AMROBA

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Modification & Repair 'Administration'

Be aware – Increased Red Tape – Increased Bureaucracy

These new rules are not clear and concise

Part 21, Subpart M states: *A person may apply to CASA or an authorised person, in writing, for a modification/repair design approval for the design of a modification of, or a repair to an aircraft, aircraft engine, propeller or appliance*. Surely the product owner is the only person that can apply?

Since the introduction of ***CASR Part 21 Subpart M, 'Designs of modifications of, and repairs to, aircraft, aircraft engines, propellers and appliances'***, and the repeal of CAR35/36, aircraft registered operators (RO) and maintenance organisations (AMO) are slowly coming to realise the changes in the administration of engineering approvals of designs of a modification or repair, including the assignment of 'safety' liability.

> **Part 21, Subpart M (Covers minor and major modifications & repairs)**
> *(a) sets out the requirements for the issue of modification/repair design approvals; and*
> *(b) sets out the rules governing the holders of such approvals; and*
> *(c) sets out circumstances in which certain designs are taken to be approved;*

AMROBA posed a number of questions to CASA to gain their opinion on interpretation of ***CASR Part 21 Subpart M*** to provide assistance to our members so they can administer the new administrative process of a modification or repair approval. This system is quite different to the past system modelled on the FAA DER.

It is quite clear that the "**applicant**" becomes the "**owner"** of the modification or repair design and therefore responsible for the mod/repair's continuing airworthiness as the RO is already responsible for the airworthiness of their aircraft – the RO must be the "**owner**" of their aircraft mods/repairs approved designs.

A study of "Division 21.M.3 ***Transfer of, and obligations for holders of, modification/repair design approvals*** *and approvals granted in accordance with alternative method*" explains some interesting regulatory responsibilities using the method prescribed in this Subpart.

Within this Division lies the real identity of the 'applicant' and 'holder' of an approved mod/repair.

> *CASR 21.460(1) Subregulation (2) applies if the holder of an approval was required under paragraph 21.420 (1) (c), or under the method in accordance with which it was granted, to provide instructions for continued airworthiness in respect of a design.*
> *(2) The holder must ensure that a copy of the current version of the instructions is available (electronically or otherwise) to any person who is required to comply with them.*

We all know that the TC/STC/TSO holders have this responsibility but what about in-service aircraft mods/repairs individually approved for an aircraft that also have on-going maintenance instructions:

1) once done as CAR35/36 field repairs and modifications, and
2) mod/repair maintenance instructions were accepted as CAR2A approved maintenance data, and
3) mod/repair approval became part of the aircraft's on-going maintenance data.

Most of these past design approvals are either CAR35 "authorised persons" own design approval or the AMO's design approval that were arranged and held by the AMO, not the RO. As the responsibility to have aircraft maintained is the RO, then surely this regulation makes it clear that the holder of the approval of a design of a minor modification or repair, not being a TC/STC/TSO item, has to be the RO. Therefore, CASR 21 M 'applicants' must be the RO unless it is an application to become a STC/TSO holder.

However, when we asked CASA could the RO or the AMO be the applicant they replied "yes" to both.

> *(1) The **holder of an approval** may transfer the approval to another person.*
> *(2) However, an approval may be transferred **only with the written agreement of the transferee**.*

This new rules implies that when an aircraft is sold the holder of mod/repair approvals will need to transfer each approval to a person who can provide any information related to the approved mod/repair to those responsible to comply with the information – e.g. the AMO. In our opinion – can only be the new RO.

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(4) If an approval is transferred, the transferor must, within 1 month after the transfer, notify CASA, in accordance with subregulation (5), of the transfer.

This is a new requirement and as this Subpart does not differentiate between major and minor mod/repairs, all mod/repairs transferred will be 'owned' by a person '**registered'** with CASA.

In our opinion, any in-service modification or repair being approved for an aircraft must be submitted for approval by the RO, and the RO must be the holder of the approval so that the RO can fulfil their regulatory responsibility to make the data available to have their aircraft maintained.

When an aircraft is sold, the maintenance log books (including any document referred to in the log book) must be passed to the new owner. However, in future the holder of mod/repair approvals must also transfer the mod/repair approval to the new RO so they can fulfil their regulatory obligation. Once transferred, CASA must be notified – this is another growth in bureaucracy and red tape way beyond other systems.

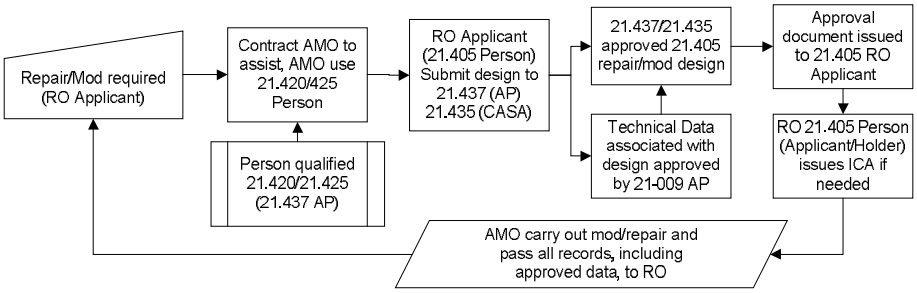
Of course, a "person" may set themselves up as holder of aircraft design approvals, such as a design organisation or maintenance organisation, and provide the information necessary to those performing maintenance at a cost to ROs, especially if maintenance is done by another AMO. This is additional red tape when performing maintenance, as the source of approved maintenance data now includes the holder of the approval that is not clarified in CAR2A.

- So how do we administer this function as a functional business practice?

Administering repairs and modifications during maintenance

The following guidance will enable AMOs and RO to manage the approval process on behalf of the RO. Remember, unlike the FAA system where minor repairs and modification are treated quite differently, **all** repairs and modifications require CASA or an Authorised Person's approval under the new system.

1. The RO becomes aware that the maintenance required is a repair or modification that needs an approved design.
    a. In other words, the repair/modification is not:
        i. aircraft/component manufacturer approved;
        ii. An STC;
        iii. A direction issued by CASA, including an AD; or
        iv. A foreign approval – refer CASR 21.470 that adds more confusion. (*see page 4*)
    b. A repair approval may be identified by the contracted AMO or by the RO.
    c. A modification may be RO instigated or suggested by the AMO.
2. Normally, the RO relies on the AMO to obtain approved maintenance data to carry out maintenance, including mod/repair approval (i.e. AMO becomes RO's agent).
    a. Same process as when RO authorises AMO to do maintenance – CAR42ZC(1).
    b. AMO coordinates obtaining the approval under CASR Subpart M.
    c. AMO, if necessary, 'employs' expertise to carry out 21.420/425 functions.
    d. Expertise is more likely to be an independent CASR 21.437 AP or this function can be sub-contracted to an Approved Design Organisation (ADO).
    e. The design application and supporting justification, is then submitted on behalf of the RO to the CASR 21.437 AP for approval.



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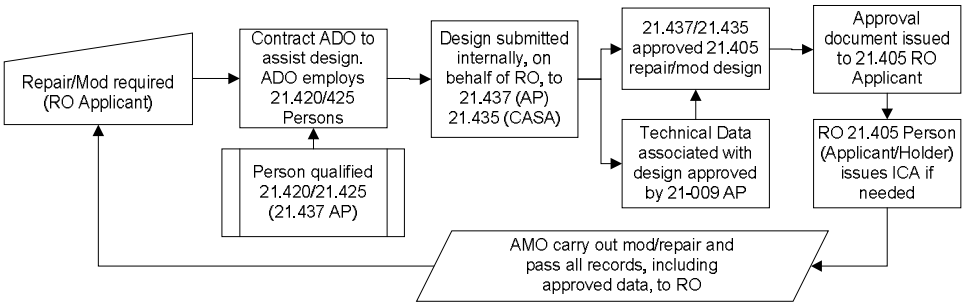
f. Another process is for the RO to contract an approved design organisation to design a mod/repair on behalf of the RO and to have the design organisation's CASR 21.437 AP approve the RO's design.



g. Another process that is possible but awkward to administer in private & aerial work is for the RO to have the AMO or ADO be the holders of the design approval and to pay them for the use of the approval and on-going support.

h. Any one of these processes provides the AMO with approved data to carry out the modification or repair.

i. Like all maintenance, the mod/repair is carried out and certified in the maintenance records.

3. The RO, as the holder of the approval, has on-going responsibilities regarding ownership.
   a. As in the past, the RO is responsible to keep their aircraft records.
      i. Includes retention of maintenance records; and
      ii. Documents referred to in the maintenance records.
   b. All mods/repair data was part of the above records.
   c. New requirement is to have an **approval holder** of the mod/repair design.

21.440 Form of modification/repair design approvals

If CASA or an authorised person grants a modification/repair design approval, the document issued to the applicant under regulation 11.060 must:

(a) set out:

(i) what the approval is; and

*(ii) the **name of the person** to whom it is granted; and*

(b) describe or otherwise identify the modification or repair; and

(c) specify, by reference to manufacturer, model and serial number, each aircraft, aircraft engine, propeller or appliance to which the design of the modification or repair relates.

One asks why the name of the person to whom it is granted is required, well 21.455 tells you why.

21.455 Record keeping and making records available to CASA

*(1) The holder of an approval must keep documents and records about the design covered by the approval, including all technical data and test and **inspection records**, until:*

(a) the end of 12 months after the approval ceases to be in force, otherwise than by being suspended under these Regulations; or

(b) the holder transfers the approval to another person;

whichever occurs first.

Penalty: 50 penalty units.

The only person that keeps the inspection records and will know when the approval ceases to be in force is the owner when they remove the aircraft, engine or appliance from service, not the AMO or ADO.

AMROBA can understand the requirements of these regulations if they applied to major modifications or repairs that had some form of on-going maintenance instructions to follow as well as any STC, TSO or PMA item where the manufacturer issues maintenance instructions. These persons are already identified along with the TC holder in Part 21.

Adoption of a process applicable to these Part 21 persons is not appropriate to RO mods/repairs.

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Refer to FAA Order 8900.1, *Volume 4 Aircraft Equipment and Operational Authorisations, Field Approval of Major Repairs and Major Alterations*. Clearly states the *Factors to be considered*:

1) Is the alteration or repair major or minor, per 14 CFR part 43 appendix A. If determined to be a major repair or alteration, a field approval may be granted.
2) If the alteration or repair is determined to be a major change to type design, a field approval will not be granted.
3) Minor alterations or repairs do not require Federal Aviation Administration (FAA) approval.

Obviously, CASA abandoned the adoption of the FAA system of aircraft/product certification and is returning to uniquely Australian rules.

Lastly, look at the increased confusion the following rule will legally create.

> **21.470 Foreign modification/repair designs**
> A design for a modification of, or repair to, an aircraft, aircraft engine, propeller or appliance is taken to have been approved for the purpose of these Regulations if the design is:
> (a) approved by the NAA of a recognised country; or
> (b) for a design of a modification or repair that relates to an aircraft, aircraft engine or propeller designed in a recognised country — published or issued by the foreign type certificate holder of the aircraft, aircraft engine or propeller under a system approved by the NAA of that country; or
> (c) for a design of a modification or repair that relates to an appliance designed in a recognised country — published or issued by the manufacturer of the appliance under a system approved by the NAA of that country; or
> (d) accepted by CASA under an agreement (however described) between CASA and the NAA of a Contracting State regarding approvals of designs for modifications and repairs.

AMROBA Q: Re Para (a)/(d) Can you use an FAA (FAA DER) approved design?

CASA Response: Yes, but only in certain circumstances. The provision in CASR 21.470 (a) only applies for designs that have already been incorporated (for example, on a second hand aircraft prior to entering on the Australian civil aircraft register). For any subsequent modification/repair design approvals, FAA will not issue any modification/repair design approvals for that aircraft (except in the case of an applicable STC). This is because ICAO Convention on International Civil Aviation requirements prevent this provision being applied generally. CASR 21.470 (d) is also relevant, but requires a bilateral agreement between CASA and the foreign NAA.

Contradicts the Bilateral Agreement & FAA/CASA Implementation Procedures that states:

2.3.1 Australia shall accept, without further investigation, the following FAA Design Approvals:
(a) Supplemental Type Certificates for all products, regardless of the State of Design;
(b) Approved design data used in support of repairs for products, parts, and appliances regardless of State of Design;
(c) Parts Manufacturer Approval; and
(d) All other minor design changes.

We have asked CASA to reconsider their response based on the BASA/IPA with the US/FAA.

AMROBA Q: (1) Clarify that "***issue***" can mean an email/fax accepting a repair without including a statement requiring local approval. (2) Is "***issuing***" a statement that includes '*NTO*' without an additional statement requiring local NAA approval compliant with this rule. [We believe BASA/IPA above overrides]

CASA response: The design documents may be transmitted electronically, however, the design must be approved in a form that demonstrates compliance with the requirements of CASR 21.470, and the registered operator must keep a copy of the relevant records. An email/fax accepting a repair without inclusion of a statement requiring local NAA approval is also acceptable subject to complying with the requirements of subregulation 21.470 (d) [This is covered by the BASA/IPA]. However, a document (electronic or otherwise) stating that the type certification holder or manufacturer has 'no technical objection' to a design does not constitute automatic approval, unless the design is approved by an appropriate delegate of the TC holder or the manufacturer authorised by the NAA.

It is amazing that other industry clearly identified recently that increased regulations and bureaucracy are having a negative effect on business. This was identified as an issue for aviation way back in the late 1980s.

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