

Applicability

Operators and Maintainers - All aircraft types.

Purpose

This AWB is to emphasise that it is responsibility of the registered operator of the aircraft to evaluate all service documentation related to PMA / STC parts for compliance purposes.

Background

Recently one registered operator of Cessna P210N aircraft whose Teledyne Continental Motors (TCM) TSIO 520 engine had 'Parts Manufacturer Approval' (PMA) cylinders installed, experienced catastrophic cylinder failure. During climb, the pilot heard a loud bang followed by sudden loss of power. The aircraft made a forced landing. Post-incident engine inspection revealed cylinder head separation from the barrel.

An investigation into the event revealed that there was a mandatory service bulletin (MSB) issued by the manufacturer of the PMA cylinders that addressed this failure and the operator did not know about it. The failed PMA cylinder actually belonged to a bad batch and would have been replaced free of charge, along with reimbursement of the labour costs.

Operator's lack of awareness about service documents issued by PMA parts manufacturer resulted in missed compliance action deadline, a hefty repair bill and potential risk of loss of the aircraft and / or its occupants.

Many registered operators wrongly believe that complying with the requirements in OEM service documents alone is sufficient for OEM parts as well as PMA parts. The fact remains that there might be some additional instructions issued by the PMA / STC parts manufacturer.

Regular review of applicable service documents from all of the issuers (OEM, PMA, STC parts manufacturers, CAR35 authorised entities) and the assessment thereof for compliance purposes is likely to enhance safety and may reduce total cost of ownership.

Recommendation

CASA recommends following actions:

- A. Review your aircraft / engine / propeller / components documentation to check if there is any change to the original configuration.

Such change may include installation of a system or a component under Supplemental Type Certificate (STC), Parts Manufacturer Approval (PMA or equivalent Australian APMA) or an Australian CAR 35 approved repair.

If unsure, contact your maintenance organisation.

- B. If any non-OEM part is installed, check with the maintenance organisation that installed the part regarding sources of service documents for the part. Often such documents require periodical inspection(s) and parts removal should the part fail to meet minimum inspection standards. Some large PMA / STC parts manufacturers issue Service Bulletins on regular basis.
- C. Ensure that your maintenance organisation has an established system of receiving and assessing service documentation issued by non-OEM parts manufacturer.
- D. Ensure that your maintenance organisation highlights the installation of non-OEM parts as well as incorporation of non-OEM repairs and make arrangements to receive relevant documents.
- E. It is recommended that this AWB is brought to the attention of the registered operator before a non-OEM repair or a non-OEM part is incorporated by a maintenance organisation.
- F. If an in-service defect is found, CASA recommends reporting the defect to PMA / STC holder / CAR 35 authorised entity. In addition to that, a service difficulty report (SDR) should also be submitted to CASA.
- G. If non-conformity is found in new part(s) supplied under PMA or STC, such non-conformity should be reported to PMA / STC holder. In addition to that, a service difficulty report (SDR) should also be submitted to CASA.

Summary

If PMA / STC parts are installed on your aircraft, CASA recommends you reviewing related service documents on regular basis and making informed decisions accordingly.



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