Australian Government
Civil Aviation Safety Authority

PRINCIPLE

(OPS.141) Flight training (non-integrated single pilot)

February 2025

Acknowledgement of Country

The Civil Aviation Safety Authority (CASA) respectfully acknowledges the Traditional Custodians of the lands on which our offices are located and the places to which we travel for work. We also acknowledge the Traditional Custodians' continuing connection to land, water and community. We pay our respects to Elders, past and present.

Artwork: James Baban.

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Terminology

Acronyms and abbreviations

Table 1. List of acronyms and abbreviations

Acronym/abbreviation	Description
AIP	aeronautical Information Publication
AMC	acceptable means of compliance
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations 1998
CEO	chief executive officer
FSTD	flight simulator training device
FTO	flight training operator
GM	guidance material
HOO	head of operations
LIRA	Legal, International and Regulatory Affairs
PIC	pilot in command
SOM	sample operations manual

Reference to regulations

Unless specified otherwise, all subregulations, regulations, Divisions, Subparts and Parts referenced in this Principle are references to the *Civil Aviation Safety Regulations 1998* (CASR).

Revision history

Amendments/revisions for this principle are recorded below in order of the most recent first.

Table 2. Revision history table

Version No.	Date	Parts / Sections	Details
2.1	February 2025	All	Minor editorial amendments
2.0	February 2025	All	Incorporation of the Part 141 technical inspector handbook and TMI Application of Instrument CASA EX49/22 Multi-Engine Helicopters Exemption 2022 - 2023-01. Template update
1.0	March 2023	All	First issue

1. Assessment scope

1.1 Assessment of initial application

Inspectors use this protocol document suite to assess an application for, or transition to, a certificate under Part 141—Recreational, private and commercial pilot flight training, other than certain integrated training courses.

Regulation 11.055 states that if an application is submitted for an authorisation in accordance with these regulations, CASA may grant the authorisation if the applicant meets the criteria specified in the regulations.

The assessment of the application will involve verification through a range of activities, including:

- desktop assessment of the documentation provided
- site inspection of facilities
- assessment of key personnel.

Before the issue of a Part 141 Flight training (non-integrated/single pilot) certificate can be recommended, the CASA inspector will verify the application meets the requirements for the proposed operation.

1.2 Assessment of a significant change application

This protocol suite is also used to assess a significant change or an approval that is not covered by its own specific protocol, such as addition of a training activity or adding a new training base. In this instance, the inspector will define the scope of the assessment in the Assessment summary tab of the worksheet (OPS.141). Only those sections of the worksheet that address the significant change need be completed.

1.3 Assessment worksheet user instructions

An FTO application will require assessment by both a flying operations inspector (FOI) and an airworthiness inspector (AWI). A project manager will be appointed to manage the worksheet and ensure all tasks are completed.

This Principle provides guidance to the inspectors when using the associated *Worksheet (OPS.141) - Flight training (non-integrated single pilot)*, other than certain integrated training courses. The worksheet provides inspectors with a regulation-based tool for recording the outcomes of the assessment.

The worksheet is set out as follows:

- User instructions
- Assessment summary
- Approval data sheet
- Assessment worksheets
  - Applicant
  - Single instructor FTO
  - FTO using SOM
  - FTO not using SOM
- Additional assess
- Rev. history.

Some of the worksheet areas will point to another protocol suite to cover that topic. Once the inspector has completed that assessment the results can be recorded in the relevant section of the worksheet (OPS.141).

1.4 FTO project management

Most FTO applications will be assessed by both an FOI and an AWI forming the project team. In this case, one of the inspectors will be appointed as the project manager. Depending on the aircraft and flight training proposed, the project team may need to consult with other technical disciplines during the assessment process.

CASA assessment of an FTO application must be treated as a project. It means CASA must have:

- a formal and structured method of managing the certification activities
- activities that have specifically defined outputs that are to be delivered according to a set schedule agreed to by CASA and the applicant
- a clear definition of roles and responsibilities of the resources involved.

It is important that the roles and responsibilities of both CASA and the applicant are clearly understood. It is not the role of the CASA project manager to manage the applicant's project.

1.4.1 Project manager

The project manager who will normally be a flying operations inspector is responsible for managing the overall assessment process, coordinating the project team members and ensuring that sufficient resources will be available for CASA to meet the project plan (formerly known as schedule of events). When the project manager is satisfied that the operator can meet the requirements of Part 141 to issue an FTO certificate, the project manager will make a recommendation to the national manager.

The project manager must:

- chair the pre-application and formal application meetings (if required)
- coordinate the creation of the task lists and hours for the estimate
- monitor the progress of work of all team members against projected delivery timeframes and availability of resources
- monitor progress of work of all team members against the estimated cost of work and ensure any projected or actual increase in cost to the applicant, above what was provided in the original estimate, is communicated to the applicant
- ensure the communication protocol enables a free flow of information between CASA and the applicant, including regular meetings with the applicant
- arbitrate in any dispute between CASA and the applicant
- provide a formal point of contact between CASA and the applicant
- keep the certificate team manager informed on the progress of the project
- maintain records of all formal meetings
- following the document evaluation and inspection phases, review the recommendations of the project team, and complete the assessment summary and approval data sheet located in Worksheet *(OPS.141) – Flight training (non-integrated single pilot).*

1.4.2 Project team

Flying operations inspector (FOI)

If conducting an inflight assessment from a control seat, the FOI must be listed on the national operations register (NOR) and:

- be qualified under Part 61 for the aircraft type
- meet recent experience requirements.

The FOI will conduct the flight assessment in accordance with the requirements contained in the Flying Qualification & Training Handbook.

If an FOI cannot meet the above requirements and there is no other person qualified, an FOI who has experience on an aircraft type which is substantially similar can be used for the assessment. If there is no FOI that has 'substantially similar' experience, the project manager will consult the national manager to determine who is the most appropriate FOI to conduct the flight assessment.

Airworthiness inspector (AWI)

The AWI must be familiar with the aircraft types that the applicant proposes for the flight training operations.

If an AWI cannot meet the above requirements and there is no other person qualified, an AWI who has experience on an aircraft type which is substantially similar can be used for the assessment. If there is no AWI that has 'substantially similar' experience, the project manager will consult the national manager to determine who is the most appropriate AWI to conduct the assessment.

1.4.3 Project team guidelines

It is in the best interest of CASA and the applicant to ensure that the assessment of the FTO application is conducted smoothly and expediently. The following must be observed:

- the project team and the applicant must maintain ongoing contact to keep abreast of any changes that impact the project
- inadequacies must be documented in CASA records and communicated to the applicant at the earliest possible stage
- the applicant must inform CASA of any changes to the schedule of events, addressing deficiencies or ready for the verification and testing phase. CASA must remind the applicant that schedule changes can affect completion of necessary reviews and result in delays
- much of the communication between CASA and the applicant will be informal and verbal. Project team members must ensure that any commitments or deficiencies are notified and confirmed in writing in a timely manner. The project manager must be notified of these actions
- the project manager must keep the project team members informed of negotiations and significant developments
- disputes must be arbitrated expeditiously – where an agreement cannot be reached between CASA and the applicant, the matter, along with recommendations, must be documented and referred initially to the national manager.

1.5 Onsite inspections and verification

The requirement for an onsite inspection will depend on the nature and complexity of the system being assessed. To ensure a system is suitable, the inspector may need to interview staff, observe a process or inspect facilities. Inspectors will use Protocol suite (OPS.26) Checklists for onsite inspections.

1.5.1 Work health and safety

Inspectors conducting an industry onsite visit must assess potential work health and safety (WHS) risks for the site and take steps to mitigate identified risks. If clarification is required on the site WHS risks or mitigations, confirm with site contacts prior to the visit. In addition, inspectors must receive a work health and safety briefing/induction to the location and confirm emergency procedures and access to first aid treatment. Identified risks must be documented on your worksheet along with the steps taken to mitigate them. For a list of identified potential onsite WHS risks and the controls that are part of CASA's WHS management system refer to WHS Checklist for 3rd party workplaces and consider which risks are relevant to the site being visited. Ensure you have appropriate personal protective equipment (PPE) where required.

2. Applicant

2.1 General

The application form requires the applicant to make a statement about their history. The history should include any accidents or incidents or CASA enforcement action that occurred within the previous 10 years.

The concept of a 'fit and proper' person is a fundamental one in many professions, jurisdictions and organisations as it is used to determine a person's honesty, integrity and reputation in order to confirm that they are fit and proper for the role they are undertaking.

Subregulations 141.060(1)(i)(i) and 11.055(4) describe the matters CASA may consider in deciding whether a person is a fit and proper person

2.1.1 Fit and proper person

The concept of a fit and proper person is a fundamental one in many professions, jurisdictions and organisations, it is used to determine a person's honesty, integrity and reputation in order to confirm that they are fit and proper for the role they are undertaking.

Subregulation 11.055(4) describes the matters CASA may consider in deciding whether a person is a fit and proper person.

CASA must be satisfied that each of the proposed key personnel are fit and proper persons to be appointed to the position.

In assessing fitness and propriety, CASA may take into account a number of matters including the following:

- the nominee's record of compliance with regulatory requirements (in Australia or elsewhere), relating to aviation safety and other transport safety
- the applicant's demonstrated attitude towards compliance with regulatory requirements (in Australia or elsewhere), relating to aviation safety and other transport safety
- the applicant's experience (if any) in aviation
- the applicant's knowledge of the regulatory requirements applicable to civil aviation in Australia
- the applicant's history (if any) of serious behavioural problems
- any conviction (other than a spent conviction, within the meaning of Part VIIC of the Crimes Act 1914) of the applicant (in Australia or elsewhere), for a transport safety offence
- any evidence held by CASA that the applicant has contravened:
  - the Act or these Regulations
  - a law of another country relating to aviation safety
  - another law (of Australia or of another country) relating to transport safety
- any other matter relating to the fitness of the applicant to hold the authorisation.

If any matter is identified that raises concerns as to whether the nominee is a fit and proper person, the inspector must request a peer review by their manager and LIRA before proceeding with any action that would cancel or refuse the application.

2.1.2 Single instructor - FTO training base address

Unless a single instructor FTO conducts either RPL, PPL, CPL, instrument rating training or instructor rating training, the HOO is exempted from the requirement in paragraph 141.260(b)(ii) to list the address of each of the operator's training bases in their operations manual.

The operations manual will need to include the method by which the HOO will assess the training bases.

2.2 Application of instrument CASA EX49/21 Multi engine helicopters exemption 2023-01

2.2.1 Instruction

At present, Part 141 Flight Training Operators (FTOs) must have type specific courses of training for each type of Multi-Engine Helicopter (MEH) or related courses of differences training, for which they conduct training listed on their Part 141 Certificate. Their operations manual must include a syllabus of training for each MEH type rating, and differences training for the variants, applicable to the MEH specified in the exemption.

It is likely current FTOs taking advantage of CASA EX49/22 will already have the required certification and syllabi unless they are adding a new type of MEH to their fleet or conducting training for a MEH type rating for the first time.

Applications to add new MEH type rating training under the instrument, should be treated in the same way as other Type Rating training applications. The training plan and syllabus of training should include both theory and flight training to the standards in the Part 61 MOS so the student can accumulate the knowledge and skills required to be assessed as competent to pilot the helicopter.

When undertaking surveillance activities, please recognise the departure from CASR with regard to MEH being treated as a class.

The operator should describe how they determine the instructor is assessed as competent to conduct flight training and flight review activities in each type of MEH permitted under the exemption. This should not be that different to the process the operator currently has in place for training activities that require the instructor to hold a specific training endorsement.

2.2.2 Background

At present, the Civil Aviation Safety Regulations 1998 (CASR) do not make provision for a multi-engine helicopter class rating.

All multi-engine helicopters are prescribed with type ratings.

CASA EX49/22 creates a class-like system for multi-engine helicopters with a maximum take-off weight less than 5,700 kgs, similar to how these helicopters are managed by the FAA under the US FARs.

The multi-engine helicopter types covered by EX49/22 are included in the Prescription of Type Ratings Excluded from CASR Part 142 Flight Training (Edition 6) Instrument 2018.

Consequently, the exemption will not change the MEH flight training activities that a Part 141 flight training operator can be authorised to conduct.

2.2.3 How the exemption works

Pilots

CASA EX49/22 is only available to pilots who hold at least one of the multi-engine helicopter (MEH) type ratings listed in column 3 of the Table in Schedule 1 of the exemption instrument. This is also referred to as the persons first MEH type rating.

The requirements of CASR Part 61, including differences training requirements (DTR), continue to apply to the holder of a MEH type rating and the associated models covered by that type rating as prescribed in the Part 61 Prescription of aircraft and ratings Instrument, as amended from time to time. That is, the exemption does not change the minimum training a person needs to complete for each type of MEH they seek to pilot but replaces the requirement to pass a flight test with a requirement to complete a flight review on the type, at the completion of the training.

CASA EX49/22 enables pilots, who hold one of those MEH type ratings, to pilot another type and/or model of MEH listed in column 2 of the Table in Schedule 1, without the need to hold the relevant type rating specified in column 3.

To pilot a type and model of MEH listed in column 2 without holding the relevant type rating, they will instead need to complete type-specific flight training and a flight review for that MEH with a Part 141 operator which is authorised by CASA to conduct type rating training relevant to that type and model.

The flight training and flight review required by the exemption only applies to helicopter models where the pilot does not hold the relevant type rating i.e. for variants included in a type rating held by the pilot, the Part 61 DTR applies.

The flight training and flight review requirements can only be met for helicopters specified in the Table when they are completed with a Part 141 operator by a flight instructor who holds a type rating training endorsement for at least one of the MEHs listed in the Table. They must also have at least 25 hours flight time as pilot in command (PIC) in that type and model of MEH. The flight review must be conducted by a person, authorised by CASA under Part 61 or CASA EX49/22, to conduct a flight review for the type of MEH.

Completion of a course of differences training, or training and a flight review, conducted by a foreign training provider are not recognised for the purposes of piloting a MEH under CASA EX49/22.

CASA EX32/24 Part 13 is available to recognise a course of differences training conducted by a foreign training provider, where Part 61 requires the completion of differences training to pilot a variant included in a MEH type rating the pilot holds.

Pilots completing flight training for a type rating overseas conducted by a foreign training provider must apply to CASA for the relevant helicopter type rating under CASA EX88/23 - Overseas Training and Assessment, and Instrument Proficiency Check, Exemption 2023, as is currently used for CASA to recognise such training.

Appearance on licence document

First and subsequent type ratings issued to a person via the existing CASR system (completion of training and flight test) appear under Type Ratings on the CASA licence document.

Under CASA EX49/22 if the holder of a pilot licence has completed the course of flight training for a second helicopter and has met the competency standards for a flight review, the pilot type rating in relation to the second helicopter will be shown under the Class Rating heading and annotated with an asterix '*'. This is an interim measure used to differentiate the qualification from a Part 61 MEH type rating.

If Part 61 is amended to create a MEH class rating for types of helicopters specified in the EX, the existing type ratings will not be displayed on a person's licence when they complete the training and flight review, in the same way aircraft covered by other class ratings are not annotated on a person's licence.

Instructors

Instructors who hold a type rating training endorsement for a type rating specified in column 3 of the exemption may conduct flight training and flight reviews for another types and models of MEH (second type) listed in column 2 if they either hold the type rating (and if necessary completed difference training) for that second type or have satisfied the flight training and flight review requirement to pilot the second type and model of MEH under the exemption. In addition, they must have accumulated at least 25 hours as pilot in command on the second type and model.

The flight Instructor must also be authorised by a Part 141 operator to conduct the flight training and flight review.

A flight instructor who is authorised to conduct the training for the MEH, may record the successful completion of a flight review on the model in the trainee pilot's licence, annotating the model with an asterix to identify it was completed in accordance with the exemption.

Changes have been made to the 61-9FR Notification Flight Review form to reflect these changes.

Examiners

Examiners who hold a type rating flight test endorsement for a MEH type rating specified in column 3 of the table, are authorised to conduct flight tests for another MEH type rating included in the table if the examiner is also authorised to conduct flight training, under the exemption, in the same model of MEH.

The Flight Test Management (FTM) system has been modified to allow examiners to notify flight tests for MEH type ratings, permitted under CASA EX49/22.

Head of Operations

A Part 141 operator must apply to CASA to conduct flight training and flight review for a type and model of MEH, which is listed in the exemption. if the operator is not already authorised to conduct that flight training and flight review for the relevant MEH type rating. The addition of such MEH training would be considered a significant change to add new type rating training privileges.

3. Flight training – single instructor FTO

This section of the principle relates to a sole instructor operating under exemption CASA EX39/23

Note: If additional information is required refer to section 5 of this principle.

3.1 Organisation

For a single person FTO, the instructor will hold the key personnel positions of chief executive officer (CEO) and HOO. This structure is consistent with the simple nature of the operation with limited training authorisations. Although CASA has not put a limit of the number of authorised training activities or students for a single instructor FTO, the inspector must be satisfied the FTO can be effectively managed by an individual.

For a single instructor FTO, the sample operations manual (SOM) requires all training activities to cease, and CASA be notified within 24 hours, if the person is unable to, or unlikely to be able to, carry out their responsibilities for a period greater than 30 days. As there is no other instructor available, CASA expects that all training will cease anytime the instructor is absent.

The reporting requirements between the HOO and the CEO are met by the fact that it's a single instructor FTO.

3.2 Key personnel

Use Protocol suite (OPS.10) Key personnel assessment for the assessment of the instructor to hold both the CEO and HOO key personnel positions.

The requirement for familiarisation training (under regulation 141.115) is met by the fact that the single instructor FTO cannot appoint other key personnel. It is CASA policy that all single instructor FTO applications require an interview in accordance with Protocol (OPS.10). During the interview, the inspector should confirm the person has sufficient aviation regulatory knowledge and instructional experience for the training activities proposed.

Subregulation 141.125(1) details the qualifications that the HOO of a Part 141 FTO must hold. The regulation requires the instructor to hold a grade 1 training endorsement or the training endorsements for all the Part 141 flight training the operator proposes to conduct. To be suitable, the inspector should refer to Division 61.T.4—Privileges and requirements for the grant of training endorsements.

Paragraph 141.125(1)(b) allows CASA to grant an approval under regulation 141.035 when the instructor does not meet the requirements of paragraph 141.125(1)(a). If the proposed training includes initial flight training in an aircraft of the specific category (e.g. training for a pilot's licence), then to be considered suitable an instructor holding a grade 2 training endorsement should have at least 500 hours flight time conducting initial training. Instructors with a grade 3 training endorsement are not suitable for a single instructor FTO. For other types of training the instructor must hold the relevant training endorsement (e.g. FIR MEA or FIR IR-A).

3.2.1 Standardisation and proficiency check

Paragraph 141.130(4)(b)(iv) and regulation 141.190 requires that an instructor for a Part 141 FTO to hold a valid standardisation and proficiency check. The purpose of the standardisation and proficiency check is to ensure that instructors are delivering consistent training in accordance with the operations manual.

CASA has exempted single instructor FTOs from the requirement to hold a valid standardisation and proficiency check.

3.3 Operations manual

CASA has developed a compliant SOM for a single instructor FTO. For this reason, the assessment of the operations manual has been significantly reduced. However, the inspector must confirm that the applicant has provided an accurate version of the CASA SOM and, when instructed, add or remove information such as the name of the key person, proposed training activities etc. The FTO may need to add additional information to the SOM to facilitate operations outside its scope – for example, flight training in a foreign registered aircraft. Inspectors should use the *Guide to Single Instructor Part 141 Flying Training Operations - Sample Operations Manual* for information as to what needs to be addressed in the applicant's operations manual.

3.3.1 Dangerous goods manual

Part 92 of CASR applies to the consignment and carriage of dangerous goods by air. If the FTO intends to carry dangerous goods, regulation 92.055 prescribes the requirement for an operator to provide a dangerous goods manual. The dangerous goods manual forms part of the operations manual under regulation 141.260. Regulation 92.055 does not require the dangerous goods manual to be a standalone document, the operator may choose to meet the requirements of the regulation as a chapter to a broader operations manual document. Use the Dangerous Goods manual evaluation checklist (form 1441) for the assessment.

3.4 Aircraft

If the FTO is the registered operator of the aircraft, the operations manual will need to include their process for managing continuing airworthiness. Refer to Protocol suite (OPS.13) Managing continuing airworthiness for more information.

If not the registered operator of the aircraft, the operations manual needs to include procedures to ensure the aircraft is airworthy for flight. The single instructor SOM includes procedures for both scenarios.

3.4.1 Turbine-engined aircraft

The operations manual must include a description of how the maintenance and continuing airworthiness of any turbine-engine aircraft will be managed. To be suitable, the inspector should confirm that:

- the description indicates whether maintenance of the aircraft is required under an approved system of maintenance (class A aircraft) or a maintenance schedule (class B aircraft)
- if a maintenance schedule (class B aircraft) is applicable, the operations manual indicates whether the schedule is the manufacturer’s schedule or the CASA maintenance schedule for the aircraft.

Refer to Protocol suite (OPS.13) Managing continuing airworthiness for more information.

If the operator intends to lease the aircraft refer to Protocol (OPS.24) - Aircraft leasing arrangements for the assessment.

3.4.2 Foreign registered aircraft

If an operator intends using foreign registered aircraft for flight training in Australia, the operations manual must include procedures to ensure the foreign registered aircraft is not used for more than 90 days in any rolling 12-month period unless the operator holds an approval for the aircraft under regulation 141.035. It is not acceptable that the operator reaches the 90-day limit, not operate the aircraft for some time and then recommence another 90 day period inside the original 12-month period. The 12-month period commences from the first day of operations. The underlying intent of this regulation is to provide for the short-term use of a foreign registered aircraft during circumstances such as the operator’s Australian registered aircraft undergoing maintenance such as repairs.

Paragraph 141.315(2)(b) provides the ability for CASA to issue an approval under regulation 141.035 for a period longer than 90 days.

If the operator is considering a long-term use of the aircraft, before considering an application for approval the inspector should confirm that the operator is unable to either:

- place the foreign registered aircraft or aircraft on the Australian Part 47 register, thus placing the airworthiness of the aircraft under solely Australian oversight

- arrange for Australia and the State of registry to enter into an article 83 bis agreement whereby Australia and the State of registry would agree to transfer regulatory responsibility to ensure the safe operation and maintenance of the aircraft, for example by agreeing to treat the aircraft as if it were an Australian aircraft. Please note there may be a significant lead in time for such an agreement to be entered into.

For operations that require a 141.035 approval, such an approval should only be issued on the basis of an agreement between CASA and the state of registry that sets out the areas of responsibility of the parties in relation to the supervision of flight operations, maintenance and airworthiness of the aircraft. The 141.035 approval and the agreement between the state of registration should expire at the same time.

Airworthiness

To ensure the operator maintains each foreign registered aircraft in accordance with the foreign country's laws, to be suitable operations manual must include:

- a system that manages the maintenance and continuing airworthiness applicable to the laws of the foreign country in which the aircraft is registered
- appoint a maintenance controller to control the maintenance of the aircraft
- how scheduled and unscheduled maintenance will be controlled
- where the maintenance will be carried out
- how compliance with the airworthiness requirements of the foreign country will be complied with, including any airworthiness directives and service bulletins.

Refer to Protocol suite (OPS.13) Managing continuing airworthiness for more information.

If the operator intends to lease the aircraft refer to Protocol (OPS.24) - Aircraft leasing arrangements for the assessment.

Equipment requirements

The inspector will need to confirm that the foreign registered aircraft meets the minimum equipment requirements under Subpart 91.K and Part 91 MOS chapter 26. To be suitable the inspector must confirm that the equipment required to be fitted to, or carried on, the aircraft must have been approved by the NAA of the aircraft's State of registry.

In some cases, a foreign NAA may not permit certain types of equipment on an aircraft that are required under the Australian regulations. In this case the operator will need to ensure that the required equipment is fitted to or carried on the aircraft prior to flight operations in Australia.

3.5 Flight simulator training devices (FSTD)

If conducting Part 141 training in FSTDs, the operations manual must include information about the FSTDs used for training. The information must indicate the purpose (as described in Part 61 of CASR) for which each device will be used.

If the operator owns the FSTD, they will also have a quality system to ensure the correct operation and maintenance of each device. For further guidance on the assessment on the use of an FSTD refer to section 5.6.9 of this principle. Considerations in relation to assessing the quality system are described in section 5.8 of this principle.

Each of the operator's FSTDs must be qualified or approved, as prescribed by the legislation relevant to the device. The operations manual must describe how the operator will ensure continued approval or qualification under the applicable legislation.

3.6 Drug and alcohol management plan

Use Protocol suite (OPS.99) DAMP entry control and assessment

4. Assessment of FTO using the SOM

Note: If additional information is required refer to section 5 of this principle.

4.1 Organisation

The Part 141 SOM has been developed to meet the requirements described in regulation 141.260 (and other relevant regulations) for an FTO that conducts Part 141 flying training and operates with up to 10 regular safety sensitive employees. The inspector will need to confirm that the operator's organisation structure is consistent with the simple nature of the operation with limited training authorisations. Although CASA has not put a limit of the number of authorised training activities or students for an FTO using the SOM, the inspector must be satisfied the FTO can effectively manage the operation.

The delineation of 10 safety sensitive employees is consistent with the provisions for the CASA Micro-business DAMP provisions. That is, if the Micro-business DAMP provision applies to a particular operator, then they are considered within the scope of the Part 141 SOM.

A sound and effective management structure, essential to the achievement of safe flight training operations, will include the following organisational structure and features:

- the CEO of the organisation has appropriate experience to conduct or carry out AOC operations safely
- the duties and responsibilities of management or supervisory positions are clearly defined with lines of communication and areas of responsibility clearly established
- the number and nature of management or supervisory positions is appropriate to the size and complexity of the organisation
- the reporting lines for sub-organisations lead to the respective head of that organisation
- the number of managerial positions is such that effective control and responsibility is clearly seen to rest with particular individuals.

The CASA inspector should consider the potential impact on any person holding a managerial position who may be involved with any other legal entity, and the impact that involvement may have on their ability to effectively manage this flight training certificate if granted.

4.1.1 Chain of command

The organisational structure is the basis for the organisation’s chain of command. The chain of command provides the reporting structure of the organisation and must be appropriate to ensure that the activities can be conducted safely.

The operator’s CEO should be head of the organisation, demonstrating the overall responsibility and accountability of the position.

The operator should demonstrate that clearly defined reporting and communication lines exist between key personnel, management, supervisors and other personnel.

The operator should demonstrate that a formal communication line exists between the CEO and the HOO.

For the chain of command to be effective, the delegation of responsibility and accountability should rest with personnel holding qualifications and experience that are relevant to their position.

4.1.2 Key personnel absence

The operations manual must include a process to ensure all key personnel positions are filled. Most operators will have alternate key personnel authorised to carry out the responsibilities of key personnel when the principle person is absent or cannot carry out their responsibilities. For a person to be authorised to carry out key personnel responsibilities, they must be approved as a significant change under regulation 141.085. Use Protocol suite (OPS.10) Key personnel assessment.

Key personnel absence refers to not being present, such as being on leave or out of the office temporarily. In this instance, if the key person intends and is still able to carry out their responsibilities, the position is still considered filled.

The operations manual must include a process to notify CASA in the event that a key person cannot, or is unlikely to be able to, carry out their duties for greater than 30 days. To be suitable, notification to CASA must be made as soon as the operator becomes aware that the key person cannot, or is unlikely to be able to, carry out their responsibilities. The operator's process for notifying CASA of key personnel absence should demonstrate that:

- 30 days commences at the time the key personnel cannot carry out, or is likely to be unable to carry out, their key personnel responsibilities
- as soon as the operator becomes aware, they must notify CASA within either 24 hrs or 3 days – depending on whether there is an authorised alternate available to take-over the responsibilities.

4.1.3 Familiarisation training

An FTO must ensure that, before a person appointed as any of the operator's key personnel begins to carry out the responsibilities of the position, the person has completed any training that is necessary to familiarise the person with the responsibilities.

The operator must describe the conduct of this training in their operations manual, including details of the training syllabus and how records of achievement are documented. To be suitable the training should include such matters as:

- outline of the regulations
- organisational structure
- operations manual structure
- type of flight training conducted.

4.2 Key personnel

4.2.1 Chief executive officer (CEO)

- Use Protocol suite (OPS.10) Key personnel assessment.

4.2.2 Head of flying operations (HOFO)

Use Protocol suite (OPS.10) Key personnel assessment

4.3 Operations manual

CASA has developed a compliant Part 141 SOM for FTOs. For this reason, the assessment of the operations manual has been significantly reduced. However, the inspector must confirm that the applicant has provided an accurate version of the CASA SOM and, when instructed, add or remove information such as the name of the key person, proposed training activities etc. The FTO may need to add additional information to the SOM to facilitate operations outside its scope – for example flight training in a foreign registered aircraft. Inspectors should use the Guide to Part 141 Sample Operations Manual to provide information as to what needs to be addressed in the applicant's operations manual.

The Part 141 SOM has been developed to meet the requirements described in regulation 141.260 (and other relevant regulations) for a FTO that conducts Part 141 flying training and operates with up to 10 regular safety sensitive employees.

The Part 141 SOM is constructed based on 'Sample Aviation' – a fictitious organisation that operates fixed wing, piston aircraft and are not the registered operator of the aircraft. The Part 141 guide expands more on the scope and the requirement to include other material where required by regulations that apply to the differences from 'Sample Aviation'.

The operations manual does not need to include Part 91—General operating and flight rules that are intrinsic to the operation of an aircraft and may rely on the Australian Aeronautical Information Publication (AIP) or foreign equivalent to provide that information. For example, regulation 91.265 prescribes the pilot in command (PIC) obligations for minimum height rules for populous areas and public gatherings – the operator's operations manual would not need to include specific instructions to the PIC. However, if the operator chooses to place additional obligations on its instructors that exceeds the Part 91 requirements, the operations manual will contain those instructions.

To be suitable, the operations manual must be managed under a document control system that allows personnel to readily identify the current version. When assessing the content of the operations manual, the inspector should ensure that the quality, readability and usability of the operations manual is suitable.

4.3.1 Dangerous goods manual

Part 92 of CASR applies to the consignment and carriage of dangerous goods by air. If the FTO intends to carry dangerous goods, regulation 92.055 prescribes the requirement for an operator to provide a dangerous goods manual. The dangerous goods manual forms part of the operations manual under regulation 141.260. Regulation 92.055 does not require the dangerous goods manual to be a standalone document, the operator may choose to meet the requirements of the regulation as a chapter to a broader operations manual document. Use the Dangerous Goods manual evaluation checklist (form 1441) for the assessment.

4.4 Aircraft

If the FTO is the registered operator of the aircraft, the operations manual will need to include their process for managing continuing airworthiness. Refer to Protocol suite (OPS.13) Managing continuing airworthiness for more information.

If not the registered operator of the aircraft, the operations manual needs to include procedures to ensure the aircraft is airworthy for flight. The Part 141 SOM includes procedures for both scenarios.

4.4.1 Turbine-engined aircraft

The operations manual must include a description of how the maintenance and continuing airworthiness of any turbine-engine aircraft will be managed. To be suitable, the inspector should confirm that:

- the description indicates whether maintenance of the aircraft is required under an approved system of maintenance (class A aircraft) or a maintenance schedule (class B aircraft)
- if a maintenance schedule (class B aircraft) is applicable, the operations manual indicates whether the schedule is the manufacturer’s schedule or the CASA maintenance schedule for the aircraft.

Refer to Protocol suite (OPS.13) Managing continuing airworthiness for more information.

If the operator intends to lease the aircraft refer to Protocol (OPS.24) - Aircraft leasing arrangements for the assessment.

4.4.2 Foreign registered aircraft

If an operator intends using foreign registered aircraft for flight training in Australia, the operations manual must include procedures to ensure the foreign registered aircraft is not used for more than 90 days in any rolling 12-month period unless the operator holds an approval for the aircraft under regulation 141.035. It is not acceptable that the operator reaches the 90-day limit, not operate the aircraft for some time and then recommence another 90 day period inside the original 12-month period. The 12-month period commences from the first day of operations. The underlying intent of this regulation is to provide for the short-term use of a foreign registered aircraft during circumstances such as the operator’s Australian registered aircraft undergoing maintenance such as repairs.

Paragraph 141.315(2)(b) provides the ability for CASA to issue an approval under regulation 141.035 for a period longer than 90 days.

If the operator is considering a long-term use of the aircraft, before considering an application for approval the inspector should confirm that the operator is unable to either:

- place the foreign registered aircraft or aircraft on the Australian Part 47 register, thus placing the airworthiness of the aircraft under solely Australian oversight
- arrange for Australia and the State of registry to enter into an article 83 bis agreement whereby Australia and the State of registry would agree to transfer regulatory responsibility to ensure the safe operation and maintenance of the aircraft, for example by agreeing to treat the aircraft as if it were an Australian aircraft. Please note there may be a significant lead in time for such an agreement to be entered into.

For operations that require a 141.035 approval, such an approval should only be issued on the basis of an agreement between CASA and the state of registry that sets out the areas of responsibility of the parties in relation to the supervision of flight operations, maintenance and airworthiness of the aircraft. The 141.035 approval and the agreement between the state of registration should expire at the same time.

Airworthiness

To ensure the operator maintains each foreign registered aircraft in accordance with the foreign country's laws, to be suitable operations manual must include:

- a system that manages the maintenance and continuing airworthiness applicable to the laws of the foreign country in which the aircraft is registered
- appoint a maintenance controller to control the maintenance of the aircraft
- how scheduled and unscheduled maintenance will be controlled
- where the maintenance will be carried out
- how compliance with the airworthiness requirements of the foreign country will be complied with, including any airworthiness directives and service bulletins.

Refer to Protocol suite (OPS.13) Managing continuing airworthiness for more information.

Equipment requirements

The inspector will need to confirm that the foreign registered aircraft meets the minimum equipment requirements under Subpart 91.K and Part 91 MOS chapter 26. To be suitable the inspector must confirm that the equipment required to be fitted to, or carried on, the aircraft must have been approved by the NAA of the aircraft's State of registry.

In some cases, a foreign NAA may not permit certain types of equipment on an aircraft that are required under the Australian regulations. In this case the operator will need to ensure that the required equipment is fitted to or carried on the aircraft prior to flight operations in Australia.

4.5 Flight simulator training devices (FSTD)

If conducting Part 141 training in FSTDs, the operations manual must include information about the FSTDs used for training. The information must indicate the purpose (as described in Part 61 of CASR) for which each device will be used.

If the operator owns the FSTD, they will also have a quality system to ensure the correct operation and maintenance of each device. For further guidance on the assessment on the use of an FSTD refer to section 5.6.9 of this principle. Considerations in relation to assessing the quality system are described in section 5.8 of this principle.

Each of the operator's FSTDs must be qualified or approved, as prescribed by the legislation relevant to the device. The operations manual must describe how the operator will ensure continued approval or qualification under the applicable legislation.

4.6 Drug and alcohol management plan

Use Protocol suite (OPS.99) DAMP entry control and assessment

5. Assessment of FTO not using the SOM

Until section 5 of this principle has been completed, inspectors are required to use both the Part 141 technical assessor's handbook and this principle.

5.1 Organisation

A sound and effective management structure, essential to the achievement of safe flight training operations, will include the following organisational structure and features:

- the CEO of the organisation has appropriate experience to conduct or carry out AOC operations safely
- the duties and responsibilities of management or supervisory positions are clearly defined with lines of communication and areas of responsibility clearly established
- the number and nature of management or supervisory positions is appropriate to the size and complexity of the organisation
- the reporting lines for sub-organisations lead to the respective head of that organisation
- the number of managerial positions is such that effective control and responsibility is clearly seen to rest with particular individuals.

The CASA inspector should consider the potential impact on any person holding a managerial position who may be involved with any other legal entity, and the impact that involvement may have on their ability to effectively manage this flight training certificate if granted.

5.1.1 Chain of command

The organisational structure is the basis for the organisation’s chain of command. The chain of command provides the reporting structure of the organisation and must be appropriate to ensure that the activities can be conducted safely.

The CEO should be head of the organisation, demonstrating the overall responsibility and accountability of the position.

The operator should demonstrate that clearly defined reporting and communication lines exist between key personnel, management, supervisors and other personnel.

The operator should demonstrate that a formal communication line exists between the CEO and the HOO.

For the chain of command to be effective, the delegation of responsibility and accountability should rest with personnel holding qualifications and experience that are relevant to their position.

5.1.2 Key personnel absence

The operations manual must include a process to ensure all key personnel positions are filled. Most operators will have alternate key personnel authorised to carry out the responsibilities of key personnel when the principle person is absent or cannot carry out their responsibilities. For a person to be authorised to carry out key personnel responsibilities, they must be approved as a significant change under regulation 141.085. Use Protocol suite (OPS.10) Key personnel assessment.

Key personnel absence refers to not being present, such as being on leave or out of the office temporarily. In this instance, if the key person intends and is still able to carry out their responsibilities, the position is still considered filled.

The operations manual must include a process to notify CASA in the event that a key person cannot, or is unlikely to be able to, carry out their duties for greater than 30 days. To be suitable, notification to CASA must be made as soon as the operator becomes aware that the key person cannot, or is unlikely to be able

to, carry out their responsibilities. The operator's process for notifying CASA of key personnel absence should demonstrate that:

- 30days commences at the time the key personnel cannot carry out, or is likely to be unable to carry out, their key personnel responsibilities
- as soon as the operator becomes aware, they must notify CASA within either 24 hrs or 3 days – depending on whether there is an authorised alternate available to take-over the responsibilities.

5.1.3 Familiarisation training

An FTO must ensure that, before a person appointed as any of the operator's key personnel begins to carry out the responsibilities of the position, the person has completed any training that is necessary to familiarise the person with the responsibilities. The operator must describe the conduct of this training in their operations manual, including details of the training syllabus and how records of achievement are documented. To be suitable the training should include such matters as:

- outline of the regulations
- organisational structure
- operations manual structure
- type of flight training conducted.

5.2 Key personnel

5.2.1 Chief executive officer (CEO)

Use Protocol suite (OPS.10) Key personnel assessment.

5.2.2 Head of flying operations (HOFO)

Use Protocol suite (OPS.10) Key personnel assessment.

5.3 Operations manual

An operations manual is a document, or set of documents, which describes how an operator will conduct flight training safely. It sets out, both for CASA and for the operator's personnel, how to comply with all applicable legislative requirements and manage the safety of the flight training, as well as details of each plan, process, procedure, program and system implemented.

If structured as a set of documents, the operations manual might include a principal/primary document which contains all the common information applicable to the operator's activities. Separate manuals can then be established for specific aspects of certain activities, and the associated systems and procedures applicable to those activities. These separate manuals form part of the operator's operations manual.

In constructing the operations manual content, and to ensure completeness of the content, the operator should refer specifically to the list of items in the regulation.

The operations manual does not need to include Part 91—General operating and flight rules that are intrinsic to the operation of an aircraft and may rely on the Australian AIP. For example, regulation 91.265 prescribes the PIC obligations for minimum height rules for populous areas and public gatherings – the operations manual would not need to include specific instructions to the PIC. However, if the operator chooses to place additional obligations on its flight crew that exceeds the Part 91 requirements, the operations manual will contain those instructions.

To be suitable, the operations manual must be managed under a document control system that allows personnel to readily identify the current version. When assessing the content of the operations manual, the inspector should ensure that the quality, readability and usability of the operations manual is suitable.

5.3.1 Safety policy

The operations manual must include a safety policy. The policy should reflect the operator's commitment to maintain policies and practices conducive to safe operations.

To be assessed as suitable the inspector should consider the following:

- the policy should highlight an appropriate attitude to safety and set a clear strategic direction and culture for the operator to follow in order to conduct training safely
- the safety policy should:
  - highlight the organisation structures, policies and processes in place to systematically manage safety
  - include a clear statement about the provision of the necessary resources for the implementation and maintenance of the safety policy
  - include safety reporting procedures
  - clearly articulate which behaviours are unacceptable in relation to the organisation's aviation activities
  - describe the circumstances under which disciplinary action will and will not apply
  - be endorsed by the chief executive officer of the organisation
  - be communicated, with visible endorsement, throughout the organisation
  - be periodically reviewed to ensure it remains relevant and appropriate to the organisation and the conduct of the authorised Part 141 training.

5.3.2 Identifying and addressing deficiencies

The operations manual must describe how deficiencies in training outcomes will be identified and addressed. Training outcomes may include those derived from summative assessments prescribed in the syllabus, pre-flight test assessments and flight tests conducted by examiners for grant of a qualification. The process for identifying training outcome deficiencies should ensure all sub-standard performances are recorded and reported for analysis. Reported deficiencies should be promptly analysed, evaluated and categorised according to cause.

To be suitable the inspector should confirm the process includes:

- review of student training records
- identifying if sub-standard performance during the assessment is reflected in the records of training
- establishing if underperformance during training or the assessment is due to incorrect instructional techniques or other organisational deficiencies
- formulating and implementing remedial action through the change management process
- appropriate corrective action is determined and implemented.

Conduct of audits

The process for auditing should be described in detail in the operations manual, and include:

- a statement of the scope for each scheduled audit
- how audits are to be planned, conducted and documented
- how evidence is to be collected and analysed
- how non-compliances are to be recorded
- how findings are to be reported
- how findings will contribute to the continuous improvement of the training
- how feedback is to be provided and received
- surveillance activities (e.g. monitoring the conduct of individual theory and flight lessons).

The scope of audits should include verification that:

- the training is conducted in accordance with the operator's written procedures, contained within the operations manual, including:
  - review of training records and course syllabuses to identify any patterns of training deficiencies
  - review of records of instructor standardisation and proficiency checks, and personnel qualifications
  - review of training outcomes, including pass rates, post-flight test feedback from examiners, and average hours required to achieve a qualification and reviewing theory examination outcomes.
- the training is conducted in compliance with relevant civil aviation legislation
- the training is conducted to the highest possible standard and the desired outcomes are being achieved
- the operator's written procedures are relevant to the training and are adequate to ensure ongoing compliance.

The operator should provide evidence to verify that at the completion of each audit. Audit reports should include:

- a description of the audit findings and observations (e.g. non-compliances or change recommendations)
- evidence to support audit findings and observations
- required follow up and corrective actions
- a plan for the implementation of corrective and preventative actions
- a schedule and timeframe for the follow up and closure of corrective and preventative actions.

The operator should describe a means to verify that, written procedures and course syllabuses will be assessed and improved where necessary, in order to address any identified patterns of training deficiencies.

The operations manual should identify personnel within the organisation who have the training, experience, responsibility and authority for:

- managing the operator's audit program
- carrying out internal audits at each of the operator's training bases
- identifying and recording any audit findings or deficiencies, and providing evidence in support of these findings or deficiencies
- analysing the root cause of a finding or deficiency
- developing and recommending corrective and preventative actions
- conducting management reviews to ensure corrective and preventative actions are addressed within an acceptable timeframe.

To support the effectiveness of the audit program, the operator should provide a means for personnel conducting internal audits to:

- maintain independence so as not to be subject to undue influence
- report directly to the chief executive officer.

The number of audits required will vary dependent upon the size of the organisation and the scope of the training. To be suitable the audit schedule should ensure that:

- all aspects relating to the conduct of the flight training are audited within a 12 month period.
- The audit schedule should allow sufficient flexibility to enable the conduct of unscheduled audits when required.

Continuous improvement process

The operations manual must describe a means for promoting continual improvement of training, which may include:

- formal annual review of training activities

- feedback methods to determine whether the continuous improvement process is effective, including:
  - internal audits
  - regular internal and external (third party) safety surveys
  - evaluation of individual performance to verify responsibilities
  - tracking changes to ensure they are relevant and effective.
- reviewing and following up on feedback to ensure issues are effectively addressed
- communicating incorporated improvements to all personnel
- monitoring and evaluating improvements for ongoing effectiveness.

Evaluating training outcomes from flight tests

The operations manual must describe a process for evaluating training outcomes of pre-flight test assessments and post-flight test feedback from examiners.

The process should include procedures and instructions for conducting pre-flight test assessments of students for a test, including:

- nominating suitable assessors
- defining the scope of the test
- assessment methods
- reporting performance of the student
- identifying sub-standard performance
- making recommendations.

The process must also include an evaluation of the findings of the assessment, including:

- review of student training records
- identifying if sub-standard performance during the assessment is reflected in the records of training
- establishing if underperformance during training or the assessment is due to incorrect instructional techniques or other organisational deficiencies
- formulating and implementing remedial action through the change management process.

The process must also include procedures and instructions for receiving and reviewing the advice from the flight examiner, as well as the result of the flight test and the reasons for any failure in an element of the test, including:

- identifying if sub-standard performance is reflected in the records of training
- establishing if sub-standard performance during training or the flight test is due to incorrect instructional techniques or other organisational deficiencies
- formulating and implementing remedial action through the change management process.

Assessing suitability of facilities and resources

The operations manual must describe a process for regular review of the suitability of facilities and resources for conducting training.

Facilities and resources to be assessed may include:

- the range of qualifications and experience of instructors
- the type and number of aircraft and avionics fitment
- briefing facilities
- training précis and publications.

The process should include procedures and instructions for identifying and procuring replacement items.

5.3.3 Dangerous goods manual

Part 92 of CASR applies to the consignment and carriage of dangerous goods by air. If the FTO intends to carry dangerous goods, regulation 92.055 prescribes the requirement for an operator to provide a dangerous goods manual. The dangerous goods manual forms part of the operations manual under regulation 141.260. Regulation 92.055 does not require the dangerous goods manual to be a standalone document, the operator may choose to meet the requirements of the regulation as a chapter to a broader operations manual document. Use the Dangerous Goods manual evaluation checklist (form 1441) for the assessment.

5.3.4 Human factors principles and non-technical skills training (HF/NTS)

A HF/NTS training program, which covers both human factors (HF) principles and non-technical skills (NTS), must be appropriate for the size, the nature and complexity of its operations.

> Note: Inspectors should refer to advisory circular (AC) 119-12 for guidance on a HF/NTS training program. Inspectors may also refer to ICAO Doc 9683—Human factors training manual for further guidance.

The primary objective of human factors training within a Part 141 organisation is to give instructors an understanding of relevant human factors hazards and how and why errors (theirs and their students) may be committed during Part 141 training. This knowledge can then be used to develop non-technical skills to minimise the potential for errors and/or to limit any consequences.

Human factors training for a Part 141 organisation should not be something radically new and may initially appear to cover many safety principles and practices which are already incorporated within operations. However, these practices are often both informal and inconsistent in application. In describing and explaining the underlying human factors principles applicable to certain practices within an organisation, HF&NTS training can ensure that Part 141 flight training is carried out in a more consistent and professional manner, such that aircraft are operated and students are trained with a higher level of safety.

Course design and development

An operator may choose to develop an internal training program or contract a third-party training provider.

If the organisation has designed and developed their HF&NTS course internally, the development process should ensure that personnel experienced or qualified in human factors were involved in developing the content of the course.

If training has been contracted to a third-party training provider, the Part 141 operator should still ensure appropriately trained and competent staff are employed in relation to HF&NTS course design and delivery.

Course Objectives

The objectives of the operator's HF&NTS training program should be to improve safety during flight training and decrease organisational exposure to risk through:

- improved human factors hazard identification
- reduced errors
- increased capture and correction of errors.

A suitable HF&NTS training program should provide the student with:

- knowledge of potential human factors influences and hazards
- non-technical skills to reduce the potential for error, improve their ability to identify hazards and to identify and correct their errors earlier
- an ability to portray expected safety related behaviours associated with how the organisation manages human performance and error, including:
  - influencing people's attitudes away from simply 'accepting' human factors related hazards and risks

– influencing individual and organisational behaviour in response to human factors hazards and risks to consistently apply new or existing controls.

HF/NTS assessment process

To be suitable, the HF/NTS training program should include an assessment which may include both theoretical and practical assessments for HF/NTS competencies. Assessment may be carried out using different methods, including:

- short answer or forced choice (multi-choice) exams
- observation of tasks (this may form part of competency assessment)
- demonstration during practical exercises
- informal assessment of participation by the instructor.

Recognition of prior learning (RPL)

If an operator chooses to recognise a person's previous HF/NTS training, the operator must ensure the training meets their operational requirements. A suitable process would include a gap analysis, considering the following matters:

- Do assessment processes allow for confirmation of achievement of learning outcomes for both HF principles and NTS elements, with competencies mapped against both elements?
- Is the training assessment focused on learning and building expertise, rather than on rote memorisation of facts, rules or procedures?
- Does the training assessment assist in clarifying people's responsibilities in ensuring they continue to reflect best practice based on lessons learned?
- Does the training program allow students to reflect on their own performance and address any identified deficiencies?

5.3.5 Reference library

The operations manual must include a reference library in accordance with regulation 141.160. An important part of the reference library is access to up-to-date information. Operators may choose to use an electronic flight bag (EFB) to provide their reference library. There are commercial products that will keep these documents up to date or the operator may develop their own EFB program. In either case the operations manual must explain how the reference library will be maintained.

5.4 Management of change

Operators who are engaged across multiple CASR Parts can construct a management of change (MOC) process that is applicable to all of their operations.

Example

An operator may have sections of their company that hold authorisations under Parts 141, 142 and 119. If preferred by the operator, they could construct an MOC process that is common to all of their operations regardless of the CASR Part under consideration.

5.4.1 Significant change

The operations manual must detail a process for the identification of a significant change. To be suitable, if an operator uses their own definition of what constitutes 'significant change', the inspector must be satisfied that the operator's definition is not less restrictive than the regulation.

Except for key personnel changes under subregulation 141.085(2), a significant change cannot be implemented until CASA has approved the change. The operator must have a process for ensuring a significant change will not be implemented until CASA approval is received.

5.4.2 Non-significant change

By having a process that identifies significant changes, the operator will by default identify all other changes as non-significant changes. A common mistake is that operators may only consider the prescriptive components for the definition of significant change under subregulation 141.024(a) and automatically classify all other changes as non-significant. To be suitable, the inspector must confirm the operator's management of change process adequately covers the requirements for the definition of significant change in subregulations 141.025(c) and (d).

Although the regulations require the operator to notify CASA of a non-significant change, they do not specify the timing of that notification. To be suitable, the inspector should confirm that the operator has developed a process to ensure CASA is notified at the same time as the operators' personnel. However, in some circumstances, the method of communication to the operators' personnel may not coincide with the notification to CASA – due to the methods used.

Examples

Some operators may use their rostering and scheduling system to communicate non-significant changes to their operations manual, whereas CASA requires an operator to provide notification via the non-significant change form (CASA-04-5819).

Operators may choose to align their operations manual amendments to coincide with the AIRAC cycle or, in the case of large operations manuals, an amendment cycle, and in the interim use an 'operational notice' (however named) to communicate a non-significant change. The associated section of the operations manual would then be amended in accordance with the cycle.

Situations may require operators to make an immediate change to procedures via an 'operational notice' to address a risk in a timely manner. To be suitable, the inspector should confirm that an operational notice forms part of the operations manual.

5.4.3 Communication of changes to operator's personnel

The method of notification to the operator's personnel should be such that the operator is sure that the communication is reaching the intended audience in a timely and effective manner. Some operators will rely on e-mail systems, while others may use a more formal system that records whether each individual has read and acknowledged the information. To be suitable, it should be clear how and when the change will be communicated.

5.4.4 Key personnel changes

The regulations provide a means for operators to enact changes to key personnel in certain circumstances, without having received CASA approval prior to implementation of the change. To be suitable, the person appointed must have been previously authorised to carry out the responsibilities of the position. This relief cannot be used for other significant changes. If an operator elects to set a policy requiring CASA approval for all significant changes prior to implementation, this is also considered suitable. See section 5.1.2 of this principle for further information.

5.5 Logs and records

5.5.1 Flight training records

The operations manual must include an auditable process for ensuring secure and confidential training record keeping. The operations manual should include templates of training and assessment forms, and guidance to instructors and examiners for the correct completion of training records.

An operations manual must include a means to ensure that a record is made within 7 days of a person’s flight training activity.

Training records must include a description and assessment of the person’s performance, including areas of weakness, and should be comprehensive with enough information to enable other instructors to efficiently continue the training.

To be suitable a training record should include:

- participant name/ARN
- lesson number and activities to be conducted
- briefings completed
- assessments and supporting evidence
- certification, by an instructor, of achievement of competency in each element
- remedial training
- flight time
- Instructor/participant sign-off.

Training records should certify end of phase competence and suitability for progression to the next phase.

The operator should have a process of internal audit to check for compliant operation of the record management process, and to verify the accuracy and completeness of training records.

Access to records

An operations manual must describe procedures for ensuring instructors have access to the records of students, prior to conducting a flight training. To be suitable the procedures should ensure the security and confidentiality of the records.

Availability of records

An operator must have a process for providing, within seven days, a copy of a training record to another Part 141 FTO when requested.

To be suitable the process should include the following:

- All requests should be in writing from an authorised representative of the requesting operator (the request should be authenticated)
- the transfer is subject to the written authorisation from the person to who the record relates
- ensure the security and confidentiality of the records
- ensure the original records are retained.

5.5.2 Flight related documents

The operator must include certain information within their operations manual about operational and flight related documents. The method for dealing with each item will vary with the size and complexity of the operation. The inspector should consider the following information when assessing suitability.

The operations manual should list items of general documentation provided to flight crew to undertake their duties. The operator must also employ a system of management for these documents. The size and complexity of the operation will dictate the method. It may vary from a simple paper filing system to an electronic system with a dedicated information manager. The operations manual should describe how information is distributed to crew.

The operations manual should contain a statement that flight crew must follow mandatory procedures published or limitations in the aircraft flight manual (AFM), or FCOM that forms part of the operations manual.

For the operation of rotorcraft where the avoid area of the HV envelope is not a limitation in the AFM the operator should have an operational policy covering how the risks of such operations are to be managed and minimised by their flight crew during, for example, confined area operations, winching or sling load operations and other operations where exposure to the avoid area is necessary to complete the task.

The operations manual must include instructions for the provision of aircraft checklists to the flight crew members. Depending on the size and complexity of the operation, this may vary from provision of hard copy documents and amendments through to the use of electronic devices whereby amendments are pushed to crew. For complex operations, the operations manual should describe how the flight crew use the checklist and when.

The checklist will be aircraft specific and must include all the items in the AFM and may also include operator specific requirements. Original Equipment Manufacturer (OEM) checklists may be in the form of a quick reference handbook (QRH) or part of the pilot operating handbook (POH). Some OEMs will provide 'expanded checklists' with additional detail explaining each checklist item. To be suitable the checklist must be easy to use and for multicrew operations define who completes the action. Checklists normally consist of:

- normal operations
- emergency operations
- abnormal operations.

> Note: AFM/POH for smaller aircraft may not address abnormal procedures. In this case the normal and emergency procedures are required to be included in the checklist.

Checklists should be regularly reviewed against AFM or supplements and any changes made IAW the operator's management of change process.

Operators must include procedures for maintaining and ensuring accessibility to the documents prescribed. A suitable method may be via hard copy or the use of electronic devices and will vary with the complexity and nature of the operation. The operations manual may also include a statement that flight crew members share mutual responsibility for ensuring the presence of certain documents.

5.6 Flight training

5.6.1 Management of flight training

An operations manual must include a description of procedures for the conduct and management of flight training. The processes should be coordinated and designed to produce standardised training outcomes.

The description should include information, procedures and instructions relating to the flight operations of all types of aircraft operated, to ensure the safe conduct of the flight operations. The extent of the material required is dependent on the number of types and complexity of each aircraft model operated.

Effective training management should include the following:

- management of training records
- determination and provision of resources for completion of training
- scheduling of instructional staff and resources
- instructor standardisation and proficiency
- management of examinations and tests
- student performance review
- management of flight training areas and low flying training areas
- establishment and maintenance of checklists for training operations
- authorisation of pilot in command
- supervision of student pilot solo flight
- carriage of passengers.

Competency-based training and assessment

Competency standards define the skills and knowledge required to attain an authorisation. Schedule 1 of the Part 61 MOS provides a summary of the standards for flight competency and aeronautical knowledge that are applicable to Part 61 authorisations.

Under Part 61, an operator for a flight crew licence, rating or endorsement must have received flight training in, and have been assessed as competent against, each of the flight competency standards mentioned in the Part 61 MOS for the particular licence, rating or endorsement.

A syllabus of flight training for a Part 61 licence, rating or endorsement must be competency based by satisfying each of the flight competency standards specified in the Part 61 MOS for the particular authorisation.

These flight competency standards, contained within Schedule 2 of the MOS, are described within units of competency which each represent a discrete function.

Flight training syllabuses and competency assessments must take into account all components of a unit of competency, namely he elements (which provide further detail to the various functions which must be carried out) - the performance criteria (which are evaluative statements contained within each element of competency, specifying what is to be assessed) - the range of variables (which add definition to the performance criteria by elaborating on critical or significant aspects of the unit of competency, and also detail contexts and conditions that should be applied) - the underpinning knowledge (which describe specific knowledge applicable to a unit of competency).

Training plans

An operations manual must include detailed training plans for the conduct of flight training. This plan may be part of a syllabus of training. A training plan should be prepared for each proposed course of training. The successful completion of training will depend on the quality of the training plan developed.

A suitable training plan provides the following details:

- what training will take place
- the competencies that need to be achieved
- how the training will be scheduled and delivered
- how the training will be assessed (assessment plan).

Syllabus

The operations manual must include syllabuses for flight training, which may be in the CASA provided format or in their own format. A detailed syllabus should be prepared for each proposed course of training.

To be suitable the inspector should consider the following matters are covered in the syllabus:

- the course description and structure
- the objectives and learning outcomes
- a detailed program of the course
- a summary of topics to be covered in a course
- the assessment details, such as marking and standards to be met.

The process for the preparation of course syllabuses may include:

- personnel responsible for preparation - responsibilities
- regulatory requirements for the qualification (e.g. Part 61 MOS)
- review of the training plan
- allocation of specific content or performance criteria to each lesson identified in the training plan
- lesson plans for each period
- validation.

For each flight training lesson, a syllabus should include time allocated for:

- flight training briefings, including underpinning knowledge
- pre-flight briefing

- flight lesson
- debriefing.

Procedures when the standards are not met

An operations manual must include a process to be followed when a standard is not met during training. The process should include a means to ensure that when conducting an assessment, an instructor keeps records when competencies have not been demonstrated and recommends further training.

5.6.2 Approval for a solo flight

The operations manual must include a process for the approval/authorisation of solo flights conducted by students. Prior to giving approval for a solo flight, the responsible flight instructor must be satisfied that:

- the student holds and carries a class 1 or 2 medical certificate or exemption
- the student is medically fit to conduct the flight
- the training objectives of the flight and the limitations on the conduct of the flight, have been provided orally and (preferably) in writing to the student, and entered by the instructor in designated parts of the flight training record
- training records indicate the student has completed training for the flight, as specified in the operations manual, and has been assessed and certified as competent by a flight instructor to conduct the flight
- recent experience requirements as required by regulation 61.115 of CASR have been met
- actual and forecast weather conditions are suitable
- the aircraft is serviceable and fuel state is appropriate.

The approval of a solo flight, including terms and conditions, must be discussed with the solo pilot during the pre-flight briefing and authenticated on the training record by the signature of the responsible instructor. Provision should be made for the solo pilot to acknowledge the terms and conditions of the approval (e.g. by countersigning the document)

Supervision of a solo flight

The operations manual must describe a means for ensuring, in accordance with regulation 61.112 of CASR, that when a person not holding a pilot licence (a student pilot) is authorised to pilot an aircraft in command, the flight is approved and supervised by a flight instructor who is authorised for the purpose by the operator. The process must meet the following minimum standard of supervision prescribed by sub regulation 61.112(3) of CASR. During the flight, the instructor must be:

- at the aerodrome of departure or flying within 15 nm of the departure aerodrome
- contactable during the flight by radio or other electronic means
- include provision for active monitoring of each solo flight by a flight instructor
- provide flight following, operational control and the rendering of assistance if necessary
- for solo circuit operations a flight instructor is assigned to visually monitor circuit operations
- for training area and navigation solo flight operations, a flight instructor is assigned to monitor radio frequencies when possible, and to provide assistance if necessary and maintain a search and rescue watch.

5.6.3 Assignment of a flight instructor

The operator must develop a process to ensure that before flight training activity commences the assigned flight instructor is qualified to conduct the training under Part 61. Depending on the size scope and complexity of the operation, this may be as simple as a manual tracking tool such as a white board detailing each flight instructor's training endorsement through to an automated software based rostering system and qualification tracking system that ensures flight instructors are qualified.

For a manual tracking system to be suitable the inspector should consider the number of flight instructors employed and number of different training activities conducted. The inspector should consider 10 flight instructors across a simple operation not involving multiple approved training programs as suitable for a manual tracking tool.

In the case of complex operators with more than 10 flight instructors or multiple training approvals or bases there are a number of software programs designed to manage flight instructor rostering available on the market. To be considered suitable the inspector should ensure the software is:

- tailored to the operators' requirements
- able to flag a flight instructors approaching and or exceeding a defined qualification or recency requirement.
- able to prevent an unqualified flight instructor being rostered for a flight training duty.

In either case the inspector needs to understand the system in place to ensure compliance.

The inspector will need to confirm that the operations manual includes a procedure to assign the PIC for each flight. The person assigned as PIC must be qualified by Part 61 for the role.

5.6.4 Instructor standardisation and proficiency check (SPC)

Standardisation of training personnel is essential for maintaining safe and effective flight instruction. The operations manual should provide a description of the operators SPC. To be suitable the operations manual should include the following:

- determination of knowledge and competency requirements for each instructor to complete their duties
- a means for selecting different cross sections of knowledge and competencies for each check
- procedures for designing the conduct of the check
- procedures for preparing an assessment plan
- scheduling the conduct of a check to ensure compliance with regulation 141.190 of CASR (relating to validity periods)
- recording and reporting procedures
- a means for recommending remedial training - descriptions and assessments of performance.

The procedures should ensure that non-standard practices or knowledge deficiencies noted during the check are debriefed, recorded and subject to remedial training as determined by the head of operations or delegate.

A SPC may only be carried out by the head of operations, or a person authorised by the head of operations. To be suitable the operations manual should describe a process for authorising a person to conduct a SPC including:

- selection criteria - training
- a duty and responsibility statement
- monitoring and review of performance.

5.6.5 Carriage of passengers

The operator must have a means for ensuring that passengers are not carried during student pilot operations, including dual training flights. Subregulation 61.113(2) of CASR provides that a student pilot is not authorised to pilot an aircraft carrying passengers. 'Pilot' means 'to manipulate the flight controls of an aircraft during flight' or 'to occupy a flight control seat in an aircraft in flight'.

The operator must include a means for ensuring passengers are not carried in aircraft when conducting the following operations:

- simulated system failures affecting aircraft performance or handling
- low flying.

The operations manual must describe a means to ensure that authorisation for the carriage of passengers, in aircraft conducting Part 141 training, will not be permitted unless the pilot in command is authorised under CASR Part 61 to fly the aircraft as pilot in command with a passenger on board. This requirement may be applicable in circumstances when the holder of an RPL, who is participating in licence training, may seek to carry more than one passenger.

5.6.6 Flight training areas

Each flight training area used to conduct Part 141 training must be described in the operations manual. The description should identify designated areas or describe the lateral and vertical boundaries, and the kind of flight training permitted in the area. As well as including descriptions in an operations manual, the operator should have a process for managing training areas. The process should provide for the safe establishment, promulgation and review of each flight training area, with an emphasis placed on ensuring that information about flight training areas is disseminated to all relevant personnel.

To be suitable the operator should demonstrate that they have considered the following in the establishment of a flight training area:

- the location and size of the area compared to the type of training and the maximum number of aircraft planned to use the area
- minimum utilisation of airspace over populous or sensitive areas.

Training areas should be depicted on a 1:100,000 or larger scale topographical map, prominently displayed in the training facility. Noise sensitive areas, obstacles such as towers and powerlines and proximity to controlled airspace, should be clearly marked.

The boundaries of a day VFR training area should be readily identifiable by prominent landmarks, rather than distances from the departure aerodrome such as DME arcs.

When a training area does not include the departure aerodrome, entry and exit paths to the training area should be identified.

The management process should include procedures for a safety review of training areas at unfamiliar locations, prior to the conduct of flight training.

Low flying training areas

An area proposed for low flying training should be subject to an inflight assessment conducted from a safe height above obstacles. The proposed area should be free from high-risk obstacles (such as power lines or cables) and should not be located over livestock. The review process should include regular aerial inspections of low flying areas, to monitor obstacles and hazards. An operator must have a means to ensure that low flying training is conducted only over a flight training area approved by CASA, if required.

5.6.7 Flight test recommendation

The operations manual must describe procedures for ensuring a person recommended for a flight test meets the flight test prerequisites specified under regulation 61.235 of CASR. The procedures may provide for an initial check of the prerequisites, by a flight instructor, before final verification and certification. The head of operations, or another person named in the operations manual, must certify that an applicant for a licence or a rating has met the prescribed eligibility requirements. The process may include a checklist of prerequisites with provision for verification and certification.

The operator must have a means to ensure that, if requesting a flight examiner to conduct a flight test, suitable facilities, records and resources are available to the examiner.

5.6.8 Aircraft

If the FTO is the registered operator of the aircraft, the operations manual will need to include their process for managing continuing airworthiness. Refer to Protocol suite (OPS.13) Managing continuing airworthiness for more information.

If not the registered operator of the aircraft, the operations manual needs to include procedures to ensure the aircraft is airworthy for flight. The Part 141 SOM includes procedures for both scenarios. Refer to Protocol (OPS.24) - Aircraft leasing arrangements.

5.6.8.1 Turbine-engined aircraft

The operations manual must include a description of how the maintenance and continuing airworthiness of any turbine-engine aircraft will be managed. To be suitable, the inspector should confirm that:

- the description indicates whether maintenance of the aircraft is required under an approved system of maintenance (class A aircraft) or a maintenance schedule (class B aircraft)
- if a maintenance schedule (class B aircraft) is applicable, the operations manual indicates whether the schedule is the manufacturer's schedule or the CASA maintenance schedule for the aircraft.

Refer to Protocol suite (OPS.13) Managing continuing airworthiness for more information

If the operator intends to lease the aircraft refer to Protocol (OPS.24) - Aircraft leasing arrangements for the assessment.

5.6.8.2 Foreign registered aircraft

If an operator intends using foreign registered aircraft for flight training in Australia, the operations manual must include procedures to ensure the foreign registered aircraft is not used for more than 90 days in any rolling 12-month period unless the operator holds an approval for the aircraft under regulation 141.035. It is not acceptable that the operator reaches the 90-day limit, not operate the aircraft for some time and then recommence another 90 day period inside the original 12-month period. The 12-month period commences from the first day of operations. The underlying intent of this regulation is to provide for the short-term use of a foreign registered aircraft during circumstances such as the operator's Australian registered aircraft undergoing maintenance such as repairs.

Paragraph 141.315(2)(b) provides the ability for CASA to issue an approval under regulation 141.035 for a period longer than 90 days.

If the operator is considering a long-term use of the aircraft, before considering an application for approval the inspector should confirm that the operator is unable to either:

- place the foreign registered aircraft or aircraft on the Australian Part 47 register, thus placing the airworthiness of the aircraft under solely Australian oversight
- arrange for Australia and the State of registry to enter into an article 83 bis agreement whereby Australia and the State of registry would agree to transfer regulatory responsibility to ensure the safe operation and maintenance of the aircraft, for example by agreeing to treat the aircraft as if it were an Australian aircraft. Please note there may be a significant lead in time for such an agreement to be entered into.

For operations that require a 141.035 approval, such an approval should only be issued on the basis of an agreement between CASA and the state of registry that sets out the areas of responsibility of the parties in relation to the supervision of flight operations, maintenance and airworthiness of the aircraft. The 141.035 approval and the agreement between the state of registration should expire at the same time.

Airworthiness

To ensure the operator maintains each foreign registered aircraft in accordance with the foreign country's laws, to be suitable operations manual must include:

- a system that manages the maintenance and continuing airworthiness applicable to the laws of the foreign country in which the aircraft is registered
- appoint a maintenance controller to control the maintenance of the aircraft
- how scheduled and unscheduled maintenance will be controlled
- where the maintenance will be carried out
- how compliance with the airworthiness requirements of the foreign country will be complied with, including any airworthiness directives and service bulletins.

Refer to Protocol suite (OPS.13) Managing continuing airworthiness for more information.

Equipment requirements

The inspector will need to confirm that the foreign registered aircraft meets the minimum equipment requirements under Subpart 91.K and Part 91 MOS chapter 26. To be suitable the inspector must confirm that the equipment required to be fitted to, or carried on, the aircraft must have been approved by the NAA of the aircraft's State of registry.

In some cases, a foreign NAA may not permit certain types of equipment on an aircraft that are required under the Australian regulations. In this case the operator will need to ensure that the required equipment is fitted to or carried on the aircraft prior to flight operations in Australia.

5.6.9 Flight simulator training devices (FSTD)

If conducting Part 141 training in FSTDs, the operations manual must include information about the FSTDs used for training. The information must indicate the purpose (as described in Part 61 of CASR) for which each device will be used.

If the operator owns the FSTD, they will also have a quality system to ensure the correct operation and maintenance of each device.

Each of the operator's FSTDs must be qualified or approved, as prescribed by the legislation relevant to the device. The operations manual must describe how the operator will ensure continued approval or qualification under the applicable legislation.

The operations manual must include a description of the operator's procedures to ensure the initial and ongoing qualification/approval of each FSTD. The description should include, or make reference to a supplementary manual or documentation that provides:

- a record of the initial qualification/approval of the FSTD
- a procedure to manage recurrent fidelity checks, including the person responsible for ensuring the checks are completed within the required timeframe
- a procedure to manage a known or suspected deficiency in the realism or accuracy of the device, including the tests and calibration procedures required to establish the nature of the deficiency (the operator may include references to other documentation such as the quality system manual for qualified flight simulators and qualified flight training devices, or the Synthetic Trainer Operations Manual (STOM) for synthetic trainers approved under CAO 45.0 (synthetic trainers)
- a method for recording and reporting deficiencies
- a means for determining if a deficiency will suspend the qualification or approval of the device (e.g. a minimum equipment list that includes the deficiency)
- the procedure for the requalification or re-approval of the device following relocation.

The operations manual procedures and instructions must set out the requirements for the operation of each FSTD. These procedures may be contained within a supplementary manual to which the operations manual refers, for example the quality system manual or STOM.

To be assessed as suitable the inspector should consider the following:

- the approved operating procedures for the device
- all procedures and practices for conducting training in flight simulation training devices
- a means to ensure operating checklists for the device are permanently displayed in the pilot and instructor stations of the device
- a procedure to ensure that, before using the device, each instructor meets the qualification requirements specified for the device.

For example, an instructor using a synthetic training device must meet the qualification requirements under Operational Standards and Requirements Approved Synthetic Trainers - FSD -2

Note: Correct operation of the device by instructors may be assessed as part of the annual standardisation and proficiency check for instructors.

5.6.10 Facilities

Training bases - regular locations

The operations manual must include a description of the main operating facilities (training bases) to be used by the FTO in the conduct of the proposed training. A training base may be considered as a facility where any of the following generally applies:

- regular training is conducted
- a person is assigned as the person responsible for day-to-day operations at that site
- permanent training and support facilities are maintained on site by the operator
- the operators training aircraft are ordinarily based there.

Note: Addition of a training base is a significant change which will require CASA assessment.

For CASA to approve a significant change that involves the addition of a training base (for an existing Part 141 operator), CASA shall normally conduct an on-site inspection, however, CASA may be satisfied through the provision of electronic, video or photographic evidence, where appropriate.

For example, the requirement to inspect a training base may be waived at the discretion of the Inspector when, within the preceding 12 months, the proposed premises and facilities were inspected for a substantially similar operation, and found suitable.

Temporary locations

In addition to a training base, other facilities remote from a training base may also be used by Part 141 operators on a temporary or non-routine basis.

If use of temporary locations is planned, the operations manual must include relevant operational procedures for the use of the temporary location to allow CASA to be satisfied that training at these 'temporary locations' can be conducted safely.

Note: The inclusion of temporary location procedures is not a significant change under regulation 141.025.

Briefing rooms

To be assessed as suitable the inspector should consider the following:

- be of a number and size appropriate to the number of students
- have provision for adequate climate control (heating and/or cooling)
- have lighting (natural or artificial) that is suitable for the size of the room
- be located and constructed so that outside disturbances and distractions do not interfere with the training
- be separate from administrative and recreational areas
- be adequately furnished and equipped for briefings.

Instructional aids

To be assessed as suitable the inspector should consider the following:

- suitably sized smart boards, whiteboards or chalkboards to assist in the delivery of briefings. Computer assisted training aids are encouraged, however are not mandatory
- training aids such as aircraft models, panel posters, cockpit cut-outs and reference books relevant to the activities
- briefing précis.

Flight planning area

To be assessed as suitable the inspector should consider the following:

- provide ready access to flight planning materials such as the AIP, weather reports/forecasts and NOTAM
- provide facilities for submission of flight notifications
- include current revisions of maps and charts which may be relevant to the area of operation
- display detailed maps depicting flight training and low flying training areas.

Examination areas

To be assessed as suitable the inspector should consider the following:

- an area which is free from noise or other distractions available for the conduct of examinations. (A briefing room may be used as an examination room, provided sufficient other briefing rooms are available for use in any other activities)
- an area for the secure storage of examination material should be provided for examination papers and completed exams. The secure storage should have access limited to the head of operations and the conducting officers. Access limitations should be documented in the operations manual
- the examination area should include furniture and equipment adequate for the conduct of examinations.

Tarmac areas

To be assessed as suitable the inspector should consider the following:

- when applicable, the design of the operator's premises should:
  - provide for safe access to the tarmac and aircraft parking area by students
  - include appropriate access controls to allow students access to aerodrome restricted areas, when required.
- The operations manual should have procedures to ensure that students are aware of precautions to observe around aircraft whilst on the tarmac area.

Aerodrome

To be assessed as suitable the inspector should consider the following:

- the aerodromes must meet the requirements of regulation 91.410 for the flight training being conducted
- the runways, taxiways and parking areas must be suitable for the flight training activities
- the aerodrome operator or control service (if any) should allow the flight training activities
- a satisfactory reporting mechanism should be in place for aerodromes that are not registered or certified, which ensures that aerodrome serviceability or availability matters are referred by the aerodrome owner to the operator.

Inspectors should use AC 91-02 - Guidelines for aeroplanes with MTOW not exceeding 5 700 kg - suitable places to take off and land for further information

5.7 Fatigue management

The operations manual must include a process to ensure that, before a flight commences, all flight crew comply with Civil Aviation Order 48.1 Instrument 2019 (CAO 48.1 Instrument 2019). The CAO 48.1 instrument 2019 is divided into 7 appendices.

Whilst no specific approval is granted for operators wishing to be compliant with CAO 48.1 Instrument 2019 Appendices 1 to 6, the inspector must be satisfied that the operator has suitable procedures and practices to ensure that operations can be conducted safely. As such, CASA must be satisfied that the operator has complied with at least one appendix that is appropriate for their operations.

For operations under appendices 1 to 6, inspectors must use CAO 48.1 Instrument 2019 - Appendix 1-6 Technical Assessor Handbook and CAO 48.1 Instrument 2019 Appendices 1-6 - Technical Assessor Worksheet.

If the operator intends to use appendix 7 – fatigue risk management system, inspectors must refer to the Fatigue Risk Management System Handbook.

5.8 Quality system

Under Subpart 141.G an operator must have a quality system if conducting training in flight simulation training devices. The system must ensure the correct operation and maintenance of the device. The chief executive officer is responsible for ensuring the operator implements and manages the quality system while the head of operations is responsible for ensuring the correct operation of FSTDs.

A quality system should include the following elements:

5.8.1 Quality policy

- Management’s commitment to and responsibility for quality should be expressed in a series of statements in the operator’s quality policy
- The policy should demonstrate that the quality system is endorsed at the highest level of management within the operator’s organisation
- The quality policy should define the operator’s quality objectives for the operation and maintenance of FSTDs
- The operator’s quality objectives for the operation of flight simulation training devices should refer to:
  - maintaining compliance with the required technical and legislative requirements
  - achieving the operator’s targets for reliability and availability of each FSTD
- The quality policy should highlight how the operator intends to meet the stated quality objectives
- The operator should demonstrate how the quality policy will be communicated to personnel.

5.8.2 Management responsibility

- The chief executive officer is responsible for ensuring the implementation and management of the quality system, and for ensuring adequate finances, resources and personnel are in place to support the quality system
- Quality system responsibilities, accountabilities and processes should be documented in the operations manual.

5.8.3 Document control

- In relation to flight simulators, the operator must provide verification that, in accordance with regulation 60.095 of CASR, the following documents relating to each particular FSTD shall be retained until at least 3 years after the device is decommissioned
  - the master Qualification Test Guide (QTG)
  - modification records
  - quality system records
  - the results of all validation tests mentioned in the master QTG, and all functions and subjective tests.
- The quality system should describe the requirements for the retention of documentation such as:
  - technical logs
  - update history
  - other system records (e.g. audit schedules, quality inspection and audit reports, responses to findings, corrective and preventative action reports, follow-up and closure reports and management evaluation reports).
- The operator must provide a means to ensure that the quality system and related documentation is up to date and made accessible to personnel involved in the operation and maintenance of FSTDs.

5.8.4 Resource allocation

- The chief executive officer is responsible for allocating sufficient resources for the proper operation of the quality system and internal audit program
- An operator should provide a means for ensuring that personnel who are assigned duties for managing the quality system receive training which covers:
  - an introduction to the quality system
  - quality management principles
  - audit techniques
  - reporting and recording methods
  - how the quality system supports continuous improvement within the organisation
- The operator must ensure that instructors are competent to conduct training in a FSTD, prior to the training being conducted.

5.8.5 Quality procedures

- The quality system must include procedures to ensure the correct operation and maintenance of the operator's FSTDs
- The operator's quality system should include procedures for the day-to-day operation of each device. For example:
  - daily functional pre-flight checks
  - defect reporting, follow up investigation and rectification
  - notification to personnel of defects
  - the use of tracking mechanisms
  - equipment calibration, software and hardware control, and spares handling
  - monitoring compliance with the required technical standards
  - ensuring that each device is maintained in accordance with the requirements of CASR Part 60 or other relevant publications
  - ensuring that preventative maintenance is carried out in accordance with the manufacturer's published schedules

  - ensuring compliance with airworthiness directives issued for the particular aircraft being simulated
  - ensuring notifications received from the original equipment manufacturer regarding routine improvements to systems and procedural changes (e.g. manufacturer service bulletins and advisory material) are reviewed and, if necessary, incorporated into standard operating procedures and training syllabuses
  - configuration management, which ensures:
    - » the continued integrity of the equipment and software of each FSTD
    - » that each device is maintained in a configuration that accurately represents the aircraft being simulated (e.g. control of training loads, updates to visual models, navigation aids etc.).
  - ensuring the review of device modifications to determine any potential effect on the characteristics of the device
  - the conduct of validation tests and functions and subjective tests
  - monitoring compliance with the procedures of the quality system
  - reporting to CASA in relation to:
    - » changes in the characteristics of a device
    - » a significant non-compliance or major failure of a device
    - » the deactivation or relocation of a device
    - » a major safety issue associated with the installation of a device.
- The quality system may also include procedures to ensure the safety of operation of the device, including:
  - safety briefing requirements
  - actions to be taken in the event of a fire or smoke detection
  - actions to be taken in the event of electrical, mechanical, hydraulic and pneumatic hazards.
- The quality system should include procedures to produce and review performance measures, usually referred to as metrics, for monitoring FSTD reliability and serviceability. The operator should demonstrate how these metrics will be used as a tool for measuring the system's effectiveness against the quality objectives. Metrics may be used to track:
  - FSTD availability
  - defects
  - open defects
  - defect closure rates
  - training session disruption rates
  - training session compliance rating.
- The operator should provide a means for personnel to provide feedback in relation to the quality system and its effectiveness, and for this feedback to be reviewed and acted upon when required.

5.8.6 Internal audit

- To monitor and assess compliance with the procedures of the quality system, the quality system must include a process of internal audit.
- The audit process should provide confirmation that the following objectives have been met:
  - each flight simulation training device is operated and maintained to the highest standard
  - the required technical standards for each flight simulation training device are met
  - the operator's procedures and relevant civil aviation legislation are complied with by all personnel
  - the operator's written procedures are relevant and adequate to ensure ongoing compliance.

- The audit process described in the quality system should include:
  - a statement of the scope for each scheduled audit
  - how internal audits are to be planned, conducted and documented
  - how evidence is to be collected and analysed
  - how non-compliances are to be recorded
  - how findings are to be reported
  - how feedback is to be provided and received.
- The quality system should identify personnel within the organisation who have the training, experience, responsibility and authority for:
  - managing the internal audit program
  - carrying out internal audits at each of the operator's training bases
  - identifying and recording any audit findings or deficiencies, and providing evidence in support of these findings or deficiencies
  - analysing the root cause of a finding or deficiency
  - developing and recommending corrective and preventative actions
  - conducting management reviews to ensure corrective and preventative actions are addressed within an acceptable timeframe.
- To support the effectiveness of the quality system, the operator should provide a means for personnel conducting internal audits to:
  - maintain independence so as not to be subject to undue influence
  - report directly to the chief executive officer.
- The number of audits required will vary according to the size of the organisation, the number of FSTDs utilised and the scope of the authorised activities. The operator's schedule for internal audits should ensure that all aspects of the operation are audited within a 12 month period.
- The objectives of the internal audit process should confirm:
  - whether the operator's quality objectives remain relevant to the operation
  - compliance with the operator's quality procedures, and the effectiveness of these procedures
  - the effectiveness of the corrective action program
  - the qualification level and technical status of each device
  - device configuration management, including airworthiness directives issued for the particular aircraft being simulated
  - completed documentation, such as validation tests mentioned in the master qualification test guide for the device
  - completed records relating to all functions and subjective tests conducted within the current (and planned) training program (or equivalent sample approved by CASA)
  - defect deferral rates
  - technical log sheets, maintenance records and configuration control records
  - the suitability of the operator's quality documentation, such as standard forms, logs and checklists
  - the effectiveness and suitability of personnel training.
- The conduct of subjective tests (fly-outs) for each device may be included as part of the operator's internal audit program, to assist in confirming the continued suitability of each FSTD. The operator's procedures should ensure that, during subjective testing, the assigned instructor:
  - holds the relevant aircraft type rating
  - is current on the aircraft type

  - is familiar with the operation of the flight simulation training device.

- The quality system should ensure that, at the completion of each audit, an audit report will be prepared and retained. Audit reports should include:
  - a description of the audit findings and observations (e.g. non-compliances or change recommendations)
  - evidence in support of audit findings and observations
  - required follow up and corrective actions
  - a plan for the implementation of corrective and preventative actions
  - a schedule and timeframe for the follow up and closure of corrective and preventative actions.
- The operator's internal audit schedule may include unscheduled audits.
- The operator should provide a means for the head of operations to report to the chief executive officer in relation to audit findings.
- The operator may require personnel involved in the conduct of internal audits to have received internal quality auditor training.

5.9 Drug and alcohol management plan

Use Protocol suite (OPS.99) DAMP entry control and assessment