



DATE: July 12, 2013

AD #: 2013-14-51

This emergency airworthiness directive (AD) supersedure is sent to owners and operators of General Electric Company (GE) GE90-110B1 and GE90-115B turbofan engines.

Background

This emergency AD supersedure was prompted by a report of one additional failure of a transfer gearbox assembly (TGB) radial gearshaft, outside the suspect population identified in AD 2013-10-52, which resulted in an in-flight shutdown (IFSD). Two earlier failures of the TGB radial gearshaft prompted the issuance of AD 2013-10-52. Inspections have found three additional radial gearshafts with cracks. Investigation has revealed that the failures were caused by TGB radial gearshaft cracking and separation. This condition, if not corrected, could result in additional IFSDs of one or more engines, loss of thrust control, and damage to the airplane.

Relevant Service Information

We reviewed GE GE90-100 Series Alert Service Bulletin (ASB) No. GE90-100 S/B 72-A0568, dated July 10, 2013. The ASB provides additional information regarding the affected TGB radial gearshafts.

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

This AD prohibits operation of an airplane with affected TGB radial gearshafts installed on both engines five days after receipt of this emergency AD.

Interim Action

We consider this AD to be an interim action. We anticipate that further AD action will follow.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This

regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Presentation of the Actual AD

We are issuing this AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

2013-14-51 **General Electric Company:** Directorate Identifier 2013-NE-17-AD

(a) Effective Date

This Emergency AD is effective upon receipt.

(b) Affected ADs

This AD supersedes AD 2013-10-52, which was issued as an Emergency AD on May 16, 2013, and as a final rule, request for comment on June 13, 2013 (78 FR 38195, June 26, 2013).

(c) Applicability

General Electric Company (GE) GE90-110B1 and GE90-115B turbofan engines with a transfer gearbox assembly (TGB) radial gearshaft, part number 1995M24P02, serial number (S/N) listed in Figure 1 to paragraph (c) of this emergency AD, installed.

Figure 1 to Paragraph (c) – TGB Radial Gearshaft S/N’s

FIA0KCYG	FIA0JETA	FIA0H0VJ	FIA0HL0C
FIA0K63F	FIA0J7V2	FIA0K62R	FIA0HLY9
FIA0K3A3	FIA0KCYM	FIA0K63C	FIA0HLOE
FIA0JVRE	FIA0JJ6E	FIA0K89H	FIA0HLOF
FIA0H0VM	FIA0JNJH	FIA0KCYK	FIA0HLOG
FIA0K3A4	FIA0K62W	FIA0K3A5	FIA0HLY7
FIA0K62T	FIA0K89P	FIA0HWKA	FIA0HJTE
FIA0JJ53	FIA0JJ57	FIA0KCYR	FIA0HJTJ
FIA0K89W	FIA0JJ56	FIA0HWKE	FIA0HJTG
FIA0KCW8	FIA0KH9Y	FIA0J7WH	FIA0HJTC
FIA0K3A6	FIA0KCYP	FIA0JER9	FIA0HJTF
FIA0HY8C	FIA0JJ55	FIA0JNJJ	FIA0HJTH
FIA0K3AP	FIA0KH9G	FIA0JVRR	FIA0HJTA
FIA0J7WG	FIA0KH9H	FIA0JNJM	FIA0HJR9
FIA0JVRL	FIA0KH9K	FIA0KH9R	FIA0HWJ7
FIA0J7V1	FIA0KH9C	FIA0KH9P	FIA0HY76
FIA0JVRL	FIA0K63H	FIA0K89C	FIA0HY8F
FIA0K3AV	FIA0K63M	FIA0JVRRH	FIA0H0VK
FIA0J7V8	FIA0K62Y	FIA0K89L	FIA0J7VR
FIA0J7WE	FIA0JVP9	FIA0JER6	FIA0JJ58
FIA0K3A2	FIA0K63E	FIA0JETH	FIA0JJ6C
FIA0K3A1	FIA0K3AY	FIA0H0VC	FIA0JNJF
FIA0K3AN	FIA0JVRT	FIA0K3AL	FIA0JNJK
FIA0JVRL	FIA0HY8E	FIA0J7VV	FIA0JVRC

FIA0JJ6F	FIA0HY8N	FIA0J7VP	FIA0J7V4
FIA0JJ6J	FIA0J7V0	FIA0J7V9	FIA0JETF
FIA0JVRV	FIA0J7V3	FIA0HWJ8	FIA0HEG4
FIA0H0VL	FIA0J7V5	FIA0H0VA	FIA0HWJ9
FIA0K89T	FIA0HY8H	FIA0KCYL	FIA0HWJ5
FIA0K89Y	FIA0HEG2	FIA0HY79	FIA0HWJ6
FIA0JETL	FIA0K62V	FIA0KH9J	FIA0J7VW
FIA0JER8	FIA0HEGY	FIA0HY8G	FIA0J7VY
FIA0J7WC	FIA0HWKC	FIA0HY8M	FIA0J7VT
FIA0JETE	FIA0K3A0	FIA0HY8A	FIA0J7WF
FIA0K3AT	FIA0JVRJ	FIA0H0VG	FIA0J7V6
FIA0JJ59	FIA0K8AA	FIA0K3AR	FIA0K89G
FIA0K3AW	FIA0KCYT	FIA0JETC	FIA0K89K
FIA0JVRN	FIA0KH9T	FIA0KH9W	FIA0K89R
FIA0JNH8	FIA0HEG1	FIA0JNJC	FIA0KCYJ
FIA0JETN	FIA0HEG3	FIA0K63L	FIA0KCYM
FIA0JJ6G	FIA0HY78	FIA0J7WJ	FIA0KCYN
FIA0JJ6A	FIA0HY75	FIA0JER7	FIA0KCYP
FIA0JVRG	FIA0HY8K	FIA0HEG0	FIA0KCYR
FIA0JVRF	FIA0HY8L	FIA0HLY6	FIA0KH9E
FIA0K63K	FIA0HY8J	FIA0HLY0	FIA0KH9F
FIA0J7WK	FIA0H0VH	FIA0HLY1	FIA0H0T9
FIA0JER5	FIA0H0VF	FIA0HLY4	FIA0HLY3
FIA0JETM			

(d) Unsafe Condition

This emergency AD supersedure was prompted by a report of one additional failure of a TGB radial gearshaft, outside the suspect population identified in AD 2013-10-52, which resulted in an in-flight shutdown (IFSD). Two earlier failures of the TGB radial gearshaft prompted the issuance of AD 2013-10-52. This condition, if not corrected, could result in additional IFSDs of one or more engines, loss of thrust control, and damage to the airplane.

(e) Compliance

(1) Comply with this AD within the compliance times specified, unless already done.

(2) No later than five days after receipt of this emergency AD, do not operate the airplane if more than one installed engine has a TGB radial gearshaft S/N listed in Figure 1 to paragraph (c) of this emergency AD.

(f) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(g) Related Information

(1) For further information about this AD, contact: Carlos Fernandes, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7189; fax: 781-238-7199; email: carlos.fernandes@faa.gov.

(2) GE Alert Service Bulletin No. GE90-100 S/B 72-A0568, dated July 10, 2013 pertains to the subject of this AD.

(3) For the service information referenced in this AD, contact: General Electric Company, GE-Aviation, Room 285, 1 Neumann Way, Cincinnati, Ohio 45215; email: gae.aoc@ge.com; phone: 513-552-3272.

(4) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on July 12, 2013.

Frank P. Paskiewicz,
Acting Director,
Aircraft Certification Service