

1. Specific Guidelines: AMO

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1. Specific Guidelines: AMO

1.1 Overview

This Annex provides guidelines for conducting surveillance of Approved Maintenance Organisations (AMO), including CAR 30 Certificates of Approval and CASR Part 145, and contains information relating to the following:

- Authorisation Holder Performance Indicator
- Systems and Elements
- Systems and Elements – Health Checks
- Surveillance Currency Guide
- Information Sources.

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2. Authorisation Holder Performance Indicator: AMO

Authorisation Holder Category	Factor	<i>Aircraft Size</i>
	Prompt	<i>Score according to largest aircraft, which the authorisation holder maintains or to which components maintained by the authorisation holder may be fitted.</i>
	Score	Word Picture
	1	< 10 pax or < 1133 kg payload
	2	10-19 pax or 1133-2153 kg payload
	3	20-30 pax or 2153-3400 kg payload
	4	>30 pax or > 3400 kg payload
	Factor	<i>Type of Operations</i>
	Prompt	<i>Score according to the type of operation being performed by the aircraft, which the authorisation holder maintains or to which components maintained by the authorisation holder may be fitted.</i>
	Score	Word Picture
1	General Aviation Operations	
2	Aerial Work Operations	
3	Regular Public Transport and/or Charter Operations	

Organisational Factors	Factor	<i>Senior Officers' Skills & Attitudes</i>
	Prompt	<i>Score according to the skills and attitudes of those persons responsible for the management of the authorisation holder.</i>
	Score	Word Picture
	1	Senior officer(s) are highly effective in their jobs and have cultivated a strong safety culture with positive attitudes to regulatory compliance and safety.
	2	Senior officer(s) are either highly effective with an accepting attitude towards regulatory compliance and safety or competent with a positive attitude towards regulatory compliance and safety.
	3	Most senior officer(s) are competent in their jobs or have an accepting attitude towards regulatory compliance and safety.
	4	Few senior officer(s) are competent in their jobs or have an accepting attitude towards regulatory compliance and safety.
5	Senior officer(s) are apparently incapable of performing their jobs or have a poor attitude towards regulatory compliance and safety.	

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Organisational Factors	Factor	Maturity/Stability
	Prompt	Score according to the authorisation holder's internal maturity and stability
	Score	Word Picture
	1	Industry participant (with >5 year operating history) with few or minor changes to operation, controlled growth/decline, low management and staff turnover, no financial issues, no political issues and no industrial relations concerns.
	2	Relatively new industry participant (with <5 years' operating history), OR longer term participant experiencing 1 of the following issues: <ul style="list-style-type: none"> • changes to operation • excessive growth • political issues • merger/take-over activity • management and staff turnover • financial concerns or • industrial relations tensions.
	3	New entrant (i.e. no surveillance history) OR industry participant experiencing 2 of the following issues: <ul style="list-style-type: none"> • changes to operation • excessive growth • political issues • merger/takeover activity • management and staff turnover • financial concerns • industrial relations tensions.
	4	Industry participant experiencing 3 of the following issues: <ul style="list-style-type: none"> • changes to operation • excessive growth • political issues • merger/take-over activity • management and staff turnover • financial concerns • industrial relations tensions.
	5	Industry participant with 4 or more wide-ranging issues including: <ul style="list-style-type: none"> • significant changes to operations • excessive growth/decline • political issues • recent merger/take-over • high management and staff turnover • significant funding/supplier issues • current/imminent industrial action.

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Organisational Factors	Factor	Control
	Prompt	Score according to the level of control the authorisation holder has over its functions, resources and personnel
	Score	Word Picture
	1	Tight control with majority of organisational functions contained within the organisation and all supplier/3rd party authorisation holders considered low-risk.
	2	Few and/or minor aspects of the organisation's operations are outsourced or leased with most supplier/3rd party authorisation holders considered low-risk.
	3	Several aspects of the organisation's operations outsourced or leased and/or some suppliers/3rd party authorisation holders considered medium risk.
	4	Many and/or major aspects of the organisation's operations outsourced or leased and/or some suppliers/3rd party authorisation holders considered medium to high risk.
5	Majority of organisational functions outsourced, and resources, facilities and equipment leased, with many supplier/3rd party authorisation holders considered high-risk organisations.	

Management Factors	Factor	Documents and Procedures
	Prompt	Score according to the authorisation holder's documentation of and adherence to procedures
	Score	Word Picture
	1	Well-designed, structured and effective documentation with procedures applied consistently.
	2	Documentation exists and procedures are followed with only minor, irregular deviations.
	3	Documentation exists but deviations from procedures are common although in practice these deviations address inadequacies in procedures.
	4	Documentation exists but deviations from procedures are the norm and may or may not address inadequacies in procedures or safety hazards.
5	Little or no documentation exists or where it exists, it is ineffective and/or actively ignored with a range of procedures in place, most with little or no effectiveness against real safety hazards present.	

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Management Factors	Factor	Safety-related Decision Making
	Prompt	<i>Score according to the authorisation holder's decision making process</i>
	Score	Word Picture
1	Systematic, transparent and data-driven process incorporating effective consultation, thorough analysis and consideration of both regulatory compliance and safety outcomes.	
2	Defined process (incorporating good characteristics) but not implemented completely with results focussed on compliance but with limited consideration of safety outcomes.	
3	No defined process but decisions made effectively although focussed on minimum compliance only.	
4	No defined process and decisions made fail to achieve minimum compliance or effective safety outcomes.	
5	No defined process and decisions made by individuals with no consultation or analysis and no clear link to regulatory compliance or safety outcomes.	

Management Factors	Factor	Safety Assurance
	Prompt	<i>Score according to the authorisation holder's assurance activities</i>
	Score	Word Picture
1	Proactive and reactive processes (including internal audits and investigations etc.) exist and are tied to safety outcomes and regulatory compliance.	
2	Proactive and reactive processes exist and are tied to safety outcomes or regulatory compliance but not completely implemented.	
3	Reactive processes exist but are not completely implemented or tied to safety outcomes or regulatory compliance.	
4	Reactive assurance activities (e.g. ad hoc investigations) are carried out but with little connection to regulatory compliance or safety outcomes.	
5	No assurance practices exist.	

Management Factors	Factor	Training
	Prompt	<i>Score according to the authorisation holder's management of training</i>
	Score	Word Picture
1	The competence (including technical and non-technical skills) of all personnel is actively managed through established processes including planning and assurance.	
2	Staff complete a planned training regime designed to meet regulatory requirements however competence is not confirmed.	
3	Staff complete training in accordance with basic regulatory requirements without any system designed to manage the process.	
4	Staff complete training but it is unplanned and inconsistent with competence unconfirmed.	
5	Significant portions of the organisation are untrained and/or incompetent with no processes in place to manage the training of personnel.	

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Management Factors	Factor	Communication
	Prompt	Score according to the authorisation holder's management of communication
	Score	Word Picture
	1	Communication throughout the organisation is clear, consistent and effective.
	2	Communication is mostly effective with the basic message getting through to the majority of the organisation.
	3	Communication is partially effective although some messages fail to reach all parts of the organisation.
	4	Communication systems are basic and ineffective with wide-spread failures in messages reaching all parts of the organisation.
5	Communication is non-existent or completely ineffective with messages failing to reach the whole organisation and/or conflicting messages reaching parts of the organisation.	

Operational/Environmental Factors	Factor	Complexity
	Prompt	Score according to the level of complexity, which exists within the scope of aircraft or aircraft components maintained by the organisation. (Complexity relates to factors such as multiple aircraft/component types, multiple aircraft/component manufacturers, disparate technology, ageing aircraft/components, and multiple customers.)
	Score	Word Picture
	1	Simple operation with no issues relating to complexity.
	2	Some complex aspects exist within the operation but systems and personnel work together to manage issues as they emerge.
	3	Complex operation but the systems and personnel work together to manage most issues which emerge.
	4	Complex operation but the systems and personnel are inadequate to address issues as they emerge.
5	Significantly complex operation with systems and personnel which do not manage issues which emerge.	

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Operational/Environmental Factors	Factor	Facilities, Resources, Equipment & Data
	Prompt	<i>Score according to the quality, suitability and availability of the authorisation holder's facilities, resources and equipment.</i>
	Score	Word Picture
	1	All are well-above minimum standards, with ample availability, are well-maintained and available for all parts of the organisation.
	2	All meet minimum standards, with general availability although may be limited at peak times, are adequately maintained and available for all parts of the organisation.
	3	1 of the following exists: <ul style="list-style-type: none"> • below minimum standards, • availability at peak times is limited • poor maintenance of facilities and equipment • limited availability across the organisation.
4	2 of the following exist: <ul style="list-style-type: none"> • below minimum standards • availability at peak times is limited • poor maintenance of facilities and equipment • limited availability across the organisation. 	
5	3 or more of the following exist: <ul style="list-style-type: none"> • below minimum standards • availability at peak times is limited • poor maintenance of facilities and equipment, • limited availability across the organisation. 	

Operational/Environmental Factors	Factor	Operating Environment
	Prompt	<i>Score according to the authorisation holder's operating environment. (Operating environment issues include multiple locations, limited local support, extremes in weather (rain, storms, temperature, dust, etc), limited shelter, night time work, shift work.)</i>
	Score	Word Picture
	1	Uncomplicated operating environment with systems suitable to the environment in place.
	2	Some aspects of the operating environment are more complicated but systems and personnel work together to manage issues as they emerge.
	3	Relatively stable operating environment but the systems and personnel work together to manage most issues which emerge.
4	Relatively stable operating environment but the systems and personnel are not quite suitable to address issues as they emerge.	
5	Difficult operating environment with systems and personnel ill-suited to manage operations as issues emerge.	

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Safety Outcomes	Factor	<i>Regulatory History</i>
	Prompt	<i>Score according to the authorisation holder's history of enforcement action (including administrative action against the authorisation or other action)</i>
	Score	Word Picture
	1	Nil or minor NCNs issued and acquitted expeditiously, and no enforcement action within the last 3 years.
	2	A few NCNs issued but all acquitted expeditiously, or resolved enforcement action within the last 3 years.
	3	Multiple NCNs issued and mostly acquitted without issue, or minor enforcement action carried out on outstanding issues.
	4	Multiple NCNs issued but acquittal problematic, or moderate enforcement action carried out on outstanding issues.
5	Multiple and recurring NCNs issued and rarely acquitted without issues or significant enforcement action underway or still in force.	

Safety Outcomes	Factor	<i>Safety Occurrences</i>
	Prompt	<i>Score according to the authorisation holder's recent accident, incident and undesired safety-related event history as it relates to aviation safety</i>
	Score	Word Picture
	1	No record of involvement or implication in any safety occurrences within the last 3 years.
	2	No record of involvement or implication in any accident or serious incident but has experienced minor safety-related events within the last 3 years.
	3	Involvement or implication in one serious incident or a significant number of minor incidents within the last 3 years.
	4	Involvement or implication in one accident or multiple serious incidents within the last 3 years.
5	Involvement or implication in multiple accidents and serious incidents within the last 3 years.	

Safety Outcomes	Factor	<i>Other Safety Issues</i>
	Prompt	<i>Score according to the presence of any other safety issues (not involving a regulatory breach) raised through CASA activities (including observations during surveillance) and external parties</i>
	Score	Word Picture
	1	Nil issues observed during surveillance or other CASA activity and nil reports of safety concerns from third parties.
	2	Few issues observed during surveillance or other CASA activity, or safety reports received from third parties.
	3	Multiple minor issues or concerns observed during surveillance or other CASA activity or significant reports of safety concerns from third parties.
	4	Multiple issues or concerns observed during surveillance or other CASA activity.
5	Significant issues or concerns observed during surveillance or other CASA activity.	

3. Systems & Elements: AMO

The CASA description of an AMO consists of three systems, 11 elements and a number of system risks associated with those elements. The inclusion of a formal safety management system, where required, in some authorisation holder's systems should also be considered.

The audit technique involves assessing the documented system, comparing it against the actual system processes and assessing the level of system risk mitigation exercised by the authorisation holder against the generic CASA standard system. 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 the Management System Model.

Systems	Elements
Aircraft Maintenance	Tooling and Equipment
	Data and Documents
	Stores and Distribution
	Maintenance Activity
Administration	AMO Operations
	Personnel Standards
	Personnel Rostering
Safety Management	Safety Policy and Objectives
	Safety Risk Management
	Safety Assurance
	Safety Promotion

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SYSTEM: Aircraft Maintenance	
ELEMENT: Tooling and Equipment	
This element includes all tooling and equipment held, used, contracted, loaned or borrowed by the organisation for the purpose of maintaining aircraft or aircraft components.	
Prompts:	
Availability /Adequacy (dependent upon planned activities)	Disposal
Identification (traceability, history, correction and status)	Parts Pooling
Calibration	Training on specialised tooling/equipment
Storage/protection	Ground support equipment availability and serviceability
Maintenance	Responsibility for control
Parts Borrowing /Lending	Review of tool control, monitoring and improvement
Contracting	
ELEMENT: Data and Documents	
This element includes all technical data, design drawings, regulatory documentation, maintenance systems and quality/procedures manuals used in the course of carrying out aircraft or aircraft component maintenance.	
Prompts:	
Availability / Adequacy (dependent upon planned activities)	Amendment - current amendment service – Ref: CASA ruling No 5/2003 Use of Electronic Data
Identification	Borrowing/Lending
Storage	Responsible and accountable
Handling	Monitoring and improvement
DAMP documentation	
ELEMENT: Stores and Distribution	
This element includes the acquisition, storage and handling of all parts, components, materials and consumable goods used, kept, loaned or borrowed in the course of carrying out aircraft or aircraft component maintenance.	
Prompts:	
Purchasing	Borrowing/Lending
Receipt	Dispatch /Issue
Storage	Quarantine/Rejection
Handling	Traceability

SYSTEM: Aircraft Maintenance (Continued)

ELEMENT : Maintenance Activity

This element includes all aircraft and aircraft component maintenance and may be applied to each maintenance activity separately.

Prompts:

Receipt (job/task acceptance)	Housekeeping (work in progress control and cleanliness)
Task assignment	Dispatch (return to customer)
Contracting	Organisation structure, duties and responsibilities
Inspection	Infrastructure
Repair/Manufacture In The Course Of Maintenance (MITCOM)	Multiple and temporary site control
Modification	Activity within Certificate scope
Certification	Training
Defect reporting	Computer control
Defect deferral	Component and aircraft release documentation
Shift changing	Monitoring and improvement

SYSTEM: Administration

ELEMENT: AMO Operations

This 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 are a key link in ensuring AMO operations are not only contained but are appropriately controlled. Examples include the Chief Engineer (however named) and Safety Officer.

Prompts:

Appropriate structure	Key personnel
Appropriate numbers of personnel	Facilities
Support staff	Technical staff

ELEMENT: Personnel Standards

AMO authorisation holder is required to establish and maintain an appropriate organisation, with sound and effective management structure that incorporates a safety management system where applicable. The standards of personnel, including third party providers is required to be documented detailing induction training, periodic recurrent training/checking and any required upgrade training. A process for dealing with unsatisfactory performance should also be documented.

Prompts:

Qualifications	Licensing
Recency (if applicable)	Supervision
DAMP education and testing	

SYSTEM: Administration (Continued)	
ELEMENT: Personnel Rostering	
<p>This element plays a significant role in achieving safe operations for it is through scheduling that the authorisation holder ensures that required tasks are carried out with appropriate personnel that have appropriate qualifications, operate in accordance with legislative requirements, certification and have appropriate recency (if applicable) in order to safely conduct the planned task from the start of the duty period until completion. Scheduling should take into consideration fatigue factors associated with long duty days or late night duty. A roster should, where appropriate, be published and displayed in a prominent position</p>	
Prompts:	
Roster production	Fatigue Issues
Qualifications	Recency
Certification	SMS documentation
Safety accountabilities of managers	DAMP supervision

SYSTEM: Safety Management	
ELEMENT: Safety Policy and Objectives	
<p>This element contains the systems and processes that ensure effective governance to support the safety management system that is in place, including processes for the review and update of the authorisation holder's management and commitment (through Safety Policy, Just Culture and Safety Objectives), the appointment of key personnel, the accountabilities of management, the Emergency Response Plan and SMS documentation.</p>	
Prompts:	
Safety policy	Key personnel
Just culture	Third party relationships and interactions
Safety objectives	Emergency response plan
Safety accountabilities of managers	SMS documentation
ELEMENT: Safety Risk Management	
<p>This element contains the systems and processes to ensure investigation and analysis of the safety risks associated with identified hazards resulting in the implementation of effective safety risk controls.</p>	
Prompts:	
Hazard identification processes - reactive	Risk assessment and mitigation
Hazard identification processes - proactive	DAMP supervision

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SYSTEM: Safety Management (Continued)	
ELEMENT: Safety Assurance	
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.	
Prompts:	
System performance	Management of change
Assurance	Continuous improvement of SMS
Internal safety investigation	DAMP supervision
ELEMENT: Safety Promotion	
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.	
Prompts:	
Training and education	Safety communication
DAMP education and testing	

3.1 Health Check

Health Check mandatory elements are current for a financial year and are reviewed and updated by the Safety Systems Office (SSO) each year for the following year. Details of the current mandatory elements for each authorisation type are published separately to the CASA website.

It is recognised that assessing all types of authorisation holders against all systems, elements and system risks would require an extended amount of time and resources. In order to more accurately target those authorisations holders requiring attention, a limited scope systems and risk assessment Health Check approach has been adopted.

The objective of a Health Check is to assess selected elements and system risks associated with areas that over time have demonstrated significant non-compliance and/or poor safety risk mitigation across a specific aviation sector. Compliance and assessment of system risk mitigation is required to be achieved during a Level 1 Health Check.

The results of Level 1 Health Checks drive consideration of what, if any, additional surveillance an authorisation holder requires. Good Health Check results will likely mean the overall compliance and safety management of the authorisation holder is being well controlled. Poor results will likely drive the requirement for additional surveillance in the form of a Level 1 systems audit and/or a Level 2 Operational Check.

The SSO, in consultation with the oversighting Division, is responsible for deciding on an annual basis the system elements and system risks to be addressed when conducting a Level 1 Health Check. The SSO will draw on existing risk and compliance data obtained over the previous periods in deciding what system elements and risks are to be targeted.

In order to provide a satisfactory indication of an authorisation holder's health the SSO will decide on not more than four mandatory elements to be targeted during the coming surveillance (financial) year as part of a Level 1 Health Check. The system elements to be targeted are nominated by the SSO in consultation with the technical discipline. Additional elements and risks can be added to a Health Check if capacity and resources allow. However, any additional elements or risks cannot replace those mandated.

Because of the time constraints placed on Health Checks, the scope of a Health Check should cover no more than four systems risks across the mandated elements. The decision on which four systems risks are to be assessed is at the discretion of the authorisation management team as this may differ between authorisation holders depending on the activities carried out by the authorisation holder.

Resources allocated to Health Checks are to be determined on a case by case basis by the relevant authorisation holder management team and may consist of a multi-discipline surveillance team or a single inspector, as applicable.

Preparation:	Half day
On site:	1 full day
Surveillance write-up and documentation:	1 full day

4. Surveillance Currency Guide: AMO

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. Aircraft inspection, Ramp check

AMO		
Type of operation	Level of surveillance	Recommended frequency
Maintenance of aircraft RPT or above 5700kg, Class A	Level 1 – Systems Audit	1 per year
Maintenance of aircraft Below 5700kg, not Class A	Level 1 – Systems Audit	1 per 3 years
	Level 2 – Operational Check	1 per year
Large component	Level 1 – Systems Audit	1 per year
Small component	Level 1 – Systems Audit	1 per 3 years
	Level 2 – Operational Check	1 per year
Distribution Certificate Holders	Level 1 – Health Check	1 per 5 years

NOTE: The Surveillance Currency Guide above provides guidance to assist in the decisions made during the ‘Conduct assessment’ stage described in Section 4.2.5 of the CSM.

Classify the certificate to the highest level authorised on the certificate.

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Large Components	Maintenance of components where: <ol style="list-style-type: none">1. There are >9 full time staff employed in the activity2. Class 1 components are maintained for passenger carrying operations3. Class 2 components are maintained for RPT aircraft
Small Components	All other facilities carrying out maintenance of components that are not classified as Large components.

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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:

- past Sky Sentinel risk reports
- surveys
- regulatory history, findings (NCNs, Observations and risk history)
- past Surveillance Reports and findings (NCNs and Observations)
- AIRS Information
- Service Difficulty Reports (SDRs)
- 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 Business Objects application.

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