



Airworthiness Directive

AD No.: 2024-0194

Issued: 15 October 2024

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I Part M.A.301, or Annex Vb Part ML.A.301, as applicable, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I Part M.A.303, or Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

GE AVIATION CZECH s.r.o.

Type/Model designation(s):

M601 engines

Effective Date: 29 October 2024

TCDS Number(s): EASA.E.070

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2024-0040-E dated 08 February 2024.

ATA 72 – Engine – Centrifugal Compressor Case – Inspections

Manufacturer(s):

GE Aviation Czech (GEAC) s.r.o., formerly Walter Engines a.s.

Applicability:

M601D, M601E, M601E-11, M601E-11A, M601E-11AS, M601E-11S, M601E-21, M601F and M601FS engines, all serial numbers.

These engines are known to be installed on, but not limited to, Aircraft Industries (formerly LET) L-410 series; Air Tractor AT-300, AT-400 and AT-500 series; Allied Ag Cat Productions Inc. (formerly Grumman) G-164 series; PZL "Warszawa-Okecie" PZL-106 (Kruk) series; GENERAL ATOMICS AeroTec Systems GmbH (formerly RUAG, Dornier) Do 28 series; Thrush Aircraft (formerly Quality, Ayres, Rockwell) S-2R series; Viking Air Ltd. (formerly de Havilland Canada) DHC-3 Otter aeroplanes; Zlin Aircraft a.s. Z 37 T and Z 137 T; and Pacific Aerospace Corporation (formerly Fletcher) FU-24 aeroplanes.

Definitions:

For the purpose of this AD, the following definitions apply:

The ASB: GEAC Alert Service Bulletin (ASB) SB-000476/01.



Affected part: Centrifugal compressor case, having Part Number (P/N) M601-154.55 or P/N M601-154.65.

Serviceable part: Centrifugal compressor case, eligible for installation in accordance with GEAC instructions, which is not an affected part; or an affected part that, before installation, passed an inspection (no cracks found) in accordance with the instructions of the section 06.03.03 of the applicable Engine Overhaul Manual; or an affected part which accumulated less than 100 flight hours (FH) and less than 300 take-offs after having passed (no cracks found) an inspection in accordance with the instructions of the ASB.

Groups: Group 1 engines are those that have an affected part installed. Group 2 engines are those that do not have an affected part installed.

Reason:

A crack on the centrifugal compressor case mount pad weld area was reported on an engine, leading to an unscheduled engine removal. Further investigation identified a non-conforming welding in the location of the failure (lack of welding penetration).

This condition, if not detected and corrected could lead to crack propagation, possibly resulting in engine separation and reduced control of the aeroplane.

To address this potential unsafe condition, GEAC issued ASB SB-000471/00 to provide instructions for a one-time detailed visual inspection (DVI) of affected parts, and, depending on findings, accomplishment of applicable corrective action(s). Consequently, EASA published AD 2024-0040-E mandating a DVI of the affected parts and, depending on findings, accomplishment of corrective action(s), and providing requirements for reporting and for installation of affected parts.

Since that AD was issued, it has been confirmed that the compliance time for the DVI can be extended, and that repetitive inspections of the affected part must be accomplished.

For the reason described above, this AD partially retains the requirements of EASA AD 2024-0040-E, which is superseded, and additionally requires a repetitive DVI of the affected parts and, depending on findings, accomplishment of corrective action(s).

This AD is considered to be an interim action and further AD action may follow.

Required Action(s) and Compliance Time(s):

Required as indicated by this AD, unless the action(s) required by this AD have been already accomplished:

Repetitive Inspections:

- (1) For Group 1 engines: Within 100 FH or 30 days after the effective date of this AD, whichever occurs first, and, thereafter, at intervals not to exceed 100 FH, or 300 take-offs, or 6 months, whichever occurs first, inspect the affected part in accordance with the instructions of the ASB.



Corrective Action(s):

- (2) If, during any inspection as required by paragraph (1) of this AD, any crack is detected on an affected part, before next flight, contact GEAC for approved instructions and accomplish these instructions accordingly, or before next flight replace that affected part with a serviceable part, in accordance with the instructions of the ASB.

Reporting:

- (3) Within 30 days after the accomplishment of the initial inspection as required by paragraph (1) of this AD, or after the effective date of this AD, whichever occurs later, report the results of that inspection (including no findings) to GEAC. This can be accomplished using the Accomplishment Form of the ASB.

Credit:

- (4) Inspection of the affected part of an engine accomplished before the effective date of this AD in accordance with the instructions of GEAC ASB SB-000471/00 is acceptable to comply with the initial requirement of paragraph (1) of this AD for that engine.

Terminating Action:

- (5) Replacing the affected part of an engine with a centrifugal compressor case, eligible for installation in accordance with GEAC instructions, which is not an affected part, constitutes terminating action for the repetitive inspection as required by paragraph (1) of this AD for that engine, provided that, after that replacement, no affected part is reinstalled on that engine.

Part(s) Installation:

- (6) For Group 1 and Group 2 engines: From the effective date of this AD, it is acceptable to install an affected part on an engine, provided it is a serviceable part, as defined in this AD, and that, thereafter, it is inspected as required by this AD. After that installation, the engine is effectively considered a Group 1 engine.
- (7) For Group 1 engines: From the effective date of this AD, it is allowed to install an engine on an aeroplane, provided that the affected parts of that engine are serviceable parts (see Note 1 of this AD).

Note 1: Removal of an engine from an aircraft and subsequent reinstallation of that engine on the same aircraft, accomplished during a single maintenance visit, is not considered as 'installation' as specified in paragraph (5) of this AD.

Ref. Publications:

GEAC ASB SB-000476/01, original issue dated 05 June 2024, Revision 01 dated 26 July 2024 and Revision 2 dated 23 August 2024.

GEAC ASB SB-000471/00 original issue dated 02 February 2024.

The use of later approved revisions of the above-mentioned documents is acceptable for compliance with the requirements of this AD.



Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication. All interested persons may send their comments, referencing the AD Number, to the E-mail address specified in below Remark 3, prior to 12 November 2024. Only if any comment is received during the consultation period, a Comment Response Document will be published in the [EASA Safety Publications Tool](#), in a compressed ('zipped') file, attached to the record for this AD.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
5. For any question concerning the technical content of the requirements in this AD, please contact: GE Aviation Czech, Beranových 65, 199 02 Praha 9 – Letnany, Czech Republic, Telephone: +420 222 538 999, Website: <https://www.geaviation.cz/customer-support>, E-mail: tp.ops@ge.com.

