Australian Government
Civil Aviation Safety Authority

PRINCIPLE

(OPS.121) Australian air transport operations—larger aeroplanes

December 2024

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
121PC	121 proficiency check
AEO	all-engine operating speed
AFM	aircraft flight manual
AIP	Aeronautical Information Publication
AMC	acceptable means of compliance
AMOC	alternate means of compliance
AOA	angle of attack
AOC	air operator's certificate
ATC	air traffic control
ATS	air traffic services
AWI	airworthiness inspector
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations 1998
CEO	chief executive officer
C-EFB	cabin electronic flight bag
DGI	dangerous goods inspector
EDTO	extended diversion time operation
EFB	electronic flight bag
FCOM	flight crew operating manual
FOI	flying operations inspector
GM	guidance material
HF/NTS	human factors/non-technical skills
HOFO	head of flying operations
HOO	head of operations
HOTC	head of training and checking

Acronym/abbreviation	Description
IFR	instrument flight rules
IMC	instrument meteorological conditions
IOS	instructor operating stations
ISA	international standard atmosphere
LOFT	line oriented flight training
LRNS	long range navigation system
LVO	low visibility operation
MEL	minimum equipment list
MOC	management of change
MOPSC	maximum operational passenger seat configuration
MOS	manual of standards
MTOW	maximum take-off weight
NAA	national aviation authority
NAIPS	national aeronautical information processing system
NAT-HLA	North Atlantic high-level airspace
OEI	one-engine inoperative speed
OV	operational variations
PBE	protective breathing equipment
PED	portable electronic device
PIC	pilot in command
PPE	personal protective equipment
PRM	precision runway monitor
SM	safety manager
SMS	safety management system
SOP	standard operating procedure
UPRT	upset prevention and recovery training
WHS	work health and safety

Definitions

Table 2. List of definitions

Term	Definition
air transport operation	A passenger transport operation, a cargo transport operation, or a medical transport operation, that is conducted for hire or reward, or is prescribed by an instrument issued under regulation 201.025.
cargo transport operation	An operation of an aeroplane that involves the carriage of cargo and crew only, but does not include the following: i. an operation conducted for the carriage of the possessions of the operator or the pilot in command (PIC) for the purpose of business or trade ii. a medical transport operation.
COMAT	Company materials which include dangerous goods of the operator – such as aircraft parts (e.g. batteries, chemical oxygen generators, oxygen cylinders etc.)
medical transport operation	An operation the primary purpose of which is to transport one or more of the following: • medical patients • medical personnel • blood, tissue or organs for transfusion, grafting or transplantation.
organisation	A product or service provider, operator, business, and company, as well as aviation industry organisations.
passenger transport operation	An operation of an aeroplane that involves the carriage of passengers, whether or not cargo is also carried on the aeroplane, but does not include the following: • an operation of an aeroplane with a special certificate of airworthiness • a cost-sharing flight • a medical transport operation.
visual approach slope indicator system	A visual approach slope indicator system is defined in the MOS for Part 139 to include the following: • a T visual approach slope indicator system (T-VASIS) • an abbreviated T visual approach slope indicator system (AT-VASIS) • a precision approach path indicator system (PAPI) • a double-sided PAPI.

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 3. Revision history table

Version No.	Date	Parts / Sections	Details
2.4	December 2024	Various	Updates to exemption numbers, addition of DAMP, clarification of "over the high seas.
2.3	September 2024	Section 3.8.5	Re-insert PED section and modify numbering of subsequent sections in 3.8
2.2	July 2024	Various	Incorporation of (OPS.11) UPRT, (OPS.23) HF/NTS and dangerous goods amendments.
2.1	May 2024	Section 3.7.7.3	Note added about requirements to follow ICAO Technical Instructions.
2.0	March 2024	Sections 3.3.4 and 3.4	Incorporate (OPS.09) Electronic flight bag and (OPS.18) Management of change.
1.5	September 2023	Various	Included WHS, DG, CAO 48.1 and EFB matters. Content moved to new template.
1.4	July 2023	Various	Removed duplicate sections that are now contained in the Operations protocol framework. Minor amendments to wording in section 4.2 to clarify flight crew experience requirements.
1.3	May 2023	Various	Inclusion of safety case sections. Minor changes to correct principle references. Various editorial changes.
1.2	March 2023	All	Post implementation review and inclusion of dangerous goods
1.1	November 2022	All	Administration review
1.0	July 2022	All	First issue

1. Assessment scope

1.1 Assessment of an initial application

Inspectors use this protocol document suite to assess an application for, or transition to, an AOC under Part 119 Australian air transport operators—certification and management to conduct Part 121 Australian air transport operations – larger aeroplanes operations. The assessment will also include relevant regulations in Part 91—General operating and flight rules and Part 92—Consignment and carriage of dangerous goods by air.

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.

Some applications may involve an AOC across multiple operational Parts, for example Part 121 and Part 135. In this case, the inspector does not need to complete the entire worksheet for each operational Part. For example, the Part 119 sections of the worksheet apply to all air transport operators.

> Note: Compliance with the Part 121 regulations will meet or exceed the requirements of the Part 135 regulations.

The worksheets for Parts 121 and 135 follow the same assessment pathway. The inspector can choose which worksheet to use as the primary, and only complete the required sections of the secondary worksheet where differences occur.

A multi-part Part 121 and Part 135 operator may choose to conduct their operations in accordance with the higher standards applicable to Part 121. In this instance, an inspector will complete the assessment using Worksheet (OPS.121) and note that the assessment includes the Part 135 operations. In which case the inspector should confirm the applicant's intention to have their Part 135 operation assessed as a Part 121 operation at the pre application meeting.

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

- desktop assessments of the documentation provided
- site inspection of facilities
- assessment of key personnel
- a proving flight where required.

Before the issue of an AOC 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

Inspectors will also use this protocol suite to assess a significant change or an approval that is not covered by its own specific protocol, such as addition of an aircraft or adding a new area or route. In this instance, the inspector will define the scope of the assessment in the *Assessment summary* tab of the worksheet (OPS.121). Only those sections of the worksheet that address the significant change need be completed.

1.3 Assessment worksheet user instructions

Typically, an AOC application will require a team of inspectors across different disciplines. A project manager will be appointed to manage the worksheet and ensure all tasks are completed.

This principle provides guidance to the assessor when using the associated *Worksheet (OPS.121) Australian air transport operations – larger aeroplanes*. The worksheet provides assessors with a regulation-based tool for recording the outcomes of the assessment. It is set out as follows:

- User instructions

- Assessment summary
- Approval data sheet
- Assessment worksheets:
  - Applicant
  - Aeroplane operations
  - Training & checking system.
- 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.121).

In this principle, chapters 2-4 provide specific guidance that aligns to the associated sections (tabs) in the assessment worksheets.

1.4 AOC project management

CASA assessment of an AOC application must be treated as a project. This 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.

CASA's workflow management system may be used as an effective management tool to assist in achieving these requirements.

There are two projects for processing an AOC application:

- the applicant's management of the process
- CASA's management of the process (including all applicable checklists).

Both projects are managed separately in order to achieve certification of the intended operations. 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 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 the *Civil Aviation Act 1988* (the Act) to hold an AOC, the project manager will make a recommendation to the national manager.

The project manager must:

- chair the pre-application and formal application meeting (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's project manager
- arbitrate in any dispute between CASA and the applicant

- provide a formal point of contact between CASA and the applicant
- coordinate the work done by the certification teams
- keep the certificate team manager informed on the progress of the project
- maintain records of all formal meetings
- consider the recommencement of initial assessment process should a significant change in the application occur
- 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 the (OPS.121) Worksheet. The project manager must review the draft AOC prior to making a final recommendation to the delegate on:
  - whether or not the certificate should be issued, and if not the reasons for not proceeding
  - if conditions in accordance with section 28BB of the Act are to be imposed on the AOC, the reasons for the conditions.
- advise the applicant if CASA is unable to meet the scheduled assessments.

1.4.2 Project team members

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 aeroplane type
- meet recent experience requirements.

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

If an FOI cannot meet the above requirements and there is no other person qualified, an FOI who has experience on an aeroplane 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 most appropriate to conduct the flight assessment.

Airworthiness inspector (AWI)

The AWI must be familiar with the aeroplane types that the applicant proposes for the AOC.

Where the applicant requires minimum equipment lists (MELs), a system of maintenance, an approved maintenance plan (AMP) or reliability programs approved by CASA:

- the AWI must assess those approvals in accordance with the applicable protocol suites
- the CASA Inspector must have training or experience on the actual aeroplane type or a similar type to carry out those assessments
- prior to carrying out these assessments, the CASA Inspector must have undertaken CASA training for the types of assessments.

If an AWI cannot meet the above requirements and there is no other person qualified, an AWI who has experience on an aeroplane 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 most appropriate to conduct the assessment.

Dangerous goods inspectors (DGI)

Dangerous goods inspectors (DGIs) must be engaged when an application is received to add the consignment and carriage of dangerous goods by air. Applications for carriage of dangerous goods by the operator or COMAT, being company materials such as aircraft spare parts (e.g. aircraft batteries, chemical oxygen generators, oxygen cylinders etc.), also require assessment by a DGI.

Where the operator does not intend to consign or carry dangerous goods, or if the level of dangerous goods requested for the proposed operation is unclear, DGIs are available to assist the project manager in making an initial determination.

Other inspectors

The project manager will determine the need for other disciplines to assess the application. Other disciplines which may need to be involved are:

- cabin safety
- ground operations
- aerodromes
- safety management system
- alcohol and other drugs.

1.4.3 Project team guidelines

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

- the CASA 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 CASA project manager must be notified of these actions
- the CASA project manager must keep the CASA 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 CASA project manager.

1.4.4 Project planning

Factors affecting project timelines include:

- quality of the applicant’s submissions
- the nomination of suitable key personnel
- applicant’s ability to meet requirements such as aeroplane inspections and proving flights
- the applicant’s timely response to CASA advice on identified deficiencies
- availability of the applicant's and CASA's resources
- unforeseen circumstances.

For CASA to allocate resources for the timely assessment of the application, the applicant must submit their proposed project plan to CASA, outlining in detail the schedule by which they will make their facilities, key personnel and aeroplane available for CASA assessment and inspection.

Based on the information the applicant delivers, CASA will develop a project plan.

1.4.5 Project monitoring

Project monitoring is an essential aspect of project management. It covers both the areas of budget (estimate) and the tasks required to be completed by CASA.

It is the responsibility of the project manager to monitor and review the project plan and to track the overall actual costs against the estimate. The project manager must inform RegServices of any cost variation likely to exceed the estimate.

A project diary must be used to track tasks, hours and who conducted the work. The purpose of the project diary is to ensure accurate final cost of the project and to be able to justify, in reasonable detail, the work that has been carried out by CASA. The project diary is to be maintained by the project manager (or by each inspector for a multi-member team) on a regular basis.

The actual total hours spent by the team must be monitored against the total estimate to determine if the original estimate is likely to be exceeded and a revised estimate needs to be issued by RegServices.

1.5 Onsite inspections and verification

Section 27AC of the Act provides for CASA to undertake an inspection or test.

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) Onsite inspection 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 the 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.

1.6 Proving flight

1.6.1 General

Under sections 27AD and 28 of the Act CASA can require an AOC applicant to conduct a proving flight.

Proving flights are normally the last part of an assessment to occur before a recommendation is made to a delegate to issue a new AOC or add an aeroplane to an existing AOC. CASA’s approach to proving flights varies depending on the size and complexity of both the organisation and the aeroplane. For Part 121 applicants the assessment is conducted by a multidisciplinary team.

The proving flight is the practical demonstration by the AOC applicant that the documented procedures and systems previously inspected can work together in real time to produce a safe operation, which complies with the legislation. It allows CASA to assess the O and E to ensure that what the operator has proposed will achieve the outcomes required by the legislation.

Proving flights need not be conducted for each separate authorisation on an AOC. Proof that the AOC applicant’s organisation is suitable may be reasonably accomplished by inspecting appropriate samples of the proposed operations.

Where cabin crew are employed, the CASA project manager will determine the CASA project team members who will take part in the flight phase of the proving flight. Additional CASA inspectors may be required to observe activities associated with operational control, loading and dispatch. In some instances, inspectors will need to be positioned to locations prior to the flight departure in order to observe arrival and departure procedures.

If the AOC applicant cannot successfully demonstrate their ability to implement their processes and procedures through a proving flight, the proving flight will need to be repeated.

The requirement for proving flights, and what form a proving flight must take, are at CASA's discretion. Use relevant Protocol suite (OPS.26) Onsite inspection checklists for onsite inspections.

1.6.2 Decision to conduct a proving flight

It is CASA policy that proving flights are required for the following:

- first issue of an AOC for Part 121 operations
- an AOC variation upgrading in type of power plant from turboprop to jet engine operations
- the introduction of passenger operations
- the introduction of an additional aeroplane type.

It is CASA policy that proving flights may be required for the following:

- the introduction of a new port
- a significant change to the geographical area of operation (e.g. overseas operations).

If CASA determines that a proving flight is not warranted, CASA may require an FOI to conduct an inflight observation from the flight deck of the first flight using Checklist (OPS.26) Flight operations – Part 121 enroute inspection.

1.6.3 Proving flight notification

If CASA determines that a proving flight is required, the project manager will decide, after consultation with the assessment team, if the AOC applicant is ready. The proving flight must be conducted in accordance with the procedures outlined in the applicant's exposition, therefore, any outstanding issues in relation to the exposition must be resolved to CASA's satisfaction prior to the conduct of the proving flight.

CASA must provide written notice of the requirement for a proving flight; the notice will contain:

- a proposed date for the conduct of the proving flight
- the objectives of the proving flight
- the process CASA will use to conduct the proving flight
- the safety considerations and conditions that must be observed during the proving flight
- the areas to be assessed – scope of assessment
- means of assessment including the use of test scenarios
- the route the proving flight will follow.

After receiving the notice, the AOC applicant must provide a detailed plan for the conduct of the proposed proving flight. The plan should include specific schedules for the enroute phase, showing departure and arrival dates, times and destinations.

1.6.4 Scope of the proving flight

To allow CASA to observe all the elements that make up the AOC assessment, the AOC applicant is required to conduct the proving flight as if it were conducting a normal revenue flight. Depending on the size, nature and complexity of the operation, more than one proving flight may be required.

The following conditions apply to proving flights:

- compliance with safety regulations is required at all times. If a CASA inspector believes that safety may be jeopardised, the exercise will be terminated
- proving flights must cover at least 2 route sectors, preferably with one sector conducted at night (if applicable)
- a proving flight must include a representative selection of the destinations intended to be serviced

- adequate time must be planned at each port to allow for inspection of the AOC applicant's:
  - ground staff, procedures and facilities
  - operational control
  - dispatch preparation
  - aeroplane loading
  - passenger processing
  - aeroplane servicing.
- carriage of passengers:
  - fare-paying passengers or revenue cargo must not be carried on proving flights. The operator will be required to carry non–fee paying passengers that can be company staff or invited guests to simulate a normal passenger load. Non-revenue company cargo or equipment may also be carried. In a proving flight, CASA expects a passenger load equivalent to at least 50% of normal capacity
  - the CASA team may ask some passengers on the flight to actively participate in certain scenarios. They will be thoroughly briefed by CASA team members on the day.

The operator must provide the normal compliment of regular flight and cabin crew to operate the flight.

During the proving flight, the following functions must be demonstrated (where applicable) in accordance with the provisions of the operator's exposition:

- compliance with an approved flight crew flight and duty time system
- usability of the safety management system
- scheduled turn-around times and on-time departures
- recording and rectification of defects encountered and where applicable the use of the maintenance release and the MEL
- refuelling of the aeroplane
- in flight fuel management and recording in accordance with the AOC applicant's fuel policy
- load control including weight & balance
- ground operations including baggage and/or cargo loading and unloading
- passenger handling
- flight and cabin crew compliance with duties and company procedures
- capacity of port facilities to support the services
- aeroplane pushback (when used)
- capacity to notify relevant persons of operational changes
- flight planning
- operational control
- suitability of aeroplane performance information
- suitability of route qualification training
- demonstration of all operational planning
- ground support and communications
- pre-flight walk around
- flight dispatch
- flight and cabin crew decision making
- normal, and abnormal, situations
- critical system failures

- critical communication systems
- communication with Nav Services
- turn around procedures
- the management of the operation, including support from contracted parties.

1.6.5 Conduct of a proving flight

CASA pre-proving flight meeting

All project team members participating in the flight phase, and those involved at the operator's main base, will attend a pre-flight meeting. The purpose of this meeting is to coordinate inspection activities to ensure that all the planned checks are accomplished with minimum distraction during the proving flight phase. When planning the proving flight, the CASA team must not introduce too many simulated emergencies or scenarios. Planned scenarios should not occur concurrent with each other, but rather, there must be a clear beginning and end to each scenario. Sufficient time between scenarios must be allowed for crew to gather their thoughts.

Operator pre-proving flight team meeting

A combined meeting of the CASA project team and the AOC applicant's nominated staff will be held prior to the flight. The purpose of this meeting is to ensure that the AOC applicant's staff are fully aware of the process the CASA project team will follow and the objectives to be achieved during the proving flight. It is critical that agreed procedures are put in place to:

- identify a planned scenario from an actual emergency
- ensure the use of the term 'simulated' precedes each planned scenario
- ensure clear understanding of the pilot in command (PIC) authority to cancel any scenario
- identify procedures in the event of an actual emergency or abnormal operation.

The CASA project team will normally allow the proving flight to run without intervention, except where a pre-planned diversion is required to test operational control systems. In addition, CASA may plan for inflight scenarios to test emergency/abnormal procedures of the flight and/or cabin crew, however this does not extend to shutting down or switching off an aircraft system. e

The PIC has the final authority on the conduct of the flight. If at any time the PIC determines an activity or scenario would compromise the safety of flight operations, they will announce 'STOP'.

The CASA inspector may request demonstrations of specific operations, such as a particular form of departure, arrival or instrument approach. The CASA Inspector may also ask questions of flight deck and cabin crew to confirm the crew members' knowledge and familiarity with company procedures. In addition, flight crew are expected to demonstrate adequate knowledge of the layout of airfields, parking and fuelling arrangements at the various destinations and air traffic control (ATC) requirements enroute.

Cabin crew are expected to demonstrate their familiarity with safety-related company procedures. Areas covered may include:

- passenger handling arrangements
- in-flight emergency procedures
- actions when encountering unexpected turbulence
- the handling of incapacitated passengers.

Scenarios

As part of the testing process the CASA project team will introduce scenarios or simulated exercises, mainly related to cabin and passenger exercises that are typical with day-to-day passenger operations.

There will be abnormal exercises and an emergency exercise to test the cabin and flight crew's ability to implement appropriate actions. The operator's crew may be questioned on their actions and their knowledge of company procedures. None of these scenarios will impact on the profile, or progress of the flight.

The CASA project team must prepare suitable scenarios simulating unusual conditions that should demonstrate the crews' capabilities, for example:

- the handling of passengers with disabilities
- managing passenger incapacitation in-flight
- responding to a cabin fire
- knowledge on the location and operation of emergency equipment
- actions when encountering unexpected turbulence.

It is important that scenarios are pre-planned, realistic and achievable, and that all crew are aware of the simulated nature of the demonstration.

Safety is paramount and should any crew member or CASA inspector believe that safety may be jeopardised as a consequence of a scenario, it must be terminated. Similarly, if any person on the flight becomes distressed as a result of the conduct of a scenario, the exercise must be terminated.

The PIC on the flight has absolute authority as PIC to take whatever action deemed appropriate, in consideration of the conduct and safety of the flight. The project team will ensure that this has been discussed and understood at the operator pre-proving flight team meeting.

The CASA project team will introduce each scenario by announcing, 'this is a simulated exercise', or words to this effect The CASA project team will conclude each scenario by announcing, 'This simulated exercise is complete', or words to this effect. All communication relating to a scenario must be identified as a simulated exercise.

1.6.6 Assessment of the proving flight

At the completion of the proving flight, the CASA project team will meet to decide whether further proving flights are required and the need for and extent of corrective action required by the AOC applicant.

The CASA project team must agree on the result and rate the AOC applicant against one of these outcomes.

a. The CASA project team finds deficiencies in the AOC applicant's compliance with exposition processes and procedures or regulatory requirements that do not demonstrate present and suitable (not compliant). If the CASA project manager determines the deficiencies are such that on-ground testing would not be appropriate to verify the AOC applicant has satisfactorily addressed the deficiencies, then the applicant will be deemed to have failed the proving flight and a further proving flight will be necessary.

b. The CASA project team finds deficiencies in the AOC applicant's compliance with exposition processes and procedures or regulatory requirements that demonstrate procedures are present but not suitable (not compliant). If the CASA project manager determines a ground exercise can verify the outcome of remedial action additional proving flights may not be required. The AOC applicant will rectify the deficiencies and CASA will verify the deficiencies have been addressed satisfactorily before the AOC is issued.

c. The proving flight demonstrated that the operator's procedures are both present and suitable and therefore compliant. Some deficiencies are to be expected during the proving flight and all deficiencies will require rectification. The project team will recommend the delegate issue the AOC.

1.6.7 Post-proving flight

The CASA project team will meet with the AOC applicant to provide a debriefing on the outcome of the proving flight. The debriefing should allow the project team to deliver their findings against the measure of present and suitable. The CASA project team and the operator should agree on the corrective action required to address any deficiencies. If required, the CASA project team will discuss the time of verification activities to ensure corrective actions have addressed the deficiencies.

The operator should be given an opportunity to provide feedback on the conduct of the proving flight and clarify any concerns they may have with the process.

2. Applicant

2.1 General

The application form requires the AOC 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 5 years.

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 119.070(3) describe the matters CASA may consider in deciding whether a person is a fit and proper person.

2.1.1 Fitness and propriety

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 Legal, International and Regulatory Affairs (LIRA) before proceeding with any action that would cancel or refuse the application.

2.1.2 Proposed aircraft

For CASA to fulfill its obligations s28 of the CAA to issue an AOC, the applicant must provide CASA with a list of aeroplanes they propose to operate. To be suitable the list should include the number of each kind of aeroplane proposed.

3. Aeroplane operations

3.1 Organisation

3.1.1 Organisational structure

Before a recommendation can be made for the issue of an AOC, CASA inspectors must verify that the AOC applicant is capable of satisfying all the matters referred to in subsection 28(1)(b) of the Act.

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

- the chief executive officer (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 must be such that effective control and responsibility is clearly seen to rest with particular individuals
- flight and duty times of crew members holding management or supervisory positions should be reviewed to ensure that there is an appropriate balance between flying duties and managerial duties.

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 AOC if granted.

3.1.2 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 applicant's CEO should be head of the organisation, demonstrating the overall responsibility and accountability of the position.

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

To ensure the safety manager (SM) is not subject to undue influence, the organisational structure should provide that the SM reports either directly to the CEO, or to senior management with a formal direct line of communication with the CEO. The SM should remain independent from operational departments.

The applicant should demonstrate that a formal communication line exists between the SM and the head of flying operations (HOFO).

An organisational structure that incorporates departments and branches should show that the reporting lines for each branch manager lead to the manager of the associated department, and reporting lines for instructors and examiners lead to the associated branch manager.

To ensure that each managerial position has a suitable span of control, the applicant's organisational structure should demonstrate that the number of managerial positions is appropriate to the size and scope of the proposed operations.

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.

3.1.3 Managing continuing airworthiness

Part 42—Continuing airworthiness requirements for aircraft and aeronautical products applies to an operator of a registered aircraft used to conduct scheduled Part 121 air transport operations. A registered operator may also elect that Part 42 applies to their aircraft for unscheduled Part 121 air transport operations. Use CASR Subpart 42.G (CAMO) Technical Assessor Handbook and the associated worksheet for the assessment.

Operators not required to manage continuing airworthiness under Part 42 of CASR must meet the requirements of Part 4, Part 4A and Part 4B of the Civil Aviation Regulations 1988 (CAR). Use Protocol suite (OPS.13) Managing continuing airworthiness for the assessment.

Addition of a new aeroplane type

The introduction of a new aeroplane type will trigger the operator's management of change process. The operator will determine whether the change is significant or non-significant.

The operator's exposition should include a process for the introduction of new aeroplane. From an airworthiness perspective, to be suitable, the process should include the following:

- ensuring that the CofA is valid for the intended operation
- ensuring that the aircraft is registered
- determining whether the operator is/needs to be the RO
- reviewing historical records of the aircraft
- ensuring that the maintenance schedule is appropriate and complete for aircraft and equipment
- inspecting the aircraft for obvious defects and ensuring that all defects are actioned appropriately
- verifying the aircraft equipment meets all regulatory requirements
- checking that any role, emergency and survival equipment is installed and included in the maintenance schedule
- ensuring that the (aircraft flight manual) AFM is current and contains the correct supplements
- verifying any modifications are approved, and the continuing airworthiness inspections are included in the maintenance schedule
- verifying all required placards and decals are fitted (refer to the AFM for the minimum requirements)
- ensuring that any maintenance training is completed
- ensuring that a maintenance provider has been selected
- ensuring that an MEL, if required, has been approved prior to commencing the use of the aircraft on an operation for which an MEL is required
- ensuring that a reliability program, if one is required, has been approved prior to commencing the use of the aircraft on an operation for which the program is required.

Section 27AC of the Act provides for CASA to undertake an inspection or test.

The requirement for an aircraft inspection will depend on the complexity of the aircraft and the operator's experience. Inspectors will use Protocol suite (OPS.26) Onsite inspection checklists for aircraft inspections.

3.1.4 Key personnel absence

The exposition 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 119.095. 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. Appendix D to Multi-part AC 119-07 and 138-03 provides further guidance.

The exposition 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 35 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:

- 35 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 notify CASA within either 24 hrs or 3 days – depending on whether there is an authorised alternate available to take-over the responsibilities.

The inspector should ensure that the operator has a process in place that prevents the CEO and SM or HOFO and SM holding the same position for no more than 7 days in unforeseen circumstances. When considering an unforeseen circumstance, the inspector should consider the events which lead to the absence. To be suitable, the operator's definition of an unforeseen circumstance should indicate that it was unforeseeable and beyond the operator's control.

An approval under regulation 119.025 must meet the requirements in the Operations protocol framework.

3.1.5 Familiarisation training

An Australian air transport operator 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. An operator must describe the conduct of this training in their exposition, 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
- safety management system
- training and checking system
- exposition structure
- the type of air transport operations conducted.

3.1.6 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. Although not required by legislation, the operator may choose to manage its HF/NTS obligations through its training and checking system.

> 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.

HF/NTS training is required for the following personnel:

- flight crew
- cabin crew
- aircrew
- medical transport specialists
- flight dispatchers
- other safety critical personnel.

Note: For simplicity this section will use the term 'safety critical personnel' to refer to all of the above personnel.

Although HF/NTS training applies to all of the above personnel, the application will vary depending on the persons role.

Example

For flight crew, the competencies NTS1 and NTS2 are included in their Part 61 licencing requirements and recurrent training programs.

HF/NTS components

To be suitable, the HF/NTS training program must cover both human factors principles, and non-technical skills.

HF principles

Human factor principles are knowledge elements outlining how the performance of people is influenced by different factors. Knowledge and awareness of HF principles help shape, improve and maximise human performance within the aviation system.

An operator's HF/NTS training program must include training and assessment related to HF principles to maximise operational safety outcomes.

ICAO identifies HF principles as:

- **Principle 1:** People's performance is shaped by their capabilities and limitations.
- **Principle 2:** People interpret situations differently and perform in ways that make sense to them.
- **Principle 3:** People adapt to meet the demands of a complex and dynamic work environment.
- **Principle 4:** People assess risks and make trade-offs.
- **Principle 5:** People's performance is influenced by working with other people, technology and the environment.

To be suitable, the HF principles training program should include, but is not limited to:

- safety culture
- human performance principle basics
- stress/stress management
- fatigue/fatigue management
- workload management.

Non-technical skills

Operators must also include appropriate operational behaviours and skills training – this is the NTS component of the training program. NTS is applied specific human competencies which may minimise human error in aviation.

To be suitable, the NTS training program should include, but is not limited to:

- communication
- teamwork
- situational awareness
- decision making

- threat and error management
- human information processing.

Third party HF/NTS training program provider requirements

HF/NTS training activities conducted by a contracted third-party provider must meet the requirements mentioned in the operator's exposition. If contracted facilitators are used, the operator must be satisfied that the contracted personnel hold appropriate qualifications. The operator should have a documented process in place to ensure third party training organisations have appropriately trained and competent staff, in relation to HF/NTS course delivery.

Contracted third party safety critical personnel

If the operator relies on a third party's HF/NTS training program to meet their obligations under the regulations, the inspector should ensure the operator has a process to validate the training. To be suitable, the inspector should consider the following:

- Does the exposition include a process for the operator to be able to assess any third-party provided HF/NTS training, to ensure it meets the requirements of the exposition and the operational environment?
- Does the exposition include a process to ensure third-party training organisations have appropriately trained and competent staff, in relation to HF/NTS course delivery?
- Do any third-party training materials appropriately address the identified human performance risk, relevant to the organisations operating environment?

Example

If an operator uses an external company for the delivery of operational flight plans, the third-party flight dispatchers are required to meet HF/NTS training requirements under regulation 119.180. In this case the operator should assess the external provider's HF/NTS training program to determine suitability.

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?

3.1.7 Safety management system

Use Protocol suite (OPS.08) Safety management system assessment.

3.1.8 Drug and alcohol management plan (DAMP)

Use Protocol suite (OPS.99) DAMP (under development)

3.2 Key personnel

3.2.1 Chief executive officer (CEO)

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

3.2.2 Head of flying operations (HOFO)

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

3.2.3 Head of training and checking (HOTC)

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

3.2.4 Safety manager (SM)

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

3.3 Exposition

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

If structured as a set of documents, the exposition might include a "principal/primary document" which contains all the common information applicable to operator 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 exposition.

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

The exposition 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 or foreign equivalent to provide that information.

Example

Regulation 91.265 prescribes the PIC obligations for minimum height rules for populous areas and public gatherings, the operator's exposition 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 exposition will contain those instructions.

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

3.3.1 Dangerous goods manual

If an operator intends to consign and carry dangerous goods by air, the assessment must be conducted by a dangerous goods inspector.

Note: The dangerous goods manual forms part of the operator's exposition under regulation 119.205. 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 exposition document.

Part 92 of CASR applies to the consignment and carriage of dangerous goods by air. All operators are required to provide a detailed standalone dangerous goods manual, or section within the exposition, which in either case, forms part of their exposition. If the operator intends to carry general cargo, regulation 92.070 prescribes that the operator must have procedures to obtain a signed statement from the person who consigns the cargo, by either describing the contents of the cargo or stating that the cargo does not contain any dangerous goods. If this statement is already obtained from the person consigning the general cargo (i.e. by a freight forwarder), then regulation 92.075 states that the operator can rely on the initial statement made when accepting on forwarded cargo.

For operations involving the carriage of dangerous goods as cargo, including those goods intended as replacement items for company materials (COMAT) or dangerous goods of the operator, the assessment must be conducted by a DGI using *Protocol (OPS.28) Consignment and carriage of dangerous goods by air* (under development). Until Protocol (OPS.28) is published, the DGI will continue to use the following documentation:

- Checklist (OPS.26) Dangerous goods manual evaluation
- Checklist (OPS.26) Acceptance of dangerous goods - onsite inspection
- Checklist (OPS.26) Dangerous goods - RAMP inspection
- Checklist (OPS.26) Ground operations – port inspection (for passenger terminal inspection).

Operations not involving carriage of dangerous goods in cargo

Worksheet (OPS.121) Australian air transport operations - larger aeroplanes has the components that a non-dangerous goods carrying operator requires in their manual. A future checklist may be developed to further assist the FOI in this assessment.

Note: The project manager may request a review and assessment of the dangerous goods manual if unsure about the complexity of the proposed cargo operation.

If the operator intends to carry non-dangerous goods 'general' cargo and/or the limited dangerous goods permitted for carriage by passengers or crew, the operator must still provide certain information (within their exposition) to address:

- dangerous goods that are permitted to be carried by passengers and crew (see section 3.7.7.3 of this principle); and
- general exceptions listed in ICAO Doc 9284 1;1.1.5 (if applicable); or
- exceptions for dangerous goods of the operator listed in ICAO Doc 9284 1;2.2.1 (see section 3.7.8.5 of this principle); or
- activities performed under regulations 91.170, 92.185 and 92.195, as they relate to air transport operations (as applicable).

Mail is separate from cargo, and may be carried by an operator not approved to carry dangerous goods in cargo. Mail may contain small amounts of low-risk dangerous goods (carried in accordance with ICAO Doc 9284 1;2.3); however, these postal items are scrutinised and screened by Australia Post as part of a CASA

approved process. Mail is presented to the operator in sealed mailbags without the requirement to provide specific information regarding any dangerous goods that may be present within. If the operator intends to carry mail, the operator must document the process for accepting and transporting mail bags within their exposition.

3.3.1.1 Dangerous goods training

Section 23B of the Act sets out that persons handling, or involved in handling, cargo in the course of the cargo being carried, or consigned for carriage, on an aircraft, are to undertake specified training relating to dangerous goods. This is expanded upon in regulations 92.085 to 92.115.

More specifically, Subpart 92.C prescribes requirements for organisations to provide dangerous goods training to all employees involved in the handling of cargo, passengers' baggage and mail. Regulation 92.085 defines the employee groups requiring dangerous goods training, and regulations 92.090 to 92.115 prescribe the requirements for:

- Australian aircraft operators to provide dangerous goods training to groups A, B, C, D and E employees performing duties in Australia, and groups C and D employees performing duties outside of Australia (CASR 92.095)
- ground handling agents to provide dangerous goods training to the groups A, B, C and E employees performing duties in Australia (CASR 92.110)
- Australian freight forwarders to provide dangerous goods training to the groups A, B and E employees performing duties in Australia (CASR 92.115)
- screening authorities to provide dangerous goods training to employees whose duties in Australia include handling, or supervising anyone who handles, checked baggage or carry-on baggage (CASR 92.115).

An operator's exposition must identify the employee groups applicable to their operation, including deemed employees (as defined in regulation 92.085), and prescribe the dangerous goods training requirements for each employee group. Regulation 92.095 requires that each group employee must have undertaken a dangerous goods training course before the employee first performs the relevant duties, and every 2 years after (while the employee continues to have those duties). The operator must include these requirements for initial and recurrent training in their exposition.

To be suitable, the exposition should also include:

- details of any CASA-approved dangerous goods training course(s) that are delivered or provided – whether that be that the operator holds a dangerous goods training course approval or training is provided by an external CASA-approved training course provider
- whether dangerous goods training undertaken by an employee for a previous employer would be acceptable.

> Note: An operator may choose to either integrate dangerous goods training into their training and checking system, or provide a standalone course.

Operators must satisfy training requirements for all staff involved in the handling of cargo, mail, passengers or passengers' baggage, even if that operator does not carry dangerous goods as cargo. Employees who do not physically handle the cargo, mail, passengers or baggage may still be required to undertake dangerous goods training; regulation 92.085 includes persons supervising these employees performing these duties to also undertake dangerous goods training.

Dangerous goods training records

Regulation 92.145 requires the operator to maintain up-to-date dangerous goods training records for at least 36 months, in accordance with ICAO Doc 9284 1;4.4. The training record must include, as a minimum:

- the name of each employee
- the names of the person and the organisation providing the training, and the date on which the training was undertaken

- a reference (e.g. CASA training course approval number) to the training material used to meet the training requirements
- a copy of any certificate issued to an employee on the completion of a course of training required by CASR Part 92.

3.3.2 Reference library

The operator's exposition must include a reference library in accordance with regulation 119.040. An important part of the reference library is access to up-to-date sections of the AIP or its foreign equivalent (if required).

3.3.3 Aircraft leasing arrangements

Use Protocol suite (OPS.24) Aircraft leasing arrangements.

3.3.4 Electronic flight bag (EFB)

CASR EX68/24 Part 2 (2)(3) includes a direction for the use of an EFB by flight crew.

Note: For detailed information on the use of an electronic flight bag (EFB) by flight crew members, refer to AC 91-17 Electronic flight bags.

The term electronic flight bag (EFB) refers to an information system for flight crew members that allows storing, updating, delivering and displaying, with or without computing, digital data to support flight operations.

The scope of the EFB will vary depending on the nature and complexity of the flight operations. Typical uses are:

- flight planning – including weather, NOTAMS and submission
- aircraft performance and weight and balance calculations
- maps and charts
- company exposition – including the AFM/FCOMs/MEL
- electronic checklists – including those for use during normal operations, abnormal and emergency situations
- mandatory occurrence reporting forms
- journey/technical logs – including defect reporting.

Operators may use EFBs for the provision of operational information to flight crew. EFB's can be either portable or installed as part of the aircraft equipment. Portable EFBs are not part of the aircraft configuration and are categorised as a portable electronic device (PED) under the regulations (see section 3.8.5 of this principle). The use of an EFB during air transport operations requires CASA approval (refer to CASA EX68/24 - Part 119 of CASR - Supplementary Exemptions and direction Instrument 2024).

For operators with an EFB installed as part of the aircraft equipment, the exposition must include the original equipment manufacturers (OEM) instructions and procedures required to operate and maintain the EFB.

For operators with a portable EFB, the exposition must include instructions on how flight crew will maintain the device—such as battery life.

EFB limitations

The exposition should provide instructions as to how the EFB can be used in differing phases of flight. Operators may limit the use of the EFB during critical phases of flight. Flight crew members will be permitted to access information such as taxi charts and instrument departure and arrival charts during this phase;

however other functions, such as performance calculations or administrative functions, will not be conducted during this phase of flight.

EFB-approved hardware

For portable EFB's, the operator must determine what portable electronic device (PED) is approved. Where an operator does not provide the EFB and relies on a 'bring your own' device, the exposition must state:

- the brand name and series of the approved hardware
- the minimum specifications, including memory and size of the approved hardware.

The exposition must describe how the EFB hardware is used. This can include handling and storage of the device, as well as maintenance of the device. For portable EFB's, the operator must outline considerations applicable to battery use, health and replacement. In many cases, the portable EFB will contain a lithium style battery. Lithium batteries have safety considerations to be aware of, and the operator must outline how the device will be managed in the case of an emergency—such as a fire.

EFBs with temporary mounts that attach to the aircraft (e.g. suction mounts, Velcro pads) are regarded as unsecured devices, and they should be stowed during critical phases of flight. These temporary mounts are unlikely to be considered airworthy and may constitute a hazard on the flight deck or crew station in certain circumstances. EFBs attached to kneeboard holders do not need to be stowed.

Note: All EFB mounts attached to the aircraft structure require airworthiness approval (Subpart 21.M).

EFB-approved software applications

Operators should not use spreadsheet software to electronically convert paper performance charts into an application; often there are underlying certification data issues with this methodology which can lead (inadvertently) to operations being conducted outside of the aircraft limits.

The exposition must describe how the applicable software remains up to date and how updates will be carried out. For an installed EFB, this will be included in maintenance procedures. For a portable EFB, the operator may have a software application that automatically updates the EFB or some other method for flight crew to confirm their device is up to date. Whichever is the case, the inspector must be satisfied that flight crew have a method to confirm that the EFB has the most up to date operational data.

Where an operator uses software for items such as weight and balance or performance calculations, the inspector should ascertain that an appropriate certifying authority has approved this software.

Example

If the EFB is used for aircraft performance, any software component should be appropriately certified by a performance engineering authority—such as the aircraft manufacturer.

Portable EFB's generally have self-contained power and may rely on data connectivity to achieve full functionality.

Note: Modifications to the aircraft to use a portable EFB requires airworthiness approval.

Inspectors should be cognisant that some installed EFB's permit the operator to load customised software applications. Where this occurs, the operator's exposition should describe how this software will be managed.

3.3.5 Cabin electronic flight bag (C-EFB)

Cabin electronic flight bags (C-EFBs) can perform a variety of functions, traditionally accomplished using paper references, by electronically storing and retrieving documents required for flight operations. C-EFBs may be authorised for use in conjunction with, or to replace, some of the hard copy material that cabin crew typically carry in their document library. C-EFB's can be either portable or installed as part of the aircraft equipment. Portable C-EFBs are not part of the aircraft configuration and are categorised as a PED under the regulations (see section 3.8.5 of this principle).

Typical uses for C-EFBs are:

- company exposition – including checklists
- passenger information list
- passenger announcements
- cabin defect log
- onboard sales.

The use of C-EFB is not subject to CASA approval. To be suitable, the inspector must ensure the operator has appropriate procedures the meet the requirements for the use of a PED. (AC 91-07 Cabin electronic flight bags provides further guidance)

3.4 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 42, 119, 121, 142 and 145. 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.

3.4.1 Significant change

The operator's exposition 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.

Paragraph 119.205(1)(h) requires that the operator's exposition includes '*details of each plan, process, procedure, program and system implemented by the operator to safely conduct and manage their Australian air transport operations in compliance with the civil aviation legislation*'. To address this requirement, the operator's documentation should detail how an application will be made to CASA, and who within the organisation is authorised to make such an application.

Except for key personnel changes under subregulation 119.090(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.

3.4.2 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 subparagraph 119.020(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 subparagraphs 119.020(b) and (c).

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 exposition, whereas CASA requires an operator to provide notification via the non-significant change form (CASA-04-5819).

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

3.4.3 Communication of changes to operators' personnel

The method of notification to operators' 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.

3.4.4 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.

3.4.5 Risk assessment

The MOC process, and associated risk assessment process, are required to be integrated with the operator's SMS. Any assessment of the SMS aspects should be conducted with reference to Protocol suite (OPS.08) Safety management systems assessment.

3.5 Records & documents

This section is to be read in conjunction with Part 121 AMC/GM . Some operators may have legislative exemption from the requirements of certain CASRs. The register of exemptions should be checked in determining the presence of current exemptions.

3.5.1 Personnel records

The operator must maintain visibility of crew licence and medical records to ensure flight crew hold a valid licence and medical certificate when they conduct operations. The size and nature of the operation will dictate the method of system used, with possibilities ranging from a simple paper filing system through to an electronic data base.

To assess suitability the inspector should consider:

- number of flight crew
- number of operating bases where flight crew are domiciled
- number of different qualifications that need to be tracked.

The operator may choose to track all crew member qualifications in addition to flight crew licences and medicals in one system. Other qualifications may include:

- dangerous goods training
- recurrent training and checking
- human factors/non-technical skills (HF/NTS) recurrent training.

To assess the suitability of the system the inspector should be satisfied that the system will provide alerts to the person responsible for rostering to prevent them from assigning a crew member for duties when a qualification has expired.

CASA EX68/24 - Part 119 of CASR - Supplementary Exemptions and Directions Instrument 2024 provides relief from the requirement to maintain copies of flight crew licences and medicals. While actual copies are not required to be kept, an operator must keep up-to-date records of flight crew member qualifications and medical details for the flight crew member to operate the operator's aircraft. This means flight crew member qualifications obtained privately and not related to the operator's aircraft or operation do not need to be recorded by the operator. Flight crew members operating foreign registered aircraft are included in the exemption.

3.5.2 Operational and flight related documents

An operator must include certain information within their exposition 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 exposition must list the documentation provided to flight crew to undertake their duties. It must also identify documents that require a signed acknowledgement of receipt. It should clarify whether a physical signature is required, or whether an electronic acknowledgement is sufficient. The operator must also employ a system of management for these documents. The size and complexity of the operation will dictate the system. It may vary from a simple paper filing system to an electronic system with a dedicated information manager. The exposition should describe how information is distributed to crew members.

The exposition should contain a directive from the HOFO stating that flight crew must follow procedures published in the AFM or FCOM that forms part of the exposition. The operator is responsible for publishing any approved variations from the manufacturer’s procedures. The directive should remind crew of the requirement for them to adhere to all legislation and operating manuals.

The exposition must include instructions for the provision of aeroplane 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. To be suitable, the exposition should describe how the flight crew use of the checklist and when. For multicrew operations the checklist normally involves a challenge and response process, whereas single pilot operations may be a ‘read and do’ process.

The checklist will be aeroplane type (kind) 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 aeroplanes 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.

3.5.2.1 Duty statement

The exposition must contain a duty statement clearly defining the responsibilities of each crew member within the operation.

The operator must also have procedures for notifying a crew member of a specific duty they are about to conduct to ensure they are compliant with all aspects of legislation. This may range from email, personal contact or published roster, depending upon the complexity and nature of the operation.

To be suitable, the exposition must also clarify how the operator ensures those parts of the exposition relevant to a crew member's duty will be made available prior to duty commencement.

3.5.2.2 Documents to be carried

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, this will vary depending on the complexity and nature of the operation. The exposition may also include a statement that flight crew members share mutual responsibility for ensuring the presence of certain documents.

3.5.2.3 Flight crew licence and medical certificate

An exposition must include a procedure to ensure the operator's flight crew members carry both their medical certificate and licence with them on a flight. This will generally be via inclusion of a statement from the HOFO. Part of that statement should also contain a reminder to crew members that if they have a reason for being unable to comply with the requirements, they must provide CASA written notice prior to the flight, or if dictated by unforeseen circumstances, within 24 hours of the flight's conclusion.

3.5.2.4 Additional documents for international flights

If an operator conducts operations that begin or end outside of Australian territory, their exposition must detail how they will ensure the additional documents required are carried and maintained. The procedures should be suitable for the size of the organisation, and the frequency with which it operates internationally. The process must consider any requirements of foreign national aviation authority (NAA). For example, some foreign NAAs only accept hard copies of documents. To be suitable, the procedure must also ensure the PIC is provided with the documents, or instructions on how to access them.

3.5.2.5 Passenger list

An operator's exposition must include a process to ensure an up-to-date copy of the passenger list is provided to the operating crew and a person on the ground. To meet the requirement the inspector should consider the availability and completeness of the passenger list. Each passenger list must be clearly identified as belonging to a specific flight and may be stored as either a hard copy or as an electronic version.

3.5.2.6 Journey log

The exposition must detail processes for the pre-flight and post-flight completion of a journey log. They must include a procedure for the PIC to verify each entry. Subregulation 121.105(3) lists the items that must be included in pre-flight entries. Subregulation 121.105(5) lists the items that must be included in post-flight entries.

The journey log may be paper-based or electronic. The method used will depend on the complexity and nature of the operation. To be suitable, the inspector should confirm the operator has a process to ensure all electronic documents can be certified at the completion of the flight. If operators utilise an electronic system, such as an Aeroplane Communications Addressing and Reporting System (ACARS), then they should also include a procedure for manual reversion when there is an outage of the electronic system.

Subregulation 121.105(6) allows an operator to meet the regulatory requirement if, prior to when the information must be recorded, either:

- the information is recorded in another document kept by the operator
- the information is readily available to the operator from another source.

3.5.2.7 Flight preparation form

An operator's exposition must include a process for the PIC of an international flight, to certify via signature their satisfaction with the listed items. To be suitable, the exposition should describe a system appropriate to the size and complexity of the operation that ensures the information is correctly maintained and provided to the PIC.

3.5.2.8 Defect reporting

The exposition must detail a process of reporting the aeroplane defects including the generic item, a defect in the aeroplane. To be suitable, it should identify how crew members notify all relevant parties of the defects. The size and complexity of the operator will dictate this process. For example, it may involve use of the aeroplane communication system while airborne followed by entering a record in the maintenance log, or it may be via use of the maintenance log only at the completion of a flight.

3.5.2.9 Incident reporting

An exposition must contain procedures for crew members to report incidents that endanger the safe operation of the operator's aeroplanes. This also includes incidents that endanger or could endanger the safety of people or property associated with the operation of the aeroplanes. The process will depend upon the size of the operation, and the complexity of its safety management system (SMS). It should address how these reports are escalated to ensure follow-up action is completed. A suitable exposition should also include a list of Immediately reportable matters and Routine reportable matters from the Transport Safety Investigation Regulations 2003 to ensure crew members follow reporting obligations.

3.5.3 Flight-related documents retention

An operator must include in its exposition a process for retaining certain records for their specified period of time. A suitable process may be electronic or physical and will depend upon the size and complexity of the operator. The process must ensure each document is retained for its specified period.

If an operator has accessed planning information via a system such as national aeronautical information processing system (NAIPS) and chooses to store records electronically, a suitable process must ensure the information accessed for a flight is still available for at least 3 months subsequent to that flight.

Regulation 119.240 directs certain operators to regulation 121.365 to monitor and record flight and cabin crew member cosmic radiation exposure. A suitable exposition should provide some guidelines about shared responsibility in monitoring and maintaining records of exposure. The exposition must include a process to ensure records of exposure are retained for five years after an employee ceases employment.

3.6 General flight limitations

3.6.1 Foreign registered aeroplane

If an operator intends using foreign registered aeroplane for air transport operations in Australia, the exposition must include procedures to ensure the foreign registered aeroplane is not used for more than 90 days in any rolling 12-month period It is not acceptable that the operator reach the 90 day limit, not operate the aeroplane 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 aeroplane during circumstances such as the operator's Australian registered aeroplane undergoing maintenance such as repairs, or where the operator needs to add capacity for peak periods.

Subregulation 119.260(2)(b) provides the ability for CASA to issue an approval under regulation 119.025 for a period longer than 90 days. Before considering an application for approval the inspector should confirm that the operator is unable to either:

- place the foreign registered aeroplane on the Australian Part 47 register, thus placing the airworthiness of the aeroplane under solely Australian oversight; or
- 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 aeroplane, for example by agreeing to treat the aeroplane as if it were an Australian aeroplane. Please note there may be a significant lead in time for such an agreement to be entered into.

An AOC cannot be issued authorising the operation of a foreign aeroplane unless CASA and the state of registry have entered into an agreement under section 28A of the Act that sets out the areas of responsibility of the parties in relation to the supervision of flight operations, maintenance and airworthiness of the aeroplane.

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

- a system that manages the maintenance and continuing airworthiness applicable to the laws of the foreign country in which the aeroplane is registered
- appoint a maintenance controller to control the maintenance of the aeroplane,
- 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.

3.6.2 Operations in foreign airspace and on the high seas

If an operator conducts operations in an Australian aeroplane outside Australia its exposition must provide instructions for PICs to operate their aeroplane in accordance with the rules of the foreign country airspace. A suitable exposition may include those rules, or it may refer PICs to foreign regulation documents.

Regulation 91.140 requires that an Australian aeroplane operated over the high seas must be operated in accordance with ICAO Annex 2—Rules of the air. The ICAO rules of the air are applied to operations outside the 12-mile territorial limit where they are in addition to or consistent with Australian legislation. If there is inconsistency, the ICAO rules have priority (regulation 91.015 of the CASR). If an operator conducts operations over the high seas the exposition must include detailed instructions for flight crew to comply with ICAO Annex 2. A suitable exposition may include those rules, or it may refer PICs to source documents published by third party providers (such as Jeppesen or LIDO).

Regulation 91.695 (1) and chapter 23 of the Part 91 MOS prescribes the requirements for the interception of an aircraft. For operations over the high seas the operations manual should include the procedures mentioned in:

- ICAO Annex 2 – Appendix 1 – Signals – Section 2 – Signals for use in the event of interception; and
- ICAO Annex 2 – Appendix 2 – Interception of Civil Aircraft, Attachment A – Interception of Civil Aircraft.

> Note:
>
> Where an operator intends to conduct application operations over the high seas, the AOC should include the following condition:
>
> "International operations are limited to operations that do not transit or enter the territory of a foreign state."

3.6.3 Route distance limitations

Regulation 121.030 applies to operators who plan to conduct flight operations further than the aeroplane's 60 minute-distance from an adequate airport but remain within the aeroplane's threshold distance.

Note: For flights beyond the threshold distance, operators require an approval for extended diversion time operations (EDTO). In this case, use Protocol suite (OPS.06) Extended diversion time operations (EDTO) for the assessment.

To determine present and suitable, the inspector will need to ensure the operator's exposition includes the following:

- the method of converting the 60-minute time and the threshold time to distance for each aeroplane type, to create the operational range rings necessary for flight planning. To be suitable:
  - aeroplanes with two engines - the distances must be calculated using an approved one-engine inoperative speed (OEI)
  - aeroplanes with more than two engines - the distances must be calculated using an approved all-engine operating speed (AEO)
  - speeds must be within the certified flight envelop.
- distances are derived at the selected OEI or AEO in international standard atmosphere (ISA) still air conditions
- flight dispatch and operational control requirements must take into consideration the conditions which might prevail any time the flight proceeds beyond the 60-minute distance to an adequate airport, for example system degradation or reduced altitude.
  To be suitable, at least the following aspects should be considered:
  - identify the enroute adequate aerodromes
  - ensure that, prior to departure, the flight crew are provided with the most up-to-date information on the identified enroute adequate aerodromes, including operational status and meteorological conditions and, in-flight, make available a means for the flight crew to obtain the most up-to-date weather information

Note: If the flight is conducted in a two-engine aeroplane the weather conditions at the adequate airport must be at or above the landing minima.

  - methods to enable two-way communications between the aeroplane and the operator's system of operational control, which could be a third-party contractor
  - ensure that the operator has a means to monitor conditions along the planned route including the identified adequate aerodromes and ensure that procedures are in place so that the flight crew are advised of any situation that may affect the safety of flight
  - pre-flight system serviceability including the status of items in the MEL
  - communication and navigation facilities and capabilities
  - fuel requirements
  - availability of relevant performance information for the identified enroute adequate aerodromes.
- the provision of operational control will depend on the size and complexity of the operation, a suitable system doesn't necessarily mean a full flight dispatch department and continuous flight following. However, the exposition must describe how the PIC will obtain the information required to support operations beyond the 60-minute distance.

Note: Further guidance can be found in Chapter 4 and Attachment C of Part 1 of ICAO Annex 6—International Commercial Air Transport – Aeroplanes.

3.6.3.1 Flights beyond the threshold distance

Use Protocol suite (OPS.06) Extended diversion time operations.

3.6.4 Flights over water

Regulation 121.040 applies to aeroplanes with a maximum operational seat configuration of more than 30 that do not comply with the ditching requirements of the relevant airworthiness standards of the aeroplane. The inspector will need to clarify the ditching requirement capability of the aeroplane compared with the relevant airworthiness standards. This may require reference to the Type specific data sheet for any limitations. The operator's exposition must describe a procedure whereby, when the aeroplane is flown over water, its dispatch system and flight crew maintain routing within the lesser of:

- a distance equal to 2 hours normal cruise speed in ISA conditions
- 400 nautical miles.

A suitable exposition should include how the operator's planning systems keep the routing within the lesser of the 2 limits while managing associated risk when the restriction is only applicable to particular aeroplanes within their fleet.

3.6.5 Causing or simulating abnormal, emergency operations/Instrument Meteorological Conditions

The exposition must provide instructions to prevent the following during air transport operations:

- the simulation of emergency and abnormal operations during a flight
- the simulation of IMC during a flight.

The instructions may be contained within a statement by the HOFO, or sections of the exposition specific to that part of operator policy. To be clear, training and checking activities are not an air transport operation, and if conducted in an aeroplane, must meet the requirements in section 4.2.5 of this document.

The operator's exposition should contain a statement prohibiting the deliberate or simulated failure of the instruments listed in paragraph 91.715(1)(a) in-flight. Regulation 91.715 provides for some exceptions to this requirement. Inspectors should check that if the operator's exposition allows for deliberate or simulated failure of those instruments in flight, it clarifies that the circumstances must be in accordance with subregulation 91.715(2).

Subregulation 91.720(1) prohibits the simulation of IMC in flight unless the exceptions at subregulation 91.720(2) are met. Some operators may include a policy in their exposition prohibiting the simulation of IMC in flight at any time. Inspectors should check that if an operator's exposition allows for the simulation of IMC in flight, it clarifies that the circumstances must be in accordance with the items at subregulation 91.720(2).

Subregulations 91.725(1), (2) and (4) specify the limitations for conducting training activities in the aeroplane. The operator's exposition must contain a section describing the circumstances under which training activities may take place on flights, including the persons permitted to be onboard. The exposition should also clarify the type of training that is permitted during air transport operations.

The operator's exposition must include a statement that prohibits PICs from deliberately shutting down an engine in-flight at night or in IMC.

Regulations 91.735 and 91.740 apply to operators of single-engine aeroplanes who undertake air transport operations (refer to Subpart 121.Z). To be suitable, the exposition must contain a statement prohibiting PICs from shutting the engine down or simulating engine failures unless:

- in day VFR flight, it is conducted as part of approved training or checking, and in accordance with specific conditions - refer to subregulation 91.735(2).
- at night or in IMC flight, unless conducted as part of approved training or checking, and in accordance with specific conditions - refer to subregulation 91.740(2).

Regulations 91.745 and 91.750 apply to operators of multi-engine aeroplanes.

A suitable exposition must contain a statement prohibiting PICs from simulating engine failures in a large air transport aeroplane unless one of the conditions at subregulation 91.745(2) is met. This may involve the operator holding an approval under regulation 91.045 to simulate engine failures in the aeroplane. The exposition should clarify this.

Paragraph 91.745(2)(a) is one requirement specifying 2 parameters, both of which must be met (see AMC/GM 91 General operating and flight rules). For example, a Lear 45 aeroplane is type certified to carry not more than 9 passengers and has a maximum take-off weight (MTOW) of more than 8618kgs. Because it exceeds the MTOW, paragraph 91.745(2)(a) does not apply. In this case an approved flight simulator must be used for the conduct of proficiency checks.

Further conditions apply for a PIC to be allowed to conduct simulated failure of an engine in the aeroplane in IMC or at night. This must only be as part of training, checking or testing. Subregulation 91.750(2) contains each of the necessary conditions. To be suitable, an inspector should determine that the exposition clarifies each of these conditions without ambiguity.

3.6.6 Ferry flights

An exposition must include a directive prohibiting one-engine inoperative ferry flights during air transport operations. This may be a directive by the HOFO, or it may be included in a section dedicated to the management and conduct of ferry flights within their exposition. To meet present and suitable requirements, an inspector should review the operator's policy on how flights are authorised and determine that the policy prohibits one-engine inoperative ferry flights during Part 121 operations. Some operators may have a policy prohibiting the conduct of one-engine inoperative ferry flights altogether.

3.6.7 Search and rescue services

An operator must provide its flight crew with information about search and rescue services relevant to a flight. Depending upon the size and complexity of the operator, an exposition may include a route guidance section providing flight crew with detailed information about the relevant areas of its operation. Some operators may choose to include search and rescue service guidance within this section. Other operators may subscribe to a flight information provider, for example, Jeppesen or Lido, and refer flight crew to the search and rescue services contained in these documents. To meet present and suitable requirements, an inspector must determine that an operator’s flight crew will have access to the relevant search and rescue information during a flight.

3.6.8 Information about emergency and survival equipment

Section 3.04 of the Part 121 MOS prescribes information about specific items of emergency and survival equipment an operator must detail if the equipment is required to be carried on its aeroplanes. To be suitable, the operator may include within its exposition:

- a written list of the equipment and its details
- an aeroplane map labelling and providing details of the equipment
- a complete section dedicated to emergency and survival equipment.

The operator must include in its exposition how it makes this information available to parties involved in a flight’s operational control for relay to a rescue coordination centre.

3.6.9 Sterile flight deck

The exposition must include a policy to ensure crew only conduct activities associated with the safe operation of the flight during take-off, initial climb, final approach, and landing. To be suitable, the exposition may consist of a sterile flight deck policy, or similar, and include when applicable, both flight crew and cabin crew. The inspector should confirm the sterile flight deck policy details the period when the sterile flight deck phase commences and ends. The policy should include instructions when contact with the flight crew during the sterile flight deck phase is permissible.

Regulation 91.175 prohibits crew members from operating a PED at any time in a flight when it will distract from their duties. If an operator uses an electronic flight bag the exposition will need to include procedures to ensure compliance.

3.6.10 Flight deck entry

Regulation 121.155 applies to aeroplanes that are required to have a cockpit door fitted[1]. The exposition must include procedures to ensure only those persons listed in subregulation 121.155(3) are permitted access to the cockpit.

To be suitable, the exposition must also include a briefing procedure for those persons permitted to ride in the cockpit that includes, but is not limited to, the following:

- a statement that the briefing should be completed prior to the person's entry into the cockpit. If the briefing cannot be completed prior to cockpit entry, a procedure to ensure the briefing is completed as soon as possible after cockpit entry
- a list of items to be covered in the briefing, including use of the seatbelt and shoulder harness, availability and use of oxygen, normal and non-normal egress, sterile cockpit policy.

3.6.11 Assignment of pilot in command

The operator's exposition must include a procedure to ensure one crew member is assigned to the flight as PIC. To be suitable, the operator must ensure operational control procedures have the ability to determine who is the assigned PIC and indicate this on required documentation (e.g. the operational flight plan). Where a flight has a flight crew consisting of 2 or more pilots who are command qualified with the operator, the exposition must include a policy on how the PIC is assigned.

3.7 Operational procedures

3.7.1 Operational control

Regulation 121.160 requires the exposition to include procedures for determining how operational control is exercised over the flight. Division 91.D.1 includes several regulations that refer to the authority of the pilot in command and crew members. For an operator to ensure these matters are managed consistently, their exposition must include policies and procedures on how and when the authority is exercised.

The procedures will vary depending upon the size and complexity, and the nature of the operation. In some cases, an operator may employ a third party to undertake certain functions required of operational control.

> Note: FAA AC 120-101 provides guidance on items a suitable exposition should include. Inspectors should be aware that the FAA requires dispatchers to be licensed, which differs from Australian regulatory requirements. However, the concepts remain relevant.

The following paragraphs provide guidance to the inspector on the content of the exposition.

3.7.1.1 Authority of PIC

The exposition should contain a statement clarifying the authority of the PIC, including reference to the items specified in regulation 91.215. This may form part of the PIC duties statement, and include additional details regarding the duties and responsibilities of the PIC, as determined by the operator.

3.7.1.2 Powers to restrain and arrest

The exposition must include instructions regarding the authority of a commander over persons and other items onboard the operator's aeroplane. The nature of the operation will dictate the level of detail an operator chooses to include in its exposition. To be suitable, an exposition should contain a brief explanation of the powers of the PIC for the items listed in regulation 91.220The exposition must include an explanation about

[1] Refer to regulation 4.68 of the Aviation Transport Security Regulations 2005

a crew member's authority to 'arrest' a passenger under regulation 91.225. To be suitable, the exposition should specify a process the PIC and crew undertake in the event of arresting a passenger.

This should include the following:

- the crew are to follow onboard prior to landing, and how they deliver a passenger to local authorities on arrival
- instructions on the use of restraint equipment
- suitable locations on the aeroplane to place a passenger under restraint and where to place any seized items.

The level of detail will depend upon the nature of the operation and whether the operation is wholly domestic or includes international flights.

The exposition must contain guidance for crew members in how to deal with difficult passengers. It should define behaviour the operator considers disorderly or offensive. The level of detail included in the exposition will depend upon the size and complexity of the operation.

3.7.1.3 Fitness for duty

An exposition must contain a statement specifying that crew members are fit to undertake their duties. It should contain procedures and guidance to assist crew on how to determine their fitness for duty. A suitable policy will include details on what prescription medications should not be taken prior to or while on duty. It must also contain information clarifying regulatory requirements about alcohol consumption prior to duty commencement, and a statement prohibiting crew members from consuming alcohol while on duty. The level of detail included in the exposition will depend upon the nature of the operation.

3.7.1.4 Smoking on board the aeroplane

The exposition must contain guidance on when an operator prohibits smoking onboard its aeroplane. The level of detail included in the exposition will depend upon the nature of the operation.

3.7.1.5 Crew member safety during turbulence

The exposition must include a policy of how the PIC will ensure the safety of crew members during turbulence encounters. To be suitable, the exposition should provide guidance to the PIC on when crew are required to return to the crew stations and fasten their seat belts. Guidance should include the use of the public address system to advise the crew of the requirement to discontinue cabin service. Guidance should also include a process for the pre-flight briefing to include the expected flight conditions.

3.7.1.6 Crew member to occupy crew station

The exposition must state when flight crew members are to be present on the flight deck, and when they must wear a seatbelt or a seatbelt and shoulder harness.

The exposition must also state when other crew members are to occupy their assigned crew stations with seatbelt and harness secured. The level of detail included in the exposition will depend upon the nature of the operation.

3.7.2 Flight preparation

3.7.2.1 Weather assessment

The exposition must detail the procedures an operator uses to obtain weather assessments for flight planning. Chapter 7 of the Part 91 MOS prescribes the specific information required for planning. The size and complexity of the operation will dictate how an operator meets this requirement. Suitable methods may vary from the use of NAIPS through to the employment of specialists within a dispatch department liaising with international meteorological information providers.

MOS 91.7.03(3) also specifies the requirements of a Part 121 Operator in the event an authorised weather forecast cannot be obtained prior to a flight's departure. The exposition must clarify PIC actions in this circumstance.

3.7.2.2 Alternate aerodromes

An exposition must detail how an operator addresses the planning requirements described in Chapter 4 of the Part 121 MOS, including the selection of alternate aerodromes when necessary. This information will essentially form part of an operator's fuel planning policy. Inspectors should be aware that Division 2 of Chapter 4 of the Part 121 MOS prescribes requirements of destination alternate and take-off alternate aerodromes. EDTO alternate aerodrome requirements are prescribed in the Division 2 of the Chapter 4 of the Part 121 MOS for those operators undertaking EDTO. Use Protocol suite (OPS.06) Extended diversion time operations.

AC 121-11[2] provides guidance for assessing a suitable planning policy. Operational Variations (OVs) are permissible if an operator holds a separate approval under regulation 121.010. Section 4.21 of the Part 121 MOS lists the process an operator must undertake to gain the approval of the operation variation.

An application for an OV to use the Part 91 alternate aerodrome criteria during a Part 121 operation does **not** meet the intent of the regulations. Any such request must be referred to the Flight Standards Branch for a response.

3.7.3 Flight planning

An exposition must include details of the operational flight plan (OFP) the operator uses for dispatching flights as prescribed by the Chapter 5 of the Part 121 MOS. An inspector should ensure the operator's OFP includes each item listed in section 5.01 of the Part 121 MOS at a minimum. A suitable exposition should also provide a decode of each OFP item and its method of calculation. The complexity and nature of the operation will determine the detail in the information. An inspector must determine whether the information provided in the exposition is suitable given the complexity of an operation.

Subsections 5.01(3), (4), (5) of the Part 121 MOS address the nomination of take-off and destination alternate aerodromes on the OFP. Some operators may include a procedure for notifying the PIC, prior to take-off, of the nomination of these alternate aerodromes when they are required, and circumstances have meant they have not been included on the OFP. An inspector must determine if that process is suitable for the complexity of the operation.

The exposition must also include procedures for the PIC to record the information required within the OFP and return it to the operator for its record storage.

An exposition must detail the system an operator uses to provide the flight planning information, listed in regulation 121.180 and section 5.01 of the Part 121 MOS, to the PIC and any person involved with the dispatch and operational control of a flight. The size and complexity of the operation may determine the method an operator chooses to meet the requirement. Some operators may contract a third party to provide dispatch information and exercise operational control. To meet present and suitable requirements, an inspector must check that the operator has a plausible and reliable system for making the information available to each person involved with the operational control of the flight, and also sending the information to its aeroplanes during flight. It should also include an alternative system of contact in the case of outage of the primary system. If the operator is engaged in international operations, suitable procedures should include how the information is accessed at international locations.

3.7.4 Flight rules

An operator may rely on the AIP or foreign equivalent to ensure flight crew comply with the requirements of airspace listed in the section 91.11 of the Part 91 MOS. Some operators may provide additional instructions to flight crew or impose additional operating restrictions on their aeroplane during Part 121 air transport operations within specific airspace. If an approval involves NATS HLA, use Protocol suite (OPS.07) NAT HLA Flight Operations.

A suitable exposition should also contain a statement authorising PICs to deviate from a clearance where an aeroplane and/or occupant safety is compromised by the clearance and include subsequent follow up actions.

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[2] At the time of publishing this principle, AC 121-11 is still under development.

3.7.4.1 Navigation and altimetry requirements

The operator will normally rely on the AIP or other approved documentation for the provision of information that is basic instrument flight rules (IFR) knowledge requirements. However, the exposition must include the specific procedures required to operate in PBN airspace. The inspector will use Protocol suite (OPS.04) Navigation authorisation to assess the suitability of the exposition. If operations are planned within the North Atlantic High-Level Airspace the inspector will use Protocol suite (OPS.07) NAT HLA Flight Operations to perform the assessment.

If operations will be conducted above the transition altitude, the exposition should provide instructions to flight crew on the selection of standard QNH across all altimeters when passing the transition altitude on climb and the area or destination QNH when passing the transition level on descent. To be suitable the procedure should include a cross check function to ensure:

- the correct QNH has been set on each altimeter
- the altimeter meets the accuracy requirements.

The exposition must include the procedures to be followed in the event of an ACAS resolution advisory (ACAS RA). Normally the flight crew will follow the OEM instructions. To be suitable there must be a clear instruction to flight crew that compliance with an ATC clearance is not required during an ACAS RA event, however they should advise ATC as soon as possible and return to the clearance when safe to do so.

The exposition must also provide guidance to flight crew on contingency procedures in various airspaces in the event of a radio communication failure. Some operators may provide specific route briefing cards detailing such procedures while others may rely on NAA approved documentation such as Jeppesen.

3.7.4.2 Take-off and landing minima

An exposition must detail how the operator calculates the minima it uses for both take-off and landing at destination and alternate aerodromes. To determine present and suitable requirements, an inspector must ensure each item listed at Chapter 15 of the Part 91 MOS for qualifying aeroplanes is included. If an operator states within the exposition that they do not conduct certain procedures such as circling, or they do not hold specific approval for a procedure such as low visibility operations (LVO), they will not necessarily include information in the exposition regarding calculation of minima for those procedures.

3.7.4.3 Minimum height rules and lowest safe altitudes

It's not expected the operator repeat the information provided in the AIP, but rather, how they comply on certain routes.

Example

For a multi-engine aeroplane, when considering the minimum height, the operator must consider the OEI service ceiling for the prevailing conditions to determine that the particular route is suitable for the flight.

Single-engine aeroplanes must comply with the prescribed single-engine aeroplane requirements. Use Protocol suite (OPS.03) Prescribed single-engine aeroplanes.

Where required an exposition should describe how the operator determines the lowest safe altitudes for its flight planned routings. To determine present and suitable requirements, an inspector needs to ensure the exposition includes procedures for establishing the following:

- lowest safe altitudes for routes where lowest safe altitudes are published
- lowest safe altitudes for routes where lowest safe altitudes are not published.

An international operator may choose to use procedures for calculating lowest safe altitudes prescribed in the AIP of the controlling NAA of that route. A suitable exposition should describe this process.

If the operator uses Flex Tracks or User Preferred Routes (UPRs), then a suitable exposition should describe the calculation of lowest safe altitudes on those route segments.

Note: Part 173 MOS contains guidance.

3.7.4.4 Low visibility operations

Use Protocol suite (OPS.12) Low visibility operations for the assessment.

The operator's exposition must include instructions for PICs regrading an IFR approach ban as described in Chapter 16 of the Part 91 MOS. To determine present and suitable requirements, the inspector should ensure the operator includes the following:

- definition of an IFR approach ban
- approach-ban procedures a PIC must follow.

Approach ban definitions may vary between NAAs. International operators should include instructions in the exposition for PICs to follow the approach ban of the respective NAA.

3.7.4.5 Stabilised approach

The operator's exposition must include operator policy and procedures for conducting stabilised approaches to aerodromes. To be suitable, the inspector should ensure the exposition includes the following:

- stabilised approach parameters and criteria, including a defined stabilisation position or height
- flight crew actions prior to, and after passing, the stabilisation position or height
- an operator go-around/missed approach policy.

Note: Briefing Note 7.1 – Stabilized Approach of the Flight Safety Foundation ALAR Tool Kit contains guidance.

3.7.5 Aerodromes

The operator's exposition must include procedures for the assessment of aerodromes to ensure they meet the requirements of the regulations and operations can be conducted safely. In determining that sufficient information is provided the inspector should consider the following for each aeroplane type operated:

- statement of the performance category of each type of aeroplane
- statement that flight crew operate the aeroplane within the specified performance category or higher, unless the operator holds an approval under regulation 91.045 to operate in a lower performance category at an aerodrome
- when the operator holds an approval under regulation 91.045 to operate an aeroplane in a lower performance category at an aerodrome, details and conditions of the approval
- procedure to ensure the aerodrome is suitable for the operator's aeroplane(s) to take-off and land
- procedure to ensure the aerodrome complies with Part 139 of CASR where required
- procedures to satisfy the requirements of subregulation 121.210(1). The operator's exposition must include procedures for determining that aeroplane are parked in such a way as not to create a hazard. Operator procedures should consider the apron survey and marked parking positions to ensure they are suitable and provide sufficient wing clearance. Apron surfaces, entry and exit taxiways must be suitable for the aeroplane performance classification number.

3.7.5.1 Operations with an unserviceable visual approach slope indicator

To conduct operations to an aerodrome without a serviceable visual approach slope indicator, the operator's exposition must detail policies and procedures to ensure safe operations. In considering whether the policies and procedures are suitable the inspector should consider the following:

- availability of electronic slope guidance

- on-board aeroplane systems that provide flight path angle guidance
- functioning GPWS/EGPWS systems
- restricted weather conditions
- additional stabilised approach requirements
- flight crew training.

3.7.5.2 Operations from an uncertified aerodrome

Operations from uncertified aerodromes require the operator to provide information to the flight crew to ensure operations can be conducted safely. If the aerodrome is published in the AIP, the operator's exposition will provide guidance on whether that aerodrome is suitable for the aeroplane type and any special procedures or restrictions to ensure obstacle clearance. If the aerodrome is not published in the AIP, the exposition will need to publish all the information required by regulation 121.210(2)(a-i).

To be suitable, the inspector should be satisfied that the operator has procedures for obtaining and verifying the information required. In addition, the operator must have a process to regularly review the aerodrome to ensure that provided information has remained up to date. The exposition should detail the communication requirements between the aerodrome owner and the operator on any matters that may affect safe operations. The operator's exposition should include an internal notice to pilot process to provide temporary advice including the non-availability of the aerodrome.

3.7.5.3 Passenger safety

An operator's exposition needs to provide instructions to personnel on the management of passengers while boarding or disembarking from an aeroplane whether via an aerobridge or the apron.

To be suitable, the procedures should cover, at a minimum, the following:

- supervision of the passengers by the operator's personnel including
  - the prevention of overcrowding at boarding bridges, and or aeroplane stairs
  - passengers follow the correct pathways to and from the aeroplane
  - assisting passengers with special needs
  - compliance with no smoking areas
  - ensure the passengers are not intoxicated or affected by psychoactive substances
  - ensure carry-on baggage limitations
- if boarding via the apron
  - weather conditions
  - jet/blast or prop wash
- ensure passengers take their assigned seats.

3.7.5.4 Narrow runway operations

Regulation 121.220 applies to the operator wishing to use runways that are defined as narrow runways. The method for calculating a narrow runway is contained in the section 6.02 of the Part 121 MOS. The inspector must ensure the operator's aeroplanes have flight manual instructions included for operation of the aeroplane on narrow runways.

The operator's exposition must prescribe procedures for their flight crew to take-off from, and land on, narrow runways. It must also prescribe training procedures for flight crew to conduct take-offs and landings on narrow runways. To be suitable, the procedures will be in accordance with the nature of the operation and have consideration for the type of aeroplanes operated, the aerodromes the operator intends to use, and the level of crew experience. Inspectors should consider factors such as nominal crosswind limits when reviewing the exposition. Flight crew training should include:

- visual illusions

- crosswind operations
- rejected take-off
- engine failure after V1.

3.7.6 Fuel requirements

An operator's exposition must include procedures to ensure its aeroplanes are only refuelled with the approved type of fuel, and not with any fuel that is prohibited for use by the manufacturer. The exposition must also include procedures to ensure that their aeroplanes are not loaded with contaminated or degraded fuel. If the operator uses different fuel grades, for example JetA or JetA1, the procedures should take into account different fuel freezing temperatures.

The procedures may be contained in one document, or several documents, including the AFM. Procedures must provide instructions as to which personnel are responsible for determining whether the fuel is degraded or contaminated. When fuel checks are conducted by a person other than the PIC then the procedure must include how the person advises the PIC that fuel checks have been completed.

3.7.6.1 Oil requirements

The exposition must include instructions to the PIC on the minimum oil quantity required to complete a flight safely. If the flight crew are required to refill oil then the exposition should provide instructions for the servicing of the oil quantity. The pilot maintenance program should include training for a flight crew member required to service engine oil.

3.7.6.2 Procedures for refuelling

An operator must include procedures to ensure aeroplane refuelling is conducted safely. Depending on the complexity and nature of the operation, this may include delegation of duties to individuals involved in the fuelling. This will include ensuring any fuelling contractors know the procedures established by the operator, and check that they conduct fuelling in accordance with those procedures. To meet present and suitable requirements, the inspector should check the procedures adequately cover the requirements mentioned in Division 91.D.6 of CASR. The procedures must also be distributed to third party contractors employed to fuel the operator's aeroplanes. Finally, the procedures must be appropriate for the complexity and nature of the operation.

The operator may fuel an aeroplane while non-crew members are boarding, onboard, or disembarking. Their exposition must include both normal and emergency communication procedures associated with the aeroplane fuelling crew members and ground handling personnel are to follow. To be suitable, the inspector should ensure the procedures are appropriate for maintaining the safety of all persons onboard and in the vicinity of the aeroplane, along with the aeroplane itself. The operator's exposition must also include procedures to meet regulation 91.515, regarding detection of fuel vapour in an aeroplane during fuelling. To be suitable, the procedures must include more than a directive to cease fuelling. They should address:

- communication with ground handling personnel
- actions required of ground personnel
- cessation and removal of ground handling equipment in close proximity to the aeroplane
- disembarkation of non-crew members onboard
- operation of an auxiliary power unit if fitted
- communication with ATC and aerodrome fire services in the event of a fire risk.

Finally, the operator's exposition must include a policy for the operation of low-risk electronic devices in accordance with subregulation 121.240(c). This may vary from prohibiting the use of such devices through to an appropriate method of communicating to persons in the cabin the types of devices the operator permits and when their operation must cease.

HOT refuelling

The AFM must permit HOT refuelling. Before authorising the hot fuelling of an aeroplane, the operator must develop procedures to ensure that the fuelling can be carried out safely. To be suitable, the procedures should include:

- how the refuelling will be conducted considering the aeroplane position in relation to the refuelling point
- any specific requirements in the aeroplane's flight manual or equivalent data
- any requirements of the aerodrome operator

procedures for communication between the PIC and the person refuelling the aeroplane.

3.7.6.3 Fuel monitoring

An operator's exposition must include a policy that complies with regulation 121.235 and Chapter 7 of the Part 121 MOS regarding the carriage of fuel. The policy must address each of the following:

- the amount of fuel that must be carried onboard an aeroplane for a flight
- calculation of the EDTO fuel requirement component if an operator conducts flight operations beyond the aeroplane threshold distance, refer to Protocol suite (OPS.06) Extend diversion time operations
- procedures for monitoring the amount of fuel onboard the aeroplane during a flight
- procedures to be considered in determining whether an aeroplane has sufficient fuel to complete a flight to the destination safely with the required reserve amount remaining
- procedures to be followed when the fuel reaches certain specified amounts in flight
- the regulatory requirement for a PIC to adhere to the approved operator fuel policy.

Procedures must include definitions for the declaration of minimum fuel and mayday fuel.

A suitable exposition should also include components such as, but not limited to:

- definitions of phases of a flight
- definitions of types of alternate aerodromes and their effective minima when used as a departure, a destination, or an EDTO alternate aerodrome
- definitions of each component of the fuel requirements
- an indication of how the fuel consumption data is obtained, including climb, cruise and holding data
- details of any in-flight replanning calculations and procedures the operator uses
- details of any special planning procedures that an operator uses.

To be suitable, the inspector must ensure that the operator's procedures are appropriate for the nature of its operation. Chapter 7 of the Part 121 MOS specifies items that the operator must incorporate into its fuel carriage policy. The inspector should check that the procedures account for each of these requirements.

The operator may apply for operational variations (OVs) to the Part 121 MOS fuel requirements. Section 7.09 of the Part 121 MOS describes when OVs are permissible. The operator must include evidence of documented in-service experience, or a permissible safety risk assessment, as part of the submission when applying for an OV. The inspector must ensure that the OV will maintain or improve the level of safety of the Part 121 MOS requirements. ICAO Doc 9976, listed below, provides guidance on acceptable OVs.

> Note: ICAO Doc 9976 – Flight Planning and Fuel Management (FPFM) Manual contains additional guidance.

3.7.7 Passenger transport and medical transport

3.7.7.1 Passenger and crew member restraint

An exposition must include instructions for crew members to ensure that any seat on the aeroplane that is to be occupied by a person has a seatbelt or shoulder harness. The section 20.01 of the Part 91 MOS prescribes circumstances that are an exception to this requirement. To be suitable, the exposition should include procedures for crew members to check on the presence and serviceability of the seatbelt and/or shoulder harness during a pre-flight inspection. The procedures should be appropriate to the nature of the operation.

The exposition must include procedures to ensure any infant or child carried on the aeroplane is restrained. Section.20.02 of the Part 91 MOS prescribes instructions on how an infant or child must be restrained. To be suitable, the exposition should include the CASA definition of an infant and a child, along with procedures for crew members to ensure that the infant or child is restrained in accordance with the section.20.02 of the Part 91 MOS. The procedures should be appropriate to the nature of the operation.

An exposition must include procedures to ensure a PIC issues safety directions for passengers before taxiing, take-off or landing to ensure they have:

- their seatbelt or shoulder harness fastened
- their seat back upright or in a designated position permitted by the AFM
- attachments such as tray tables or footrests stowed, or in a designated position permitted by the AFM.

The procedures should be appropriate for the complexity and nature of the operation. A suitable procedure may include the use of illuminated signs. The procedures may be within a tailored Standard Operating Procedure manual, or they may be included within a cabin policy and procedures manual. However, they must address how the PIC conveys the required information to the passengers.

3.7.7.2 Consumption of alcohol or psychoactive substances

An exposition must include guidance for crew members to ensure that a passenger does not consume alcohol onboard the aeroplane except in the following circumstances:

- when alcohol is provided to the passenger by a crew member
- no other crew members are onboard, and the PIC has permitted the passenger to consume the alcohol.

The exposition must also include directions that a crew member must not provide alcohol to a passenger if there are reasonable grounds to suspect that the passenger's behaviour may present a hazard to the aeroplane or other occupants onboard.

The inspector should ensure that the procedures are in accordance with the size, complexity, and nature of the operation. For some complex operations, the procedures may be contained within a cabin policy and procedures manual.

An operator must have a policy included in the exposition prohibiting passengers from boarding the aeroplane if they are suspected of being affected by alcohol or psychoactive substances. Although the regulation refers specifically to crew members, if ground staff are employed to assist in the boarding process the policy should also extend to the ground staff. To be suitable the exposition should provide guidance to crew members and ground staff on what observed behaviours indicate the passenger is affected by alcohol or psychoactive substances.

3.7.7.3 Dangerous goods

If an operator intends to consign and carry dangerous goods by air, the assessment must be conducted by a dangerous goods inspector (DGI).

Notes:

- Regulations 92.020, 92.025, 92.030 and 92.035 make it a requirement for operators and persons to follow the *Technical Instructions for the safe transport of dangerous goods by air* (ICAO Doc 9284).
- For the inspection of the passenger terminal, inspectors should use Checklist (OPS.26) Ground operations – port inspection.

Provision of information to passengers and crew

An operator's exposition must include a process to notify passengers about the dangerous goods they are forbidden to carry onboard an aircraft. If the ticket purchase and/or issuance of a boarding pass can be completed by a passenger without involvement of company personnel, the operator's notification system must include an acknowledgement by the passenger that they have been presented with information about dangerous goods they are forbidden to carry onboard the aircraft. The information must be provided to passengers:

- at the point of ticket purchase or, if this is not practical, made available to passengers in another manner prior to being issued with a boarding pass; and
- when issued the boarding pass or, if no boarding pass is issued, prior to boarding the aircraft.

Note: The information may be provided in text or pictorial form, electronically or verbally, as described in the exposition.

Dangerous goods signage in passenger terminals

The operator, the operator's handling agent, or the owner or operator of an airport terminal, must ensure that information on the types of dangerous goods that passengers are forbidden to carry on board an aircraft is communicated effectively to them. This information, or notices, must be sufficient in number and prominently displayed in visible location(s) at each of the following places at an airport:

- where tickets are issued
- where boarding passes are issued
- where passenger baggage is dropped off and collected
- where aircraft boarding areas are maintained
- at any other location where passengers are issued boarding passes and/or checked baggage is accepted.

This information must include visual examples of dangerous goods forbidden from transport onboard an aircraft, including batteries.

Dangerous goods carried by passengers and crew

The exposition should include information about the dangerous goods that are permitted to be carried by passengers and crew. To be suitable, the exposition must include a statement advising crew that passengers and crew are forbidden to carry dangerous goods as carry-on baggage, checked in baggage, or on their person, unless the dangerous goods are permitted in accordance with Table 8-1 of ICAO Doc 9284 and for personal use only.

Note: The exposition should include a copy of the current version of Table 8.1 from ICAO Doc 9284 or some other method of providing equivalent information (e.g. the industry equivalent Table 2.3.A contained within the International Air Transportation Association (IATA) Dangerous Goods Regulations (DGR)).

Passenger check in procedures

Passengers may carry certain dangerous goods, with the approval of the operator, some of which will require the PIC to be notified. The exposition should articulate the process by which the operator approval is given.

Check-in staff must be adequately trained to assist passengers in identifying and detecting dangerous goods, other than those permitted to be carried onboard the aircraft.

Check-in staff should seek confirmation from a passenger that they are not carrying dangerous goods that are not permitted to be carried onboard the aircraft. Where there are suspicions that an item may contain dangerous goods, check-in staff should seek further confirmation about the contents of the item. Many innocuous-looking items may contain dangerous goods.

If excess baggage is consigned as cargo, check-in staff should seek confirmation from the passenger, or a person acting on behalf of the passenger, that the excess baggage does not contain dangerous goods that are not permitted.

3.7.7.4 Carriage of a restricted person

The operator's exposition must include procedures for:

- carrying a restricted person on their aeroplanes
- informing the PIC about the carriage of a restricted person on the flight.

The exposition should provide guidance as to who is considered a 'restricted person' and, where required, who is the person responsible for supervising them. To be suitable, procedures should address such matters as the consumption of alcohol by the restricted person and if required, the supervising person. The inspector must determine that the procedures are suitable for the type of air transport operation.

3.7.7.5 Carry-on baggage

An exposition must include procedures regarding carry-on baggage for each of the following:

- how to determine its size and weight
- where it may be stowed
- how it may be securely stowed
- provision of instructions to passengers about securely stowing the carry-on baggage before take-off, before landing, and at other times as directed by the pilot.

Suitable procedures will depend upon the operator's aeroplanes and the nature of the operation, however, will include instructions for personnel supervising passenger boarding on how to assess carry-on baggage and what to do with baggage that does not meet the operator requirements.

3.7.7.6 Aisle to remain unobstructed

Regulation 121.260 applies to operators who have aeroplanes that are required to carry cabin crew in accordance with regulation 121.630. The exposition must include procedures and guidance for ensuring the aisle of an aeroplane remain unobstructed during flight unless by a person, or by cabin service equipment when service is being provided to passengers. Suitable procedures may also include instructions that prevent groups of passengers congregating in such a manner as to obstruct the aisles.

3.7.7.7 Passenger service equipment

Regulation 121.265 applies to operators that carry passenger service equipment on their aeroplanes which includes medical transport special equipment and containers. The exposition must include procedures and directives to ensure that during taxi, take-off, and landing:

- a piece of passenger service equipment that could interfere with an emergency evacuation remains secured in a stowed position
- an item of galley equipment or a serving cart is secured to prevent it from moving in the emergency landing conditions set out in the aeroplane's type certification basis.

To be suitable, the inspector should determine the procedures are appropriate considering:

- aeroplane type
- design of the galley and passenger service equipment, and its stowage areas
- complexity of the operation
- nature of the operation.

3.7.7.8 Passengers assigned seats in an emergency exit row

Regulation 121.270 applies to the operator who has aeroplanes that are required to carry cabin crew in accordance with regulation 121.630. The exposition must include procedures to ensure that a crew member is satisfied that each passenger assigned emergency exit row seat will assist in an evacuation if required. To be suitable, the exposition will provide guidance to cabin crew on how to assess the suitability of a passenger.

For the passenger to be considered suitable the exposition should provide instructions that consider:

- English language proficiency
- passenger mobility
- passenger agreement to assist in the event of an aeroplane evacuation.

The operator may have a procedure to assess suitability of a passenger to be assigned an emergency exit row seat at the time of passenger check in, however the final assessment should be made by the responsible crew member. The exposition should include instructions to the responsible crew member to brief the passenger on the operation of the emergency exit.

Regulation 121.375 requires that emergency exit rows must be unobstructed during taxi, take-off, landing, or when the PIC directs.

> Note: An emergency exit is not taken to be obstructed by a passenger occupying a seat adjacent to the exit or a seat in a row of seats adjacent to the exit.

The exposition should include instructions to crew to ensure emergency exit row is kept clear. Instructions should include, but are not limited to:

- passenger carry-on baggage
- cabin service equipment.

3.7.7.9 Carriage of passengers with reduced mobility

The exposition must include procedures and instructions for the carriage of passengers with reduced mobility. To determine present and suitable requirements, the inspector should confirm the exposition includes procedures to ensure:

- the passenger does not occupy a seat such that they will hinder crew members from safety duties, access to emergency equipment, or hinder the emergency evacuation of the aeroplane
- the PIC or the senior cabin crew member is informed that the passenger will be carried on the aeroplane before the flight begins
- a crew member asks the passenger, or a person accompanying the passenger, before the flight begins, the best way to help the passenger in an emergency evacuation.

Suitable procedures will depend upon the operator's type of aeroplane and the nature of the operation.

3.7.7.10 Passenger briefing cards

The exposition must include procedures to ensure that safety briefing cards are available to all passengers on the aeroplane when a flight begins. Suitable procedures will depend upon the crew members carried on the aeroplane, and the configuration of the aeroplane.

The inspector must also determine that the briefing cards are suitable by ensuring the following:

- the briefing card must include the information prescribed in subsections 8.01(1) and (2) of the Part 121 MOS
- the briefing card may contain other information, but it is limited to an item relevant to the type and model of the aeroplane, and an item relevant to the safety of the aeroplane and its passengers.

3.7.7.11 Passenger briefing

The operator's exposition must include the following:

- procedures to ensure that passengers receive safety briefings and instructions or demonstrations before take-off
- procedures for briefing passengers on what they should do if an emergency occurs on the aeroplane during flight.

To determine present and suitable requirements, the inspector must ensure that the safety briefings, instructions, or demonstrations:

- meet the requirements of sections 8.03 and 8.04 of the Part 121 MOS
- do not include other information irrelevant to the type and model of the aeroplane, or irrelevant to the safety of the aeroplane and its passengers
- include information for a passenger seated in an exit row who will be required to operate the emergency exit and assist in the use of the exit.

The inspector must ensure that the procedures are suitable for the complexity and nature of the operation, and the type of aeroplane and its cabin configuration.

3.7.8 Carriage of cargo

3.7.8.1 Cargo restraint

Regulation 91.585 applies to operators who intend carrying cargo on flights, other than the items listed under subregulation 91.585(1). The operator's exposition must include procedures to ensure that the cargo is either:

- restrained by equipment approved under regulations 21.305 or 21.305A
- securely stowed in a place on the aeroplane designed and approved under Part 21
- for foreign registered aeroplane operating in Australian territory, restrained or stowed in accordance with requirements under the law of the aeroplane's Sate of registry or State of the operator.

The exposition should also include a statement that the PIC is responsible for ensuring the cargo is restrained in accordance with the regulations.

To be suitable, the inspector should ensure the procedures are appropriate for the size and complexity of the operation, and also appropriate for the type of aeroplanes operated.

3.7.8.2 Where cargo maybe loaded

Regulation 91.600 applies to operators who carry cargo on flights. The operator must include procedures in its exposition to ensure that cargo is not carried in a position on its aeroplanes that will:

- damage, obstruct, or cause the failure of controls, wiring, pipelines, or other equipment essential to the safety of the aeroplane
- exceed the load limitations for the floor structure or other load bearing components as set out in the flight manual instructions or a placard on the aeroplane
- obstruct an aisle (other than passenger service or galley equipment on a temporary basis)
- obstruct or restrict access to an emergency exit.

The exposition should also include a statement that the PIC is responsible for ensuring the cargo is carried in accordance with the regulations including Part 92 dangerous goods regulations.

To be suitable, the inspector should ensure that the procedures are appropriate for the size and complexity of the operation, and also appropriate for the type of aeroplanes operated.

Note: An operator may apply for or hold an approval under regulation 91.045 to carry cargo in a manner that obstructs or restricts access to an emergency exit.

3.7.8.3 Cargo carried in a compartment requiring crew access

Regulation 91.605 applies to a flight that:

- requires more than one flight crew member in accordance with the AFM instructions or other regulatory requirements
- carries cargo in a compartment that would require crew member access to enter and extinguish a fire if one occurred in the compartment.

The operator must include instructions in their exposition to ensure that a crew member can enter and access all areas of the compartment to extinguish any fire with a hand-held fire extinguisher. The inspector should determine suitable based on the operator's type of aeroplanes, the nature of the operation, and whether the instructions are appropriate for a crew member at any time during a flight.

3.7.8.4 Cargo carried on an unoccupied seat

Regulation 91.610 applies to a flight that carries cargo on an unoccupied seat in the aeroplane. The operator must include a procedure or instruction in its exposition to ensure that any cargo carried on the seat does not exceed 77kg or the manufacturer's seat weight limit, and is restrained so that it doesn't interfere with the safe operation of the aeroplane. The inspector should determine suitable based on the operator's type of aeroplanes, the nature of the operation, and whether the instructions are appropriate for the persons involved with loading the cargo onto the aeroplane.

Regulation 91.615 applies to cargo other than carry-on baggage weighing less than 9kg that is stowed under a seat or in a place designed for its carriage, or cargo carried on an unoccupied seat in accordance with regulation 91.610. The operator must include instructions in their exposition to ensure the cargo is only carried in a place on the aeroplane that has a placard with instructions for carrying cargo in that place. The inspector should determine suitable based on the operator's type of aeroplanes, the nature of the operation, and whether the placard instructions are clear.

3.7.8.5 Dangerous goods

If an operator intends to consign and carry dangerous goods by air, the assessment must be conducted by a dangerous goods inspector (DGI).

Where an operator does not intend to carry dangerous goods consigned as cargo, the exposition must provide guidance as to what is permitted to be carried on the aircraft. This may include the carriage of certain items that are 'excepted' from complying with all of the requirements of ICAO Doc 9284 – such as the exceptions for dangerous goods of the operator, or the general exceptions.

Consult a DGI to assist with the review of any dangerous goods exceptions detailed in an operator's exposition.

Exceptions for dangerous goods of the operator

There are a number of exceptions for dangerous goods of the operator (more commonly known as company materials/COMAT), refer ICAO Doc 9284 1;2.2.

They include:

- articles and substances which would otherwise be classified as dangerous goods but are required to be aboard the aircraft in accordance with pertinent airworthiness requirements and operating regulations, or are authorised by the State of the operator to meet special requirements

- aerosols, alcoholic beverages, perfumes, colognes, liquefied gas lighters (excluding non-refillable gas lighters and those lighters liable to leak when exposed to reduced pressure) and portable electronic devices containing lithium metal or lithium ion cells or batteries (provided that the batteries meet the provisions of item 1 in Table 8.1 of ICAO Doc 9284) that are carried aboard an aircraft by the operator for use or sale on the aircraft during the flight, or series of flights
- dry ice intended for use in food and beverage service aboard the aircraft
- alcohol-based hand sanitizers and cleaning products that are carried aboard an aircraft by the operator for use on the aircraft during the flight, or series of flights, for the purposes of passenger and crew hygiene
- electronic devices (such as EFBs), PEDs and credit card readers containing lithium metal or lithium ion cells or batteries, as well as spare lithium batteries for such devices, that are carried aboard an aircraft by the operator for use on the aircraft during the flight, or series of flights (provided that the batteries meet the provisions of item 1 in Table 8.1 of ICAO Doc 9284). Spare lithium batteries must be individually protected to prevent short circuits when not in use. Conditions for the carriage and use of these electronic devices, and for the carriage of spare batteries, must be provided in the operations manual and/or other appropriate manuals that will enable flight crew, cabin crew and other employees to carry out the functions for which they are responsible

Unless CASA approves otherwise, articles and substances intended as replacements to any of the above must be transported in accordance with ICAO Doc 9284. An operator must be authorised to carry dangerous goods as cargo to transport any replacement items of dangerous goods of the operator or COMAT. See section 3.3.1 of this principle for further information.

General exceptions

In accordance with ICAO Doc 9284 1;1.1.5, there are some general exceptions for dangerous goods that may apply to air transport operations and therefore carried under specific circumstances provided that the operator meets certain criteria. The specific circumstances that dangerous goods may be carried under the general exceptions are when the dangerous goods:

- provide, during flight, medical aid to a patient, or to preserve tissues or organs intended for use in transplantation, when those dangerous goods and have been placed on board with the approval of the operator or form part of the permanent equipment of the aircraft when it has been adapted for specialised use, providing that:
  - gas cylinders have been manufactured specifically for the purpose of containing and transporting that particular gas
  - equipment containing wet cell batteries is kept and, when necessary, secured in an upright position to prevent spillage of the electrolyte
  - lithium metal or lithium ion cells or batteries meet the provisions of ICAO Doc 9284 2;9.3 and spare lithium batteries are individually protected so as to prevent short circuits when not in use
- are required for the propulsion of the means of transport or the operation of its specialized equipment during transport (e.g. refrigeration units) or that are required in accordance with the operating regulations (e.g. fire extinguishers) (as per ICAO Doc 9284 1;2.2)
- are contained within items of excess baggage being sent as cargo, provided that:
  - the excess baggage has been consigned as cargo by or on behalf of a passenger
  - the dangerous goods are only those that are permitted by, and in accordance with, ICAO Doc 9284 8;1.1.2 and Table 8-1 dangerous goods permitted to be carried in checked baggage by passenger or crew
  - the excess baggage is marked with the words 'Excess baggage consigned as cargo'.

Dangerous goods transported for the purposes of providing medical aid to a patient, or to preserve tissues or organs for transplantation, may be carried on flights made by the same aircraft for other purposes (e.g. training flights and positioning flights, prior to or after maintenance), provided the operator has documented, specific information in the exposition regarding:

- stowage and securing of the dangerous goods transported during take-off and landing and at all other times when deemed necessary by the PIC

- the requirement for dangerous goods to be under the control of trained personnel during the time when they are in use on the aircraft (e.g. Doctors, Nurses etc).

Where the operation or activity requires positioning of the dangerous goods to and/or from the location of intended use, the dangerous goods may be carried on a flight (if it is impracticable to load or unload the dangerous goods immediately before or after the flight). However, the following additional conditions should be detailed within the operator's exposition or dangerous goods manual:

- The dangerous goods:
  - must be capable of withstanding the normal conditions of air transport (i.e. not listed as forbidden for air transport in Table 3-1 of ICAO Doc 9284 or, in the instance of excess baggage, the dangerous goods are permitted in accordance with ICAO Doc 9284 8;1.1.2 and Table 8-1)
  - must be appropriately identified (e.g. by marking or labelling)
  - may only be carried with the approval of the operator
  - must be inspected for damage or leakage prior to loading
  - are loaded under the supervision of the operator
  - must be stowed and secured in the aircraft in a manner that will prevent any movement in flight which would change their orientation
  - loading, and the location of, is notified to the PIC (including procedures in the event of a crew change, to ensure that the loading information is passed on to the next crew)
  - are handled by personnel with appropriate task specific training and commensurate with the functions for which they are responsible.
- Instructions to be taken in the event of an emergency, detailing actions provided to personnel
- Requirement to report any accidents or incidents to CASA (in line with the dangerous goods reporting requirements within CASR 92.065).

Dangerous goods signage at cargo acceptance points

An operator, or the operator's handling agent, must ensure they have a sufficient number of notices about the transport of dangerous goods that are prominently displayed and located in visible location(s) at the cargo acceptance points to alert shippers/agents about any dangerous goods that may be contained in their cargo consignment(s). These notices must include visual examples of dangerous goods, including batteries. Inspectors should use Checklist (OPS.26) Ground operations –port inspection.

The exposition must include a process to:

- ensure that all consigned cargo is accompanied by a declaration that the item(s) do not contain dangerous goods
- report a dangerous goods incident or accident, normally done through its SMS.

3.7.9 Instruments, indicators, equipment and systems

3.7.9.1 Use of radios on aeronautical frequencies

A suitable exposition must include a directive or procedure, prohibiting anyone other than a person qualified to do so, from transmitting a radio using a frequency that is:

- prescribed for Air Traffic Services
- used for communications at an aerodrome
- used for emergency communications
- prescribed in the Part 91 MOS.

3.7.9.2 Flight data recorder

The exposition must include guidance for operator personnel or contractors to make the instructions for the preservation of a flight data recorder or combination recorder fitted to the operator's aeroplane and when requested made available for the ATSB.

The exposition must include guidance on the requirements under regulation 91.650 regarding flight data and voice recorder information. To meet present and suitable requirements, the exposition should include:

- information about ATSB reportable matters
- when recordings must be preserved
- the duration recordings must be preserved, when required
- when recordings are not required to be preserved
- guidance on the preservation of recordings as opposed to the recorders
- a directive that crew members and other personnel are prohibited from switching off or erasing flight data recorders or cockpit voice recorders.

3.7.9.3 Navigation authorisation

Use Protocol suite (OPS.04) Navigation authorisation.

3.7.9.4 Weather radar

The operator must include procedures within their exposition for the use of the airborne weather radar. To meet present and suitable requirements, the inspector should determine that the exposition includes the following:

- an operator manual or other detailed information explaining the operation of the weather radar system
- specific operator procedures for the use of the weather radar, including operation prior to take-off
- procedures to be followed in the event the weather radar is unserviceable prior to commencement of a flight or becomes inoperative during a flight.

Operator procedures for aeroplane dispatch without a weather radar may be contained in the approved operator aeroplane MEL. Suitable procedures will depend on the complexity of the operation, along with the nature of the flying the operator undertakes.

3.7.9.5 Head-up display, enhanced vision system, synthetic vision system

The operator must include procedures within their exposition for the use of such equipment whether or not the operator utilises an operational credit for flight crew to use the equipment.

To meet present and suitable requirements, the inspector should determine that the exposition includes the following:

- an operator manual or other detailed information explaining the operation of the equipment
- specific operator procedures for the use of the equipment
- procedures to be followed in the event the equipment is unserviceable prior to commencement of a flight or becomes inoperative during a flight.

Operator procedures for aeroplane dispatch without an item of the equipment may be contained in the approved operator aeroplane MEL. Suitable procedures will depend on the complexity of the operation, along with the nature of the flying the operator undertakes.

3.7.9.6 Protective breathing equipment

An aeroplane must carry protective breathing equipment (PBE) for each flight crew member. Section 11.44 of the Part 121 MOS prescribes requirements for the PBE. To meet present and suitable requirements, the exposition must include procedures for the use of the PBE that are appropriate for the type of PBE fitted to the operator's aeroplane.

3.7.9.7 Handheld fire extinguishes

Section 11.52 of the Part 121 MOS prescribes the requirements of hand-held fire extinguishers carried on an aeroplane, including the number that must be fitted dependent upon the aeroplane maximum operational passenger seat capacity (MOPSC). The exposition must list the number of kits carried. To be suitable, the inspector must determine there is:

- the correct number fitted
- a description of the extinguishing agent in the fire extinguishers
- a description of the location of each extinguisher carried on the aeroplane.

The description of the location should be appropriate for the type of aeroplane, including any differences in interior configuration between aeroplanes in the operator's fleet.

3.7.9.8 First-aid kits

Section 11.53 of the Part 121 MOS prescribes the requirements for first-aid kits, including the number that must be fitted dependent upon the aeroplane MOPSC.

> Note: This section applies on and after 2 December 2023.

The exposition must list the number of kits carried. To be suitable, the inspector must determine there are:

- the correct number fitted
- procedures to ensure the first-aid kits can be readily identified, easily accessed, and contain sufficient supplies for the number of persons on the aeroplane
- procedures for checking the first-aid kits
- procedures for replacing items in the first-aid kits that are used
- a list of the minimum contents that must be in the first-aid kit.

The procedures should be appropriate for the nature of the operation including how the regulatory requirements will be met during international operations. They should also be suitable for the types of aeroplanes the operator has.

3.7.9.9 Universal precaution kits

Section 11.55 of the Part 121 MOS prescribes the requirements for universal precaution kits including the number that must be fitted dependent upon the aeroplane MOPSC. An exposition must list the number of kits carried. To be suitable, the inspector must determine the following:

- correct number of kits are carried
- contents are appropriate for the nature of the operation
- procedures to replenish the kits are appropriate for the nature and location of the operation, including any international operating ports.

3.7.9.10 Emergency medical kit

If required by section 11.54 of the Part 121 MOS to carry an emergency medical kit, an operator's exposition must include the following:

- procedures for checking the medical kit
- procedures for replenishing the medical kit
- procedures for administering and supplying prescription medicines contained within the medical kit, including ensuring that prescription medicines are administered under the authority of a medical practitioner
- a list of the minimum contents the medical kit must contain prior to a flight.

To be suitable, the inspector must determine that the procedures prescribed for each item above are appropriate for the nature of their operations, including the area and duration of the flights the operator undertakes, and that the medical kit contains items appropriate to the nature of the operation.

3.7.9.11 Lifesaving and survival equipment

Regulation 121.335 applies to operators who must carry life rafts onboard their aeroplane in accordance with Subpart 121.K. The exposition must include a list of the minimum life-saving equipment carried on the aeroplane for each life raft.

Regulation 121.340 and the section 11.13 of the Part 121 MOS prescribe when survival equipment must be carried on flights:

- within or over remote areas as defined in v Division 26.15 of the Part 91 MOS
- over water, where life rafts must be carried in accordance with Subpart 121.K of the CASR.

The operator who conducts flights in either or both of the above areas must include the following in their exposition:

- a list of the minimum life-saving equipment for each life raft carried on the aeroplane
- procedures for determining survival equipment appropriate for sustaining life in the areas of operation
- for operators whose aeroplanes must carry life rafts, procedures for determining the pyrotechnic signalling devices required to ensure distress signals can be made as set out in ICAO Annex 2—Rules of the Air.

To be suitable, the inspector must determine that life-saving equipment and survival equipment is appropriate to the nature and location of the operation, and that any requirements for pyrotechnic devices are met.

3.7.9.12 Requirements for the equipment carried

Subsection 121.11.04 of the Part 121 MOS prescribes requirements relating to equipment that must be fitted to or carried on an aeroplane. The equipment must comply with, or be approved under, Part 21 of CASR. The operator's exposition must include details of the procedures it uses to ensure the specified equipment meets this requirement. To be suitable, the inspector should determine that the operator's procedures are appropriate for the complexity of its operation, and the types of aeroplanes operated. The procedures should also account for any contracted maintenance and engineering services that the operator is approved to use.

The Inspector should also note that:

- paragraph 11.04(2) of the Part 121 MOS includes a list of equipment exempted from the requirements
- paragraph 11.04(3) of the Part 121 MOS provides that before a foreign-registered aeroplane begins a flight, the equipment fitted to, or carried on, the aeroplane must have approval from the NAA of its State of registration
- paragraph 11.04(4) of the Part 121 MOS provides additional details about equipment that is fitted to an aeroplane, but is not required under subsection 11.04 of the Part 121 MOS.

If any equipment must be fitted to or carried on an aeroplane for a pilot's manual or visual use in or from the cockpit, the exposition must include procedures to ensure it is visible to and usable by the pilot, when in the pilot's seat on the aeroplane. To be suitable, the inspector should determine that the operator's procedures are appropriate for the nature of the operation, and the types of aeroplanes operated. This may require a physical inspection of the aeroplane.

Any emergency equipment that must be fitted to or carried on the aeroplane for a flight must be easily accessible for immediate use in the event of an emergency. To be suitable, the inspector should determine that the operator's procedures are appropriate for the complexity of the operation, and the types of aeroplanes operated. This may require a physical inspection of the aeroplane.

The operator must have procedures within its exposition to ensure any equipment required to be fitted to an aeroplane under the Chapter 11 of the Part 121 MOS for a flight is operative, unless:

- allowed by section Chapter 11 of the Part 121 MOS
- the equipment:

- is inoperative because of a defect that has been approved as a permitted unserviceability
- is fitted or carried in accordance with a permitted unserviceability.

Equipment contained in an MEL, as required by regulation 121.060 for air transport operations, cannot be unserviceable for a period of time longer than that prescribed for the equipment in Chapter 11 of the Part 121 MOS.

3.7.9.13 Equipment for flight under the IFR

Section 11.07 of the Part 121 MOS lists the flight instrument equipment that must be fitted to an aeroplane for flight under IFR. An operator's exposition must include procedures to ensure that its aeroplanes have this equipment fitted as a minimum prior to conducting an air transport operation. Approval of the equipment will form part of the airworthiness approval for the operator's aeroplanes.

To meet present and suitable requirements, the inspector must determine that the operator has listed this equipment within their exposition as essential for (IFR – Part 121) flight. It must also include procedures for personnel, including contracted maintenance personnel, to determine whether the equipment is functional. These will depend upon the nature of the operation, the types of aeroplanes, aeroplane equipment and furnishings.

Section 11.08 of the Part 121 MOS applies to aeroplane in flight in any class of airspace. To meet present and suitable requirements, the inspector must determine that the operator includes procedures to ensure that its aeroplanes are fitted with at least two independent radiocommunication systems:

- that meet the Part 91 broadcast and listening watch requirements for all areas of the operation, including potential diversions
- that can each receive meteorological information at any time during flight in the area of operations
- with at least one having 2-way voice communication capability
- with at least one able to communicate on 121.5 MHz
- that for a 2-engine aeroplane approved to operate with a maximum diversion time of more than 180 minutes, can
  - provide satellite-based voice communication
  - can provide communication capability between the flight crew and both air traffic services and the operator's approved operational control centre.

Suitable procedures for ensuring an operator's aeroplanes comply with these requirements will depend on the complexity of the operation.

The inspector should also determine that an operator who uses third-party contractors for operational control and/or maintenance has procedures that are appropriate for the inclusion of those contractors.

3.7.9.14 Aeroplane equipment and furnishings

Section 11.09 of the Part 121 MOS lists the navigation equipment that must be fitted to an aeroplane involved in Part 121 air transport operations, along with additional capability requirements of this equipment. Approval of the equipment will form part of the airworthiness approval for the operator's aeroplanes.

The operator must include confirmation in its exposition that its aeroplanes are fitted with the prescribed equipment. To be suitable, the inspector must determine that the operator also includes procedures to ensure, in the event of any navigation equipment failures during flight, the remaining navigation equipment will enable navigation of the aeroplane in accordance with:

- the operational flight plan
- the requirements of air traffic services
- the airspace in which the aeroplane is planned to be flown.

If an operator intends flying in oceanic airspace that requires the use of RNP 2, RNP 4, or RNP 10 navigation specification, a suitable exposition must also include procedures to ensure crew check that at least two long range navigation systems (LRNSs) are operable when entering oceanic airspace. When there are less than 2 LRNSs operable, the exposition must include procedures to ensure the crew inform ATC.

Depending on the nature of the operation, a suitable exposition should also include procedures for flight crew when operating in RVSM airspace with an unserviceable autopilot or unserviceable altitude hold capability.

Section 11.10 of the Part 121 MOS specifies that an aeroplane must be fitted with an automatic pilot with an altitude hold mode and a heading mode, or otherwise have fully functioning dual controls. Approval of this equipment will form part of the airworthiness approval for the operator's aeroplanes. The exposition must include this information.

Section11.11 of the Part 121 MOS specifies requirements for removing precipitation from the windshield of an aeroplane. Approval of this equipment will form part of the airworthiness approval for the operator's aeroplanes The exposition must include this information.

Section 11.12 of the Part 121 MOS specifies requirements of internal doors and curtains fitted in an aeroplane when they are required. Approval of this equipment will form part of the airworthiness approval for the operator's aeroplanes. To meet present and suitable requirements, the inspector must determine that the exposition includes procedures to ensure:

- an internal door or curtain can be secured open
- a crew member has a means of opening a door that a passenger can access and lock
- that placards are placed on an internal door and adjacent to a curtain indicating that each must be secured open during take-off and landing.

3.8 Miscellaneous

3.8.1 Reporting requirements

The exposition must include the following instructions to the PIC:

- Report any hazard to air navigation to air traffic services (ATS) or the aerodrome operator, unless the hazard has previously been reported. To be suitable, it should include guidance on the types of information to report, and a format for reporting.
- Report an emergency situation that threatens the safety of the aeroplane or its occupants to ATS as soon as practicable. The report must also inform ATS of the carriage of any dangerous goods. To be suitable, the exposition should include the types of reports and reporting format.
- For a multi-engine aeroplane, to land at the nearest suitable aerodrome in the event of an emergency that threatens the safety of the aeroplane or its occupants. Inspectors should be aware that the types of emergencies are not restricted to engine failures. AFMs and FCOMS may contain checklists and guidance for PICs to land at the nearest suitable aerodrome in the event of a system failure or emergency.
- To submit a written report to CASA (in an approved form) within 2 business days if a pilot flying an aeroplane has taken action contravening the regulations as a result of an emergency threatening the safety of the aeroplane or its occupants. Some operators may include this instruction within their safety reporting procedures and specify a reduced time for submission as an operator requirement.
- Action to take if intercepted by another aeroplane in flight. Section 23.02 of the Part 91 MOS states that in the event of intercept by another aeroplane in flight, a PIC must comply with the applicable procedures as set out in ICAO Annex 2. An exposition must include this requirement. To be suitable, the exposition may contain this information, or the operator may refer PICs to the information contained in AIP or a similar source document.
- Action to cancel any distress signal made from the aeroplane as soon as practicable after the reason for declaring the distress signal no longer exists. To be suitable, an exposition may contain this information, or an operator may refer PICs to the information contained in the AIP or a similar source document.

3.8.2 Maintenance test flights

Regulations 91.725(1) and (3) specify the limitations for conducting maintenance test flight activities in the aeroplane. The exposition should contain a section describing the circumstances under which maintenance test flight activities are permitted, including the persons permitted to be onboard.

3.8.3 Aeroplanes certified for flight in icing conditions

An exposition must contain procedures to ensure PICs do not commence flight in an aeroplane unless it is free from frost, ice or snow. This is referred to as the 'clean aeroplane' concept. To meet present and suitable requirements, the exposition should include a statement prohibiting PICs from take-off unless the aeroplane meets the 'clean aeroplane' concept, an explanation of the 'clean aeroplane' concept, and information about when formation of frost and ice on aeroplane surfaces may occur. It must also include any aeroplane manufacturer instructions about commencing flight with frost, ice or snow on the aeroplane surfaces, noting that these procedures may differ from, and override, the requirements of subregulations 91.705(1) and (2). Refer to subregulation 91.705(3).

> Note: Subregulation 91.705(2) allows for frost, ice or snow on the top of the fuselage, unless the aeroplane has rear mounted engines, or the presence of the frost, ice or snow presents a hazard to flight.

Regulation 91.705 precludes a PIC from commencing flight in an aeroplane unless it is free from frost, ice or snow, unless they are in compliance with AFM instructions. Regulation 121.345 clarifies requirements to ensure an aeroplane is free of frost or icing prior to flight. The operator's exposition must contain procedures for ensuring PICs inspect an aeroplane for contamination prior to flight if frost or icing conditions exist. To be suitable, the exposition should include one of the following:

- a statement precluding aeroplane operations when ground icing is present, unless in accordance with AFM instructions, along with advice for PICs on understanding the conditions that may lead to icing conditions precluding commencement of a flight
- appropriate procedures for the operator's personnel to carry out ground de-icing and/or ground anti-icing of the aeroplane before flight when required. The procedures should account for all regions where the operator conducts its operations.

An exposition must also include procedures for the use of any anti-ice or de-ice systems fitted to the aeroplane. A suitable exposition may have these procedures included as part of the airplane flight manual or FCOM, or they may be included separately within another part of the exposition.

If the operator has a program to conduct de-icing/anti-icing the inspector must use Protocol suite (OPS.22) De-icing/anti-icing program for the assessment of the exposition.

> Note: ICAO Doc 9640 Manual of Aeroplane Ground De-icing/Anti-icing operations contains additional guidance.

3.8.4 Aeroplanes not certified for flight in icing conditions

Regulation 91.710 applies to operators of aeroplanes that are not type certified for flight in icing conditions. An exposition should include information about the type certification of its aeroplanes for flight in icing conditions. The inspector may need to confirm this. To meet present and suitable, the exposition must contain statements prohibiting PICs of those aeroplane types from:

- beginning a flight into known or suspected (forecast) icing conditions
- flying into icing conditions during the flight and not, as soon as practicable, altering the flight path to avoid the icing conditions.

> Note: Some MELs may include operational procedures prohibiting flight in icing conditions by aeroplanes that are type-certificated for flight in icing conditions.

3.8.5 Use of portable electronic devices

The operator's exposition must include policies and procedures for the carriage and operation of PEDs. To be suitable, the instructions should include:

- which PEDs are permitted to be used during flight
- when PEDs are permitted to be used during flight
- the stowage of a PED when not permitted to be used
- procedures in the event of an emergency involving the PED (such as a battery fire or smoke)
- instructions to ensure crew members are not distracted during the critical stages of flight (such as take-off and landing).

3.8.6 Carriage of animals

An operator must include guidance in its exposition for the carriage of animals on its aeroplanes. This has relevance for the carriage of assistance animals, especially in relation to the Disability Discrimination Act 1992. A suitable exposition should include procedures for carrying the animal to best ensure it has no adverse effects on the safety of the aeroplane or its occupants. It should also clarify that the operator or PIC may refuse carriage of the animal, despite the Disability Discrimination Act 1992, if one of them has reasonable grounds to believe that having the animal on the aeroplane might adversely affect safety.

3.8.7 Assignment of cabin crew seats

The exposition must include policy and procedures to ensure that cabin crew seats assigned to crew members are in accordance with the aeroplane's evacuation procedures. To be suitable, the inspector should determine that the procedures in the exposition take into consideration the approved emergency evacuation procedures of the operator's aeroplanes including any type certificate requirements.

If applicable to the aeroplane types operated by the operator, the exposition must include policy and procedures to ensure that a cabin crew seat adjacent to a floor level emergency exit is only occupied by a person meeting the requirements of subregulations 121.380(4), (5), or (6). To be suitable, the inspector must ensure that the operator's exposition includes appropriate procedures for the nature and complexity of the operation.

3.8.8 Polar operations

> Note: Polar region means north of 78°N or south of 60°S.

Regulation 121.360 applies to operators who intend operating flights in the polar region. An operator requires a separate approval under regulation 121.010 to conduct operations in the polar region.

To meet present and suitable requirements, the inspector must determine that the operator's exposition includes information on each of the following:

- procedures for monitoring and resolving fuel freezing issues. Suitable procedures may involve reference to the manufacturer's airplane flight manual or FCOM, or they may be constructed by the operations department. The procedures must be appropriate for the type of aeroplanes operated, and the complexity of the operation
- procedures to ensure the crew has communication capability within the polar region. The procedures must be appropriate for the aeroplane types so that contact with Air Traffic Services is maintained. It should also involve consideration of the type of operational control undertaken by the operator
- details of specific training that flight crew must undertake prior to conducting operations in the polar regions. The inspector should determine that the procedures in the exposition are appropriate for the complexity of the operation, including the polar region of intended operation, and the types of aeroplanes operated
- procedures to mitigate risks to both crew and passengers from cosmic radiation associated with solar flare activity. Suitable procedures should include how the operator determines the occurrence of these periods
- procedures for the carriage of at least 2 cold weather anti-exposure suits during times of the year when extreme cold weather conditions are expected at any of the potential alternate aerodromes an operator

may use while transiting the polar region. Suitable procedures will depend upon the complexity of the operation, and the alternate aerodromes the operator chooses to nominate.

3.8.9 Flight above FL490

If the operator intends operating in excess of FL490, they must establish a method of:

- determining a limit to the amount of cosmic radiation that may be received inside the cabin of an aeroplane during a flight
- recording the amount of cosmic radiation any crew member receives and maintaining a cumulative running total for any 12-month period.

To meet present and suitable requirements, the exposition must include limits that are appropriately determined and safe.

The exposition must include procedures for the PIC to monitor the cosmic radiation dose received during a flight above FL490 and take appropriate action by descending to the lowest safe altitude for completing the flight when the safe limit, as determined by the operator and included in their exposition, is exceeded.

Section 11.14 of the Part 121 MOS requires the operator to fit a device readily visible to the operating flight crew members that monitors the dose rate of cosmic radiation being received within the aeroplane cabin at any time, along with the cumulative dose total for a flight. The exposition must provide the flight crew operating procedures for the system.

3.8.10 3D IAP with FPA greater than 4.5 degrees

The operator requires an approval under regulation 121.010 to conduct 3D instrument approach operations with a flight path angel 4.5 degrees or more (steep approaches). The inspector will need to ensure that the AFM approves steep approaches. The exposition must include instructions as to when steep approaches can be conducted and by whom. To be suitable, the procedures should include the following:

- a list of airports where a steep approach can be conducted
- weather conditions that permit a steep approach
- aeroplane configuration requirements
- training requirements for flight crew
- minimum flight crew experience on the aeroplane type.

Note: AMC/GM Part 121 contains additional guidance.

3.9 Performance

3.9.1 Performance data

Subregulation 121.390(1) states that the performance data in the flight manual instructions of a Part 121 aeroplane must comply with ICAO Annex 8, which describes the airworthiness standards required of an aeroplane. An exposition must clarify that PICs are required to use the performance data in the flight manual instructions to make any calculations relating to the aeroplane's performance in flight. However, an operator may apply for approval under regulation 121.010 to use performance data other than that set out in the AFM instructions. If this approval is held, the exposition must clarify this, including the specifics of the approval.

3.9.2 Take-off performance

Regulation 121.395 applies to the take-off performance and enroute performance requirements for large air transport aeroplanes. Divisions 1 and 1A of Chapter 9 of the Part 121 MOS prescribes the requirements an aeroplane must meet to comply with regulation 121.395. The operator must ensure that the performance data provided to its flight crew to conduct the take-off performance calculations meets all the requirements. If the performance data from the AFM instructions is used (as approved under Part 21), then the data will meet

the requirements of Divisions 1 and 1A of Chapter 9 of the Part 121 MOS. To be suitable, the exposition should include a statement to the effect that the PIC must only use the performance data from the AFM instructions for take-off calculations.

If an operator intends using take-off data from another source, it must hold approval under regulation 121.010 to use that performance data. In that case, a suitable exposition must clarify that the operator has the approval to use the data and specify exactly the data that can be used and when it is applicable for use.

Paragraph 121.395(2)(c) of the CASR specifically applies to the route flown by an aeroplane. Sections 9.08 and 9.08K of the Part 121 MOS describe the requirements an aeroplane must meet to comply with paragraph 121.395(2)(c) of CASR. The operator must verify that analyses of the routes it intends flying confirm its aeroplane types can comply with each of the requirements of sections 9.08 and 9.08K of the Part 121 MOS.

This may include:

- development of escape route procedures from flight plan tracks to suitable enroute alternate aerodromes
- consideration of performance navigation specification of the aeroplane and its ability to maintain tracking with RNP2 capability or better
- fuel jettison to meet the performance requirements, whilst ensuring the aeroplane can meet fuel reserve requirements at a suitable enroute alternate aerodrome
- the additional requirements of sections 9.08(5), (6), and (7) of the Part 121 MOS for 3 and 4 engine aeroplanes.

The operator's exposition must verify that the routes chosen for flights meet the conditions of sections 9.08 and 9.08K of the Part 121 MOS. To be suitable, an exposition should include a statement to the effect that the PIC must follow the published operator procedures in enroute flight if the aeroplane experiences an engine failure.

Paragraph 121.395(2)(d) of the CASR refers to landing performance which must be taken into consideration when calculating the take-off performance. Division 1 of Chapter 9 of the Part 121 MOS, which is made for regulation 121.395, contains no information about landing performance requirements. However, Division 2 of Chapter 9 of the Part 121 MOS, which is made for regulation 121.420, prescribes the requirements for landing performance.

Notes: Part 1 of ICAO Annex 6—Operation of Aeroplane contains additional guidance.
ICAO Doc 10064—Aeroplane Performance Manual contains additional guidance.

3.9.3 Landing performance

Regulation 121.420 applies to the landing performance requirements for large air transport aeroplanes. Division 2 of Chapter 9 of the Part 121 MOS describes the requirements an aeroplane must meet to comply with regulation 121.420. An operator must ensure that the performance data it provides to the flight crew to conduct the landing performance calculations meets all of these requirements. If the performance data from the AFM instructions is used (as approved under Part 21), then the data will meet the requirements of the Division 2 of Chapter 9 of the Part 121 MOS.

The operator and PIC must consider each of the following:

- pre-flight requirements for dry runways
- pre-flight requirements for wet or contaminated runways
- planned missed approach climb requirements
- in-flight requirements for landing performance.

The exposition must provide relevant information about each of the above items to the flight crew. To be suitable, the inspector must determine that the information provided clearly distinguishes the difference between pre-flight landing distance calculation requirements, and the in-flight landing distance calculation requirements. The exposition should also clarify that the PIC must only use the performance data from the AFM instructions for landing calculations.

If the operator intends using landing data from another source, they must hold approval under regulation 121.010 to use that performance data. In that case, a suitable exposition must clarify that the operator has the approval to use the data and specify exactly the data that can be used and when it is applicable for use.

Notes: Regulation 121.425 will be repealed.
Part 1 of ICAO Annex 6—Operation of Aeroplane contains additional guidance.
ICAO Doc 10064 Aeroplane Performance Manual contains additional guidance.

3.9.4 Engine inoperative – multi-engine aeroplane

Subregulations 121.430(1) and (2) apply to aeroplanes that continue flight after suffering an engine failure during take-off. The operator must include, in its exposition, procedures and instructions to PICs that ensure its aeroplanes will clear all obstacles within a flight path from take-off through to landing at either the departure aerodrome, or a take-off alternate aerodrome. This may be in the form of tailored one-engine inoperative departure routings, via take-off weight restrictions imposed at specific aerodromes, or a combination of both. An operator may include information obtained from third party contractors within its exposition.

Subregulation 121.430(3) applies to 3 and 4 engine aeroplanes. The exposition must include additional procedures and instructions for PICs in the event 2 engines fail during take-off and the aeroplane continues flight. Again, these may be specific departure routings for 2 engines inoperative, take-off weight restrictions, or a combination of both.

Note: ICAO Doc 10064 Aeroplane Performance Manual contains additional guidance.

3.10 Weight and balance

An operator must include instructions and procedures within the exposition to ensure that its aeroplanes are loaded in accordance with the aeroplane's weight and balance limits. The instructions and procedures must be available to all personnel involved with the loading of the aeroplane, including any contracted parties, along with the PIC. To be suitable, the inspector should determine the exposition specifies that an aeroplane must be loaded in accordance with its approved loading systems and any other applicable regulatory requirements. It will also involve having appropriate flight crew procedures to ensure that flight of an aeroplane does not commence with incorrect load and trim data entered into its computer systems.

An exposition must also include instructions and procedures for the PIC to ensure the aeroplane is maintained within weight and balance limits throughout the flight. This may include instructions to the cabin crew for passenger seating requirements, along with any fuel transfer requirements in accordance with manufacturer checklist procedures.

3.10.1 Aeroplane loading procedures

Regulation 121.440 specifies the requirements for loading a Part 121 aeroplane. The exposition must address each of the following:

- procedures to determine the weight of:
  - crew members and their carry-on baggage
  - passengers and their carry-on baggage
  - cargo including baggage loaded in the hold
  - fuel.
- procedures to ensure an aeroplane is loaded:
  - in accordance with the loading instructions for the flight prepared by the person responsible for planning the loading
  - under the supervision of the person responsible for supervising the loading.

- procedures surrounding last minute changes to the load, including ensuring the aeroplane remains within weight and balance limits
- procedures for confirming weight and balance documents
- procedures to offload passengers and/or cargo ensuring the aeroplane remains within weight and balance limits.

The operator must include within the exposition its method of determining the weights of crew, passengers, and carry-on baggage. The regulations provide that the operator can use either:

- actual weights
- standard weights prescribed by the section 10.01 of the Part 121 MOS
- a method for which they hold approval under regulation 121.010.

When the operator holds approval under regulation 121.010 for an alternative method of determination, the exposition must clarify the methodology.

The operator must include in their exposition methods of calculating the weight of fuel loaded on an aeroplane. These may be either:

- reference to the actual fuel density
- reference to a standard density value.

To be suitable, the procedures should include using the density of the fuel and the volume loaded, compared with the fuel load sensed by the aeroplane. The procedures should offer methods of resolving any discrepancies between the calculated weights. If a standard density value is used, the operator must account for any different types of fuel loaded on the aeroplane, as per the region of operation.

3.10.2 Weight and balance documents

Section 10.02 of the Part 121 MOS prescribes the information on the weight and balance documents that a PIC must have prior to commencing a flight. An exposition must include procedures to ensure that a PIC is provided with this information. It must also have procedures to ensure that the person responsible for loading the aeroplane certifies the load and distribution are in accordance with the documents provided to the PIC, and the PIC (or co-pilot) certifies that they accept the aeroplane has been loaded as specified in accordance with the weight and balance documents. To be suitable, the weight and balance documents must contain information that identifies it with a specific flight on a specific date time. Each edition of the document should be identified so that the PIC can ensure they have the latest version.

3.11 Flight crew

3.11.1 Flight crew compliment

Regulation 121.005 prescribes that an air transport operation with a MOPSC of more than 9 is a Part 121 operation. Regulation 121.475 (2)(b) requires a minimum flight crew compliment of at least 2.

CASA EX74/24 – Part 121 – Single Pilot Aeroplane (MOPSC 10-13) Operations – Exemptions Repeal, Remake, and Direction Instrument 2024 exempts an operator and PIC from each provision of Part 121 and the Part 121 MOS for a single pilot aeroplane with a MOPSC between 10 and 13, subject to conditions.

Inspectors must use Protocol suite (OPS.135) Australian air transport operations—smaller aeroplanes for the assessment. Principle (OPS.135) Australian air transport operations—smaller aeroplanes provides further guidance.

3.11.2 Assignment of a flight crew member to a duty

The operator must develop a process to ensure that before a flight commences all flight crew are appropriately qualified. 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 crew members qualification through to an automated software based rostering system and qualification tracking sys that ensures flight crew are qualified for a flight.

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

In the case of complex operators with more than 10 flight crew or multiple types there are a number of software programs designed to Manage flight crew rostering available on the market.

To be considered suitable the inspector should ensure:

- the software has been tailored to the operators' requirements
- the software has the ability to flag a flight crew member approaching and or exceeding a defined qualification or recency requirement
- the software has the ability to prevent an unqualified flight crew member being rostered for a duty.

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

3.11.3 Flight and duty time limitations

The exposition 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 comply 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 the 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.

3.11.4 PIC route and aerodrome knowledge

In addition to the requirements of section 3.11.2 of this principle, to be suitable the inspector must determine that the exposition details the PIC knowledge requirements and that they are appropriate for the complexity and nature of the operation.

3.11.5 Operation of aeroplanes of different type ratings

If the operator intends to roster flight crew to operate multiple aeroplane types, their exposition will need to describe how this will be accomplished safely. To be suitable, the inspector needs to determine that the operator has considered all the risks associated with operating multiple types and developed appropriate risk mitigation strategies. The inspector should consider the following:

- similarities between the different aeroplane types
- number of different aeroplane types
- experience requirements on one aeroplane type prior to the flight crew qualifying on an additional aeroplane type
- rostering requirements to ensure the flight crew member has sufficient time between operating different aeroplane types.

The training and checking system will also need to be assessed to understand how the operator maintains the competency of flight crew on the different aeroplane types. Subregulation 121.580(1) requires a 121 proficiency check (121PC) to assess the competence of the pilot in an aeroplane of that kind. In relation to an aeroplane that requires a type rating, the CASR dictionary defines a kind of aeroplane as an aeroplane covered by the same type rating. Therefore, the training and checking system will need to make allowance for a 121PC on each aeroplane type flown in accordance with subregulation 121.575(1).

3.11.6 Relief

Regulation 121.535 applies to operators who conduct operations where the PIC has a requirement to delegate his authority to another flight crew member in flight above FL 200. This may be for inflight rest requirements as an example. The operator must have processes to manage the scheduling of flight crew for flights that require in flight relief of the PIC. The system must be sufficiently robust to ensure that the relief pilot meets the qualification requirements of the regulations.

The operator's exposition must include reference to how they manage the rostering of flight crew to conduct inflight relief accounting for each of these items.

Additionally, depending upon the complexity and nature of the operation, the operator may provide some kind of command training to a co-pilot who will be rostered to undertake inflight relief of the PIC. This may be in the form of additional ground training, and possibly include a session in a simulator practicing command decision making. A suitable exposition should include how the operator manages some form of additional training for co-pilots who will undertake inflight relief of the PIC.

3.11.7 Recent experience

Division 121.N.4 of the CASR prescribes the recent experience requirements for operators and flight crew members. It's important to remember that recent experience requirements are a joint obligation between the operator and flight crew. The operator's exposition must detail how recent experience will be tracked and what happens if the flight crew member does not meet the recent experience requirements. To be suitable, the exposition will describe how the flight crew member will regain recency. Most operators will include training and checking activities that must be completed depending on the length of time the flight crew member has not operated the aeroplane.

> Note: A regulation 61.040 approval does not provide relief against the recency requirement in Part 121.

3.12 Cabin crew

3.12.1 Assignment of a cabin crew member to a duty

The operator must develop a process to ensure that before a flight commences cabin crew, when required to be carried, are appropriately qualified and competent. 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 crew members qualification through to an automated software based rostering system and qualification tracking system that ensures flight crew are qualified for a flight.

For a manual tracking system to be suitable, the inspector should consider the number of cabin crew employed and number of different activities conducted. The inspector should consider 10 cabin crew across a simple operation not involving multiple approvals as suitable for a manual tracking tool.

In the case of complex operators with more than 10 cabin crew or multiple types there are a number of software programs designed to manage cabin crew rostering available on the market. To be considered suitable the inspector should ensure:

- the software has been tailored to the operators' requirements
- the software has the ability to flag a cabin crew member approaching and or exceeding a defined qualification or recency requirement
- the software has the ability to prevent an unqualified cabin crew member being rostered for a duty.

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

3.12.2 Number of cabin crew

The exposition must detail the number of cabin crew required for each flight including procedures for operating with reduced cabin crew in an unforeseen circumstance. If the operator's exposition includes a process to operate with reduced cabin crew, to be suitable the inspector must ensure that:

- the number of cabin crew is a ratio of not less than one for each 50 passengers or part thereof
- the definition of unforeseen circumstances is appropriate and identifies that these are matters beyond the operator's control
- there is a process for notifying CASA.

The exposition must include procedures where an assigned cabin crew member for a flight is unable to undertake duty due to an unforeseen circumstance. Subregulation 121.670(2) provides an example for an unforeseen circumstance as:

> *'A cabin crew member becomes unfit for duty shortly before a flight at a place where a replacement cabin crew member is not available'*

There may be other circumstances, however the inspector should use the above example as a test.

Note: It would not be suitable if, at a cabin crew base, the flight would be delayed waiting for a senior cabin crew to be called out from standby.

The exposition will need to have procedures for operations with reduced crew to ensure an equivalent level of safety.

Single aisle aeroplanes

The regulations refer to a flight base number which is the greater of 1 cabin crew for each department or if the maximum operational passenger seat configuration (MOPSC) of more than 19, one cabin crew member for each 50, or part of 50, passenger seats fitted to the aeroplane. In addition to the flight base number the inspector will need to consider the 'demonstration number' determined during type certification. To be suitable, the number of cabin crew required will be based on the flight base number or the number of cabin crew in excess of the flight base number as established in type certification, the 'demonstration additional number'.

Twin aisle aeroplane

For twin aisle aeroplane in addition to the above requirements for single aisle aeroplane the inspector must take into account the number of floor level exits on the aeroplane.

Approval under regulation 121.010 for reduced demonstration additional number

An operator may apply for an approval for a reduced demonstration additional number under regulation 121.010. To be considered suitable, the inspector must take into account regulation 11.055(1B)(b) and ensure that granting the approval will preserve a level of aviation safety that is at least acceptable. As part of the approval process CASA will require the operator to conduct a demonstration of their evacuation procedures with the reduced number of cabin crew. The demonstration will confirm that the operator's evacuation procedures with the lower number of cabin crew for the configuration and passenger seating capacity of aeroplane, can achieve an evacuation capability at least equivalent to that achieved during type certification.

The scope of assessment in relation to the operator's procedures and evacuation demonstration is according to the criteria in this principle and will allow the assessor to determine if the cabin crew training and emergency procedures documented in the operator's exposition meet the evacuation requirements.

The operator's application for a reduced demonstration additional number should include the following:

- the aeroplanes MOPSC

- the aeroplanes flight base number
- the aeroplanes demonstration additional number
- the proposed reduced demonstration additional number.

3.12.3 Emergency evacuation procedures demonstration

The CASA requirement to conduct a demonstration under section 14.06 of the Part 121 MOS should not be confused with the evacuation demonstration required during type certification. The CASA requirement for a demonstration provides an opportunity for CASA to assess the operator's emergency evacuation procedures.

Evacuation demonstration with reduced additional numbers

The purpose of the demonstration is for the operator to demonstrate to CASA that the proposed evacuation procedures with a reduced demonstration additional number and crew training introduced by the operator, will enable the crew members to achieve an evacuation capability equivalent to that achieved at the initial aeroplane type certification demonstration.

During the exercise, the operator will be required to demonstrate the:

- ability of cabin crew to recognise and react to a simulated emergency situation, by operating appropriate emergency exits and in accordance with timing requirements for an evacuation demonstration exercise
- system of initiating and managing an emergency evacuation in simulated conditions, using cabin crew procedures
- cabin crew procedures and associated training ensure the evacuation of passengers in accordance with timing requirements for a full evacuation demonstration exercise.

Unlike a partial evacuation, an operator will be required to evacuate passengers through the exits and will be timed against the type certification demonstration standards.

Approval under regulation 121.010 not to conduct an evacuation demonstration

An operator may apply for an approval for relief against the requirement to conduct an evacuation demonstration required by regulation 121.755(1). To be considered suitable, the inspector must take into account regulation 11.055(1B)(b) and ensure that granting the approval will preserve a level of aviation safety that is at least acceptable.

The inspector should consider the following when assessing the application:

- where the operator proposes to operate another model of an aeroplane type and the operator has previously demonstrated the emergency evacuation procedures for that type in accordance with the requirements
- where the operator intends to implement changes to an aeroplane type where the operator has already met the demonstration requirements, but the changes have not been demonstrated previously. For example:
  - a reduction in the number of cabin crew
  - a change to the locations or emergency evacuation procedures and duties assigned to cabin crew
  - a change to the number, location, type of exit or type of opening mechanism on an emergency exit.
- the difference between the aeroplane type already demonstrated and the new aeroplane model would not affect the effective egress of passengers from the new model in the event of an emergency
- any change to an aeroplane type that has not previously been demonstrated would not affect the effective egress of passengers from the aeroplane in the event of an emergency.

3.12.4 Operations with more than 1 cabin crew

When operating with more than 1 cabin crew member the exposition must include a procedure to assign one of the cabin crew members as the senior cabin crew member for the flight. To be suitable, the inspector

should determine that the exposition specifies the additional duties a senior cabin crew member should undertake and include reference to the position in the operating crew chain of command.

The exposition must include procedures where the assigned senior cabin crew member for a flight is unable to undertake duty due to an unforeseen circumstance. The regulation provides an example for an unforeseen circumstance as:

> *'A senior cabin crew member becomes unfit for duty shortly before a flight at a place where a replacement senior cabin crew member is not available'*

There may be other circumstances, however when the inspector should use the above example as a test.

> Note: It would not be suitable if, at a cabin crew base, the flight would be delayed waiting for a senior cabin crew to be called out from standby.

CASA guidance is that a senior cabin crew member who becomes incapacitated in flight should be replaced at the next transit port if a qualified person is available at that port. In the case of a senior cabin crew becoming unfit for duty prior to the flight, the flight should not normally depart unless there is no qualified person available as a replacement in that port.

The operator's exposition should define the minimum experience level of a cabin crew member, who has not completed senior cabin crew training, that can act in the position of senior cabin crew.

3.12.5 Operations with more than 4 cabin crew

The exposition must include procedures to ensure a cabin crew member on the flight is assigned to be the 'second' senior cabin crew member. To be suitable, the inspector should determine that the procedures also include reference to:

- the duties a second senior crew member must conduct
- the training or experience a crew member should have before assignment as the second senior crew member.

The suitability will depend on the complexity and nature of the operation, bearing in mind that an operation requiring more than four cabin crew members can be expected to be relatively complex.

3.12.6 Operation of aeroplanes of different types

If the operator intends to assign cabin crew to multiple aeroplane types their exposition will need policies and procedures to manage the risks. Unless the operator holds an approval under regulation 121.010 cabin crew must not be assigned duties on more than 3 aeroplane types.

To be suitable, the inspector should consider the following:

- the aeroplane types operated under the AOC for the purpose of assigning cabin crew and associated training and checking requirements
- a description of the circumstances in which cabin crew can be assigned duty to more than one aeroplane type for which they hold a valid annual training check
- procedures to ensure that cabin crew members are only assigned to duty on different types in the circumstances identified.

Classification of aeroplane types and variants

The inspector should confirm that the exposition details the operator's classification of aeroplane types. When applied to cabin crew aeroplane types and variants are not the same as prescribed in Part 61 flight crew licencing for example. the A320 and A321 aeroplanes although considered to be the same type under Part 61 for the purpose of cabin crew they are considered to be different types.

Additionally, variants of an aeroplane type are considered to be a different type if they are not similar in the following aspects:

- emergency exit operation
- location and type of portable safety and emergency equipment
- type-specific emergency procedures.

The inspector should consider the following factors when determining whether a variant of an aeroplane type they operate is itself a type:

- similarity of doors and exits in relation to:
  - exit arming/disarming
  - direction & movement of operating handle
  - direction of door/exit opening
  - power assist mechanisms
  - assisting evacuation means e.g. slides, escape ropes.
- similarity of location and type of safety and emergency equipment in relation to the following:
  - all portable safety & emergency equipment is stowed in the same, or in exceptional circumstances, in substantially the same locations
  - all portable safety & emergency equipment require the same method of operation
  - portable safety and emergency equipment considered included: firefighting equipment, PBE, oxygen equipment, crew lifejackets, torches, megaphones, first aid equipment survival & signalling equipment.
- type-specific emergency procedures are essentially the same, including but not limited to:
  - land and water evacuation
  - in-flight fire
  - depressurisation
  - pilot incapacitation.

If the aeroplane variants not meeting the criteria above the inspector should consider them a different aeroplane type. In this case the inspector will need to discuss the matter with the operator.

Consideration of a 4th aeroplane type

For the purposes of an approval that allows cabin crew to be qualified on a fourth aeroplane type, the assessor needs to consider whether the operator has demonstrated that on at least two of the types:

- safety and emergency equipment and type-specific normal and emergency procedures are similar
- non-type specific normal and emergency procedures are identical.

Procedures for assignment to different aeroplane types

The operator's procedures should address the following:

- combinations of aeroplane types the cabin crew member could be assigned
- recency on type
- measures are in place to ensure a cabin crew member is adequately prepared for duty on a different aeroplane type, after completing a flight on another aeroplane type in the same duty period

Operating more than 1 type in a duty period

When changing aeroplane type during the same duty, the cabin crew safety briefing should include a sample of type-specific normal and emergency procedures and safety and emergency equipment applicable to the aeroplane to be operated on subsequent flight sectors.

3.13 Minimum equipment list

Use Protocol suite (OPS.01) Minimum equipment list.

3.14 Certain single-engine aeroplanes

Use Protocol suite (OPS.03) Prescribed single engine aeroplanes.

4. Training and checking system

4.1 General

4.1.1 Suitable training and checking system

A Part 121 air transport operator must have a training and checking system to undertake the functions required by Part 119 in the context of Part 121 requirements. Other regulations also require training activities such as HF/NTS and dangerous goods. The operator can choose to include these within their training and checking system or provide that training separately. If the operator conducts part of the mandatory training outside the training and checking system (such as dangerous goods training for ramp, freight, check-in and other deemed employees), the inspector will need to verify that the training is managed to a level at least equivalent to that required by the training and checking system.

A suitable exposition will need to demonstrate that the operator has full oversight and responsibility for the training and checking system, even if certain activities are contracted out to a Part 142 flight training organisation or a third-party provider.

To be suitable, the inspector must determine that the training and checking system is appropriate for the size, nature, and complexity of the organisation. Items the inspector should consider include, but are not limited to:

- number of its operational safety-critical personnel
- number and kinds of aeroplanes it operates
- nature of activities an operator conduct
- location and distribution of the organisation’s air transport activities.

Other items the inspector should consider include the organisational structure. A complex organisation may require management assistance for the HOTC to ensure obligations under regulation 119.150 are fulfilled. A simple operation where training and checking events occur predictably or infrequently may be able to demonstrate compliance using shared HOTC and HOFO duties.

The inspector should also consider the need for any support systems associated with the training and checking activities of an organisation. The use of administrative staff and an IT system to manage an operator’s training and checking system may be appropriate for larger and more complex organisations.

4.1.2 Training and checking system approved under regulation 61.040

An operator's training and checking system can be approved under regulation 61.040—approved training and checking system.

Under the approval, flight crew who are successfully participating in an operator's approved training and checking system may be granted relief from:

- subparagraph 61.880(3)(d) instrument proficiency check (IPC)
- subregulation 61.800 flight review
- Part 61 recency provisions.

> Note: The relief provisions provided by the regulation 61.040 approvals do not provide relief from the recency requirements under Part 121.

Relief from Part 61 IPC

For an operator proficiency check (OPC) to be approved under subregulation 61.880(3)(d) the operator must demonstrate how the requirements prescribed in the schedule 6, appendix 1 of the Part 61 MOS (IPC) are

addressed. To be suitable the operator may develop an OPC that addresses both the 121 proficiency check (121PC) and the IPC competencies, or a series of OPC's covering the competencies within 12-month period. The inspector must be satisfied the training and checking system meets both the IPC and 121PC competencies within the 12-month period.

Relief from Part 61 recency provisions

An approved training and checking system may also provide relief from certain Part 61 recency provisions. The inspector must confirm the proposed training and checking activities using an alternate means of compliance creates an equivalent level of safety to that provided by the regulations. The operator will need to determine what recency provisions will be relieved and how the training and checking systems ensures that flight crew are competent.

Example

An operator who wants relief from the requirement for 3 instrument approaches (IAP) in 90 days must be able to demonstrate that the flight crew will maintain competency in the conduct of an IAP.

To be suitable the inspector must confirm the training and checking system includes:

- a granular method to measure the competency of flight crew
- a regular line operation review process to ensure flight crew are maintaining competency.

To grant relief from recency provisions would normally require a mature training and checking system preferrable conducting training and proficiency checks in a qualified FSTD.

Check pilot training and assessment

Flight crew operating within an approved training and checking system do not require an IPC and therefore the OPC can be conducted by a check pilot approved under regulation 121.010. To be suitable the inspector must ensure that the check pilot training covers the same competencies required to issue a Part 61 flight examiner rating. The training and checking system should provide for an annual standardisation check to maintain check pilot proficiency. The exposition may detail the required competencies or refer to the Part 61 MOS schedule 5 and 6.

4.1.3 Training and checking system approved under regulation 121.010

Part 12 of CASA EX 69/24 makes provision for an operator to apply for an approval of an alternate means of compliance (AMOC) to paragraphs 121.475(2)(h) to (m) inclusive.

To develop a training and checking program for approval under regulation 121.010, the operator will need to demonstrate how their training and checking activities will achieve the same outcomes as prescribed in paragraphs 121.475(2)(h) to (m). The intent of the provision is to allow flexibility on how the operator delivers the training and checking activities.

To be suitable, the inspector must assess the program against the competencies identified by the operator. It may be that the nature of their operations are such that a training system that conducts elements of the recurrent training, at more frequent intervals, creates a better outcome. The approval process must not be used for alleviation against a particular requirement. For example, it is not acceptable to approve a training system that does not include the practical components prescribed in Chapter 12 of the Part 121 MOS.

To be suitable, the approved training and checking program should include more information on how flight crew are assessed versus interrater reliability. The approval may be given concurrently with an approval under regulation 61.040.

4.1.4 How is training and checking conducted

The operator's exposition must include a description of how they fulfill the requirements of their training and checking obligations. The description should include a high-level view of training and checking system organisational structure and the details of how the training and checking is conducted.

Under Part 121 an operator can utilise a Part 142 flight training organisation for the provision of contracted training and if the aeroplane is not more than 30 seats MOPSC or a maximum payload capacity of less than 3410 kgs, contracted checking.

An operator required to conduct the checking of flight crew, will require personnel authorised to conduct the activities. Under this regulation it is suitable for an operator to employ personnel under contract for periods of time to conduct the checking activity. In this case the contracted person must be inducted and oversighted by the training and checking system.

If the operator utilises contracted training and or checking personnel or a Part 142 flight training organisation, the description must include how these are incorporated into the operator's activities, as well as how oversight of the training activities are managed.

Other items that should be included are as follows:

- scheduling of events
- administrative process including the use of forms
- personnel able to conduct the event
- training syllabuses
- assessment process including checking topics
- platform for the event; ground facility, FSTD, or aeroplane
- threat and error management and risk mitigation for in-aeroplane activities
- simulation devices, if any, used in air crew and medical transport specialist training and checking
- suitability of third-party facilities, if utilised, for the operator's aeroplane types
- oversight and monitoring processes.

The size and complexity of the organisation, and the specific nature of the training and checking events, must be considered when determining suitability.

4.1.5 Personnel training and checking records

The operator must have an appropriate system that maintains records of training and checking events conducted, and results of the events. The system must be constructed so that the operator can conduct auditing of the records for quality assurance purposes. The system may be designed so a third party can similarly conduct an audit of the events. To be suitable, the inspector should determine that the operator's exposition describes the operation of this system and clearly defines the administrative processes involved in maintenance of the records and access to the data when required.

The exposition must include a description of how the operator ensures its personnel complete training and checking in accordance with its approved training and checking system, refer to section 4.1.1 of this principle. The description should focus on the administrative tasks to ensure personnel comply with all regulatory requirements. Specific personnel or position holders should be nominated to conduct required actions. These should include items such as:

- personnel or position holder assignment to specific duties
- responsibilities and accountabilities to ensure activities are conducted in accordance with the exposition
- a process to ensure only appropriately trained and checked personnel are released for duty.

To be suitable, the inspector must determine that the procedures in the operator's exposition are appropriate for managing the amount of training and checking events conducted, the operations conducted, and the fleet composition and disposition of the operator. In addition, the system must be capable of preventing personnel being assigned a duty when a training or checking activity has not successfully been completed. The inspector should verify that if a person does not complete a training or checking activity, there is a process to ensure they are not available for line operations until the activity is completed.

Making training and checking records

The operator's exposition must detail a process to ensure training and checking records are made within 21 days of a training and checking activity. Records may be paper based or electronic and the process should

ensure correct completion, including proper signoff by training and checking personnel. Incomplete records should be returned to personnel for completion.

Storing training and checking records

The design of the training and checking records must make sure all the records required by regulations are completed and stored for the period required by the regulations. A suitable process would include a policy on the destruction of records at the end of the storage period. If the training and checking records are electronic, then to be suitable the inspector must be satisfied that there is a data backup system, remote from the primary system to preserved records in the event of an IT system corruption. Whether paper based or electronic training and checking records should be stored securely to prevent unauthorised access.

If the operator receives a request in writing from another air transport operator for a copy of a person's training and checking records, they must be provided within 7 days. To be suitable, the operator's exposition should include clear guidelines on the provision of the records. Matters for consideration should include:

- verification of the veracity of the other air transport operator (e.g. why are the records requested)
- how the records will be provided securely
- confirmation from the person whom the record refers to, that they authorise the release.

4.1.6 Supervision during training and checking

The operator must describe in their exposition how effective supervision is provided to their personnel undergoing training and checking. To meet present and suitable requirements, the inspector should determine that the system describes:

- specific supervision of personnel through all phases of training and checking, including:
  - supervised flying training and checking in an aeroplane
  - supervision administratively.
- performance management, including procedures to manage personnel whose progression is below expectations
- performance management when personnel do not meet the required standard for any check.

4.1.7 Training and checking personnel

To effectively supervise training and checking activities, training, and checking personnel must be trained and assessed as competent to conduct the activity.

To consider the training and assessment process suitable, the inspector must take the following into consideration:

- If the activity is a 121PC for flight crew, do the check pilots hold an examiner rating or approval under regulation 121.010. Use Protocol suite (OPS.21) Check pilot assessment.
  - for a flight examiner the training should include induction into the operators training and checking system and the procedures used to assess the pilot under check
  - to hold an approval under regulation 121.010, the training program will need to ensure the check pilot completes a course of training to ensure equivalent competencies as those required by a Part 61 flight instructor/examiner.
- For line checks the training should include how the operator conducts the line check.
- To hold an approval under regulation 121.010 to deliver annual or 3-yearly emergency and safety equipment training and check, a course of training that covers the delivery and assessment of emergency and safety equipment training and checking is required. The program should include a requirement that the person is assessed as competent. This may include training equivalent to a certificate IV. Use Protocol suite (OPS.15) Emergency and safety equipment instructor.
- For other training activities conducted under the training and checking system, personnel should complete a course of training. The training should address the competencies required for adult learning and could be equivalent to a certificate IV.

Smaller operators may elect to utilise Part 61 qualified instructors or persons who hold a certificate IV or equivalent to conduct the training and assessment of ground and cabin personnel. In this case the exposition should include details on how such persons are inducted into the system.

When training of training and checking personnel is conducted internally, the inspector must ensure that the course of training is adequate for the role of the person. To be suitable, the course of training must include a theory component covering instructional techniques and a practical component covering competency assessment. At the completion of the training course the process should include an assessment and internal approval process.

4.1.8 Assessment of competence

The exposition must include a description of how the operator's crew members are assessed for competency. This could be a simple pass/fail assessment or competency-based assessment with a granular grading system (e.g. score of 1 to 5).

When a pass/fail system is used, the exposition must clearly define what constitutes a pass or fail assessment and may refer to the Part 61 MOS schedule 8 Aeroplane general flight tolerances - professional level. Other requirements such as HF/NTS may also utilise the Part 61 MOS competency standards.

The operator who chooses a more granular competency-based system will need to provide more guidance on how to make the assessment. To be suitable, each grading score should be accompanied by a word picture description of the competency elements that make up each score which should be simple and concise to promote consistency of rating, and ensure that crew members being graded can easily understand their performance assessments.

> Note: A competency-based grading system will require checking personnel to be appropriately trained to ensure interrater reliability.

4.1.9 Contracted training and or checking

The operator may contract a Part 142 flight training authorisation that includes contracted training and checking, to conduct flight crew training, and depending on their aeroplane, checking activities, including those required under Part 61. To be suitable, the exposition must include processes to demonstrate how the HOTC oversight the training and or checking activities including:

- ensuring each person assigned by the Part 142 flight training organisation to conduct training and or checking activities for the operator is authorised under Part 61 to conduct the training and/or checking activities
- notifying the Part 142 flight training organisation in writing any changes to the operator's exposition relating to the training and checking activities.

Operators are also able to contract third party providers, who do not hold Part 142 flight training authorisation that includes contracted training and checking, to conduct certain training and checking for all personnel including:

- dangerous goods training
- HF/NTS training
- emergency and safety equipment training
- refresher training.

To be suitable, the inspector must determine that the exposition describes how the operator manages the following requirements:

- the details of any person who is contracted to conduct training and checking activities
- the specific details of the training and checking activities each contracted person is authorised to conduct
- procedures to ensure that any contracted person is complying with the operator's approved training and checking system.

The complexity and nature of the operations will generally influence suitability criteria. Organisations may have levels of management within the organisation to assist in managing these regulatory requirements, or the HOTC may undertake these management functions as an individual, refer to section 4.1.1 in this principle. The operator's exposition should also ensure that any training and checking functions that fall outside the area of responsibility of the HOTC (the flight crew responsibilities) are managed appropriately, understanding that the CEO is responsible for ensuring all training and checking, apart from the flight crew training and checking, is conducted in accordance with their exposition.

4.1.10 Operational safety critical personnel

The operator must provide operational safety critical personnel who are not flight crew with specific training. Examples of operational safety critical personnel in a Part 121 air transport operation are:

- ground handling personnel other than those engaged in providing airworthiness management services
- personnel with position descriptions/functions that may have an impact on the weight and balance of an aeroplane, including dispatchers
- medical transport specialists who may be engaged in an air transport operation.

The operator must provide these personnel with specific training. An operator's exposition must include:

- a description of both the initial and recurrent training and checking given to the personnel, whether by the operator's own employees or a contractor
- details of when training must be provided to these personnel to familiarise them with their duties.

To be suitable, the inspector must determine that the system is appropriate for the complexity of the operation, the number of personnel employed, the areas of operation, and the types of aeroplanes.

4.1.11 Facilities for emergency and safety equipment check activities

All flight crew and cabin crew involved in Part 121 air transport operations must participate in annual and 3-yearly emergency and safety equipment checks. These checks may be conducted either in an aeroplane, or in a training facility using a cabin training device.

If an aeroplane is used, the operator's exposition must include procedures to ensure the safe and effective conduct of the activities. It is important that the procedures also ensure the aeroplane continues to meet airworthiness requirements following any training and checking.

When training and checking is conducted using a cabin training device, emergency exit trainer, or other device, the operator must include a description of the device within their exposition. Specific approval of the device is not required; however the device must meet the requirements prescribed in the Division 3 of Chapter 13 of the Part 121 MOS training facilities and devices.

To be suitable, the inspector must determine that the devices an operator intends using for the annual and 3-yearly emergency and safety equipment training and checks are appropriate for the aeroplane type and nature of its operations. If they do not replicate the exact type of aeroplane an operator has, then the aeroplane must be very similar in design and functionality of items such as: doors, interphone equipment, and seating arrangements. Other equipment on which crew members are trained and checked must be at least substantially the same, and be representative of, the equipment crew members would use on the operator's aeroplane.

The inspector must determine the device are adequate and appropriate to ensure the objectives of the training and checking can be achieved.

4.2 Flight crew

4.2.1 Flight crew experience

The regulations require at least one pilot, occupying a pilot seat, to have completed the minimum hours and sectors in an aeroplane of that kind during the conduct of line operations. The requirements are as follows:

- 100 hours and 10 sectors; or
- an approval under regulation 121.010 for a different number of hours and sectors.

The purpose of the requirement is to provide a risk mitigation against 2 flight crew who are inexperienced operating on the same flight. Experience gained during supervised line flying counts toward the experience requirement.

Line operations experience is designed to expose flight crew to the real-world environment and the processes and procedures used by the operator.

The experience requirement must be completed during line operations and cannot be completed wholly in a FSTD. It is not possible to simulate all the operational matters that may face a flight crew during line operations.

The regulations make provision for an operator to apply for an approval under regulation 121.010 to vary the experience requirements. To issue the approval, the inspector must be satisfied that the approval will maintain or improve safety. (Refer to the Operations protocol framework) . The operator may propose that some of the experience will be gained in an FSTD as line-oriented flight training (LOFT). To be suitable, the resultant experience gained in an FSTD and aeroplane should still equal 100 hours with no more than 25% conducted as LOFT in a FSTD.

For the FSTD LOFT to be suitable, the inspector should consider the following:

- flight hours gained during a type rating do not count towards the experience requirement (e.g. the flight crew must be Part 61 qualified on the aeroplane type)
- the program in the FSTD should be conducted as a normal line operation (LOFT) with a qualified flight crew – the session should be conducted in real time
- the LOFT should include real world scenarios that require the flight crew to interact with:
  - ATC
  - their operations centre
  - cabin crew
  - ground personnel.
- when the operator is authorised to conduct EDTO or LVO operations, the LOFT should include those operations
- the LOFT scenarios should include a normal operation flight plan, NOTAMS, aeroplane maintenance issues etc.
- the LOFT scenario should include different weather conditions, such as cold weather operations and contaminated runways.

Example

If an operator introduces a new aeroplane type, and has employed flight crew with relevant experience on that type, the inspector can take into consideration the previous experience to determine whether to grant an approval under regulation 121.010. The inspector must be satisfied that the flight crew are sufficiently familiar with the operator's line operations.

Pilot in command

Before a flight crew member can be released for unsupervised line flying, as PIC, the exposition must detail the command training program. To be suitable, depending on the complexity of the operation, the command training should consist of theory and practical components.

Co-pilot and cruise relief co-pilot

The operator must specify within their exposition the minimum flying experience requirements for a pilot to conduct Part 121 air transport operations as co-pilot and cruise relief co-pilot within its operation. If the aeroplane is foreign registered, then a co-pilot and cruise relief co-pilot must also meet the minimum flying experience required by the aeroplanes State of registry.

To be suitable, the inspector should determine that the minimum experience requirements specified are appropriate for the nature and complexity of the operation to ensure an appropriate level of safety. Also note

the requirement of paragraph 121.475(2)(c) for at least one pilot occupying a pilot seat to have completed the minimum hours and sectors in an aeroplane of that kind.

4.2.2 A valid line check – flight crew

The operator must provide for a line check each 12 months for each flight crew member to ensure they hold a valid line check. The line check is not a Part 61 activity and will not fulfill the requirements of a 121PC. As with flight crew experience (refer to Flight crew experience 4.2.1 of this principle), a line check must be conducted during line operations, for this reason it is not suitable to conduct a line check in a FSTD.

4.2.3 Use of approved simulators

Regulation 121.510 requiring the use of an approved FSTD applies to the conduct of operations which involve emergency and abnormal activities to meet the Part 121 proficiency check requirements in certain aeroplane.

> Regulation 91.745 limits a PIC conducting a simulated engine failure in a multi-engine aeroplane. See section 3.6.5 of this principle for guidance.

To use a qualified FSTD for training and checking purposes, the operator, other than a Part 142 operator, must apply for approval to use the device under regulation 60.055. The FSTD the operator is seeking approval to use must be qualified under:

- regulation 60.035 for a device located in Australia
- if located outside of Australia, the regulations of the foreign State overseeing the operation of the device. In this case, the operator will need to:
  - provide CASA with a copy of a qualification certificate that meets the requirements of regulation 60.010
  - include details of the device in their exposition, including how they ensure the device continues to remain qualified by the regulator of the foreign State.

The exposition should list the approved flight simulators and what training and checking activities can be conducted in the FSTD. To be suitable, the exposition should include a process to make sure the FSTD is qualified at the time of the training and checking event. The exposition should include instructions to ensure that check pilots/examiners verify that any defects on the FSTD will not affect its qualification for the conduct of the training and checking activities.

> Note: For additional information on the use of an FSTD for upset prevention and recovery training (UPRT), see section 4.2.8 of this principle.

4.2.4 Operations on more than 1 aeroplane type

The operator who has flight crew that operate more than one aeroplane type can receive credit for training or checking on one type to be applied to another type. The check and training system may be established so that successful completion of checks, qualifications, or training by its flight crew in one type, counts as being successful in another type. The regulation specifies conditions that are imposed to allow this. The operator must demonstrate that:

- the aeroplanes are sufficiently similar in technology, procedures, and handling
- the checks, qualifications, or training in one type is sufficiently similar to the checks, qualifications, or training in the other type.

> Note: An example of a similar type would be the A320 and A330 aeroplane types.

To be suitable, the inspector should confirm that the training and checking system provides for a 121PC and line check alternating on each aeroplane type in a defined period.

To issue the approval under regulation 121.010, the inspector must be satisfied that the approval will maintain or improve safety (refer to the Operations protocol framework). The inspector must be satisfied the proposed training and checking program will ensure that flight crew are competent on each aeroplane type.

4.2.5 Part 121 proficiency check

The operator's exposition must include the items that will be checked in a Part 121 proficiency check. Division 5 of Chapter 12 of the Part 121 MOS prescribes the items that must be checked for pilots, cruise-relief pilots, and flight engineers.

To be suitable, the inspector should determine that each of the prescribed items is covered in the check profiles that the operator has devised. Other items the inspector should consider include:

- if the operator intends to conduct proficiency checks in the aeroplane rather than an approved simulator – ensure they comply with regulation121.510
- If the operator conducts proficiency checks in the aeroplane – ensure the exposition clarifies the items in subsection12.22(8) of the Part 121 MOS for pilots conducting the check
- ensure the proficiency checks include items specifically for pilots who are authorised to conduct operations from both pilot seats
- ensure that pilots who are delegated command of the flight above FL 200, for PIC relief purposes, are checked on manoeuvres listed in the exposition or flight manual that are specific to PIC duties
- if the operator employs cruise relief co-pilots – check that the exposition includes a specific cruise relief co-pilot proficiency check in accordance with section 12.23 of the Part 121 MOS
- ensure that the exposition includes reference to the limitations on flight manoeuvres in accordance with schedule 8 to the Part 61 MOS – it should include an explanation of required tolerances for sustained deviations in conducting manoeuvres required by the proficiency check.

Where a flight crew member is employed by more than one Part 121 operator, subregulation 121.575(2) allows for operator 'A' to accept a proficiency check, conducted by operator 'B', as a valid proficiency check in the following circumstances:

- MOPSC of 19 or less
- an aeroplane of that kind
- they hold an approval under regulation 121.010.

If an operator submits an application for approval to accept a proficiency check conducted by another operator, their exposition must describe the circumstances under which the proficiency check will be accepted. To be suitable, the inspector should consider the following matters:

- the aeroplane is the same type, model and similar configuration
- the proficiency check covers the operational approvals required by the operator
- the communication protocol between the HOTC for each operator to confirm the flight crew hold a valid proficiency check
- the method that each operator tracks the validity of the proficiency check.

> Note: This provision does not apply to the requirement to hold a valid line check, refresher check, annual and 3 yearly emergency and safety equipment check.

4.2.6 Initial training

Division 2 of Chapter 12 of the Part 121 MOS prescribes initial training events flight crew must undertake when they join an operator. These are essentially ground based training activities to prepare the flight crew member for conversion training. A flight crew member must be assessed during initial training, in accordance

with the operator's exposition. To be suitable, an inspector must determine that the check an operator plans covers each of the items prescribed in Division 2 of Chapter 12 of the Part 121 MOS. It is possible that between ground training components and practical assessments, a check may be conducted in multiple parts to satisfy the requirements. The inspector needs to consider the nature and complexity of the operation to determine whether the checks the operator has designed fulfill the regulatory requirement, whilst also being suitable for the joining flight crew member.

4.2.7 Conversion training

The concept of conversion training is to familiarise flight crew with the operators standard operating procedures (SOPs) and the configuration of the operator's aeroplane. Conversion training will normally be conducted internally however could be conducted by a contracted Part 142 flight training organisation (Part 142 FTO) provided the training is conducted in accordance with the operator's SOPs. The inspector must be satisfied that the Part 142 FTO has appropriately inducted and qualified instructors to conduct the training in accordance with the operator's SOPs. To be suitable, the operator should conduct a standardisation check on the instructors and a process to ensure instructors are supplied with current copies of the exposition.

When an operator has a Part 142 certificate to conduct flight training for the issue of a type rating, the operator's conversion training may be conducted concurrent with the type rating course. In this instance the inspector will need to confirm that the type rating course provides for additional sessions to conduct all the conversion training requirements.

The section 121.12.D3 of the Part 121 MOS prescribes conversion training events flight crew must undergo when they commence flying an aeroplane of a particular kind for an operator. The conversion training events also prescribe specific ground training requirements. These include:

- door opening in both normal and emergency modes
- evacuation procedures, including the use of slides and escape ropes as fitted.

To be suitable, the inspector must ensure the operator's conversion program includes operations that require specific approval (regulations 91.045 or 121.010). Examples include:

- EDTO
- LVO
- RNP AR
- PRM approach
- UPRT.

Supervised line flying

As part of aeroplane conversion training, flight crew must undergo supervised line flying in that kind of an aeroplane. The purpose of supervised line flying is to ensure:

- flight crew are exposed to the operator's route and aerodrome structure
- flight crew are exposed to operational procedures such as passenger and cargo handling, operational control, flight planning.

The exposition needs to ensure that flight crew have a valid Part 121PC, emergency and safety equipment check, and 3-yearly emergency and safety equipment check before commencing supervised line flying.

To be suitable, the exposition should include a process for the completion of a training file, whether paper or electronic which includes a sign-off sheet or other method that allows verification that each part of the conversion training is successfully completed.

> Note: Supervised line flying experience can count towards the requirements under regulation 121.480.

Flight crew line check

At the completion of supervised line flying the operator must make a provision for a line check. The design of the check will depend on the operator's complexity, however if the operator conducts multi-crew operations the line check must cover both pilot flying and pilot monitoring duties. In addition, the line check should verify any special operations, such as steep approach, narrow runways, international operations and EDTO. The purpose of the line check is to verify the flight crew are competent in all the duties required as part of normal line operations.

The exposition should include a process for the HOTC to verify all training is complete and release the flight crew for unsupervised line operations.

4.2.8 Upset prevention and recovery training (UPRT)

UPRT is an integrated approach that identifies the training resources required to cover both the academic and practical elements of the training, to:

- provide pilots with the necessary knowledge, skills and attitudes to reduce the probability of an upset encounter
- maximize pilots' ability to recover the aeroplane from an undesired state.

UPRT training in an FSTD

> Note: Additional and detailed guidance on the technical requirements, and on the instructor operating stations (IOS) functions and tools for UPRT, can be found in *Volume I of ICAO Doc 9625—Manual of Criteria for the Qualification of Flight Simulation Training devices*.

To be suitable for UPRT, the FSTD must be qualified for flight outside the aeroplane flight envelope data provided by the OEM, including adequately representing the post stall regime. The development and utilisation of a 'type-representative post-stall aerodynamic model' to support demonstration of a stall past the critical AOA (full aerodynamic stall or post-stall regime) is recommended if such demonstration is to be conducted. The IOS should allow accurate feedback of pilot performance. Instructors should have available, and be trained to effectively utilise, IOS tools that convey:

- when the simulator model is no longer valid
- when the aeroplane operational envelope has been exceeded
- when inappropriate control inputs have been used.

Where the FSTD is not based on the type and variant of the operator's aeroplanes, the operator will need to engage a subject matter expert (SME) to ensure that the device represents the actual aeroplane, with no negative training outcomes. The requirements for the SME are detailed in AC 121-03—Upset prevention and recovery training.

In some cases, the operator may not be able to source OEM data to support extended envelope training. There are a number of 'generic' data programs designed to support a UPRT program. To validate these programs, the operator should source an SME pilot.

> Note: If the FSTD does not have a Part 60 qualification to conduct UPRT, the inspector should contact the Senior Standards Officer (flight simulation) for an assessment.

UPRT – instructors

The following instructor training programs assume that the person is already qualified to deliver training in an FSTD. Individuals who have not had previous instructor or check pilot training experience will need to complete the operator's training program, in addition to the syllabus below, to be qualified as a UPRT instructor.

Note: The term 'instructor' here, refers to a person delivering UPRT training and should not be confused with a Part 61 qualification.

The inspector assessment should consider whether the following matters are included in the training program. The structure and delivery of the program may vary; however, the desired outcomes need to be demonstrated.

Academic syllabus

- Review of LOC-I accidents / incidents
- Energy management factors
- Disorientation
- Workload management
- Distraction
- OEM recommendations
- UPRT recognition and recovery strategies
- Risks of negative training
- Recognition of trainee errors
- Intervention strategies
- Aeroplane type-specific characteristics
- Operating environment
- How to induce the startle factor
- Understanding the importance of angle of attack reduction
- Value and benefits of demonstration
- How to assess pilot performance using core competencies
- Delivery of the theory component of the UPRT training syllabus
- Interpretation and use of the Vn diagram

Practical syllabus

- Limitations of training platform
- Operation of instructor operating station (IOS) and de-briefing tools
- Delivery of training in an FSTD based on sequences in the AUPRTA
- In-seat instruction techniques
- Pre-session briefing and post session debriefing

To be suitable, instructor training should include refresher training. Training may be delivered by internal SMEs, by an external OEM, or other suitable training organisation(s). If delivered by internal SMEs, the refresher training should demonstrate how these SMEs remain up to date with the latest training practices. CASA expects SME training to be conducted by an external organisation, preferably an OEM specialising in UPRT training delivery. The refresher training should cover the academic syllabus and demonstrate how instructors are kept up to date.

UPRT – flight crew

The following UPRT training syllabus is based on *ICAO Doc 10011— Manual on Aeroplane Upset Prevention and Recovery Training*. The operator can develop appropriate course notes to support the

syllabus, or utilise the *Airplane Upset Recovery Training Aid*. Inspectors must ensure that the training program includes both the academic and practical training suitable to the aeroplane type.

UPRT is delivered as part of the conversion training and recurrent training programs. Conversion training will cover the complete syllabus, while the operator may develop recurrent training to include elements of the syllabus – such that the full syllabus is covered over a three-year period.

Many of the elements listed in the syllabus below may already be included as part of the conversion and recurrent training program. There is no need for the operator to develop a separate UPRT syllabus that repeats items included in other training; however, the inspector must be satisfied that all syllabus items are covered.

The UPRT syllabus will include a mix of both academic and practical training to competency.

UPRT syllabus

Aerodynamics

- General aerodynamic characteristics
- Advanced aerodynamics
- Aeroplane certification and limitations
- Aerodynamics (high and low altitudes)
- Aeroplane performance (high and low altitudes)
- Angle of attack (AOA) and stall awareness
- Stick shaker activation – if applicable to aeroplane type
- Stick pusher activation – if applicable to aeroplane type
- Mach effects – if applicable to aeroplane type
- Aeroplane stability
- Control surface fundamentals
- Trims
- Icing and contamination effects
- Propeller slipstream (as applicable)

Causes and contributing factors for upsets

- Environmental
- Pilot-induced
- Mechanical
- Safety review of accidents and incidents relating to aeroplane upsets

G-awareness

- Positive/negative/increasing/decreasing g-loads
- Lateral g-awareness (sideslip)
- G-load management

Energy management

- Kinetic energy vs. potential energy vs. chemical energy (power)
- Relationship between pitch and power and performance

Flight path management

- Automation inputs for guidance and control
- Type-specific characteristics

- Automation management

Recognition

- Type-specific examples of instrumentation during developing and developed upset
- Pitch / power / roll / yaw
- Effective scanning (effective monitoring)
- Stall protection systems & cues
- Criteria for identifying stalls & upset

Upset prevention and recovery techniques

- Timely and appropriate intervention
- Nose high / wings-level recovery
- Nose low / wings-level-recovery
- High bank angle recovery techniques

System malfunction

- Flight control anomalies
- Power failure (partial or full)
- Instrument failures
- Automation failures
- Fly-by-wire protection degradations
- Stall protection system failures, including icing alerting systems

Specialised training elements

- Slow flight
- Steep turns
- Recovery from approach-to-stall
- Recovery from stall, including uncoordinated stalls (aggravating yaw)
- Recovery from stick pusher activation (as applicable)
- Nose high / high speed recovery
- Nose high / low speed recovery
- Nose low / high speed recovery
- Nose low / low speed recovery
- High bank angle recovery
- Line-oriented flight training (LOFT) or line-operational simulation (LOS)

Human factors

- Situation awareness
  - human information processing
  - inattention, fixation, distraction
  - instrument interpretation
- Startle and stress response
  - physiological, psychological, and cognitive effects
  - management strategies

- Threat and error management (TEM)
  - TEM framework
  - active monitoring, checking
  - fatigue management
  - workload management
  - crew resource management (CRM)

4.2.9 Differences training

Some operators have aeroplanes that require flight crew members to undergo differences training. There are two possibilities as to why differences training may be required.

a. Differences training in accordance with regulation 61.200 due to a requirement of the aeroplane type rating. This must be conducted as a Part 142 activity, or by an individual employed by the operator who is authorised under regulation 142.040 to conduct differences training.

b. A requirement for familiarisation purposes with an aeroplane covered by the type rating, and not required by regulation 61.200. An example of this would be an operator having passenger and cargo variations of an aeroplane type. In this case, a person approved by the operator may conduct the differences training between the passenger and cargo versions of the aeroplane.

If an operator requires flight crew members to undergo differences training as per item b above, their exposition must include differences training for the following:

- the aeroplane the flight crew members will be flying
- any equipment fitted to or carried on the aeroplane in accordance with Subpart 121.K of CASR that flight crew members may use in connection with operating the aeroplane.

To meet the present and suitable requirements, the inspector must determine that the exposition includes differences training on both of the above items. The inspector must also ensure the training the operator provides is appropriate and sufficiently comprehensive to enable flight crew to operate the aeroplane and equipment safely. Items that may be covered include, though not be limited to:

- performance differences
- weight and balance differences
- engine operation differences
- emergency and safety equipment differences.

4.2.10 Pilot in command training

A pilot must successfully complete specific PIC training program for an aeroplane and aeroplane operator to conduct a flight as PIC. To be suitable, the inspector must determine that the operator's exposition includes each item of regulation 121.565. The number of sectors of line flying as PIC under supervision specified in the exposition should be appropriate for the nature and complexity of the operation and ensure an appropriate level of safety for the operation. The supervised line flying must ensure the PIC meets the experience requirements under regulation 121.480, refer to section 4.2.1. of this principle. PIC training will normally finish when the candidate successfully completes a line check.

The regulation also specifies that command training must include training in the responsibilities of a PIC of an aeroplane of the operator's kind. Hence, a syllabus must include items in addition to training in flying technical skills. The syllabus should also emphasise the application of HF/NTS and include items that allow a pilot to demonstrate their decision-making capability. Training in these items may be covered in classroom ground school sessions prior to a pilot commencing aeroplane or simulator training.

To be suitable, the inspector should determine that the syllabus includes items such as, but not limited to:

- leadership and teamwork building skills
- communication
- application of knowledge

- powers of the PIC
- operator obligations of the PIC
- workload management.

Application and further development of these skills should be included in the simulator and aeroplane modules of the command training course. The syllabus should include non-technical skills training and development within the command training events, including the line flying as pilot in command under supervision

To be suitable, the inspector should determine that the minimum experience requirements specified are appropriate for the nature and complexity of the operation to ensure an appropriate level of safety. The inspector should also consider the requirement of paragraph 121.475(2)(c) for at least one pilot occupying a pilot seat to have completed the minimum hours and sectors in an aeroplane of that kind.

4.2.11 Recurrent and refresher training and checking

Recurrent training is an umbrella term that ensures flight crew remain competent to conduct AOC operations and qualified under Part 61. Recurrent training includes refresher training with both conducted concurrently. To be suitable, the operator's program of recurrent training program should include:

- units of competency under the Part 61 MOS
- normal, abnormal, and emergency procedures UPRT, if required
- specific operational training to support LVO, EDTO, LAHSO, PRM etc.
- each major system failure at least once every 4 years
- SMS training
- HF/NTS training
- dangerous goods training if required.

In addition, each flight crew member must hold a valid check for the following:

- Part 121PC
- annual line check, both day and night operations
- refresher check
- annual emergency and safety equipment check
- 3-yearly emergency and safety equipment check.

The operator may conduct recurrent training requirements concurrently with Part 61 proficiency check requirements, provided the check is designed to meet both requirements. For example, a Part 121PC can meet the requirements of a Part 61 IPC provided:

- the 121PC is conducted under the IFR
- the check is conducted by a flight examiner.

The design of the recurrent training program will vary depending on the size and scope of operations. The operator may conduct two 121PC’s and an annual line check in addition to the refresher training requirements of:

- items that relate to duties as flight crew
- aeroplane systems
- specific operational procedures using the aeroplane
- accident, incident and occurrence reviews.

Refresher training may consist of:

- computer-based training sessions
- technical quizzes

- targeted questioning during line checks
- periodic newsletters.

The operator may apply for an approval under regulation 61.040 to have their recurrent training and checking program meet certain recency and proficiency check requirements under Part 61.

4.2.12 Emergency and safety equipment training and checking

The operator must provide both annual and 3-yearly emergency and safety equipment training and check. The annual and 3-yearly training may be conducted concurrently every third year. The training maybe conducted in the aeroplane or a training facility or device. Training and checking personnel who conduct the training and or check must be approved under regulation 121.010. Use Protocol suite (OPS.15) Emergency and safety equipment instructor to conduct the assessment and approval.

When emergency and safety equipment training and checking is conducted in an aeroplane, the exposition should contain policies and procedures to ensure that the activity can be conducted safely and effectively, and that the aeroplane continues to meet airworthiness requirements following the activity. The operator should consider the following:

- If emergency and safety equipment is removed from its stowage position and used for training and checking activities, the operator should detail how that equipment will be handled safely and indicate who is responsible for ensuring the equipment is restowed and serviceable.
- If emergency and safety equipment is removed from its stowage position and replaced with 'dummy' equipment, then an entry should be made in the aeroplane technical log. Following the training and checking activity, the technical log must be certified once the equipment is correctly restowed and serviceable.
- If emergency exits are operated, the procedures will need to ensure that the activity is conducted safely and with no damage to the aeroplane.
- Where escape slides/rafts can be armed for automatic deployment, the procedure will need to include how the system is made safe to prevent accidental deployment. In this instance, approved maintenance staff may need to be involved in deactivating and reactivating the system.

Practical training in emergency and safety equipment may be conducted using representative training devices instead of the actual aeroplane and equipment. The effectiveness of crew member training and checking can be enhanced using cabin training devices, emergency exit trainers, underwater escape trainers, and fire-fighting training devices, etc.

There is no formal approval process for the use of such devices. The exposition must detail the policies and procedures for the use of the device, and the training and checking activities that can be conducted.

Training and checking personnel who use the device need to be trained and qualified by the operator to conduct the activities.

The exposition should outline maintenance procedures and describe when the device is considered unserviceable and the process that personnel must follow to report the unserviceability.

Whether the training is conducted in aeroplane or utilising training devices, the inspector should conduct an onsite inspection to confirm suitability.

The operator may choose to combine the emergency and safety equipment training with HF/NTS training to enhance awareness between cabin crew and flight crew. When the training and assessment is combined the inspector must confirm that the sessions are properly managed by the instructor.

4.3 Cabin crew

The exposition must describe the training and checking activities that are required to familiarise cabin crew with their duties. This includes any ground training and checking, along with supervisory flying training and checking in the aeroplane. Chapter 13 of the Part 121 MOS prescribes items that the operator must include in the training and checking activities. The inspector should determine that the operator meets Chapter 13 of the Part 121 MOS requirements in their cabin crew training and checking activities. To be suitable, the training the operator provides must be tailored to the operations conducted, and the operator's aeroplane types. The training should ensure that an individual with no previous flying experience will attain a level of competence to ensure confidence in operating in abnormal or emergency situations in an airborne scenario.

Cabin crew members must meet the qualification, training, and experience requirements of subregulation 121.640(2) before conducting flying duties. However, an operator can apply for approval under regulation 121.010 to develop a cabin crew training and checking system. This system should encompass the requirements of subregulation 121.640(2), but with emphasis on the specific operations conducted by the operator. To consider an approval under regulation 121.010, the inspector must refer to the Operations protocol framework.

4.3.1 Initial training and check

Division 4 of Chapter 13 of the Part 121 MOS prescribes material that must be taught to meet the initial training requirements for an individual when joining an operator as cabin crew. The intent of the training is to provide a grounding in items that will be relevant to the person's duties as a cabin crew member.

To meet the initial training requirements to qualify as a cabin crew member, an individual must complete the prescribed training components and successfully complete an initial training check in accordance with an operator's exposition.

Inspectors need to be aware that unlike flight crew, cabin crew may join an operator with little or no aviation experience. To be suitable, the inspector should ensure the training includes sufficient training to ensure that cabin crew are aware of the aviation environment, general aeroplane awareness and terminology. The theory of flight component of initial training does not need to be to the level of flight crew, however, should include basic understanding of flight, turbulence, and aeroplane configuration changes. The initial training check must ensure the cabin crew member is competent.

4.3.2 Conversion training

Division 5 of Chapter13 of the Part 121 MOS prescribes information that must be taught to meet the conversion training requirements for a cabin crew member to conduct duties on an operator's aeroplanes. The intent of the training is to qualify cabin crew both on the aeroplane type and also in the use of the operator's procedures. Hence, if a cabin crew member will be flying for an operator on more than one type, they must complete conversion training on each of those types.

To be suitable, the inspector must determine that the operator's exposition includes each of the prescribed components of conversion training for the operator's aeroplane types. The operator may combine initial training and conversion training for new joining cabin crew members. Hence, the inspector should ensure that all items of both training requirements are prescribed for new joiners, whilst also making sure that if a crew member conducts additional conversion training, the elements of Division 5 of Chapter 13 of the Part 121 MOS are covered for that aeroplane type. The inspector should also ensure the exposition clarifies the requirement to complete conversion training on each aeroplane type a cabin crew member may operate.

Supervised line flying

As part of conversion training, and prior to commencing unsupervised line flying, a cabin crew member must successfully complete:

- an annual emergency and safety equipment check
- a three-yearly emergency and safety equipment check
- supervised line flying in accordance with any requirements prescribed in the operator's exposition
- a line check for the operator and aeroplane type.

To be suitable, the inspector should determine that the operator's exposition prescribes supervised line flying procedures that are appropriate for the nature and complexity of their operation and their aeroplane type. Consideration should also be given to the level of experience a cabin crew member has prior to undertaking the supervised line flying. Hence, the operator may prescribe a different number of supervised line flying sectors for a new member undertaking conversion training as opposed to an experienced cabin crew member completing conversion training on a new type.

The exposition must also describe the operator's process for appointing individuals to conduct cabin crew checking activities, including line checking. This includes how the operator ensures the training and checking personnel are complying with its training and checking system.

4.3.3 Differences training

Differences training is required when the operator assigns a cabin crew member to fly a variant of an aeroplane type, or an aeroplane of the same type that differs in:

- safety and emergency equipment, including its location
- emergency exit operation, including location of the exits
- normal or emergency procedures.

At the completion of differences training, the cabin crew member must successfully complete an operator's differences training check.

To be suitable, the inspector should determine that the operator's exposition includes where applicable, differences training procedures. The training should focus on the location and use of safety equipment, and the normal and emergency procedures for the aeroplane variant. The exposition must also include details of the operator's differences check. It should be appropriate for the aeroplane type and the nature of their operation.

The operator's exposition should also outline procedures to ensure cabin crew are not assigned unsupervised flying duties on an aeroplane that requires differences training until they have successfully completed both differences training and a differences training check.

4.3.4 Senior cabin crew member

When the operator has aeroplanes that require more than one cabin crew member for a flight, they must nominate a senior cabin crew member. Before a cabin crew member can be nominated as senior cabin crew member, they must have completed the training for a senior cabin crew member as prescribed in Division 2 of Chapter 13 of the Part 121 MOS. The cabin crew member must also have successfully completed the operator's senior cabin crew member competency check as specified in the exposition.

To be suitable, the inspector must determine that the operator's exposition includes the training required by Division 2 of the Chapter of the Part 121 MOS. The inspector must also determine that the operator's senior cabin crew member competency check is appropriate for the nature and complexity of the operation, along with the type of aeroplane.

4.3.5 Refresher training

To maintain recency for the operator on an assigned aeroplane type, a cabin crew member must have flown as cabin crew on an aeroplane of that kind within the previous six months. There is no distinction between whether they operate unsupervised, or as a cabin crew member under supervision. When a cabin crew member does not meet the requirement, they must successfully complete an operator's refresher training for the aeroplane type.

To be suitable, the inspector must determine that the operator's exposition prescribes a course of training that is appropriate for the nature and complexity of their operation, and the type of aeroplane. The training may distinguish between a cabin crew member who has not completed any flying duties in the previous six months, and a cabin crew member who has not operated on a specific type of aeroplane in the operator's fleet in the previous 6 months.

4.3.6 Recurrent training

Recurrent training is an umbrella term that ensures cabin crew remain competent to conduct AOC operations, and includes:

- annual emergency and safety equipment check
- three-yearly emergency and safety equipment check
- line check
- HF and NTS training
- SMS training
- dangerous goods training.

To effectively manage recurrent training, the operator's exposition must develop procedures to ensure that cabin crew have completed the required recurrent training prior to being assigned a duty. When a cabin crew member is qualified across several aeroplane types, the recurrent training program should identify the differences between the types and ensure those matters are assessed. An example would be if the different aeroplane types have different emergency exit doors.

The operator's exposition must detail the process used to remove cabin crew from line operations if any part of the recurrent training is not successfully completed.

If a cabin crew member does not pass a check or is not deemed competent at the end of a training course, the exposition should detail the remedial training pathway to return the cabin crew member to competency.

To be suitable, the inspector must determine the system the operator employs is sufficiently robust to ensure that a cabin crew member is not scheduled for unsupervised flying duties unless they meet each of the above criteria. The operator's exposition should also include procedures to ensure scheduling personnel are trained to understand these requirements so that any automated system is not overridden to allow crewing of a flight.

4.3.7 Regulation 121.010 – approved cabin crew training and checking

The operator may apply for an approval to develop a training and checking system that achieves the same or better outcomes via a different means. To develop a training and checking program for approval under subregulation 121.640(4) the operator will need to demonstrate how their training and checking activities will achieve the same outcomes as prescribed in subregulation 121.640(2). The intent of the provision is to allow flexibility on how the operator delivers the training and checking activities.

Under the approval, cabin crew who are successfully participating in an operator's approved training and checking system may be granted relief from completing an annual or three yearly emergency and safety procedure check. The system of checks are designed to achieve the same outcome over a defined period.

To be suitable, the inspector must assess the program against the competencies identified by the operator. It may be, that the nature of their operations are such, that a training system that conducts elements of the recurrent training at more frequent intervals creates a better outcome. It is important to note that the approval process must not be used for alleviation against a particular requirement. For example, it is not acceptable to approve a training system that does not include the practical components prescribed in Chapter 13 of the Part 121 MOS.

To be suitable, the approved training and checking program should include more detail on how cabin crew are assessed versus interrater reliability. In addition the exposition will need to describe the term "successfully participating in" and the process where, for what ever reason a cabin crew member does not complete part of the program.