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Sent Via: E-mail

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RE: AFS-300 Memorandum dated April 13, 2007
The Use of Technical Orders (TO) and the Alteration of Data Plates

Dear Messrs. Cann and Domingo:

The Aeronautical Repair Station Association (ARSA) is requesting for the withdrawal or revision of the above referenced Memorandum. That document indicates that a repair station cannot change the identification information of a component to reflect an alteration accomplished using the manufacturer's component maintenance manual (CMM). It also states that a repair station cannot use a Technical Order (TO) to perform maintenance and approve that work for return to service unless it was approved by an Aircraft Certification Office (ACO). We believe the regulations allow both actions.

Identification Information

Data plates and other identification information are attached to aircraft, aircraft engines, propellers and propeller blades and hubs under the part marking requirements of 14 CFR part 45¹. Part marking information is also contained in the regulations governing the issuance of Technical Standard Order Authorization and Parts Manufacturer Approval.

However, the majority of components maintained or altered at a repair station have no marking requirements at the time of production. Despite the lack of a regulatory requirement, many components do bear the manufacturer's name, a model number, part number and a serial number. The identification and markings are important to making an airworthiness determination for the component after maintenance or alteration.

The regulations state that required data plates and other identification information cannot be removed, installed or changed without the Administrator's approval; unless you are performing work under part 43 (see, §§ 45.13(b), 45.13(c) and 21.611(c)). Therefore it is clear that entities performing maintenance, preventive maintenance and alteration may use methods, techniques and practices acceptable to the Administrator to change or place identification information on products during maintenance (see, §§ 43.13(a), 45.13(d) and 21.611(c)).

Use of CMMs to Make Minor Alterations

Currently, many repair stations use manufacturers' CMMs to alter parts from one configuration to another. The CMM covers components that have the same base number with designated dash numbers. All configurations use the same manual for disassembly, cleaning, inspection,

¹ Unless otherwise noted all references are to Title 14 CFR.

RE: AFS-300 Memorandum dated April 13, 2007
The Use of Technical Orders (TO) and the Alteration of Data Plates

repair, reassembly and testing. The CMM and its associated parts catalogs allow a repair station to determine the internal components and thus the configuration of each dash number.

Using the CMM allows a minor alteration to be accomplished using acceptable methods, techniques and practices (§ 43.13(a)). However, when the work is complete the information on the identification plate is no longer accurate. While the base part number remains the same, the dash number must change to reflect the final configuration. If the CMM is silent on changing or replacing the information, repair stations have created their own marking methods, including:

- Replacing the existing identification plate with a new plate reflecting the component's altered configuration.
- Placing a sticker next to the original plate with the name of the repair station, work order number and air agency certificate number and the current dash number.
- Updating the dash number on the existing plate to reflect the component's proper configuration.

ARSA believes that repair stations are using acceptable methods, techniques and practices for accomplishing these minor alterations (§ 43.13).

Until recently the FAA allowed this practice. ARSA is aware of certain regions that still allow this practice, while others enforce the strict letter of the AFS-300 memorandum, which cites to no regulatory basis. These regions are not only forbidding the updating of identification information, but also the minor alteration of components in compliance with a CMM.

ARSA requests that the FAA withdraw or correct its Memorandum. The regulations recognize that minor alterations can be accomplished using a CMM that covers multiple dash numbers. It also permits the updating of identification information that reflects the end dash number of an article.

Use of TOs

The second issue in the Memorandum which should be corrected is a repair station's use of TOs to accomplish maintenance. The Memorandum indicated that TOs could only be used to perform maintenance if approved by an ACO. ARSA believes that this step is unnecessary.

Section 43.13(a) requires persons performing maintenance to use methods, techniques and practices that are acceptable to the Administrator (§ 43.13(a)). Minor repairs require no additional FAA action (see §§ 43.13(b), 145.201(c)(1), and Advisory Circular AC 120-77). Only major repairs or alterations must be supported by approved technical data (see § 145.201(c)(2)).

Generally, TOs are instructions that provide methods, techniques and practices for maintaining military aircraft. Many of these aircraft have been issued type certificates by the FAA. Therefore, when a TO describes a minor repair or alteration of an article that has been type certificated, it

Messrs. Cann and Domingo
May 15, 2007
Page 3

RE: AFS-300 Memorandum dated April 13, 2007
The Use of Technical Orders (TO) and the Alteration of Data Plates

needs no further approval. If it describes a major repair or alteration, the technical data supporting the TO has already been approved as part of the type certification process (see §§ 21.31) and again needs no further approval.

Therefore, a repair station can use a TO without approval from the ACO if it is for an article that has been type certificated or is incorporated in a type certificated product.

Conclusion

ARSA asks the FAA to either withdraw or revise its Memorandum. We have attached an altered memorandum that clarifies the circumstances under which a repair station can make minor alterations with a CMM, update part marking information and use TOs.

The AFS-300 memorandum has caused great concern within the industry. Indeed, two ARSA members have or will be detrimentally impacted by the Memorandum. Cross Check Aviation has been directed to cease use of the CMMs to make minor alterations on components. Lynden Air Cargo is concerned that vendors will refuse to perform component maintenance with TOs for its fleet of Lockheed L382G Hercules aircraft. The TOs have been specifically approved for use under its Continuous Airworthiness Maintenance Program (see Operations Specifications D072 and section 121.367(a)) even though the TOs have not been approved by an ACO. We therefore request timely action to avoid further consternation.

Your Servant,



Sarah MacLeod
Executive Director
Aeronautical Repair Station Association

cc: [Robert Moten](#) [William C. Kunder](#) [Michael Zarr](#)
[Vince Prentice](#) [Paul Willing](#)

Federal Aviation Administration

Memorandum

Date:

To: All Regional Flight Standards Division Managers
All Regional Technical Standards Branch Managers

From: David E. Cann, Manager, Aircraft Maintenance Division, AFS-300

Prepared by:

Subject: Update on the Use of Technical Orders (TO) and the Alteration of Data Plates

On April 13, 2007 the Aircraft Maintenance Division, AFS-300, issued a Memorandum responding to questions from the field. The Memorandum needs clarification and this update provides that information.

Q: Is it permissible for an appropriately rated repair station to approve for return to service a product/part/appliance on a FAA Form 8130-3, block 19, 14 CFR section 43.9, using a Technical Order (TO) when there is no published manufacturers' maintenance/overhaul manual? The repair station does not know eligibility or intended use.

A: TOs are generally methods, techniques and practices for maintaining or altering military aircraft. When those aircraft have been issued type certificates by the Federal Aviation Administration (FAA), the manufacturers may designate the TOs as the method for maintaining or altering the type certificated products and the articles that are installed in those products. Provided the configuration of the military article did not change when the civil type certificate was issued, TOs can be used to perform maintenance in accordance with part 43. If there are differences between the military and civilian configurations, those differences must be covered by other data acceptable to or approved by the FAA.

After the work is accomplished, the repair station can issue an approval for return to service in accordance with 14 CFR section 43.9. In the maintenance record, the repair station should reference the TO in block 13 of the FAA Form 8130-3 so that the installer can verify the eligibility for installation.

Q: Is it permissible for an appropriately rated repair station to alter the configuration of a product/part/appliance (article), using data contained in the manufacturers' maintenance/overhaul manual, and to alter the data plate information to indicate the part number it was altered to if specific instructions for doing so are not addressed by the manufacturer? It is assumed that the instructions for the original and altered part numbers are both contained within the same manual and that only the dash numbers, not the base numbers (Base # -- Dash #) will be changed.

A. An appropriately certificated repair station may use manufacturer instructions (including component maintenance manuals (CMMs)) and other data acceptable to the Administrator to perform minor alterations on articles. The repair station is responsible for ensuring that the alteration is contained within the articles' specifications as required to ensure it is indeed a minor alteration (see 14 CFR section 1.1 definitions of major and minor repairs and alterations). If the minor alteration results in a change to the dash number of an article, the end configuration

DATE

Subject: Update on the Use of Technical Orders (TO) and the Alteration of Data Plates

Page 2

must be reflected in both the maintenance record required by 14 CFR section 43.9 and on the identification information of the article. The identification information may be reflected by:

- Replacing the existing identification plate with a new plate reflecting the component's altered configuration. These new identification plates must be obtained from the manufacturer of the article.
- Placing a sticker next to the original plate with the name of the repair station, work order number and air agency certificate number and the correct (current) dash number.
- Updating the dash number on the existing plate to reflect the component's proper configuration.

If the methodology for accomplishing the minor alteration is not contained in the manufacturers' instructions (either the maintenance manual or a service letter or similar document), the repair station must put its method for accomplishing this in writing and the document must reference the manufacturer's data used. This will ensure that the repair station is accomplishing a minor alteration in accordance with the regulations. If the alteration is major, it must be accomplished in accordance with data approved by the FAA as required by 14 CFR section 145.201(c).

Q: If second Q above is permissible, would a FAA Form 337 be required to record a major alteration or minor alteration?

A: FAA Form 337 is required for major alterations. Provided the repair station is accomplishing a minor alteration no FAA Form 337 is needed; however a proper maintenance record must be completed in accordance with 14 CFR section 43.9.