



# **Annex 3**

## **Flight Operations**

## Introduction

This annex is an integral part of the CASA Surveillance Manual (CSM), which should be referenced at all times. To allow for more frequent revisions, this annex can be updated independent of the CSM and other annexes. The process of updating this annex requires verification and approval from its owners and sponsors, as well as from Coordination and Safety Systems (CSS). An updated version can only be published once CSS has finalised the format, with the latest revision history data included in the revision table.

## Revision history

Revisions to this annex are recorded below in order of the most recent first.

Version Nº.	Date	Parts / sections	Details
5.3	August 2022	Section 1	Update to remove details regarding Part 142 integrated and multi-crew flying training and contracted recurrent training.
5.2	December 2021	Section 2	Removal of CAR 234 references
5.1	June 2021	Section 2  Table 4	Added Systems and Elements Fatigue Management Fatigue Risk Management System (FRMS)  Amended Flight Operations element to read Operations
5.0	December 2019	Section 2.1	Change of where to locate Health Check mandatory elements
4.0	April 2019	Inclusion of Introduction and Revision history.	These inclusions allow for updates and revisions independent of the CSM and other annexes.
4.0	April 2019	Section 2.1	Removal of recommended Health Check timeframes.
4.0	April 2019	Section 3	Removal of recommended surveillance intervals.
4.0	April 2019	Section 5	Addition of third-party audits.

# 1 Overview

This Annex provides instructions for conducting surveillance of Air Operator's Certificates (AOC), issued under Section 27 of the Act, as well as an approval issued under CASR Part 138 (Aerial work operations). The Annex contains information relating to the following:

- Systems and Elements
- Systems and Elements – Health Checks
- Surveillance Currency Guide
- ANZA requirements
- Information Sources.

## 2 Systems and Elements: Flight Operations

The audit technique involves assessing the documented system and comparing it against the actual system processes. The system is assessed for compliance and sampling conducted as appropriate. The assessment of the system and its risks is achieved by a questioning technique using the four attributes (12 components) of Management System Model (MSM), see CSM Sections 3.3.3 System attributes – Management System Model and Section 3.3.3.1 – Systems attributes (table). The CASA description of a Flight Operation consists of six systems incorporating 25 elements.

**Table 1: System and Elements**

<b>Systems</b>	<b>Elements</b>
<b>Operational Personnel</b>	Crew Scheduling
	Operational Standards
	Fatigue Management
	Fatigue Risk Management System (FRMS)
<b>Aircraft</b>	Maintenance System
	Airworthiness Control
	Line Servicing
	Airworthiness Assurance
<b>Operations</b>	Authorised activities
	Operational Support Systems
	Flight System
	Operating Ports
	Air Routes
	Fuel Requirements
<b>Cargo and Passengers</b>	Passenger Control
	Non DG / Baggage System
	DG Cargo Control
	Fuel Load Control
	Aircraft Load Control
<b>Training</b>	Training Management
	Training Infrastructure
	Qualifications and authorisations (instructor, examiner and support staff)
	Assessments
<b>Safety Management</b>	Safety Policy and Objectives
	Safety Risk Management
	Safety Assurance
	Safety Promotion

Table 2: Operational Personnel Elements

<b>SYSTEM: Operational Personnel</b>	
<b>ELEMENT: Crew Scheduling</b>	
Crew scheduling plays a significant role in achieving safe operations for it is through crew scheduling that the authorisation holder ensures that flight and ground crew have appropriate qualifications, certification, operate in accordance with legislative requirements and have appropriate recency (as applicable) in order to safely conduct the planned task from the start of the duty period until completion.	
<b>Prompts:</b>	
Roster production (includes cabin crew and dispatchers)	
Crew records (includes cabin crew and dispatchers)	Maintenance authorities and other airworthiness authorisations
Flight authorisation	Qualifications, certifications, currency (are they trained for the role)
DAMP education and testing	HF/NTS training
SMS training	
<b>ELEMENT: Operational Standards</b>	
Operational Standards are a vital element of the system required to maintain safe operations through the establishment of an appropriate set of systems (includes an appropriate organisational structure) to accommodate induction, check to line, upgrade training (where applicable) and a system for dealing with unacceptable performance.	
<b>Prompts:</b>	
CEO	Line pilots including casual/subcontracted pilots
Chief Pilot / HOFO/ Type Specialist (however named)	Flight school trainees
Head of training and checking (however named)	Quality assurance personnel
Check pilots	Cabin crew
Supervisory pilots	Cabin staff
Safety and/or Quality manager	Load control personnel
Head of Aircraft Airworthiness and Maintenance Control (HAAMC) and/or CAM	Ground handling staff
Maintenance controller	Ground crew
Approved Testing Officer (ATO) delegates Flight examiners	Loading staff
Cabin check crew	Dispatcher personnel
Flight instructors	Operational support and admin staff
Ground instructors	Traffic staff
DG training Instructors	Head of Operations (HOO)
<b>ELEMENT: Fatigue Management (Flight Crew) - CAO 48.1 Appendices 1-6</b>	
The Fatigue Management element is designed to audit compliance with CAO 48.1 Appendices 1 to 6 and minor variation approvals. Safe operations rely on proactive management of fatigue risks and hazards	
<b>Prompts:</b>	
Roster production	Fatigue management
Records and Reports	Operations across Multiple Appendices
Fatigue hazard and identification and mitigation processes	Enhanced obligations (Appendices 2-6)
FCM fatigue monitoring	Fatigue training
Sleep opportunity assurance	Minor Variation conditions
Sustenance	Appendix selection

<b>SYSTEM: Operational Personnel (cont...)</b>	
<b>ELEMENT: Fatigue Risk Management System (FRMS) - CAO 48.1 Appendix 7</b>	
An FRMS approval allows an operator to establish bespoke fatigue limits in excess of those allowable under another appendix to CAO 48.1. fatigue hazard identification, mitigation, monitoring, assurance and promotion procedures all form the basis of an effective risk management system for safe operations.	
<b>Prompts:</b>	
Change management procedures	Practical operating procedures
FCM fatigue monitoring	Hazard identification, risk assessment and mitigation procedures
Data acquisition and analysis	Safety Assurance procedures
Use of Biomathematical Model	Safety promotion procedures
Fatigue Training	Records and Reports
Sustenance	

Table 3: Aircraft Elements

<b>SYSTEM: Aircraft</b>	
<b>ELEMENT: Maintenance System</b>	
This element contains the systems and processes for identifying “what” maintenance activities are required to be done as well as “when” the maintenance activities are to be completed.	
<b>Prompts:</b>	
Manufacturer's recommendations	Safety equipment
Aircraft age (Aging aircraft)	Major repairs and alterations
Aircraft modifications	Aircraft configuration and listing
Aircraft specialised operations	Defect information
Reliability program	Minimum Equipment List (MEL)/Configuration Deviation List (CDL)
System of Maintenance (SOM) or approved maintenance program	Service Defect Reports (SDR)
Airworthiness review certificate (ARC)	
<b>ELEMENT: Airworthiness Control</b>	
This element contains the systems and processes for achieving the “how” maintenance activities are conducted and “who” completes the maintenance activities.	
<b>Prompts:</b>	
System of certification	Contractual arrangements
Data	Special flight permits
Parts and stores and/or parts pooling	Operational equipment
Maintenance providers	MEL/CDL deferred maintenance
Aircraft maintenance documentation	Aircraft cross hire
Time in service details	CASA approval
Defect information	Short term escalation
Airworthiness directions	Authorised maintenance support equipment
<b>ELEMENT: Line Servicing</b>	
This element contains the systems and processes for ensuring the appropriate activities are conducted to ensure the aircraft is serviced for flight.	
<b>Prompts:</b>	
Line maintenance	Taxiing
Pilot maintenance	Authorised maintenance support equipment
Configuration control	Engine running
Fuelling	Towing
Replenishing	De-icing
Cleaning	

<b>SYSTEM: Aircraft (cont...)</b>	
<b>ELEMENT: Airworthiness Assurance</b>	
This element contains the systems and processes for ensuring the aircraft is airworthy and fit for service. This is accomplished primarily through the authorisation holder's internal audit processes and closes the loop on the entire maintenance system.	
<b>Prompts:</b>	
Audit	Maintenance
Aircraft	Locations
Aircraft documentation	

Table 4: Operations Elements

<b>SYSTEM: Operations</b>	
<b>ELEMENT: Authorised activities (review against Operation Personnel)</b>	
The AOC Operations element addresses the systems that ensure the authorisation holder contains its operations to those authorised by legislation. This is primarily achieved through the use of a properly structured organisation with appropriate communication channels. Appropriate Key Personnel is a key link in ensuring AOC operations are not only contained but are appropriately controlled. Examples include the Chief Pilot/ HOFO (however named) and, when applicable, Type Specialist, the Head of Operations, Head of Check and Training, Head of Aircraft Maintenance Control, Maintenance Controller and Safety Manager.	
<b>Prompts:</b>	
System to contain operations to the AOC authorisation	Approved aerodromes
System to control AOC authorised operations	Special navigation areas
Manual currency procedures	Consistent content across manuals
Distribution system	Availability of manuals
Requirements for supplemental Ops manual procedures	Key personnel responsibilities and procedures
<b>ELEMENT: Operational Support Systems</b>	
This element contains the authorisation holder's systems and processes that support the conduct of flight operations. The authorisation holder system to provide crews with the published data and procedures necessary to achieve compliance with performance requirements.	
<b>Prompts:</b>	
Provision of Performance data	Flight planning and preparation
Reliability and validity of performance data	Training programming and scheduling
Briefing rooms	Records management
Classrooms	Training flights authorisation
Facilities and equipment	EFB (Software/hardware distribution, updating and redundancy)
Exam facilities and security	Training aerodromes and associated training areas
Training aids	Operational library
Record storage and archive	Charts (training area)
<b>ELEMENT: Flight System</b>	
This element contains the authorisation holder's systems and processes for the safe conduct of the flight phase of operations. Much of this information, procedures and instructions are contained in the operations manual. This is not a limiting factor and other areas of operations may or may not require consideration.	
<b>Prompts:</b>	
Crew coordination	Approved Single Engine Aeroplane (ASEA)
Flight check system	Extended Diversion Time Operations (EDTO)
Monitoring the flight path	Reduced Vertical Separation Minimum (RVSM)
ATS communication and procedures	Flight deck procedures
Navigation procedures	Monitoring of flight path procedures

<b>SYSTEM: Operations</b>	
<b>ELEMENT: Flight System (cont...)</b>	
Altitude awareness procedures	Lower take-off and landing minimum
Flight profile procedures	Flight Management System (FMS) operation procedures
Aircraft performance considerations	Operational control procedures
Aircraft system management procedures	Turn around and post flight procedures
Defect recording procedures	Emergency procedures
Passenger control procedures	Precision Runway Monitoring (PRM)
Land And Hold Short Operation (LAHSO)	Supplemental electronic devices and information (e.g. iPad)
Polar operations	Refuelling/ fuel spill procedures
Performance Based Navigation (PBN)	Pre-flight procedures
<b>ELEMENT: Operating Ports</b>	
This element contains the systems and processes that ensure that the flight crew have adequate knowledge of the port and that the port/landing area is “suitable” for the operation.	
<b>Prompts:</b>	
Inspection and reporting procedure	Lower landing minima
Operating details	Weather reporting/Special Automatic Weather Report (SAWR)
Approved agents	Altimeter setting sources
Security	Suitability of port
Suitability for pax recovery	
<b>ELEMENT: Air Routes</b>	
This element contains the systems and processes that allow an authorisation holder to use, as applicable, but not be limited to the provisions of Required Navigation Performance (RNP), RVSM, EDTO, ASEA, or the use of Self-contained, long-range navigation systems.	
<b>Prompts:</b>	
Reduced Vertical Separation Minimum (RVSM)	Approved Single-Engine Aeroplane (ASEA)
Extended Diversion Time Operations (EDTO)	Self-contained, long-range navigation systems (FMS)
Route limitations	Required navigation performance (RNP)
Polar operations/ Cold weather operations	Communications system to support route specifications (ACARs, Sat Comm)
<b>ELEMENT: Fuel Requirements</b>	
This element addresses the current or proposed policy the authorisation holder has in place to comply with the applicable requirements of CASR 91.455, 138.285, 135.355, 133.190 and 121.235 and associated amendments. This is achieved through a review of the relevant sections of the authorisation holder’s Operations Manual or separately submitted fuel policy.	
<b>Prompts:</b>	
Aircraft specific fuel data	In-flight fuel management
Fuel planning requirements	Variable fuel requirements
Fuel reserves	Fuel policy risk assessment
Supplementary fuel	



Table 5: Cargo and Passengers Elements

<b>SYSTEM: Cargo and Passengers</b>	
<b>ELEMENT: Passenger Control</b>	
This element contains the authorisation holder's systems and processes that deliver control over passenger movement from check-in until completion of the flight.	
<b>Prompts:</b>	
Passenger check in and seat allocation	Exit-row seating
Passenger screening	Carry-on baggage
Passenger transport to aircraft	Cabin procedures
Passenger seating verification	Check-in contractual arrangements
Management of electronic devices	
<b>ELEMENT: Non DG / Baggage System</b>	
This element contains the authorisation holder's systems and processes that deliver control cargo classification to ensure that DG and any specialised cargo (perishable materials, animals) is identified prior to processing. Cargo or baggage, acceptance for non-DG cargo/baggage and specialised cargo scales and their calibration, identification/tagging, cargo manifest building and data flow to the flight crew are key elements in this sub-system.	
<b>Prompts:</b>	
Cargo classification system	Cargo loading
Cargo or baggage acceptance	DG control
Temporary storage	Cargo contractual arrangements
Transport to aircraft	Notification of loads to flight crew
<b>ELEMENT: DG Cargo Control</b>	
This element contains the authorisation holder's systems and processes relating to cargo classification and acceptance procedures to ensure that DG and any specialised cargo (perishable materials, animals) is identified and properly classified prior to acceptance. Establishing whether the DG can actually be carried by air. Examination of the presented DG for correct packaging, preparation declarations and documentation. Check-in and/or Freight Forwarding personnel require DG acceptance training and are required to ascertain the content of the DG prior to formally accepting the DG and provision of a quarantine area.	
<b>Prompts:</b>	
Acceptance	Loading
Examination	Notification
Storage	In-flight emergencies

<b>SYSTEM: Cargo and Passengers</b>	
<b>ELEMENT: Fuel Load Control</b>	
This element ensures that the correct amount of fuel is loaded, where applicable, the correct amount of fuel is removed from an aircraft and the fuel quality is controlled. The sub-system Fuel quality and equipment is covered by the Line Servicing element from the Aircraft system. For demarcation in the audit process the Line Servicing element from the Aircraft system is considered to cover all issues related to the quality of delivered fuel, whereas the Fuel Load Control element covers issues of quantity, safety and contractual arrangements.	
<b>Prompts:</b>	
Fuel ordering	Defuel procedures
Refuelling procedures	Fuel contractual arrangements
Fuel Policy	Notification to flight crew
Quality control	
<b>ELEMENT: Aircraft Load Control</b>	
This element is the central system within the total Load Control system and draws together outputs from all the other systems to ensure the aircraft is actually loaded in accordance with the rules of the aircraft loading system – in balance, within all weight limits including compartment weight limits, with the load correctly secured, in an aircraft correctly configured, and how the crew expected or requested that it be loaded.	
<b>Prompts:</b>	
Trim sheet production	Aircraft configuration
Load distribution	Cargo and baggage restraint
Notification to flight crew	Computer software/hardware reliability and validity
Record retention	

Table 6: Training Elements

<b>SYSTEM: Training</b>	
<b>ELEMENT: Training Management</b>	
This element contains the authorisation holder's systems and processes for the management of training.	
<b>Prompts:</b>	<b>Sub-prompts:</b>
Training prerequisites	Training syllabus
Training delivery	Training assessment
Training system performance	Remedial training processes
Change management process	Training records management
Continuous improvement	Recommendation and/or issue of authorisations (internally)
Quality system	Internal audits
<b>ELEMENT: Training Infrastructure</b>	
This element contains the authorisation holder's systems and processes to ensure that appropriate infrastructure is available for the training being delivered.	
<b>Prompts:</b>	<b>Sub prompts:</b>
Aircraft suitability for purpose	Facilities
Flight simulation training devices	Exam facilities and security
<b>ELEMENT: Qualifications and authorisations (instructor, examiner and support staff)</b>	
This element contains the authorisation holder's systems and processes to manage the instructional and examining standards, (includes SMS, HF/NTS, cabin staff training, DG training, emergency procedure training, key personnel training, fatigue training, DAMP training etc.).	
<b>Prompts:</b>	<b>Sub prompts:</b>
Competency management	Authorisation holder documents
Professional development	
<b>ELEMENT: Assessments</b>	
This element contains the authorisation holder's systems and processes for the conduct of flight tests and assessments.	
<b>Prompts:</b>	<b>Sub prompts:</b>
Recommendations and prerequisites	On-job-competency
Management of candidates' assessments	Flight test notification
Appropriate assessment devices	Construct of the assessment exercise
Exam bank management	

Table 7: Safety Management Elements

<b>SYSTEM: Safety Management</b>	
<b>ELEMENT: Safety Policy and Objectives</b>	
This element contains the systems and processes that ensure effective governance to support the safety management that is in place, including processes for the review and update of the authorisation holder's management and commitment.	
<b>Prompts:</b>	
Safety policy	Appointment of key personnel
Just culture	Third party relationships and interactions
Safety objectives/ Safety performance indicators	Emergency response plan
Safety accountabilities/ responsibilities of managers	SMS documentation
Safety governance	
<b>ELEMENT: Safety Risk Management</b>	
This element contains the systems and processes to ensure analysis of the safety risks associated with identified hazards resulting in the implementation of effective safety risk controls.	
<b>Prompts:</b>	
Hazard identification processes - reactive	Risk assessment and mitigation
Hazard identification processes - proactive	Safety investigation
<b>ELEMENT: Safety Assurance</b>	
This element contains the systems and processes for setting, recording and evaluating system performance, conformance with regulations and company procedures, a process for conducting internal safety investigations, effectively managing change across the aviation activities conducted and driving continuous improvement of the SMS.	
<b>Prompts:</b>	
Safety performance monitoring and measuring	Safety performance indicators
Internal audit programme	Management of change
Data analysis programs (including flight data analysis, FOQA, FDAP, FDM, MOQA, reliability programs etc)	Continuous improvement
<b>ELEMENT: Safety Promotion</b>	
This element contains the systems and processes for ensuring personnel are appropriately trained and are aware of the SMS to a degree commensurate with their positions, safety-critical information is conveyed, explains why particular safety actions are taken and explains why safety procedures are introduced or changed must be evident.	
<b>Prompts:</b>	
SMS training and education programme	Safety communication processes
Safety promotion	HF/NTS training
Key personnel familiarisation training	Safety-critical/ Safety Specialist specific training
Recurrent training	Training records

## 2.1 Health Check

Health Check mandatory elements are available on the CASA Intranet. Details of the current mandatory elements for each authorisation type are published separately to the CASA website.

### 3 Surveillance Currency Guide: Flight Operations

Surveillance level	Type	Elements
Level 1	Systems Audit	Systems, Risks and Compliance
	Health Check	Specific Elements, Risks and Compliance
	Post-authorisation Review	Entry Control Elements
Level 2	Operational Check	E.g. Flight Deck Observation, Ramp check

**Note:** Surveillance intervals are determined by the National Surveillance Selection Process (NSSP). Refer to the NSSP planned surveillance schedule for further information regarding surveillance intervals.

## 4 ANZA Requirements

The arrangement between the Australian and New Zealand governments on Mutual Recognition of Aviation-Related Certification (ANZA Mutual Recognition Arrangements) provide for the reciprocal recognition by Australia and New Zealand of Air Operator's Certificates authorising operation of aircraft with a capacity of 30 seats or more or has a maximum certificated take-off weight greater than 15,000kg. Such certifications are issued by the respective aviation safety authorities under the Australia New Zealand Aviation (ANZA) Mutual Recognition Principle set out in those agreements. CASA issues AOCs with ANZA privileges under Section 27 of the Act. (General provisions in relation to mutual recognition under the ANZA Mutual Recognition Agreements are set out in Part III of the Act).

Safety oversight of authorisation holders with ANZA privileges is the responsibility of the host regulator. CASA oversees and conducts surveillance of Australian registered authorisation holders with ANZA privileges in New Zealand territory. There is no requirement for CASA to conduct surveillance or international ramp checks of New Zealand authorisation holders with ANZA privileges, but it may choose to do so.

## 5 Information Sources

The following is a non-exhaustive list of information sources that can be accessed to support the assessment of an authorisation holder:

- surveys
- third-party audits
- regulatory history, findings (Safety Findings and Safety Observations)
- past Surveillance Reports and findings (Safety Findings and Safety Observations)
- EAP information
- Defect Report Service (DRS)
- Regulatory Service activity
- information gathered by the authorisation holder
- external information gathered from industry or other government agencies
- Enforcement action
- past accident/incident history
- risk management plans provided by the authorisation holder.

A large portion of this information is available to the surveillance team and authorisation management team via the Data Warehouse using the BusinessObjects application.

**Note:** For advice on where and how to access required information refer to CSM Chapter 5 – Information Capture and Access.