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RE: Multiple part identification issue

Dear Steve and Terry:

It came to the association's attention that its members have questions about the identification that should be referenced in maintenance records when more than one number is applied to a part at production. ARSA has worked with Anthony Janco and Stephen M. Carbone to address and resolve this issue.

This letter is written to recommend the FAA issue guidance on this matter.

Background

There are times that type certificate (TC) and/or production certificate (PC) holders use "original equipment manufacturers" (OEMs)¹ to produce both production and replacement parts. Under Title 14 Code of Federal Regulations (14 CFR),² the OEM must obtain a technical standard order authorization (TSOA) or parts manufacturer approval (PMA) to produce and sell the replacement parts to "end-users." To ensure the OEM replacement parts are "identical" in design and production methodology, the regulations indicate that the contracts (licensing agreements) among and between the TC/PC and OEM TSOA/PMA holders "tie" changes in design and/or production methodology in "lock-step."

When the OEM PMA/TSOA holder has obtained a "manufacturer assist", "contract" or "licensing agreement" from the TC/PC holder to produce a replacement part, sometimes the part number

¹ For the purposes of this issue, we are using this term to define the actual producer; that is, the company that physically produces the part for the "product" manufacturer, i.e., the type and/or production certification approval holder (e.g., Boeing, Airbus, Pratt & Whitney, Hamilton Sundstrand).

² All references are to 14 CFR unless otherwise indicated.

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is exactly the same as the TC/PC holder's (except for the suffix or prefix) and sometimes it is completely different, e.g., TSOA number and TC/PC "installation" number. In some cases, the rules require and Aircraft Certification Service (AIR) has "allowed" both part numbers to be affixed at the time the OEM PMA/TSOA holder actually produces the part and other times, these "different" part numbers are affixed at "shipment". In the latter case, the part only has one part number affixed (either the TC/PC holder's or the OEM PMA/TSOA holder's), but no matter the number, the part has been made to the exact same design and production standard.

When the PMA/TSOA holder is not the OEM, the part number should have the PMA holder's "unique" number as required by part 21. However, we know of instances where the TC/PC or OEM part number is maintained by the "aftermarket" PMA holder and only the suffix or prefix changes.

Design and Production Discussion

Identification of "new" articles is covered under 14 CFR part 45. Other than critical parts, there is no specific part marking requirements for TC/PC holders. Normally, the TC/PC holder applies its part numbers through drawings or specifications. During this process, the OEM part number can be identified in the drawing or specification as well as the TC/PC holder part identification.

Part number confusion is exacerbated by several additional considerations—

- (1) The OEM part may be approved in more than one type design by more than one TC/PC holder. While the TC/PC holder and even the OEM may mark the part differently, the actual part is produced to the exact same design requirements under the exact same manufacturing controls.
- (2) There may be more than one design approval holder for the part. For example, the TC holder, the OEM PMA holder and an "aftermarket" PMA holder.

Therefore, when the part numbers are "attached" at production, the scenarios are:

- (1) A TC holder part number only; or,
- (2) A PMA/TSOA holder part number only; or,
- (3) The TC/PC holder part number **and** the PMA/TSOA holder number.

If only one part number is "attached" at production, the FAA has a clear understanding of the certificate holder responsible for the design and production of the article and can take appropriate action if something is wrong with either the design or production under part 21.

If both part numbers are "attached" at production, the FAA still can take appropriate action to ensure correction of any deficiencies in the design and/or production, since the actual producer

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(the PMA/TSOA holder) would need to make adjustments to ensure continued compliance for both design and production approvals.

Issues at and Solutions for Repair Stations

When more than one number applies to the exact same part, issues arise in the repair station world.

(1) Capability List: Many repair stations keep their capability lists (see, section 145.215) by part number rather than by manufacturer make and model since the component maintenance record (see, section 43.9) is issued against a part number. When the repair station does not place all potential part numbers for a particular article (the TC holder's and the PMA/TSOA holder's part numbers) on its capability list, an Aviation Safety Inspector questions whether the certificate holder is—

- Following its own procedures and/or,
- Appropriately “rated” to perform the maintenance and/or,
- Using the proper maintenance data.³

When a part goes into service and comes back for work under part 43, the FAA is concerned that the right “maintenance data” be used under section 43.13. When the TC/PC and OEM PMA/TSOA holder are “joined at the hip” through a “licensing agreement” or other contractual relationship recognized by the FAA, there is only one “actual” producer (the OEM) and both part numbers would be using the same maintenance data.

When the PMA/TSOA holder is an “aftermarket” provider, the FAA has ensured that the original maintenance data is appropriate by default. In other words, during the certification process, AIR guidance states that the “original” maintenance data can be used UNLESS there is a difference.

Therefore, under either condition, the applicable part numbers should be on a repair station's “capability list”⁴—if they are not, a quick remedy can be achieved since section 43.13 is satisfied and section 43.9 doesn't even have a “direct” part number requirement.

(2) Customers may or may not understand the significance of applying the “dual” part numbers to commercial and regulatory documentation. The FAA should be clear on the extent part number usage is covered by the regulations, enabling more standardization in the commercial world.

³ Not all component maintenance manuals have both the TC/PC holder and OEM PMA/TSOA holder part numbers represented. Sometimes, a single CMM may apply to “models” of the component which are eligible for installation on several types and models of product or appliance.

⁴ Even though part numbers are not “officially” needed for capability lists, they are often used instead of the nomenclature, make and/or model required by section 145.215(b).

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In all cases, the maintenance provider must be able to recognize the part marking and place the “right” identification on the section 43.9(a)(4) approval for return to service (usually an 8130-3 tag).

In other words, the part number that came in should be the part number that goes out, therefore—

- (1) If the part is marked with only the TC/PC part number, the section 43.9 record created by the repair station needs to reference only the TC/PC part number.
- (2) If the part is marked with only the OEM PMA/TSOA number, the section 43.9 record created by the repair station needs to reference only the OEM PMA/TSOA number.
- (3) If the part is marked with more than one design and/or production approval holder number (TC/PC/PMA/TSOA). The repair station must carefully review the article and the customer’s request to determine how to identify the part.
 - (a) If the customer is an air carrier (part 121 or 135) or commercial operator (part 125) or foreign air carrier with N-registered aircraft (section 129.14), the repair station should follow the customer’s direction as is required by section 145.205 and use the “originating” part in the appropriate block on the 8130-3 tag.
 - (b) If the customer holds another certificate that is allowed to perform maintenance under 14 CFR, i.e., part 65 mechanic or part 145 repair station, the receiving repair station should follow the customer’s direction and use the “originating” part in the appropriate block on the 8130-3 tag.
 - (c) If the customer does not hold a certificate under 14 CFR, the repair station must carefully review the article to determine if there is a method to ascertain the part number attached at production. Since that is unlikely, it can use either the TC/PC part number or the OEM PMA/TSOA part number in the appropriate block of the 8130-3. It can also put the “other” part number in block 13 if it wishes so that the “article” is fully identified as it actually exists (the part would actually match the “paperwork”).

Remember, this “allowance” would only apply to parts that are actually marked with more than one number at the time of production, not just because the repair station happens to know other numbers “may” apply to the part. Additionally, it would apply when the customer is not necessarily knowledgeable about the article, such as a distributor or owner/operator pilot that has no authority to perform work under 14 CFR.

To avoid issues in the future, we recommend guidance be issued to the FAA and the industry in the next revision to Order 8130.21. If that document is not appropriate, we recommend that Advisory Circular 43-9 be updated to reflect current practices relating to maintenance records issued by persons authorized to approve work for return to service under section 43.3.

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Messrs. Allen and Douglas
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I look forward to discussing the solution further.

Your Servant,

A handwritten signature in blue ink, reading "Sarah MacLeod". The signature is written in a cursive style with a large, looping initial "S".

Sarah MacLeod
Executive Director

cc: Anthony Janco
Stephen M. Carbone

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