

AMROBA[®]inc

ADVOCATE OF THE AVIATION MRO INDUSTRY

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The prime safety element for maintenance of aircraft and aeronautical parts relies on the person performing the maintenance. It is a business responsibility to provide an environment so that employees can carry out maintenance tasks correctly.

Many production & maintenance organisations already adopt international standards to various degrees depending on their trading needs. Some are already ISO accredited. Some do not need to be as they are not in the commercial global system.

AMROBA encourages organisations to use the Aerospace Standards applicable to their business needs as a basis of their compliance requirements.

Compliance with these Aerospace Standards is voluntary whereas Regulatory Standards are mandatory. Compliance with Aerospace Standards are trade related.

With reference to the ISO AS9110 standard and ICAO's recommendations, SMS integration should focus on four distinct areas:

- Safety Policy and Objective
- Safety Risk Management
- Safety Assurance
- Safety Promotion

Quality and reliability are critical values for the aerospace industry. In an environment where the mistakes or failure of products or services can be fatal, the effective operation of a quality management system plays an essential role in helping to reduce risks and provide a reliable framework for organisations to provide a product or service.

Quality management systems have been used in the aerospace/aviation industry for many years. Efforts by members of the aerospace/aviation industry to establish a single common Quality Management System resulted in AS9100, 9110, 9120. They are used and supported by the world's leading aerospace/aviation companies and also throughout their supply chain partnerships.

- AS9100 - Quality Management System *Requirements for Design and/or Manufacture of Aerospace Products*
- AS9110 - Quality Management System Requirements for Maintenance Organisations
- AS9120 - Quality Management System *Requirements for Stockist Distributors*

The Aerospace Standards are a series of specific

standards based on ISO 9001 and developed by the International Aerospace Quality Group (IAQG) to provide international consistency and address the specific regulatory, safety & reliability requirements demanded by the aerospace sector.

Whether you're looking to operate internationally or expand locally to accommodate new business contracts, certification to the standard provides firm evidence that your management system meets the exacting requirements of the aerospace sector. Other benefits include:

- Licence to trade
It is often a requirement of aerospace industry primes that you have implemented a quality management system. It also independently demonstrates that you have a management system accepted by the aerospace sector.
- Encourages international growth and sales
The global nature of the standard allows for commonality throughout the industry, allowing increased trade and co-operation.
- Saves time
Potential reduction in second party system audits.
- Risk Management
Ensures compliance with a system supported by regulatory authorities that helps to mitigate your risks.
- Raises brand reputation
By demonstrating the operation of globally accepted quality standards using common language to improve understanding of quality requirements
- Reduces waste
By helping to improve processes and remove the variation in quality.
- Increases market opportunities
Helps to demonstrate excellent levels of traceability throughout the supply chain and remove uncertainty encouraging clients to choose you over a competitor.
- Facilitates continual improvement
Regular assessment will ensure you continually use, monitor and improve your processes. ISO accreditation is the way of the future.

Contract Maintenance—Part 145

AMROBA wonders why we use the term “outsourcing” when referring to contract or sub-contract maintenance. Most of our members have been doing contract maintenance for years.

The ‘public’ and ‘media’ become alarmed when the “outsourcing” term is used. In spite of suggestions that contracting is an undesirable practice, there is no evidence that contracted maintenance is a lower level of safety than ‘in-house’ maintenance. However, we believe that both areas can do a better job.

Understanding the regulatory compliance provisions is one aspect as we transition to CASR Part 145, but understanding the operator’s Continuous Aircraft Maintenance Organisation’s (CAMO) requirements is another. The need for well documented General Terms of Agreements, Purchase Orders details, etc. will come under higher scrutiny and will increase paperwork.

Every CAR 206(1)(c) RPT operator will have their own CAMO. Current CAR 30 maintenance organisations doing line servicing/maintenance will, once transitioned to a CASR Part 145 AMO, be re-negotiating contracts with AOC’s CAMOs.

There are no regulatory “*saving*” provisions that will make current Maintenance Service Contracts between CAR30 AMOs and AOCs legal. Future contracts will be between the airlines’ CAMO and the Part 145 AMO.

First, entities have to be created—Part 42 CAMO and Part 145 AMO, then the contracts have to be amended or created between these new entities.

A CAMO is the RPT airline’s Airworthiness and Maintenance Control Organisation and the airline’s CAMO responsible manager cannot be a contracted AMO’s responsible manager.

A RPT airline CAMO can be covered by the airline’s Quality and Safety System. A CAMO will be required to have quality qualified audit staff.

E.g. Part 42 places an obligation on a Part 145 AMO to perform the contracted maintenance and, if it finds a defect, to inform the person responsible for continuing airworthiness (RPT CAMO) that there is a defect and it is not being deferred. This must be done by the AMO prior to releasing the aircraft to service.

Most contracts currently address many issues but normally give little emphasis to the regulatory side. Usually there is a clause stating each side will comply with regulatory requirements.

A Part 145 AMO has to comply with Part 145, its MoS and the AMO’s Exposition (manual). In addition, Part 145 requires the AMO to comply with Part 42.

The RPT CAMO will need to have more regulatory prescription in its contract with maintenance service providers. Their Exposition (Manual) addressing matters that their own Part 145 AMO will be ‘contracted’ to follow or an individual AMO will need to be contracted to use will need clarity.

There are many traps for RPT aircraft Part 145 AMOs such as a requirement to enter information in the aircraft’s continuing airworthiness records.

The contract will need to state that the maintenance worksheets supplied to the AMO form part of the aircraft’s continuing airworthiness records.

In hindsight, maybe we should not have complained so much about the current rules, they are much simpler to understand than what is now the future regulatory system.

Exposition

What is an Exposition?

Aviation Maintenance Organisations have, over the last few decades, adopted and implemented various levels of quality control, quality assurance, quality systems, total quality management, etc. and now they will be including a Safety Management System in the organisation’s documented system.

Purpose (Goal) of the SMS:

- To create and maintain a safe and healthy working environment for all (SMS)
- To produce fully airworthy aircraft, in a safe working environment, that are subsequently operated safely (QMS)
- To ensure that all work activities undertaken are progressed in a safe and environmentally responsible manner (OHS)

A maintenance organisation manual that complies with AS9110 also meets regulatory requirements.

Through the Maintenance Organisation Exposition (manual) the organization describes the duties and responsibilities of the company personnel, the procedures and documents used to fulfill the requirements of the regulation in force.

CASR Part 145 MoS states certain items that must be included or, if in separate manuals, procedures or processes, they can be referred to in the Exposition (Manual).

So an Exposition is another name for your current manuals that explains what you do, how you do it and by whom.

AMROBA recommends that all AMOs that may need to become a Part 145 AMO should do a cross reference check with the Exposition requirements specified in MoS part 145. This will at least prepare you for the changes that needed to comply with CASR Part 145.

CASR Part 42—Compromising Safety?

- Is it all a big con?
- Has CASA resorted to political 'spin'?
- Is the Minister conning the charter, aerialwork and general aviation sectors or just resorting to more political 'spin'?

The Minister, Mr Albanese, tells us that charter, aerialwork and general aviation regulations will only be made after deep and meaningful consultation. What additional rules is he referring to?

Fact: *Part 42 contains a full set of continuing airworthiness regulations addressing charter, aerialwork and general aviation.*

CASA's John McCormick has openly stated that he would prefer to apply the FARs to charter, aerialwork and general aviation. Considering that the continuing airworthiness regulations for this sector is already contained in Part 42, then we assume he is referring to the "operational regulations".

The question is simple: *Why does CASR Part 42 contain draconian regulations that apply to charter, aerialwork & general aviation?*

To develop this CASR Part 42 to the extent that CASA has, clearly demonstrates that this is CASA's new regulatory structure for the non RPT sectors.

Consultation continues to be an insult to aviation participants since Byron decided that EASRs were the way for Australia. The only consultation has been CASA presentations on what is proposed and how you will comply with it.

The only regulations that prevent CASR Part 42 applying to charter, aerialwork and general aviation is two transitional regulations restricting, for the time being, Part 42 to RPT AOC holders.

At the whim of the Minister and CASA, these transitional regulations can disappear.

The Applicability of Part 42 is ALL REGISTERED AIRCRAFT AND AERONAUTICAL PRODUCTS.

There is concern that CASA primary purpose of developing these rules has been focused on clarity of responsibilities so CASA can 'enforce' safety.

In taking this approach, CASA has applied a RPT way of thinking to a regulatory system that could actually compromise safety in general aviation.

The concept built into this Part is that registered operators will eventually need to 'contract' a CAMO to handle the airworthiness and maintenance control of their aircraft. CASA will be given a copy of the contract between the CAMO and registered operator specifying what requirements in Divisions 42 C2, C3 & C4 they have contracted. Potentially, over 10,000 contracts for private aircraft.

This places the full onus for maintaining an airworthy aircraft & records on the RO/CAMO.

The AMO/LAME will not be responsible to review records prior to issuing a release to service.

The current LAME responsibility, based on ICAO & FAA system, to review aircraft records and ensure the aircraft complies with all regulatory requirements prior to issuing a maintenance release has been written out of these regulations.

Under Part 42, the maintenance organisation and the LAME are only responsible to carry out and sign for the maintenance the CAMO/registered operator contracts them to carry out.

The only 'performance' rule for the AMO/LAME is signing that the aircraft, in respect of the maintenance, is airworthy .

CASRs: *"An aircraft is airworthy if it is in a state that conforms with its approved design and is in a condition for safe operation."*

Unlike the FAA & CAA(NZ) Inspection Authorisation, there is no appropriate training or examination requirements for the LAME so that he/she can be seen as competent to determine that the aircraft continues to conform to aircraft's design standards.

Fit and Proper Person

Whether an aviation participant is a '*fit and proper*' person to hold a CASA authorisation normally is a reactive process after frustrating enforcement action by CASA.

The CAA(NZ) on the other hand, takes a proactive approach by ensuring that any person that holds a CAA(NZ) authorisation or a "responsible position" in a certificate holder is a fit and proper person to hold the CAA(NZ) licence, certificate or a responsible position within a certificate holder.

The CAA(NZ) Act sets out the criteria to be considered by the Director when determining whether or not a person is fit and proper. Once an aviation document has been granted, participants in the avia-

tion system must continue to satisfy the fit and proper person test.

Maybe this proactive approach should be adopted in Australia. It places the onus on CASA to accept that the person is fit and proper and it also places similar responsibility on the individual.

Everyone working in this safety sensitive business should be a fit and proper person to participate in aviation. Employers hold the initial responsibility for this assessment.

In NZ, having a criminal record does not necessarily make you an unfit or improper, in fact some of their prominent aviators had criminal records.

The Future LAME

It is a pity that the benefits of the EASA MRO system did not materialise in the new maintenance regulations tabled in Parliament.

The LAME under the new regulations *either* does the maintenance task and certifies for that maintenance *or* supervises the doing of the maintenance task and certifies for the maintenance.

This change is a retrograde step in that it has replaced the current "*completion of maintenance, including completion of stages of maintenance*" with certifying for each maintenance "task".

There is no legal obligation for a non licensed AME/AMT to sign on company documentation that he/she did the maintenance under supervision.

Once again, this is not EASA or ICAO, it is uniquely Australian.



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Civil Aviation Act

"*maintenance means any task required to ensure, or that could effect, the continuing airworthiness of... etc*".

EASA Article II definitions:

(b) "*certifying staff*" means personnel responsible for the release of an aircraft or a component after maintenance;

(h) "*maintenance*" means any one or combination of overhaul, repair, inspection, replacement, modification or defect rectification of an aircraft or component, with the exception of pre-flight inspection;

Note that the EASA definition of maintenance is not task related. This enables qualified mechanics to sign that they have completed individual tasks and this enables the "certifying staff" to sign a certificate for release to service.

In Europe, aircraft mechanics can sign for individual maintenance tasks. In base maintenance, the LAME will do an inspection at specified stages of the maintenance (EASA Definition) and sign the release to service.

EASA AMC 145.A.30 (e) (3) states:

b. *Mechanics are able to carry out maintenance tasks to any standard specified in the maintenance data and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards. &*

e. *Certifying staff are able to determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service.*

The new maintenance regulations are more like the current system not EASA.

So why did CASA develop regulations, based on EASRs, that are so different to the EASA approach?

"CASR 42.695 - *Individuals performing maintenance certification on behalf of approved maintenance organisations*

Obligation

(1) *An individual must not perform maintenance certification for the maintenance on behalf of an approved maintenance organisation unless:*

(a) *he or she is a certifying employee of the organisation whose certification authorisation permits him or her to perform maintenance certification for the maintenance; and*

(b) *he or she carried out the maintenance, or supervised the carrying out of the maintenance by another individual.*

certifying employee, for particular maintenance, means an individual who holds a certification authorisation that is in force from an approved maintenance organisation for the maintenance.

42.350 *Meaning of qualified individual*

(1) *For a defect in an aircraft that is authorised to operate under an air transport AOC or a large aircraft, qualified individual means a certifying employee of a Part 145 organisation who is authorised to perform maintenance certification for the maintenance that would be necessary to rectify the defect.*

(2) *For a defect in an aircraft, other than an aircraft mentioned in subregulation (1), qualified individual means a licensed aircraft maintenance engineer whose aircraft engineer licence permits the holder to perform maintenance certification for the maintenance that would be necessary to rectify the defect."*

The Aircraft Maintenance Engineers/Technician Creed

Worth Remembering

"UPON MY HONOR I swear that I shall hold in sacred trust the rights and privileges conferred upon me as a qualified aircraft maintenance engineer/technician. Knowing full well that the safety and lives of others are dependent upon my skill and judgment, I shall never knowingly subject others to risks which I would not be willing to assume for myself, or for those dear to me.

IN DISCHARGING this trust, I pledge myself never to undertake work or approve work which I feel to be beyond the limits of my knowledge nor shall I allow any non qualified superior to persuade me to approve aircraft or equipment as airworthy against my better judgment, nor shall I permit my judgment to be influenced by money or other personal gain, nor shall I pass as airworthy aircraft or equipment about which I am in doubt either as a result of direct inspection or uncertainty regarding the ability of others who have worked on it to accomplish their work satisfactorily.

I REALIZE the grave responsibility which is mine as a qualified aircraft maintenance engineer/technician, to exercise my judgment on the airworthiness of aircraft and equipment. I, therefore, pledge unyielding adherence to these precepts for the advancement of aviation and for the dignity of my vocation."