



Advisory Circular

AC 39-01(4)

MAY 2010

AIRWORTHINESS DIRECTIVES

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1. REFERENCES

Civil Aviation Safety Regulation (CASR) 1998 Part 39- Airworthiness Directives.

2. PURPOSE

This AC provides guidance and information to Registered Operators (ROs) and maintenance personnel regarding their responsibility for complying with Airworthiness Directives (ADs) and recording compliance with the AD in the appropriate maintenance records.

3. STATUS OF THIS AC

This is the fourth revision of this AC to be written for CASR Part 39.

Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

Where an AC is referred to in a 'Note' below the regulation, the AC remains as guidance material. ACs should always be read in conjunction with the referenced regulations.

4. ACRONYMS

AD	airworthiness directive
AFM	aircraft flight manual
AMO	approved maintenance organisation
AMOC	alternative means of compliance
CAR	Civil Aviation Regulations 1988
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations 1998
CoR	Certificate of Registration
EASA	European Aviation Safety Agency
FAA	Federal Aviation Administration (of the United States of America)
LAME	licensed aircraft maintenance engineer
NAA	National Airworthiness Authority
NPRM	Notice of Proposed Rule Making
OEM	original equipment manufacturer
RO	registered operator
SB	service bulletin
SFP	Special Flight Permit
STC	Supplementary Type Certificate
UK	United Kingdom

5. BACKGROUND

5.1 ADs are key elements in implementing the safety responsibilities conferred on the Civil Aviation Safety Authority (CASA) by the *Civil Aviation Act 1988*. Together with the safety standards imposed through type certification and other airworthiness certification requirements, ADs provide an additional and indispensable level of regulation to ensure that aircraft and aeronautical products remain airworthy at all times. Unanticipated problems arising during service, such as design deficiencies, material wear, fatigue, corrosion, and deterioration, which may pose substantial hazards to the continued airworthiness of aircraft and aeronautical products, can be prevented through the prompt issue of accurate ADs.

5.2 From 1 October 2009, in accordance with CASR Part 39:

- all aircraft on the Australian register are required to comply with applicable ADs issued by the National Airworthiness Authority (NAA) of the State of Design;
- it will be the responsibility of the registered operator (RO) to monitor all ADs (Australian and State of Design ADs) applicable to their aircraft and aeronautical products;

- CASA will no longer produce an Australian AD that mirrors a State of Design AD unless the applicability of the State of Design AD requires amendment to include Australian aircraft operated in similar conditions;
- CASA will still have the ability to issue unique Australian ADs to address an unsafe condition in an aircraft or aeronautical product; and
- except for emergency ADs, CASA no longer mails out ADs to ROs.

5.3 From 1 October 2009, CASA will also automatically accept an alternative means of compliance (AMOC) for a State of Design AD provided the AMOC is approved by the NAA of the State of Design. If the State of Design NAA appoints a delegate or authorised person to issue AMOCs on its behalf, then the AMOC approved by such a delegate or authorised person would be acceptable to CASA. That is, industry will no longer need to submit an exclusion or a proposed alternative means of compliance application to CASA if the AMOC against a State of Design AD has been approved by the NAA of the State of Design. (Refer to Section 17). Industry can still submit exclusion or proposed alternative means of compliance, applications for Australian ADs and State of Design ADs.

5.4 From 1 October 2009, ROs are required to comply with both State of Design ADs and Australian ADs applicable to their aircraft. Details of the requirements for each aircraft model are included in the CASA website.

<http://casa.gov.au/airworth/airwd/index.htm>

- **For existing aircraft models on the Australian Civil Aircraft Register**
 - For an aircraft model issued with a Certificate of Registration (CoR) prior to 1 October 2009 (implementation date of CASR Part 39 amendment), the operator must comply with applicable Australian ADs and only the State of Design ADs issued after 1 October 2009.
- **For new aircraft models entering the Australian Civil Aircraft Register**
 - For a new aircraft model which has never had the same model issued with a CoR prior to 1 October 2009, the RO must comply with applicable Australian ADs and applicable State of Design ADs.

5.5 In order to ensure compliance with all applicable mandatory requirements, the owners and ROs of aircraft must ensure they are aware of the content of any AD issued by the NAA of the State of Design and any applicable CASA AD. In addition, organisations or individuals undertaking maintenance and overhaul must ensure that they are in receipt of ADs issued by the NAA of the State of Design and any CASA AD or mandatory requirements applicable to Products, Parts and Appliances which they maintain or overhaul.

6. DEFINITIONS

6.1 For the purpose of this advisory circular:

aeronautical product means any part or material that is, or is intended by its manufacturer to be, a part of or used in an aircraft, unless excluded by the regulations.

aircraft model means a particular version of a type of aircraft, that is distinguished from another version of the same type by a change of sufficient effect on the weight, balance, structural strength, operational characteristics as would require a separate entry on a type certificate, identifying and approving the particular version as distinct from the identification and approval of other versions.

Airworthiness Directive (AD) means a mandatory regulatory document which requires the registered operator to comply with the requirements to address an unsafe condition on an aircraft or aeronautical product.

Alternative Means of Compliance (AMOC) means an alternative means of compliance with an AD, approved by CASA or NAA State of Design.

Australian AD means an airworthiness directive issued by CASA under CASR 39.001.

exclusion means an approval issued by CASA that excludes an aircraft or aeronautical product from the requirements of an airworthiness directive because the unsafe condition does not exist due to a modification or repair.

National Airworthiness Authority (NAA) means the airworthiness regulatory authority of the country.

State of Design means the State having jurisdiction over the organisation responsible for the type design.

State of Design AD means an airworthiness directive issued by the NAA of the State of Design. It is also called a Country-of-Origin AD.

Unsafe Condition means a condition which, if not corrected, is reasonably expected to result in one or more serious injuries.

7. STATE OF DESIGN AD

7.1 From 1 October 2009, all ROs must comply with the requirements of State of Design ADs applicable to their aircraft including revisions to existing State of Design ADs. CASA no longer issues State of Design ADs as Australian ADs. This means the RO must now monitor State of Design ADs to ensure the continuing airworthiness of their aircraft. In many circumstances, it is anticipated that the RO's maintenance organisation will assist with the monitoring of and ensuring compliance with ADs. Nevertheless, CASA will provide the necessary information on the CASA website to enable each RO and maintenance organisation ready access to State of Design ADs. This information will include:

- a list of the NAAs responsible for all type certificated aircraft, engines and propellers operating on the Australian register;
- access links to State of Design NAAs; and
- access to State of Design ADs on the CASA website.

7.2 The RO will need to comply with all the ADs covering their aircraft, engine, propeller and equipment. This includes State of Design ADs and Australian ADs.

7.3 What State of Design ADs must be complied with?

7.3.1 This depends on whether the aircraft of the same model was on the Australian Civil Aircraft Register prior to 1 October 2009:

- If the aircraft model was on the Australian Civil Aircraft Register prior to 1 October 2009, the RO must comply with State of Design ADs issued **on or after 1 October 2009**.
- If the aircraft model was not on the Australian Civil Aircraft Register prior to 1 October 2009, the RO must comply with **all** State of Design ADs issued for the aircraft.

7.3.2 It should be noted that there would still be a number of Australian ADs applicable to many aircraft operating in Australia. These Australian ADs are also available on the CASA website.

7.4 What equipment is necessary to monitor and obtain State of Design ADs?

7.4.1 To monitor and obtain State of Design ADs you must have access to a computer with internet capability.

7.5 Establishing the NAA of the State of Design for aircraft, engine and propeller

7.5.1 Aircraft, propellers and engines are all type certificated products and the continuing airworthiness of these products is controlled by the NAA of the State of Design. For example, Cessna aircraft are designed in the USA and type certificated by the Federal Aviation Administration (FAA), the NAA of the State of Design. Also, many Cessna models use Continental engines and McCauley propellers. Both these are designed in the USA and type certified by the FAA. Hence, for a Cessna aircraft, and the propeller and engine, the NAA of the State of Design is the FAA. However, in some cases, the engine or propeller may be type certificated in different countries to the aircraft, and subsequently the NAA for propeller or engine will be different to the aircraft. Therefore, to establish the NAA, first establish the make of your aircraft, engine and propeller. Once this is established, go to <http://casa.gov.au/airworth/airwd/index.htm> and search the list of NAAs for all type-certificated aircraft, engines and propellers operating in Australia.

7.6 How to obtain a State of Design AD

7.6.1 The RO is obligated to regularly search up-to-date State of Design Airworthiness Directive information for their aircraft, engine, propellers and appliances.

7.6.2 The RO can obtain State of Design ADs from the CASA website under the existing AD aircraft model list. This list will contain the existing Australian ADs and the State of Design ADs applicable to that aircraft model. CASA will always endeavour to update this list as soon as possible after receiving notification from the NAA that a State of Design AD has been issued.

7.6.3 Many aircraft will also be subject to State of Design ADs for equipment and Supplementary Type Certificates (STC). These State of Design ADs are located in various NAAs and may be different to the aircraft NAA. To monitor these equipment and STC ADs, ROs with limited experience with AD regulation may find it very difficult. As a result, CASA will provide a copy of each equipment and STC AD on its website. Therefore, for an operator to ensure compliance with these ADs, the operator must identify all the equipment and STC's fitted to the aircraft. The following list gives an indication of possible types of equipment:

- air conditioning equipment;
- air induction systems;
- auxiliary power units;
- cargo equipment;
- cockpit voice and flight data recording systems;
- compressed gas cylinders;
- coolers;

- electrical equipment;
- emergency equipment;
- fire protection equipment;
- flight management systems;
- fuel supply and metering equipment;
- hose assemblies;
- hydraulic equipment;
- instruments and automatic pilot;
- lubrication systems;
- oxygen systems;
- parachute equipment;
- pneumatic equipment;
- precision aerial delivery system;
- propeller governors;
- radio communication and navigation equipment;
- restraint equipment;
- seats and berths;
- supplementary equipment;
- turbochargers; and
- wheels and tyres.

7.6.4 Once the equipment list has been identified, a search for equipment ADs applicable to the aircraft can be conducted through the CASA equipment AD website <http://casa.gov.au/airworth/airwd/index.htm>

7.7 How regularly should State of Design ADs be monitored?

7.7.1 NAAs can issue a State of Design AD at any time so it is important to regularly check the NAA AD website. Occasionally, an NAA may issue an emergency AD with immediate or very short compliance periods. In such cases, CASA will endeavour to send, email or fax all emergency ADs to operators who have registered their details with CASA. To ensure compliance with normal ADs (non-emergency ADs), it is recommended that the NAA or the CASA AD website be monitored at least every four (4) weeks. However, be aware, AMOCs or exclusions submitted to CASA requesting a delay in compliance with an AD will not be approved on the justification that the operator was not aware of the State of Design AD.

7.8 ADs requiring finding to be submitted to the NAA

7.8.1 On some occasions, compliance with a State of Design AD requires reports or findings to be submitted to the NAA. As the NAA is only responsible for aircraft registered under its jurisdiction, it is inappropriate that reports from Australian registered aircraft be sent to the State of Design NAA. Under regulation CASR 39.005 these reports or findings must be submitted to CASA rather than the State of Design NAA. Upon submission, CASA would then review these reports or findings and if deemed necessary would forward the information to the NAA.

7.8.2 The address for submitting findings is as follows:

AD Cell
Airworthiness and Engineering Branch
Civil Aviation Safety Authority
GPO Box 2005
Canberra ACT 2601

Fax: (02) 6217 1442

Email: airworthiness.directives@casa.gov.au

7.9 What ADs must an operator of a foreign manufactured aircraft comply with when entering the Australian Civil Aircraft Register?

7.9.1 If a foreign manufactured aircraft entering the Australian Civil Aircraft Register has the same model of aircraft already on the Australian Civil Aircraft Register before 1 October 2009, then the aircraft must comply with State of Design ADs issued on or after October 1 2009 and all Australian ADs applicable to this aircraft. However, prior to the issue of a Certificate of Airworthiness, if a State of Design AD has been complied with and this AD has the equivalent requirements of an Australian AD, then the Australian AD is taken to have been complied with (refer to CASR 39.002A).

7.9.2 If a foreign manufactured aircraft entering the Australian Civil Aircraft Register does not have the same model of aircraft already on the Australian Civil Aircraft Register before 1 October 2009, then the aircraft must comply with all State of Design ADs issued for the aircraft and any applicable Australian ADs.

7.10 What if the aircraft is a variant of an existing model on the Australian Civil Aircraft Register?

7.10.1 Aircraft manufacturers regularly produce variants of existing models. For example Boeing and Airbus have model variations such as B737-300, -400, -500 and the A330-201, -202, -203 respectively. If an aircraft enters the Australian Civil Aircraft Register and this aircraft is a variant of an existing aircraft model that has been on the Australian register prior to 1 October 2009, then this aircraft variant is not considered a new model. As a result, the registered operator must ensure that the aircraft complies with the State of Design ADs issued on or after 1 October 2009 and any Australian ADs that may be applicable. It should also be noted that many ADs will specify the model variants in the applicability statement.

7.10.2 To alleviate any confusion with the applicable AD requirements for an aircraft model or variant, the RO can contact the AD cell for confirmation as follows:

AD Cell
Airworthiness and Engineering Branch
Civil Aviation Safety Authority
GPO Box 2005
Canberra ACT 2601
Fax: (02) 6217 1442
Email: airworthiness.directives@casa.gov.au

7.11 What if I have a European manufactured aircraft—who is the State of Design NAA?

7.11.1 Recently ADs from European manufactured aircraft have been issued from two sources, the European Aviation Safety Agency (EASA) and the State of Design. CASA has become aware that under EASA requirements, the State of Design is responsible for production airworthiness issues and has prime responsibility to issue ADs that address these issues. For example, for an aircraft manufactured in the United Kingdom (UK) such as the BAE 146, the sources of ADs would be EASA and the UK Civil Aviation Authority. Although ADs from the State of Design are not common, the RO should ensure they monitor both EASA and the State of Design to ensure compliance with all ADs. To avoid confusion for European aircraft, CASA will list these ADs on its website.

8. AUSTRALIAN AIRWORTHINESS DIRECTIVES

8.1 Under CASR 39.001, CASA may issue an Australian AD for a specified kind of aircraft, or a specified kind of aeronautical product if:

- an unsafe condition exists in an aircraft or aeronautical product of that kind; and
- the condition exists, is likely to exist, or could develop, in other aircraft and aeronautical products of that kind.

8.2 By referring to ‘kind’ in the above paragraph, the intent is to cover a class or group of the same nature or character, e.g. type, series or model of aircraft or aeronautical product.

8.3 Australian ADs are divided into two categories:

- a) those of an urgent nature requiring immediate compliance upon receipt, referred to as ‘immediate safety of flight ADs’; and
- b) those of a less urgent nature requiring compliance within a reasonable time frame.

8.4 AD action will only be taken where the criteria specified in paragraphs 8.3 (a) and (b) apply. Such ADs will prescribe corrective actions to be taken or the conditions and limitations under which the products may continue to be operated.

8.5 Evidence of an unsafe condition can result from a defect report where it is evident that the aircraft does not comply with a safety aspect of the aircraft design standard.

8.6 Issue of Australian ADs

8.6.1 Depending on the urgency, ADs are issued as follows:

- **Normal ADs**

- These are published before the effective date of the AD and will appear in a bi-weekly listing on the CASA website. These ADs will also appear in the aircraft and equipment listing.

- **Emergency ADs**

- These ADs may require immediate action or action within 50 hours time in service or 50 cycles or less than 42 days. These ADs will appear on the website under urgent ADs and are also forwarded to ROs by mail or fax.

8.7 Publication of Australian ADs

8.7.1 CASA publishes all Australian ADs on the CASA website

www.casa.gov.au/avreg/aircraft/index.htm.

8.8 CASA also provides an information mailing list concerning maintenance and certification airworthiness issues. This service also includes notifications of new or amended Australian ADs. Subscription to this mailing list can be obtained through <http://www.casa.gov.au/airworth/subscribe.htm>.

8.9 CASA will not send normal ADs to ROs

8.9.1 Only emergency ADs will be mailed or faxed to the ROs. Therefore, it is the responsibility of the RO to monitor the CASA website to ensure compliance with all ADs, State of Design and Australian ADs. However, all email subscribers will receive ADs when published.

8.10 Public consultation of Australian ADs

8.10.1 When CASA issues an Australian AD, a Notice of Proposed Rule Making (NPRM) for an AD may be circulated for public comment. When this occurs, interested persons are invited to comment on the NPRM by submitting written views on the proposals. CASA will consider each comment and may amend the AD to reflect such views.

8.11 Australian ADs not requiring public consultation

8.11.1 Public consultation is not conducted for the following ADs:

- Emergency ADs that are unique to Australia but require immediate safety consideration. (Consultation may be necessary after the AD has been issued if the AD requires repeat inspections etc);
- ADs that address requirements that are made mandatory in another form (other than an AD) by the NAA approving the type design through type certification – for example a specific limitation included in the certifying country's regulatory framework;
- an Australian AD that either revises compliance times, corrects typographical errors, provides comment or clarification notes or provides changes that do not increase the difficulty of compliance for Australian operators; or

- an AD that revokes an existing AD or eliminates redundant requirements.

8.12 Structure of an Australian AD

8.12.1 An Australian AD is structured as follows:

- **Applicability**
 - This details what aircraft or aeronautical products are affected by the AD.
- **Requirement**
 - This sets out what action needs to be taken to correct the unsafe condition. When there is more than one requirement, each particular requirement will be numbered as a separate paragraph.
- **Compliance**
 - This sets out when the requirement action must be undertaken. The compliance period may specify hours, time in service, calendar period or date, flight cycles or landings etc. The compliance period cannot begin prior to the effective date of the AD. On occasions when there is more than one requirement, it is possible that different compliance periods will be given for each requirement. On such occasions, each compliance paragraph must align with the numbering given for the Requirement paragraphs.
- **Note**
 - A note details reference documents or gives information that may be useful to the person carrying out the AD. Legal requirements will not be placed in notes.
- **Effective Date**
 - This is the date that the AD comes into force, after the AD is lodged on the Federal Register of Legislative Instruments with the Attorney General's Department.
- **Background**
 - This provides a brief description of the unsafe condition and how the AD addresses the unsafe condition. Also a brief history of the amendments (if any) to the AD will be included in the description.

8.13 Requirement documents in Australian ADs

8.13.1 Many Australian ADs require action to be taken in accordance with a requirement document such as a Service Bulletin (SB) or a Service Instruction. These documents are regularly amended and issued with a sequential number. CASA recognises that ROs would prefer to carry out the maintenance to the latest issued document rather than maintaining the aircraft to the issued document referred in the AD. The definition of an Australian AD in CASR Part 39 allows CASA to include a statement in the Australian ADs such as:

‘Inspect in accordance with Service Bulletin XYZ Rev A or a later revision’

When such a statement is included in an Australian AD, the RO may action any revision of the SB from Revision A to the latest issue.

9. ADS THAT APPLY TO AIRCRAFT

9.1 Australian ADs and State of Design ADs usually contain an applicability statement specifying the aircraft to which it applies. When there is no reference to an aircraft type by serial number, all models of the product are affected. Otherwise, where the serial number or number series of an aircraft to which the AD is applicable is specified, only those aircraft are affected. Also, if the AD applicability statement identifies an aircraft model fitted with certain type of equipment, then only those aircraft fitted with this equipment are affected by the AD.

9.2 The AD applies to all aircraft identified in the applicability statement, regardless of whether it has been previously repaired or modified in the area subject to the requirements of the AD or regardless of the kind of Certificate of Airworthiness (CoA) or permission issued for the aircraft.

9.3 For aircraft that have been repaired or modified so that the performance of the requirements of the AD is affected, a person may apply to CASA under CASR 39.004 for approval of an exclusion (refer section 16). Unless specifically excluded in the AD, the presence of a repair or modification does not remove any aircraft from the applicability of the AD.

9.4 When an aircraft has been modified to reflect a model update, the operator must ensure compliance with ADs applicable to the updated modification.

10. ADS THAT REQUIRE FLIGHT MANUAL CHANGE

10.1 To correct an unsafe situation, an AD may direct an amendment to the Aircraft Flight Manual (AFM). Where an AD includes a requirement that changes the contents of an AFM or AFM supplement, then the AD compliance statement usually requires a copy of the AD to be inserted into the AFM until corrective action is taken that negates the need for the copy to remain in the AFM.

10.2 It is the responsibility of the RO to ensure that the AFM has been amended, the nature of the amendment is brought to the attention of the affected aircrew and the AD is signed off in the amendment record sheet of the AFM.

11. COMPLIANCE TIME OR DATE

11.1 ROs should be aware that AD compliance may not necessarily coincide with a maintenance inspection period, e.g. at 100 hours or annual inspection. The required compliance time is specified in each AD, and unless the requirements of the AD have been complied with, no person may operate the affected aircraft after expiration of that stated compliance time.

11.2 Compliance requirements specified in ADs are established for safety reasons and may be stated in numerous ways. Some ADs that are of such a serious nature may require compliance before further flight. In such circumstances, a Special Flight Permit may be granted under CASR 21.197(1) enabling the aircraft to fly to a nominated maintenance base. However, on some occasions because of the critical nature of the problem, an AD may state that a Special Flight Permit (SFP) will not be granted.

11.3 Compliance times may also be expressed in operational terms such as, ‘before the aircraft completes 10 landings after the effective date of this AD’. Other ADs may require compliance within a specified number of hours of operation, e.g. ‘compliance required before the expiry of 50 hours time in service after the issue date of this AD’.

11.4 For turbine engines, compliance times are often expressed in terms of cycles. A cycle normally consists of an engine start, take-off operation, landing, and engine shutdown. The same applies for a pressurisation cycle.

11.5 When a direct relationship between the airworthiness issue and calendar time is identified, (for example corrosion related problems) compliance time may be expressed as a calendar date. Another aspect of compliance times that should be emphasised is that not all ADs have a single compliance time period. Repetitive inspection may be required to satisfy the requirements of the AD and some ADs may also have varying follow up action including varying inspection times as a result of the AD inspection.

12. AD COMPLIANCE

12.1 Compliance with an AD is mandatory. Therefore, no person may operate an aircraft that is covered by an AD or is fitted with an aeronautical product covered by an AD, unless a SFP has been granted or an exclusion or an alternative means of compliance has been approved (AMOC) under CASR 39.004. The RO has prime responsibility for AD compliance. The RO must ascertain that the AD has been implemented in the manner prescribed and refrain from engaging in flight operations contrary to the provisions of the applicable AD.

12.2 The role of Licensed Aircraft Maintenance Engineer (LAMEs) and Approved Maintenance Organisations (AMOs), with regard to AD compliance, should also be clearly understood. Some aircraft owners and operators may be under the impression that when the aircraft is booked into the AMO workshop for a scheduled inspection, the AMO will routinely ensure that all ADs have been complied with before final certification for return to service. This may not necessarily be true as some ADs may deal with aeronautical products that are not normally part of the inspection. Also, some ADs at the time of the inspection may have delayed compliance dates outside the normal inspection periods. In such cases, the LAME and/or AMO may not be obliged to act upon them unless requested to do so by the RO. Under Civil Aviation Regulation 1988 (CAR) 43(7) and (8), when issuing a maintenance release, the maintenance organisation is only required to address ADs that are due. Therefore, it is the responsibility of the RO to ensure compliance with all ADs.

12.3 Compliance with immediate safety of flight ADs is recognised as a problem for ROs of leased aircraft. It is important that owner/ROs of leased aircraft make the AD information available to the organisation leasing their aircraft as expeditiously as possible. Unless this is done, the lessee may not be aware of the AD and, apart from safety being jeopardised, the lessee may be operating the aircraft illegally. Lease agreements between a lessee and the RO should clearly identify how AD compliance is to be actioned.

13. ADS AND CONFLICTING MAINTENANCE DOCUMENTS

13.1 In many cases ADs incorporate by reference the manufacturer’s SB. In these cases, the SB becomes part of the AD. In some cases, the AD may modify requirements and compliance times of the SB. If there is a conflict between the AD and a SB or any other maintenance data, on all occasions the AD has priority and must be carried out.

14. RESPONSIBILITY FOR AD COMPLIANCE RECORDING

14.1 Responsibility for AD compliance rests with the RO of the aircraft who is responsible for ensuring the aircraft remains in an airworthy condition.

14.2 This responsibility may be met by ensuring that certificated and appropriately rated aircraft maintenance personnel carry out and certify the maintenance required by the AD and properly record it in the maintenance records. This must be done within the compliance times specified in the AD or the aircraft may not be operated beyond the compliance period specified in the AD.

14.3 For aircraft inspected in accordance with a maintenance program, aircraft maintenance inspection personnel are required to comply with ADs only when the portions of the inspection program provided to them require compliance. The maintenance program may require a determination of AD compliance for the entire aircraft by a general statement, or compliance with ADs applicable only to portions of the aircraft being inspected, or it may not require compliance at all. This does not mean that AD compliance is not required by the compliance time or date specified in the AD. It only means that the RO has elected to handle AD compliance separately from the maintenance inspection program as special inspections. The RO is responsible for AD compliance even though this function is performed on behalf of the RO by a maintenance scheduler/controller.

14.4 The RO is required to maintain the aircraft records and to ensure that maintenance personnel make appropriate entries in the records. Completion of AD action must be signed off with the appropriate documentation. In a large organisation, the work card, Engineering Instruction or Order should have reference to the AD so that the person signing these documents understands what they are signing. The RO is responsible for ensuring that proper records are kept even where this function is performed on behalf of the RO by the maintenance scheduler/controller. It should also be noted that ROs are required to retain all records with respect to their aircraft and related aeronautical products for a period of one year after the operating life of the unit to which they refer (refer to Civil Aviation Order 100.5 para 5).

14.5 Certain ADs may permit pilots to carry out and certify some items under specific conditions. However, these pilots must be appropriately trained before certifying compliance against the AD. These ADs normally include maintenance recording requirements. However, if the AD does not include the recording requirements for the pilot, the RO must make available maintenance records for certification purposes. The person who carries out the work must certify compliance with the AD to return the aircraft to service and to record the status of AD compliance in the required aircraft or aeronautical product records.

14.6 If a defect is detected during the course of complying with an AD, a defect report must be submitted to CASA. (refer to CAR 51B).

15. ADS REQUIRING REPETITIVE OR PERIODIC INSPECTION PERIODS

15.1 In order to provide for flexibility in administering such ADs, an AD may provide for adjustment of the inspection interval to coincide with inspections required by the CASRs. This will be stated in the AD compliance paragraph. If the AD does not contain such a statement, adjustments are not permitted unless approved by way of an AMOC or exclusion.

16. APPLICATION TO CASA FOR AN EXCLUSION OR AN ALTERNATIVE MEANS OF COMPLIANCE AGAINST AN AD

16.1 All ADs require some form of action to address the safety issue. It cannot be assumed that only one specific repair, modification, or inspection method is acceptable to correct an unsafe condition. Therefore, an operator may propose an alternative method of correcting an unsafe condition for Australian or State of Design ADs. When approved, this is referred to as either an exclusion or an alternative means of compliance (AMOC) (refer to CASR 39.004).

16.2 For CASA to consider an exclusion or an alternative means of compliance, the operator may submit an application in writing using Form 953 (available from the Regional office or through the CASA website at:

<http://www.casa.gov.au/manuals/regulate/awd/form953.pdf>). Any relevant information such as the NAA or manufacturer's approval, a statement from the manufacturer supporting the engineering justification should be attached to the form.

16.3 All applications will be charged a fee based on an hourly rate. Upon receiving the application, CASA will estimate the number of hours to assess the application and prepare a written quotation for the applicant. Once payment has been received, an airworthiness specialist will assess the application and make a determination.

16.4 CASA may approve an alternative means of compliance or an exclusion provided an equivalent level of safety can be justified. CASA will assess the application and make a determination based on engineering practices to ensure that the airworthiness of the aircraft will not be compromised. To enable approval, the applicant will need to provide engineering justification as to how the proposed exclusion or means of compliance will address the unsafe condition to a level of safety equivalent to the AD or ensure that the unsafe condition no longer exists. To support the application it is recommended the engineering justification should be endorsed by a CAR 35 engineer, the manufacturer or the State of Design NAA.

16.5 Exclusions

16.5.1 Under CASR 39.004 (1) (b), a person may submit an application for an exclusion from an airworthiness directive as a result of a repair or modification of an aircraft or aeronautical product. Provided the unsafe condition that the AD seeks to correct no longer exists, and cannot develop, because the aircraft or aeronautical product has been modified or repaired, CASA may exclude the aircraft or aeronautical product from the AD (refer to CASR 39.004(5))

16.5.2 When an exclusion is granted, CASA will advise the applicant, in writing, of the exclusion of the aircraft or aeronautical product from the AD, and the exclusion will be in force from the time of approval. The exclusion may also include specific conditions. These conditions must be met for the exclusion to be satisfied otherwise the applicant must carry out the AD.

16.6 Alternative Means of Compliance (AMOC)

16.6.1 Under regulation CASR 39.004(1) (a) a person may submit an application for CASA to consider an alternative means of compliance, other than set out in the AD. This could be the result of using a different inspection method as referred in the AD or carrying out repeat inspections rather than replacement of parts if the parts are not available. For example, it may be acceptable to inspect a component for cracks using a different method or equipment to that required in the AD. CASA will assess the method of compliance to ensure that the repeat inspection interval and the sensitivity of the testing method will detect cracks well before the possibility of any failure.

16.6.2 CASA may approve an alternative means of compliance to extend the compliance period of the AD on occasions when an AD requires replacement of parts and the manufacturer is unable to supply these parts. On such occasions, the application must be fully supported with a technical justification. This justification should include:

- an approval from the manufacturer or an approval from the NAA;
- if no parts are available, a statement from the manufacturer indicating unavailability of the parts; and
- an explanation of how the problem has not arisen due to poor planning by the RO.

16.7 Validity of an exclusion or AMOC when an AD is amended.

16.7.1 An exclusion or AMOC is no longer valid after an AD has been amended. This occurs because the previous AD instrument is automatically revoked when the amended AD is issued. (Refer to the preamble of amended Australian ADs). Therefore for an operator to satisfy the requirements of the amended AD, they must either resubmit an application for approval of an exclusion or an AMOC, or comply with the amended AD.

16.7.2 Where CASA does not approve an exclusion or a proposed AMOC application, the applicant may seek review by the Administrative Appeals Tribunal.

16.7.3 All CASA approved exclusions and AMOCs will be published on the CASA AD website.

17. AUTOMATIC ACCEPTANCE OF AMOCS APPROVED BY THE NAA OF THE STATE OF DESIGN

17.1 On many occasions, the NAA of the State of Design approves AMOCs against their ADs. Under CASR 39.002(d) CASA will automatically accept an AMOC for a State of Design AD provided there is evidence that an AMOC has been approved by the NAA of the State of Design. Therefore it is no longer necessary to submit an exclusion application against a State of Design AD if an AMOC has already been approved by the NAA of the State of Design.

17.2 For automatic acceptance, the AMOC must exhibit the following requirements:

- The AMOC must be approved by the NAA of the State of Design or a delegate specifically approved by the NAA;
- The conditions of the AMOC must not exclude Australian product. For example, such restrictions that could exclude Australian registered aircraft are:
 - applicable to the State of Design fleet only;
 - applicable to a specific operator(s) or organisation(s);

- applicable to specific models, line numbers, serial numbers or configurations; or
- applicable to age or life of the aircraft; and
- A revision or amendment of the requirement document to the AD approved by the State of Design (eg an FAA Form 8100-9 or the OEM's document such as a Service Bulletin or Supplementary Repair Manual) is acceptable.

17.3 Evidence of an AMOC

17.3.1 CASA will require the operator to show evidence of the State of Design AMOC. This evidence includes an approved NAA document that verifies the AMOC has been approved by the NAA State of Design and no restrictions exist that excludes Australian registered aircraft.

17.4 Prior to submitting an AMOC application against a State of Design AD to CASA, the RO is encouraged to seek information from the manufacturer to establish whether the NAA of the State of Design has approved an AMOC.

18. AD REVIEW

18.1 ADs are issued by the type design regulatory authority to address unsafe conditions. As a result, the manufacturer may elect to introduce a means for terminating the need for the AD. In such circumstances where the unsafe condition no longer exists or is not likely to develop, under CASR 39.006, industry may request CASA to review an AD to establish its viability and validity.

18.2 From in-service operational feedback, manufacturers may implement modifications and/or update their instructions for continued airworthiness that may change the conditions related to the AD. For example, the manufacturer may elect to include limitations previously expressed in an AD in the airworthiness limitations section of the manual, or include the inspections that were in an AD in the manufacturer's maintenance program. Where this occurs, there is a need to review the AD to confirm that the unsafe condition still exists and the conditions of the AD are still appropriate.

Note: It should not be construed that the issue of a mandatory SB by the manufacturer meets this requirement. Mandatory SB may not be mandatory under the maintenance program in place for a particular aircraft.

18.3 CASA will review the AD when requested and take applicable action as follows:

- confirm the continuance of the AD because the unsafe condition still exists or could exist;
- amend the AD if instructions for continued airworthiness have been issued by the manufacturer that varies the conditions of the AD;
- cancel the AD because the manufacturer of the aircraft or aeronautical product has taken appropriate action to address the unsafe condition; or
- any other appropriate course.

Note: CASA will only cancel an AD provided the requirements are addressed by some other mandatory requirements or the unsafe condition clearly no longer exists and the condition is not likely to exist or develop in other aircraft.

18.4 Persons seeking review of an AD may apply:

- using a Form 951 (available from the CASA Regional Office or through the CASA website <http://www.casa.gov.au/manuals/regulate/awd/form951.pdf>); or
- in writing and as a minimum supply the following information:
 - the name and address of the applicant;
 - the specific AD for which review is sought, including details of:
 - the kind (type, model or series) of aircraft affected; or
 - the kind (type, model or series) of aeronautical product affected;
 - the cost per aircraft or aeronautical product of complying with the AD or aspects thereof;
 - a detailed explanation of the circumstances, substantiating why review of the AD is considered necessary; and
 - any information, views, or arguments available to support the action sought, the reasons why granting the request would be in the public interest.

Note: A fee may be charged on an hourly rate for the processing and consideration of the application.

18.5 The request for review of an AD should be sent to the following address

AD Cell
Airworthiness and Engineering Branch
Civil Aviation Safety Authority
GPO Box 2005
Canberra ACT 2601
Fax: (02) 6217 1442
Email: airworthiness.directives@casa.gov.au

18.6 CASA will advise the person seeking the review, within 28 days of receipt of the petition, of what action CASA proposes to take and when, to investigate the matter set out in the petition.

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