



Is CASA 'Unknowingly' Creating Unsafe Conditions?

Current legislative requirements and CASA imposed mandatory standards (ADs) create unsafe, or at least **potentially** unsafe conditions by uniquely mandating minimum maintenance standards that are less than the country-of-design/manufacturers' airworthiness limitations and maintenance standards for aircraft. This has created an unsatisfactory **attitude** in some registered operators' mindset.

Confusing airworthiness/maintenance requirements, mainly ADs, published and/or mandated by CASA differ to National Airworthiness Authorities (NAA) approved aircraft & aircraft component manufacturers (OEM) published airworthiness limitations, maintenance standards and practices. **The NAA approved OEMs are made responsible for the continuing airworthiness of their "in-service" product by the NAAs; it is not the responsibility of the NAA or CASA.**

These approved OEMs are obliged to stipulate airworthiness limitations, maintenance standards and practices but CASA, uniquely for a NAA, override these very responsible OEMs by setting standards **less** restrictive than published manufacturers' limitations and maintenance requirements.

Australian Mandatory Aircraft Maintenance

CAR Division 2 – Maintenance for which Holder of Certificate of Registration Responsible – sets out WHAT maintenance is to be performed and WHEN such maintenance must be done. The Registered Operator (CoR holder) is responsible for having **an effective and appropriate** maintenance schedule or system, thus, theoretically, ensuring safely maintained aircraft, no matter how old the aircraft is. ADs are to address known unsafe conditions **not the inability of Registered Operators** to have an appropriate and effective maintenance schedule/system.

Failure of a registered operator to amend an aircraft's schedules or system of maintenance to include supplementary airworthiness & maintenance requirements means that the registered operator has committed a clear breach of their regulatory requirements and responsibility. This carries a strict liability penalty of 50 penalty units. ADs are not the way to fix the problem of a registered operator incorrectly controlling the maintenance of their aircraft.

CASA's has failed to properly influence some registered operators to include OEM supplementary maintenance requirements to keep their schedules/systems of maintenance regulatory compliant.

However, in a number of cases, unique Australian airworthiness directives (AD), **not based on a foreign AD** (mainly issued prior to CASR Part 39), instruct registered operators to ignore OEM's supplementary requirements by mandating an individual task or tasks from the OEM supplementary airworthiness/maintenance requirements. Registered operators interpret this CASA process as meaning that CASA has deemed the rest of the OEM's published supplementary maintenance tasks are not mandatory airworthiness and maintenance data. **This creates potentially unsafe conditions.**

ADs are to correct "**unsafe conditions**" in aircraft, engines and equipment, not create potentially "**unsafe conditions**".

Numerous ADs are NOT addressing "known" unsafe condition(s) because CASA's predecessors used ADs to mandate OEM supplementary data & to set product overhaul/inspection periods. Many of these periods were set after CASA predecessors utilised controlled life development programs in conjunction with industry to support the extended periods. These controlled programs ceased over 25 years ago so CASA has no current data to support the continuation of this approach.

This is compelling LAME's ¹ to certify that aircraft as airworthy, based on unique regulatory and CASA criteria, even though the OEM's NAA would not deem the aircraft airworthy. AMROBA questions whether CASA has more technical expertise than designers & manufacturers of aircraft, and aircraft components, to exclude parts of OEM supplementary requirements by AD action

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AMROBA Recommendation: That all ADs, especially those raised prior to the making of CASR Part 39, including all “general” ADs, be **urgently** reviewed to ensure that each AD does not potentially create an unsafe condition by differing with regulatory requirements for an aircraft to have an effective and appropriate maintenance schedule/system of maintenance; and:

- attest that each published ADs actually address a known unsafe condition, and
- attest that each AD does not countermand manufacturer’s airworthiness limitations, maintenance standards and practices; and
- attest that each AD does mandate part of aircraft’s supplementary airworthiness & maintenance document thus making the rest non-mandatory; and
- cancel all ADs that are not based on a foreign AD or has been through the consultative process.

Aircraft, Engine & Equipment all have specific products where conflicting requirements exist.

Background

For over a decade, some NAAs have been identifying that aircraft previously registered in Australia have not met the minimum airworthiness & maintenance standards of the country-of-design when they were registered in their country. The FAA raised this matter with CASA a number of years ago.

The problem is that many registered operators are still under the impression that tasks included in manufacturers’ documents, excluding airworthiness limitations and maintenance schedules, are not mandatory unless CASA has raised an AD. This **attitude** has been created by CASA because CASA raised ADs for individual tasks included in manufacturers’ documentation rather than educate registered operators to include all of the tasks in the maintenance schedules/system of maintenance.

Approved OEMs amend their maintenance data based on current in-service data that they have evaluated and that data often conflicts with ancient CASA issued ADs and other data. Many ADs raised by CASA’s predecessors do not address known unsafe Australian conditions but mandate some specific OEM maintenance requirement – requirements that are now required by Regulations.

In addition, many ADs are no longer relevant as they are way past their compliance date and the data referred to, in most cases, have been superseded by current OEM data.

For example, some approved OEMs have set calendar periods over the last decade because of the low hours that many privately owned aircraft might fly per year. The registered operator is not adopting all of these calendar periods or requirements because unique Australian ADs from an era past has created an attitude where they do not believe that they are mandatory.

Regulatory Prioritisation

To add to industry confusion, CAR 50E (4) states the order of priority of requirements is (starting with those of highest priority):

- (a) requirements in these Regulations (except those requirements mentioned in the remaining provisions of this sub-regulation); then
- (b) requirements in instruments made under these Regulations;

Both ADs and CAOs are instruments so which one takes precedent – the AD or the CAO? This is a very vital decision that is usually made by the maintainer when addressing some ADs that conflict with manufacturers’ maintenance requirements and CAO’s airworthiness limitations requirements.

Industry practice is to prioritise ADs in front of CAOs but some are uncertain if that is how a court would interpret these requirements.



Prioritising Regulatory Maintenance Requirements

Current regulations require an aircraft's registered operator to elect a maintenance schedule or a system of maintenance that is **NOT DEFECTIVE OR INAPPROPRIATE**. If a registered operator does not include all of an OEM's supplementary inspections or maintenance instructions in their aircraft's maintenance schedules or system of maintenance, then the maintenance schedule or system of maintenance would be defective and inappropriate. This also applies to those registered operators that have elected CASA Schedule 5 in lieu of a more appropriate and effective OEM maintenance requirements. Schedule 5 can be more appropriate and effective than some OEM maintenance schedules/programs, mainly older aircraft. Any aircraft manufacturer that has issued supplementary maintenance (inspection) requirements document usually has maintenance schedules or maintenance program that is more effective and appropriate than Schedule 5.

In maintenance, the first priority is the maintenance that is required under the Regulations irrespective of the instruments made by CASA. Irrespective to whether an aircraft is being maintained to the CASA Maintenance Schedule, the manufacturer's maintenance schedules or a system of maintenance, all maintenance must be done to approved maintenance data (refer CAR 42V and CAR 2A for what is approved maintenance data for an aircraft). CAR 1 (2A) states that reference in the Regulations to "maintenance on an aircraft" includes a reference to "maintenance on aircraft components and aircraft materials" so all regulations referring to aircraft also refer to aircraft components and aircraft materials.

What is the unsafe condition that the CASA AD is trying to address?

Example 1. AD/Eng/4, Piston Engine Continuing Airworthiness Requirements, has created complete confusion by over-riding regulatory requirements that apply to all piston engines worldwide. Some Airworthiness Limitation items are not OEM mandatory – the item is "recommended". It is these airworthiness limitations' "recommended" periods that enable engine life on-condition extensions. AD is Advisory not an AD.

Example 2. AD/PROP 1, Does not address current OEM periods where Appendix gives alternative period. Should read that Appendix periods cannot override manufacturers' airworthiness and maintenance periods and requirements so registered operator has proper maintenance program.

Sample of out-of-date ADs mandating maintenance data

AD/CESSNA 210/2 Nose Gear Downlock - Modification 10/60

Applicability: All models with S/Nos. prior to 57524.

Document: **Cessna SL No. 210-13**

Compliance: Before 1 September 1971.

AD/SWSA226/9 Main Landing Gear Uplock Roller - Inspection and Modification 2/73

Applicability: All models with S/Nos. T201 to T220.

Document: **Swearingen SB 30-10-3028**

Compliance: Within 100 hours time in service after 28 February 1973.

If one OEM document is mandated to apply a maintenance requirement then the others are no longer considered mandatory as CASA is doing the maintenance control, not the registered operator.

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