\[
Q_{\text{Max}} = Q_{\text{Heat}} \frac{\sqrt{\text{ESP}_{\text{Max}}}}{\text{ESP}_{\text{Heat}}} \times \frac{(T_{\text{Heat}} + 460)}{(T_{\text{Max}} + 460)}
\]

; and

\[
Q = \left( E_{\text{fjy}_{\text{SS}} - L_j} \right) \times Q_{\text{IN}} + \left( 3413 \times E_{\text{Heat}} \right) \times 1.08 \times \Delta T
\]

The estimated national average operating hours presented in Table VI.2 shall be used to calculate FER.

**TABLE VI.2—ESTIMATED NATIONAL AVERAGE OPERATING HOUR VALUES FOR CALCULATING FER**

<table>
<thead>
<tr>
<th>Operating mode</th>
<th>Variable</th>
<th>Single-stage (hours)</th>
<th>Multi-stage or modulating (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating</td>
<td>HH</td>
<td>830</td>
<td>830/HCR</td>
</tr>
<tr>
<td>Cooling</td>
<td>CH</td>
<td>640</td>
<td>640</td>
</tr>
<tr>
<td>Constant Circulation</td>
<td>CCH</td>
<td>400</td>
<td>400</td>
</tr>
</tbody>
</table>

Where:

\[
HCR = \frac{Q_{\text{IN}, R}}{Q_{\text{IN}}}
\]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; General Electric Company Turbofan Engines

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain General Electric Company (GE) GE90–76B, −85B, −90B, −94B, −110B1, and −115B turbofan engines. This proposed AD was prompted by multiple reports of failure of certain stage 1 high-pressure turbine (HPT) stator shrouds due to accelerated corrosion and oxidation. This proposed AD would require initial and repetitive on-wing borescope inspections (BSIs) for corrosion and oxidation, of the affected stage 1 HPT stator shrouds, and removal from service before further flight, if the parts fail the inspection. We are proposing this AD to prevent failure of the stage 1 HPT stator shrouds, resulting in in-flight shutdown of one or more engines, loss of thrust control, and damage to the airplane.

**DATES:** We must receive comments on this proposed AD by June 3, 2013.

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact General Electric Company, One Neumann Way, MD Y–75, Cincinnati, OH; phone: 513–552–2913; email: geae.aoc@ge.com; and Web site: www.GE.com. You may view the referenced 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.

**Examing the AD Docket**

You may examine the AD docket on the Internet at http://www.regulations.gov; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800–647–5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:**


**SUPPLEMENTARY INFORMATION:**

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA–2013–0186; Directorate Identifier 2013–NE–11–AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.
Discussion
We received one report of an aborted takeoff, and multiple reports of stage 1 HPT stator shroud distress resulting in engine removals on airplanes with GE90 turbofan engines. Investigation revealed that the stage 1 HPT stator shrouds failed due to accelerated corrosion and oxidation. GE is still investigating the cause of the accelerated corrosion and oxidation. This condition, if not corrected, could result in failure of the stage 1 HPT stator shrouds, resulting in in-flight shutdown of one or more engines, loss of thrust control, and damage to the airplane.

Relevant Service Information

FAA’s Determination
We are proposing 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.

Proposed AD Requirements
This proposed AD would require initial and repetitive on-wing BSIs of stage 1 HPT stator shrouds, part number (P/N) 1847M52P14, and P/N 1847M52P16, for corrosion and oxidation, and removal from service before further flight if the parts fail the inspection.

Differences Between the Proposed AD and the Service Information
The SBs require completing and sending to GE the Inspection Findings Report Form after each inspection. This proposed AD does not.

Costs of Compliance
We estimate that this proposed AD would affect about 100 GE90 engines installed on airplanes of U.S. registry. We also estimate that it would take about four hours per engine to perform one inspection. The average labor rate is $85 per hour. Based on these figures, we estimate the cost of the proposed AD on U.S. operators for one inspection to be $34,000.

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.

Regulatory Findings
We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(a) Comments Due Date
We must receive comments by June 3, 2013.

(b) Affected ADs
None.

(c) Applicability
This AD applies to General Electric Company (GE):

(i) GE90–76B, –85B, –90B, and –94B turbofan engines with stage 1 high-pressure turbine (HPT) stator shrouds, part number (P/N) 1847M52P14, installed.

(ii) GE90–110B1 and –115B turbofan engines with stage 1 HPT stator shrouds, P/N 1847M52P16, installed.

(d) Unsafe Condition
This AD was prompted by multiple reports of failure of certain stage 1 HPT stator shrouds due to accelerated corrosion and oxidation. We are issuing this AD to prevent failure of the stage 1 HPT stator shrouds, resulting in in-flight shutdown of one or more engines, loss of thrust control, and damage to the airplane.

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

(f) Borescope Inspections of the Stage 1 HPT Stator Shrouds

(1) Perform an initial on-wing borescope inspection (BSI) of the stage 1 HPT stator shrouds for corrosion and oxidation before accumulating 2,100 cycles since new (CSN), or within 100 cycles in service (CIS) after the effective date of this AD, whichever occurs later.

(2) Thereafter, repeat the BSI of the stage 1 HPT stator shrouds every 250 cycles since last inspection (CSLI) or fewer, depending on the results of the inspection.

(3) For engines listed in paragraph (c)(1) of this AD:

(i) Perform the inspections using Section 3.A of the Accomplishment Instructions of GE Service Bulletin (SB) No. GE90 S/B 72–1076, dated November 19, 2012; and


(4) For engines listed in paragraph (c)(2) of this AD:

(i) Perform the inspections using Section 3.A of the Accomplishment Instructions of GE SB No. GE90–100 S/B 72–0528, dated November 15, 2012; and


(5) Remove from service before further flight, any stage 1 HPT stator shrouds found with any hole further than 0.35-inch from the shroud leading edge and hole size more than 0.25-inch diameter, or more than 0.049 square inch area.

(6) The inspection findings reporting specified in Section 3.A of the
SUMMARY: This action provides interested persons with the opportunity to comment on the FAA's draft interpretation regarding nonstop international supplemental operations scheduled for longer than 12 hours. Additionally, this draft interpretation discusses the appropriate international flight time limitations that would apply to the operation. As discussed in the draft interpretation, the FAA finds that the operation of such flights would be precluded under the flight time limitations of the "U.S. mainland rules" found in the supplemental flight and duty rules. However, the operation could be conducted under the "international rules" provisions of our regulations.

DATES: Comments must be received on or before May 2, 2013.

ADDITIONAL INFORMATION: You may send comments identified by docket number FAA–2012–1239 using any of the following methods:

Federal eRulemaking Portal: Go to http://www.regulations.gov and follow the online instructions for sending your comments electronically.

Mail: Send Comments to Docket Operations, M–30; U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12–140, West Building Ground Floor, Washington, DC 20590–0001.

Hand Delivery: Take comments to the Docket Operations in Room W12–140 of the West Building on the 12th Floor, Room W12–140, West Building Ground Floor, Washington, DC 20590–0001 between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Fax: (202) 493–2251.

FOR FURTHER INFORMATION CONTACT:

Dean E. Griffith, Attorney, International Law, Legislation and Regulations Division, Office of Chief Counsel, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone: (202) 267–3073; email: dean.griffith@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites interested persons to submit written comments, data, or views concerning this interpretation. The most helpful comments reference a specific portion of the draft interpretation, explain the reason for any recommended change, and include supporting data. To ensure that the docket does not contain duplicate comments, please send only one copy of written comments, or if you are filing comments electronically, please submit your comments only one time.

The FAA will file in the docket all comments received, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposal. Before acting on this proposal, the FAA will consider all comments received on or before the closing date for comments and any late-filed comments if it is possible to do so without incurring expense or delay.

Availability of This Draft Interpretation

You can get an electronic copy using the Internet by—

(1) Searching the Federal eRulemaking Portal (http://www.regulations.gov);

(2) Visiting the FAA’s Regulations and Policies Web page at http://www.faa.gov/regulations_policies/; or


You can also get a copy by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM–1, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267–9680. Make sure to identify the docket number or notice number of this proposal.

BACKGROUND

The FAA publishes draft legal interpretations when the matter in question is likely to be highly controversial or the likely answer has the potential to significantly and adversely affect long-standing practices that regulated parties have been engaged in, reasonably believing that these practices were consistent with FAA regulations. The intent is not to seek input on whether the FAA is correct—the FAA has the responsibility for interpreting its regulations. Rather, the reason for publishing the draft interpretation for comment is to see whether there may be unintended consequences for regulated parties that merit a further examination of how the agency’s regulatory provisions should be applied in conjunction with agency policy and guidance material.

We are issuing this draft interpretation because it has come to our attention that supplemental air carriers might be misinterpreting and misapplying the regulations governing flight time limitations for supplemental operations to operate international flight segments longer than 12 hours by reading §121.509 of title 14. Code of Federal Regulations in isolation, without also complying with §121.503(a) or, in the alternative, without adequate sleeping facilities for the flight crew as required under §121.523(b). As discussed below, such a reading fails to consider the full meaning of the FAA’s regulations.

DISCUSSION OF THE PROPOSAL

I. Introduction

The purpose of this notice of draft interpretation is to address whether a supplemental air carrier may conduct an international nonstop flight scheduled for more than 12 hours without crew rest facilities on board the aircraft. The answer is “no.” For purposes of this interpretation we will use the hypothetical example of a supplemental air carrier that has scheduled four pilots to conduct a non-

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 121

[Docket No. FAA–2012–1239]

Interpretation of the Rest Requirements of Nonstop International Supplemental Operations

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of Draft Interpretation.

SUMMARY: This action provides interested persons with the opportunity to comment on the FAA’s draft interpretation regarding nonstop international supplemental operations scheduled for longer than 12 hours. Additionally, this draft interpretation discusses the appropriate international flight time limitations that would apply to the operation. As discussed in the draft interpretation, the FAA finds that the operation of such flights would be precluded under the flight time limitations of the “U.S. mainland rules” found in the supplemental flight and duty rules. However, the operation could be conducted under the “international rules” provisions of our regulations.

DATES: Comments must be received on or before May 2, 2013.

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