevant to the training endorsement(s) the applicant holds and that are assessed in the SPC.

The FEH activities and manoeuvres, listed in the Requirements column of Table 37 below, mirror the SPC test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 6 for the SPC.

These activities and manoeuvres, described in clause 3 of Schedule 6 of the MOS and the SPC test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

SPC flight tolerances and ground reference tolerances are specified in Tables 2 and 4 of Schedule 8 of the MOS. Sustained deviation outside the applicable flight tolerance is not permitted.

The SPC applicant should demonstrate that control of the FSTD Instructor Operating Station is maintained at all times, that the successful and safe outcome of any training session is not in doubt and that any corrective action is taken promptly.
To assist in the assessment of the SPC applicant's flight management ability, the applicant should decide positioning, height and orientation for all flight sequences and manage all relevant radio communications.

A competent performance in operating the FSTD IOS is one in which the SPC applicant is in control of the session and is able to manage unplanned situations to achieve the desired task outcome.

Additionally, SPC applicants should demonstrate efficient and effective decision making, continuous situational awareness and confident task management.

### 34.3 Conduct (ground component)

#### 34.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the proficiency check with a brief to the applicant on the following items:

- proficiency check context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment
- the ‘trainee profile’ for the proficiency check scenario.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the proficiency check elements.

#### 34.3.2 Document review

The examiner must confirm the identity of the applicant for the SPC. To achieve this, the logbook and licence must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the proficiency check.

**Licence** – the applicant for the SPC must hold a CPL or ATPL of the same category as the FSTD in which the proficiency check is conducted and hold the SIR.

**Aeronautical knowledge examinations** – N/A

**Knowledge deficiency report (KDR)** – N/A

**Flight training requirements** – N/A

**Aeronautical experience** – N/A

**English language proficiency** – N/A

**Eligibility certification** – N/A

**Medical certificate** – N/A

**Security check and fit and proper person requirements** – N/A

If the proficiency check is a retest following a fail assessment, requiring remedial training – the examiner must review the applicant's training records for evidence that appropriate remedial training has been successfully carried out with the applicant.
34.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 6 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

Conducting the Aeronautical Knowledge Quiz

The examiner should include questions from the knowledge standards defined in Schedule 3 of the Part 61 MOS, relating to the training endorsement being checked. The assessment of aeronautical knowledge is related to the applicant’s ‘own knowledge’, not an ability to transfer knowledge, therefore, the examiner should not require ‘teaching’ during this assessment. Where they are relevant, the bank of questions should cover multiple ‘themes’ of knowledge, such as:

- general aeronautical knowledge
- aerodynamics
- flight rules and air law
- human factors principles
- navigation
- meteorology.

34.3.4 The long briefing

The SPC should include a long briefing and prior notice of the briefing topic should be given to the applicant prior to the day of the proficiency check.

During the long briefing, the examiner should not interrupt the applicant to explore their theoretical knowledge; rather, any occasional interjection should be as the ‘trainee’ reacting to the briefing content and delivery. The examiner may query the applicant upon conclusion of the briefing.

34.3.5 Ground component debriefing

At the conclusion of the ground component, the examiner shall de-brief the SPC applicant on that portion of the proficiency check so far. The debriefing shall include feedback against the specific performance criteria.

34.4 Conduct (flight component)

34.4.1 Assessment of the applicant’s performance

The applicant’s performance is assessed for technique, judgement, knowledge, smoothness, accuracy, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:
**Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.

**Judgement** – is applicable to all tasks.

**Knowledge** – during the course of the proficiency check the applicant’s knowledge may be further tested.

**Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the proficiency check.

**Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the session.

### 34.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the proficiency check environment (e.g. simulated training session)
- the trainee profile
- the format of the flight component to ensure that the SPC applicant is in no doubt about what is required
- requirement to de-brief the ‘trainee’ on air exercise one
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC (if applicable)
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

### 34.4.3 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the SPC. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

**Table 45: Assessment of activities and manoeuvres - SPC**

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-flight</td>
<td>(a) Pre-flight brief - Confirm the trainee is prepared and can recall underpinning knowledge</td>
<td>The pre-flight briefing sequence should be the same sequence as the air exercise one. The applicant should check essential knowledge is ‘recalled’, as related to the practical aspects of flight (i.e. not unnecessarily re-teaching the long briefing theory). The limitations of the FSTD should be discussed.</td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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</tr>
<tr>
<td></td>
<td>(b) Pre-flight brief - training outcomes and performance criteria are briefed</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Pre-flight brief - conduct of the flight and actions required by the trainee during the flight are briefed</td>
<td>The applicant should ensure the trainee is made aware of what will be seen and done during the flight.</td>
</tr>
<tr>
<td></td>
<td>(d) Pre-flight brief - TEM issues applicable to the proposed flight are discussed</td>
<td>NSR</td>
</tr>
<tr>
<td>(e) Plan a flight training exercise</td>
<td>Confirm the technical and human factors requirements, including simulator sickness, safety and emergency procedures.</td>
<td></td>
</tr>
<tr>
<td>(f) Perform pre-flight actions and procedures</td>
<td>Perform pre-flight FSTD and instructor station procedures.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test specific activities and manoeuvres</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Air Ex - Conduct FSTD training - guide and facilitate learning and manage trainee cognitive load</td>
<td>Throughout all phases of the training, demonstrate the ability to avoid unnecessary interruptions to the flow of the training sequence. Improve training outcomes by, where necessary, freezing the simulator or repositioning the simulator to a designated position in space.</td>
<td></td>
</tr>
<tr>
<td>(b) Air Ex - Conduct FSTD training - monitor and assess trainee performance and provide instruction</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(c) Air Ex - Conduct FSTD training - address any technical issues or unusual conditions as required</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>(d) Air Ex - Conduct FSTD training - demonstrate ability to operate the instructor station</td>
<td>NSR</td>
<td></td>
</tr>
<tr>
<td>Phase of Flight</td>
<td>Requirements</td>
<td>Recommendations</td>
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<tr>
<td>(e) Air Ex - Conduct</td>
<td>FSTD training - demonstrate ability to operate the functional controls of the pilot station</td>
<td>The applicant should demonstrate a working knowledge of cockpit systems and be able to direct the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>trainee to resolve uncertainties with operating the systems or performing checklists.</td>
</tr>
<tr>
<td>(f) Air Ex - Conduct</td>
<td>FSTD training – demonstrate a flight sequence</td>
<td>The applicant must demonstrate a high standard in each of the manoeuvres requested by the examiner.</td>
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<td></td>
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<tr>
<td>(g) For multi-crew pilot</td>
<td>training endorsement - teamwork and problem solving are emphasised</td>
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<td></td>
<td></td>
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<tr>
<td>(h) For multi-crew pilot</td>
<td>training endorsement - NTS rather than manipulative skills are emphasised</td>
<td>The applicant shall demonstrate a good working knowledge of the MCO competencies.</td>
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<tr>
<td>(i) For multi-crew pilot</td>
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<td>NSR</td>
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<tr>
<td>Shut down and post-flight</td>
<td>(a) Perform post-flight FSTD and instructor station procedures</td>
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<td>(b) Post-flight brief - trainee is given the opportunity to self-assess their performance against</td>
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</tr>
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<td></td>
<td>performance criteria</td>
<td>would de-brief a real trainee following an instructional flight.</td>
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<tr>
<td></td>
<td>(c) Post-flight brief - trainee’s performance is assessed accurately and discussed</td>
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</tbody>
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<tr>
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<td>NSR</td>
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</table>

#### General requirements

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Use correct radio procedures</td>
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</tr>
</tbody>
</table>

### 34.4.4 Failure assessment

The failure to perform an activity or procedure may be broken into two levels depending on the safety implications during the proficiency check. Both levels result in a fail assessment.

#### Safety critical items

The highest level, being safety critical, is where the control of the FSTD Instructor Operating Station is such that the safe outcome of the activity or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, **but are not limited to**:

- failure to complete FSTD checklist items mandated by the manufacturer
- failure to correctly prepare the FSTD for flight
- failure to operate the IOS within the limitations of the FSTD
- failure to comply with the hand-over/take-over technique (as applicable to FSTD training sessions).

If the error is safety critical and the examiner needs to take control or intervene, the proficiency check must be terminated immediately. For the SPC, no credits are to be given.

#### Non safety critical items

The second level is where the control of the FSTD is such that the safe outcome of the activity or procedure is certain, but the technique is unsatisfactory. Under these circumstances the proficiency check may be continued and credits given for successfully completed test items.

The examiner has the discretion to enable the applicant to demonstrate TEM to avoid the situation where the error becomes safety critical.

Credits are only valid for one retest.
34.5 Complete (post flight)

34.5.1 Debriefings

The examiner must debrief the applicant and, if applicable, the operator as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the operator to construct a remedial training program.

34.5.2 Proficiency check administration

At the conclusion of the proficiency check, the examiner must:

- enter in FTM, in accordance with the Examiner Requirements of 34.1 (12):
  - the long briefing topic
  - the pre-flight briefing topic
  - the air exercise sequences
- within 14 days after the day of the check, complete the proficiency check report and provide a copy of the report to the applicant and operator
- within 14 days after the day of the check, complete the flight test management system notification requirements.

All items on the proficiency check form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner must be in accordance with the Flight Crew Licensing Manual.
35 Flight Examiner Rating

The aim of this FER test is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 5 of the Part 61 MOS for the grant of the flight examiner rating (FER) and the associated flight examiner endorsement(s).

The applicant should have the ability to:

- plan a flight test including assessment of those performance criteria described in Schedule 5 of the Part 61 MOS
- deliver an adequate pre-test brief for a flight test
- conduct a flight test in accordance with the FEH
- make appropriate assessment decisions
- conduct a post flight test briefing
- debrief the training organisation
- complete all administrative requirements (pre and post flight test).

Definitions

The term 'examiner' in this chapter shall be taken to refer to one of the following listed persons (that is, a person assessing the applicant for the FER):

- a CASA flight training examiner
- a CASA flying operations inspector
- a person approved under regulation 61.040 of CASR.

The term 'applicant' in this chapter shall refer to the person applying for the FER and/or examiner endorsement.

The term 'candidate' in this chapter shall refer to the examiner when required to role play or an applicant undertaking a flight test for a licence, rating or endorsement.

The role of examiners

Examiners play a vital role in flight safety. With the 'pass' or 'fail' decision, the examiner is the 'gatekeeper' into the relevant licence, rating or endorsement privilege. As such, it is essential that an examiner is thoroughly familiar with the required knowledge, skills and attitudes (performance criteria and underpinning knowledge) described within Schedule 2 of the Part 61 MOS.

An applicant should only be 'passed' if they have demonstrated the required standards. Hence, an applicant requires attributes such as:

- engendering and influencing the continuous improvement of safety and standards in both candidates and flight training organisations
- excellent planning skills
- an ability to communicate accurately and effectively with people
- an ability to replicate realistic candidate profiles (e.g. pilot instructor applicants)
- an ability to limit inflight intervention, whilst cognisant of flight safety
- integrity in decision making.
35.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the FER flight test:

1. The examiner must conduct the FER flight test in accordance with clauses 1 to 3 of Schedule 5 of the Part 61 MOS.
2. The examiner must conduct the FER flight test within the operational scope and conditions described in clause 4 of Schedule 5 of the Part 61 MOS.
3. The examiner must ensure that the ground component of the FER flight test is successfully completed before conducting the pre-flight briefing and flight component of the FER flight test.
4. The examiner must not introduce or permit simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.
5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.
6. The examiner must terminate the FER flight test at the point where a fail assessment is made. This applies to either the ground or the flight components.
7. The examiner must not give credits for any items of the ground component of the FER flight test if that component of the FER flight test is terminated due to failure of a ground component item.
8. An examiner must not give credits for any items of the flight component of the FER flight test if the FER flight test is terminated due to failure of a flight component item.
9. Where credits are available for FER flight test items, they are valid for 28 days only. After 28 days, the FER flight test must be conducted in full.

35.2 Plan

35.2.1 Testing methodology

The examiner should apply the flight test methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The FER flight test should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the FER flight test cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a flight test applicable to the flight test endorsement(s) covered by the FER flight test). The applicant should be given the test scenario at least 24 hours before the start of the FER flight test.

It is recommended that the examiner plans an airborne time of approximately:

- 1.7 hours for the general handling and test specific manoeuvres.
The FER flight test for the examiner rating and/or flight test endorsement(s) comprises three components:

- **Component 1 (managed by the examiner)**
  - interview in relation to an initial FER application and the components of the Flight Examiner Rating Course, in accordance with subregulation 61.1290(3). The interview is conducted prior to commencing the FER flight test
  - FER flight test briefing
  - document review
  - FER knowledge requirements.

- **Component 2 (managed by the applicant)**
  - a simulated or real flight test which is covered by the flight test endorsement and includes the relevant sections of the FEH
  - for simulated tests, the examiner may make a sample assessment of the Knowledge Requirements questions that the applicant has prepared for the candidate
  - if the FER flight test is for the grant of an FIR flight test endorsement, the examiner should deliver the long and pre-flight briefings (role playing a candidate), sufficient for the applicant to assess the briefing techniques
  - flight test de-briefings

- **Component 3 (managed by the examiner)**
  - FER flight test de-brief
  - administration.

**Examiner applicant for a CAR 217 organisation**

Where the assessment is for an examiner applicant for a CAR 217 organisation, (at the discretion of the examiner) the FER flight test may utilise the observation of an actual candidate for a licence or rating. In this case, the applicant will be assessed conducting the test in accordance with the FEH for the qualification.

The examiner shall brief the applicant on the communication requirements during the conduct of the flight test. This shall include provision for terminating the flight test and take control events.

The applicant should confer with the examiner prior to advising the real candidate of any outcome. Prior to an opinion from the examiner, the applicant should validate the pass / fail result in accordance with the relevant performance criteria described in the Part 61 MOS.

**Replicated flight tests**

In all the FER flight test endorsements listed below, the examiner should act as a candidate:

- private pilot licence
- commercial pilot licence
- multi-engine aeroplane class rating
- instrument rating (N/A simulator)
- night VFR rating
- night vision imaging system rating
• low level rating
• aerial application rating
• flight instructor rating (N/A simulator).

**Use of IFR procedures (FER conducted VFR)**

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the FER flight test or be taken into account in the FER flight test flight time. A landing and shutdown should terminate the IFR flight segment before commencing the FER assessment flight sequences.

The FER flight test should be concluded by a landing and shutdown in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the FER flight test should be considered as the flight time for the FER flight test.

**35.2.2 FER assessment scope and conditions**

The FER flight test must be conducted under the VFR or IFR as applicable and in an aircraft or an FSTD approved for the purpose, in accordance with subregulations 61.1290 (2), 61.1320 (2) and regulation 61.1318 of CASR.

The aircraft and FSTD used for the FER flight test must be of the appropriate category and be capable of being operated for the kind of operations relevant to the flight test endorsement(s) covered by the FER flight test.

The FEH activities and manoeuvres, listed in the Requirements column of Table 38 below, mirror the FER test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 5 for the FER flight test.

These activities and manoeuvres, described in clause 3 of Schedule 5 of the MOS and the FER test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

The FER applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

*For ME aircraft, a simulated engine failure after take-off must not be initiated at a height less than 400ft AGL.*

For ME aircraft, simulated engine failures after take-off, in the cruise or during instrument approach procedures must be conducted by day in VMC.

*Recoveries from unusual attitudes must be conducted by day in VMC.*

For the above procedures, the concept is that IMC is simulated, and the applicant has a clear view of the horizon.

**Note:** *If the FER flight test includes simulating/replicating or the conduct of a real LL, AA, NVFR or NVIS flight test, NPC or APC the applicant must manage simulated engine failures in accordance with the relevant sections of this FEH.*
35.3 Conduct (ground component)

35.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the FER flight test with a brief to the applicant on the following items:

- FER flight test context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment
- the ‘candidate profile’ for the flight test scenario(s) where applicable.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the FER flight test elements.

35.3.2 Document review

The examiner must confirm that an applicant for the FER satisfies the eligibility requirements to undertake the FER flight test for the grant of the flight examiner rating. To achieve this, the CASR 61.235 (4) certification, training records, logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the flight test.

**Licence** – the applicant for the FER must hold a CPL or ATPL of the same category as the aircraft in which the FER flight test is conducted.

**Aeronautical knowledge examinations** – the examiner must review the applicant’s flight examiner rating course assessment and workbook records.

**Knowledge deficiency report** (KDR) – the examiner must ascertain whether the flight examiner rating course KDR assessment has been completed.

If the KDR has not been completed, the examiner must complete this before the flight component. Where the examiner conducts the KDR assessment, this should be on the first day of FER flight test.

**Flight training requirements** – the examiner must review the applicant’s pilot training records to ensure that the training and mentoring requirements have been met. Normal evidence should at least be a course completion certificate.

**Aeronautical experience** – the examiner must review the applicant’s pilot logbook to ensure that the minimum aeronautical experience requirements have been met. Note that this review is also completed at initial FER application and for enrolment into the flight examiner rating course.

**English language proficiency** – N/A

**Eligibility certification** – the examiner must ensure that the mentor has certified in writing that the applicant is eligible to take the FER flight test.
Medical certificate – for FER flight tests conducted in an aircraft, the examiner must check that the applicant holds a class 1 medical certificate, or a medical exemption allowing them to exercise the privileges of the FER.

Security check and fit and proper person requirements – N/A

If the FER flight test is a retest following a fail assessment – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

35.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 5 of the Part 61 MOS. The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

35.4 Conduct (flight component)

35.4.1 Assessment of the applicant’s performance

At an appropriate time during the flight component the examiner will initiate a scenario to assess that the applicant has the required skills to safely handle the aircraft or situation in the event of error on the part of a real candidate.

The applicant’s performance is assessed for technique, judgement, knowledge, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

Technique – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment.

Judgement – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.

Knowledge – during the course of the FER flight test the applicant’s knowledge may be further tested.

Procedures – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the FER flight test.

Flight management – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

35.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:
• the scenario applied to the test environment (e.g. passenger carrying private or commercial operation / simulation of passengers)
• the candidate profile where applicable
• the format of the airborne component to ensure that the applicant is in no doubt about what is required.
• requirement to de-brief the ‘candidate’ and ‘HOO’ where applicable
• pilot in command
• transfer of control
• flight tolerances and ground references
• simulating emergencies, methods and calls
• actual emergencies
• procedures for simulating IMC (if applicable)
• multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

35.4.3 Post-flight test debriefing and training organisation debriefing

The applicant should conduct a post-flight test debriefing, given to the examiner (role playing the candidate). The applicant should also conduct a training organisation debriefing, given to the examiner (role playing the Head of Operations). These debriefings should be in accordance with the requirements of the FEH pertaining to the simulated flight test.

35.4.4 Completion of administration requirements

The applicant should demonstrate their ability to perform the test administration described in FER.7 and the Flight Crew Licensing Manual. The examiner may conduct this assessment verbally.

35.4.5 Examiner debriefing

The examiner should debrief the applicant at the conclusion of the FER flight test. The debriefing should cover the performance criteria for each phase, as appropriate.

35.4.6 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the FER flight test. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.
Table 46: Assessment of activities and manoeuvres - FER

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test specific activities and manoeuvres</td>
<td>(a) Apply the flight test process correctly</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Conduct and manage the flight test effectively</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Monitor and record the candidate’s performance</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Manage contingencies and any abnormal or emergency situations</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) Ensure the safe completion of the flight test</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(f) Evaluate the evidence of the candidate’s performance</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(g) Make assessment decision based on objective evaluation</td>
<td>NSR</td>
</tr>
<tr>
<td>Shut down and post-flight</td>
<td>(a)(i) Post-flight test debrief for candidate - advise result, provide feedback on performance and, if applicable, guidance on further training</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(a)(ii) Post-flight test debrief for candidate - explore opportunities to overcome competency gaps and advise reassessment procedures</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Post-flight test debrief for HOO - advise training provider of result and provide information to improve training</td>
<td>NSR</td>
</tr>
</tbody>
</table>
(a) Maintain effective lookout
(b) Maintain situational awareness
(c) Assess situations and make decisions
(d) Set priorities and manage tasks
(e) Maintain effective communications and interpersonal relationships
(f) Recognise and manage threats
(g) Recognise and manage errors
(h) Recognise and manage undesired aircraft state

<table>
<thead>
<tr>
<th>General requirements</th>
<th>NSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) Complete flight test administration</td>
<td></td>
</tr>
</tbody>
</table>

In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.

The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.

35.4.7 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the FER flight test. Both levels result in a fail assessment.

Safety critical items

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).

Examples of safety critical failure items include, but are not limited to:

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.
If the error is safety critical and the examiner needs to take control or intervene, the FER flight test must be terminated immediately. For the FER, no credits are to be given.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

An unsatisfactory performance of any item or procedure results in an overall fail assessment for the FER test.

The examiner must not give credits for any items of the ground component of the FER flight test if that component of the FER flight test is terminated due to failure of a ground component item.

Where component 1 is completed satisfactorily and the applicant fails an item in component 2, credits may be given for component 1 FER flight test report items (FER knowledge requirements ONLY).

Credits are only valid for one retest.

### 35.5 Complete (post flight)

#### 35.5.1 Debriefings

The examiner must debrief the applicant and the training provider as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the training provider to construct a remedial training program.

#### 35.5.2 Flight test administration

At the conclusion of the FER flight test, the examiner must:

- within 14 days after the day of the test, complete the FER flight test report and provide a copy of the report to the applicant, training provider and CASA
- within 14 days complete the flight test management system notification requirements.

All items on the test form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner (if applicable) must be in accordance with the Flight Crew Licensing Manual.
36 Flight Examiner Proficiency Check

The aim of this proficiency check is for the applicant to demonstrate competency in the knowledge, skills and attitudes as required in Schedule 6 of the Part 61 MOS for the flight examiner proficiency check (EPC).

The applicant should have the ability to:

- plan a flight test/proficiency check including assessment of those performance criteria described in the Part 61 MOS
- deliver an adequate pre-test brief for a flight test/proficiency check
- conduct a flight test/proficiency check in accordance with the FEH
- make appropriate assessment decisions
- conduct a post flight test briefing
- debrief the training organisation
- complete all administrative requirements (pre and post flight test).

Definitions

The term ‘examiner’ in this chapter shall be taken to refer to one of the following listed persons (that is, a person assessing the applicant for the EPC):

- a CASA flight training examiner
- a CASA flying operations inspector
- a person approved under regulation 61.040 of CASR.

The term ‘applicant’ in this chapter shall refer to the person undergoing the EPC.

The term ‘candidate’ in this chapter shall refer to the examiner when required to role play or an applicant undertaking a flight test for a licence, rating or endorsement or undergoing a proficiency check.

The role of examiners

Examiners play a vital role in flight safety. With the ‘pass’ or ‘fail’ decision, the examiner is the ‘gatekeeper’ into the relevant licence, rating or endorsement privilege. As such, it is essential that an examiner is thoroughly familiar with the required knowledge, skills and attitudes (performance criteria and underpinning knowledge) described within Schedule 2 of the Part 61 MOS.

An applicant should only be ‘passed’ if they have demonstrated the required standards. Hence, an applicant requires attributes such as:

- engendering and influencing the continuous improvement of safety and standards in both candidates and flight training organisations
- excellent planning skills
- an ability to communicate accurately and effectively with people
- an ability to replicate realistic candidate profiles (e.g. pilot instructor applicants)
- an ability to limit inflight intervention, whilst cognisant of flight safety
- integrity in decision making.
36.1 Examiner requirements

The following examiner requirements are applicable to the conduct of the EPC:

1. The examiner must conduct the EPC in accordance with clauses 1 to 3 of Schedule 6 of the Part 61 MOS.

2. The examiner must conduct the EPC within the operational scope and conditions described in clause 4 of Schedule 6 of the Part 61 MOS.

3. The examiner must ensure that the ground component of the proficiency check is successfully completed before conducting the pre-flight briefing and flight component of the proficiency check.

4. The examiner must not introduce or permit simultaneous, multiple and unrelated simulated emergencies or abnormal events during the flight. Emergencies and abnormal situations relating to aircraft systems, powerplants and the airframe must be limited to those described in the AFM.

5. After a simulated failure, the examiner must ensure the aircraft is reconfigured to a normal operating mode before another simulated failure may be introduced, except where the simulated failures are linked. The safety of the aircraft should never be in doubt when simulating emergencies or failures.

6. The examiner must terminate the proficiency check at the point where a fail assessment is made. This applies to either the ground or the flight components.

7. The examiner must not give credits for any items of the ground component of the proficiency check if that component of the proficiency check is terminated due to failure of a ground component item.

8. An examiner must not give credits for any items of the flight component of the proficiency check if the proficiency check is terminated due to failure of a flight component item.

9. Where credits are available for proficiency check items, they are valid for 28 days only. After 28 days, the proficiency check must be conducted in full.

36.2 Plan

36.2.1 Testing methodology

The examiner should apply the proficiency check methodology described in chapter 3, Adult education and competency based assessment and chapter 4, Assessment of human factors and non-technical skills.

The proficiency check should be designed such that all required components can be assessed in a logical sequence. Where one or more mandatory units or elements are unable to be assessed for any reason, the proficiency check cannot be completed.

The examiner must ensure the applicant is given adequate notice of the intended task to allow for unhurried preparation and planning (simulating a flight test applicable to the flight test endorsement(s) the applicant holds). The applicant should be given the test scenario at least 24 hours before the start of the proficiency check.

It is recommended that the examiner plans an airborne time of approximately:

- 1.3 hours for the general handling and test specific manoeuvres.
The EPC comprises three components:

- **Component 1 (managed by the examiner)**
  - flight test briefing
  - document review
  - EPC knowledge requirements.

- **Component 2 (managed by the applicant)**
  - a simulated or real flight test/proficiency check which is covered by the flight test endorsement(s) the applicant holds and includes the relevant sections of the FEH
  - for simulated PCs, the examiner may make a sample assessment of the Knowledge Requirements questions that the applicant has prepared for the candidate
  - if the EPC simulates an FIR or SIR flight test or an FPC, the examiner should deliver the long and pre-flight briefings (role playing a candidate), sufficient for the applicant to assess the briefing techniques
  - flight test/proficiency check de-briefings.

- **Component 3 (managed by the examiner)**
  - proficiency check de-brief
  - administration.

**Actual flight test / proficiency check observation**

At the discretion of the examiner, the EPC may utilise the observation of an actual flight test or proficiency check. In this case for component 2, the applicant will be assessed conducting the test in accordance with the FEH for the qualification. The following additional procedures apply in this case:

- **Examiner pre-flight briefing** – the examiner shall brief the applicant on the communication requirements during the conduct of the proficiency check. This shall include provision for terminating the proficiency check and take control events

- **Applicant and examiner confer** - the applicant should confer with the examiner prior to advising the ‘real’ candidate of any outcome. Prior to an opinion from the examiner, the applicant should validate the pass or fail result in accordance with the relevant performance criteria described in the Part 61 MOS.

**Use of IFR procedures (EPC conducted VFR)**

If IFR procedures are used for a positioning flight, this part of the flight should not form part of the proficiency check or be taken into account in the proficiency check flight time. A landing and shutdown should terminate the IFR flight segment before commencing the EPC assessment flight sequences.

The EPC should be concluded by a landing and shutdown in VFR conditions before commencing the IFR return positioning flight.

Only the flight time associated with the EPC should be considered as the flight time for the proficiency check.
36.2.2 EPC scope and conditions

The EPC must be conducted under the VFR or IFR as applicable and in an aircraft or an FSTD approved for the purpose, in accordance with subregulation 61.1285 (4) of CASR.

The aircraft and FSTD used for the EPC must be of the appropriate category and be capable of being operated for the kind of operations relevant to the flight test endorsement(s) the applicant holds and that are assessed in the EPC.

The FEH activities and manoeuvres, listed in the Requirements column of Table 39 below, mirror the EPC test form and FTM items. They are a paraphrase of the Part 61 MOS Schedule 6 for the EPC.

These activities and manoeuvres, described in clause 3 of Schedule 6 of the MOS and the EPC test form, must be assessed against a representative sample of the performance criteria applicable to the Element being assessed, taking into account the relevant competency standards prescribed in Schedule 2 of the MOS.

The applicant should demonstrate that control of the aircraft or procedure is maintained at all times, that the successful and safe outcome of any manoeuvre is not in doubt and that any corrective action is taken promptly.

*For ME aircraft, a simulated engine failure after take-off must not be initiated at a height less than 400ft AGL.

*For ME aircraft, simulated engine failures after take-off, in the cruise or during instrument approach procedures must be conducted by day in VMC.

*Recoveries from unusual attitudes must be conducted by day in VMC.

For the above procedures, the concept is that IMC is simulated, and the applicant has a clear view of the horizon.

Note: *If the EPC includes simulating/replicating or the conduct of a real LL, AA, NVFR or NVIS flight test, NPC or APC, the applicant must manage simulated engine failures in accordance with the relevant sections of this FEH.

36.3 Conduct (ground component)

36.3.1 Initial brief to applicant

In accordance with chapter 3, Adult education and competency based assessment; the examiner must begin the proficiency check with a brief to the applicant on the following items:

- proficiency check context, purpose and content
- assessment procedure
- function of the examiner
- standards against which competency will be assessed
- actions in the event of a failure assessment
- the ‘candidate profile’ for the proficiency check scenario(s) where applicable.

The applicant should be encouraged to ask for clarification should they become uncertain on any of the proficiency check elements.
36.3.2 Document review

The examiner must confirm the identity of the applicant for the EPC. To achieve this, the logbook, licence and medical certificate must be checked. Ideally, these documents should be presented to the examiner prior to the commencement of the proficiency check.

**Licence** – the applicant must hold a CPL or ATPL of the same category as the aircraft in which the proficiency check is conducted and hold the FER.

**Aeronautical knowledge examinations** – N/A

**Knowledge deficiency report (KDR)** – N/A

**Flight training requirements** – N/A

**Aeronautical experience** – N/A

**English language proficiency** – N/A

**Eligibility certification** – N/A

**Medical certificate** – for proficiency checks conducted in an aircraft, the examiner must check that the applicant holds a class 1 medical certificate, or a medical exemption allowing them to exercise the privileges of the FER.

**Security check and fit and proper person requirements** – N/A

**If the proficiency check is a retest following a fail assessment, requiring remedial training** – the examiner must review the applicant’s training records for evidence that appropriate remedial training has been successfully carried out with the applicant.

36.3.3 Assessment of knowledge requirements

Questions for the oral knowledge assessment must be in accordance with the knowledge requirements topics listed in clause 2 of Schedule 6 of the Part 61 MOS.

The examiner should use a developed set of scenario-based questions for the listed topics to achieve effective assessment of the applicant’s working knowledge and reasoning ability. It should be a structured conversation to a logical conclusion, starting broad and funnelling down, rather than simple factual recall. Refer to FEH 3.2.5 - 3.2.7 for appropriate questioning techniques and methods of enquiry.

36.4 Conduct (flight component)

36.4.1 Assessment of applicant’s performance

At an appropriate time during the flight component the examiner will initiate a scenario to assess that the applicant has the required skills to safely handle the aircraft or situation in the event of error on the part of a real candidate.

The applicant’s performance is assessed for technique, judgement, knowledge, procedures and flight management. The following explanations are provided to assist the examiner in assessing the flight component:

- **Technique** – the method by which a task is performed. There may be more than one acceptable technique and the examiner should be flexible in their assessment
• **Judgement** – is applicable to all tasks but is of particular importance in respect of environmental conditions and effects such as cloud, wind and turbulence.
• **Knowledge** – during the course of the proficiency check the applicant’s knowledge may be further tested
• **Procedures** – the applicant should demonstrate awareness and practical application of nominated standard operating procedures throughout the proficiency check
• **Flight management** – the applicant should demonstrate satisfactory proficiency in aircraft and flight management systems, situational awareness, threat and error management and decision-making during the flight.

### 36.4.2 Pre-flight briefing

In accordance with chapter 3, Adult education and competency based assessment; the examiner must brief the applicant on:

- the scenario applied to the proficiency check environment (e.g. passenger carrying private or commercial operation / simulation of passengers)
- the candidate profile where applicable
- the format of the airborne component to ensure that the applicant is in no doubt about what is required.
- requirement to de-brief the ‘candidate’ and ‘HOO’ where applicable
- pilot in command
- transfer of control
- flight tolerances and ground references
- simulating emergencies, methods and calls
- actual emergencies
- procedures for simulating IMC (if applicable)
- multiple flights and the assessment of competencies (if applicable).

The applicant should be encouraged to ask for clarification should they be uncertain about any of the briefed items.

### 36.4.3 Post-flight debriefing and training organisation debriefing

The applicant should conduct a post-flight debriefing, given to the examiner (role playing the candidate). The applicant should also conduct a training organisation debriefing, given to the examiner (role playing the Head of Operations).

### 36.4.4 Completion of administration requirements

The applicant should demonstrate their ability to perform the proficiency check administration described in FER.7 and the Flight Crew Licensing Manual. The examiner may conduct this assessment verbally.

### 36.4.5 Examiner debriefing

The examiner should debrief the applicant at the conclusion of the proficiency check. The debriefing should cover the performance criteria for each phase, as appropriate.
### 36.4.6 Assessment of activities and manoeuvres

An examiner must comply with the requirements and take into account the recommendations described below when planning and conducting the **EPC**. Where there are no specific recommendations, ‘NSR’ is listed in the table against the unit or element.

**Table 47: Assessment of activities and manoeuvres - EPC**

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test specific activities and manoeuvres</strong></td>
<td>(a) Apply the flight test or proficiency check process correctly</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(b) Conduct and manage the flight test or proficiency check effectively</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(c) Monitor and record the candidate’s performance</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(d) Manage contingencies and any abnormal or emergency situations</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(e) Ensure the safe completion of the flight test or proficiency check</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(f) Evaluate the evidence of the candidate’s performance</td>
<td>NSR</td>
</tr>
<tr>
<td></td>
<td>(g) Make assessment decision based on objective evaluation</td>
<td>NSR</td>
</tr>
<tr>
<td><strong>Shut down and post-flight</strong></td>
<td>(a)(i) Post-flight test debrief for candidate - advise result, provide feedback on performance and, if applicable, guidance on further training</td>
<td>NSR</td>
</tr>
</tbody>
</table>
### Phase of Flight

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)(ii) Post-flight test debrief for candidate - explore opportunities to overcome competency gaps and advise reassessment procedures</td>
<td>NSR</td>
</tr>
<tr>
<td>(b) Post-flight test debrief for HOO - advise training provider of result and provide information to improve training</td>
<td>NSR</td>
</tr>
<tr>
<td>(c) Complete flight test administration</td>
<td>NSR</td>
</tr>
</tbody>
</table>

#### General requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Maintain effective lookout</td>
<td>In most flight tests, the assessment of emergency and non-normal events will provide sufficient evidence of the NTS competencies. The examiner should provide, where possible, applicable operational environment scenarios to support these events.</td>
</tr>
<tr>
<td>(b) Maintain situational awareness</td>
<td>The examiner should request a copy of company SOPs to ensure familiarity with standard briefs, work-cycles and procedural techniques.</td>
</tr>
<tr>
<td>(c) Assess situations and make decisions</td>
<td></td>
</tr>
<tr>
<td>(d) Set priorities and manage tasks</td>
<td></td>
</tr>
<tr>
<td>(e) Maintain effective communications and interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td>(f) Recognise and manage threats</td>
<td></td>
</tr>
<tr>
<td>(g) Recognise and manage errors</td>
<td></td>
</tr>
<tr>
<td>(h) Recognise and manage undesired aircraft state</td>
<td></td>
</tr>
</tbody>
</table>

#### 36.4.7 Failure assessment

The failure to perform a manoeuvre or procedure may be broken into two levels depending on the safety implications during the proficiency check. Both levels result in a fail assessment.

**Safety critical items**

The highest level, being safety critical, is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is in doubt and the examiner has to take control (physically or by direction).
Examples of safety critical failure items include, **but are not limited to:**

- failure to complete checklist items mandated by the AFM
- failure to correctly prepare the aircraft for flight
- failure to comply with ATC clearances and airspace requirements
- failure to operate the aircraft within the limitations of the AFM
- failure to maintain required flight visibility and cloud separation during a visual segment
- failure to maintain required terrain clearance
- failure to comply with minimum descent altitudes
- failure to maintain minimum traffic separation standards
- failure to comply with the hand-over/take-over technique (not applicable to single pilot authorisations)
- failure to safely and consistently apply the elements of NTS1 and NTS2.

If the error is safety critical and the examiner needs to take control or intervene, the proficiency check must be terminated immediately. For the EPC, no credits are to be given.

**Non safety critical items**

The second level is where the control of the aircraft is such that the safe outcome of the manoeuvre or procedure is certain, but the flight tolerances have been exceeded or the technique is unsatisfactory.

The examiner has the discretion to enable the applicant to demonstrate NTS2 TEM to avoid the situation where the error becomes safety critical.

The examiner must not give credits for any items of the ground component of the FER flight test if that component of the FER flight test is terminated due to failure of a ground component item.

Where component 1 is completed satisfactorily and the applicant fails an item in component 2, credits may be given for component 1 proficiency check items (EPC knowledge requirements ONLY).

Credits are only valid for one retest.

### 36.5 Complete (post flight)

#### 36.5.1 Debriefings

The examiner must debrief the applicant and, if applicable, the operator as soon as practicable after the conclusion of the flight component.

In the event of a fail assessment, in addition to the verbal debriefing, the examiner should ensure sufficient detail is entered into the applicant’s training records to allow the operator to construct a remedial training program.

#### 36.5.2 Proficiency check administration

At the conclusion of the proficiency check, the examiner must:
• within 14 days after the day of the check, complete the proficiency check report and provide a copy of the report to the applicant, operator and CASA
• within 14 days after the day of the check, complete the flight test management system notification requirements.

All items on the proficiency check form must be marked to indicate the assessment, with either ✓ (pass), X (fail), N (not tested) or TR (training records).

Licence entries made by the examiner must be in accordance with the Flight Crew Licensing Manual.