

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2013-0363; Directorate Identifier 2013-NM-031-AD; Amendment 39-17769; AD 2014-04-10]

RIN 2120-AA64

**Airworthiness Directives; Airbus Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Airbus Model A330-200, -300 and -200 Freighter series airplanes; and Model A340-200, -300, -500, and -600 series airplanes. This AD was prompted by a report that an airplane equipped with Angle of Attack (AOA) sensors installed with conic plates recently experienced blockage of all sensors during climb, leading to autopilot disconnection and activation of the alpha protection (Alpha Prot) when Mach number was increased. This AD requires, for certain airplanes, revising the airplane flight manual (AFM) to advise the flightcrew of emergency procedures for addressing AOA sensor blockage. This AD also requires replacing the AOA sensor conic plates with AOA sensor flat plates, which is a terminating action for the AFM revision. We are issuing this AD to prevent reduced control of the airplane.

**DATES:** This AD becomes effective May 8, 2014.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of May 8, 2014.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-0363>; or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For service information identified in this AD, contact Airbus SAS—Airworthiness Office—EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport

Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

**FOR FURTHER INFORMATION CONTACT:**

Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-227-1138; fax: 425-227-1149.

**SUPPLEMENTARY INFORMATION:****Discussion**

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus Model A330-200, -300 and -200 Freighter series airplanes; and Model A340-200, -300, -500, and -600 series airplanes. The SNPRM published in the **Federal Register** on October 2, 2013 (78 FR 60798). We preceded the SNPRM with a notice of proposed rulemaking (NPRM), which published in the **Federal Register** on May 3, 2013 (78 FR 25902). The SNPRM was prompted by a report that an airplane equipped with AOA sensors installed with conic plates recently experienced blockage of all sensors during climb, leading to autopilot disconnection and activation of the alpha protection (Alpha Prot) when Mach number was increased. The NPRM and the SNPRM both proposed to revise the airplane flight manual (AFM) to advise the flightcrew of emergency procedures for addressing AOA sensor blockage, for certain airplanes. The NPRM and the SNPRM also proposed to require replacing the AOA sensor conic plates with AOA sensor flat plates, which is a terminating action for the AFM revision. We are issuing this AD to prevent reduced control of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2013-0023, dated February 1, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

An A330 aeroplane experienced a blockage of all Angle of Attack (AOA) probes during climb leading to Autopilot (AP) disconnection and activation of the alpha protection (Alpha Prot) when Mach number increased.

Analysis showed that this aeroplane was equipped with AOA probes having conic plates, and it is suspected that these plates might have contributed to the event. Investigations are on-going to determine the

root cause of this AOA probes blockage. The AOA conic plates can also be installed on A340 aeroplanes.

These AOA conic plates could have been installed in production through Airbus modification (mod.) 201609, associated to Thales Avionics AOA probes Part Number (P/N) C16291AA and P/N C16291AB, or mod. 201610, associated to Goodrich AOA probes P/N 0861ED, or in service through Airbus Service Bulletin (SB) A330-34-3255 or SB A340-34-4250 or SB A340-34-5081.

The blockage of two or three AOA probes of the same angle may cause the Alpha Prot of the normal law to activate.

Under normal flight conditions (in normal law), if the Alpha Prot activates and Mach number increases, the flight control laws order a pitch down of the aeroplane that the flight crew may not be able to counteract with a sidestick deflection, even in the full backward position.

This condition, if not corrected, could result in reduced control of the aeroplane.

To address this condition, Airbus developed a “Blocked AOA probes” emergency procedure included in Airbus Airplane Flight Manual (AFM) A330 Temporary Revision (TR) TR293 issue 1 and Airbus AFM A340 TR294 issue 1.

Consequently, EASA issued Emergency AD 2012-0258-E to require amendment of the AFM to ensure that flight crews, in case of AOA probe blockage, apply the applicable emergency procedure.

Since that [EASA] AD was issued, Airbus published approved instructions to re-install AOA probe flat plates on A330/A340 family aeroplanes.

For the reasons described above, this [EASA] AD retains the requirements of EASA [Emergency] AD 2012-0258-E which is superseded, and requires installation of AOA probe flat plates, after which the AFM operational procedure must be removed.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0363-0002>.

**Comments**

We gave the public the opportunity to participate in developing this AD. We have considered the comment received. The following presents the comment received on the proposal (78 FR 60798, October 2, 2013) and the FAA’s response to each comment.

**Request To Reduce Compliance Times**

Airbus asked that we reduce the compliance time of 5 months, as specified in paragraphs (h) and (i) of the SNPRM (78 FR 60798, October 2, 2013), to 10 weeks. Airbus stated that, taking into account that this AD was delayed due to issuance of an SNPRM, and that the terminating action required by EASA AD 2013-0023, dated February 1, 2013 (<http://www.regulations.gov/#!documentDetail;D=FAA-2013-0363-0002>), was already completed, it

recommends a 10-week compliance time for the actions in those paragraphs.

We acknowledge the commenter's recommendation to reduce the compliance time specified in the SNPRM (78 FR 60798, October 2, 2013) to 10 weeks. While there might be merit to reducing the compliance time in this AD, the suggested reduction would make the actions currently required by this AD more restrictive, so additional rulemaking would be necessary. We find that further delaying this action would be inappropriate in light of the

identified unsafe condition. Therefore, we have not changed this final rule in this regard.

**Conclusion**

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the SNPRM (78 FR

60798, October 2, 2013) for correcting the unsafe condition; and

- Do not add any additional burden upon the public than was already proposed in the SNPRM (78 FR 60798, October 2, 2013).

**Costs of Compliance**

We estimate that this AD affects 64 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

**ESTIMATED COSTS**

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
AFM revision .....	1 work-hour × \$85 per hour = \$85 .....	\$0	\$85	\$5,440
Replacement of certain AOA sensor conic plates.	7 work-hours × \$85 per hour = \$595 .....	0	595	38,080
Modification of installations of certain AOA sensor flat plates.	5 work-hours × \$85 per hour = \$425 .....	0	425	27,200

**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 AD will not have federalism implications under Executive Order 13132. This AD will 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 that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

**Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov/#/docketDetail;D=FAA-2013-0363>; 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 AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section.

**List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

**PART 39—AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

**Authority:** 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new AD:

**2014-04-10 Airbus:** Amendment 39-17769. Docket No. FAA-2013-0363; Directorate Identifier 2013-NM-031-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective May 8, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the Airbus airplanes, certificated in any category, identified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Model A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes, all manufacturer serial numbers.

(2) Model A340-211, -212, -213, -311, -312, -313, -541, and -642 airplanes, all manufacturer serial numbers.

**(d) Subject**

Air Transport Association (ATA) of America Code 34: Navigation.

**(e) Reason**

This AD was prompted by a report that an airplane equipped with Angle of Attack (AOA) sensors installed with conic plates recently experienced blockage of all sensors during climb, leading to autopilot disconnection and activation of the alpha protection (Alpha Prot) when Mach number was increased. We are issuing this AD to prevent reduced control of the airplane.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Airplane Flight Manual Revision**

For airplanes identified in paragraphs (g)(1) and (g)(2) of this AD, except as provided by paragraph (j) of this AD: Within 10 days after the effective date of this AD, revise the Emergency Procedures of the Airbus A330 and A340 Airplane Flight Manuals (AFMs), by incorporating Airbus A330 Temporary Revision TR293, Issue 1.0, dated December 4, 2012; or Airbus A340 Temporary Revision TR294, Issue 1.0, dated December 4, 2012; as applicable; to advise the flightcrew of emergency procedures for addressing AOA sensor blockage. This can be done by inserting Airbus A330 Temporary Revision TR293, Issue 1.0, dated December 4, 2012; or Airbus A340 Temporary Revision TR294, Issue 1.0, dated December 4, 2012; into the applicable AFM. When the information in Airbus A330 Temporary Revision TR293, Issue 1.0, dated December 4, 2012; or Airbus A340 Temporary Revision TR294, Issue 1.0, dated December 4, 2012; is included in the general revisions of the applicable AFM, the general revisions may be incorporated into the AFM, and the temporary revisions may be removed.

(1) Model A330–201, –202, –203, –223, 223F, –243, –243F, –301, –302, –303, –321, –322, –323, –341, –342, and –343 airplanes, all manufacturer serial numbers, on which Airbus modification 201609 or 201610 has been embodied in production; or on which Airbus Service Bulletin A330–34–3255 has been embodied in service.

(2) Model A340–211, –212, –213, –311, –312, –313, –541, and –642 airplanes, all manufacturer serial numbers, on which Airbus modification 201609 or 201610 has been embodied in production; or on which Airbus Service Bulletin A340–34–4250 or A340–34–5081 has been embodied in service.

**(h) Replacement**

Except as provided by paragraph (j) of this AD: Within 5 months after the effective date of this AD, replace all AOA sensor conic plates having part number (P/N) F3411060200000 or P/N F3411060900000 with an applicable AOA sensor flat plate identified in paragraph (h)(1) or (h)(2) of this AD. Performing this replacement constitutes terminating action for the AFM revision required by paragraph (g) of this AD; and Airbus A330 Temporary Revision TR293, Issue 1.0, dated December 4, 2012, and Airbus A340 Temporary Revision TR294, Issue 1.0, dated December 4, 2012, to the Airbus A330 and A340 AFMs, as applicable, must be removed from the AFM before further flight after doing the replacement.

(1) Replace with a flat plate having P/N F3411007920200 or P/N F3411007920300, as applicable, in accordance with the applicable service information specified in paragraph (h)(1)(i), (h)(1)(ii), or (h)(1)(iii) of this AD.

(i) Airbus Mandatory Service Bulletin A330–34–3293, Revision 01, including Appendix 01, dated June 12, 2013.

(ii) Airbus Mandatory Service Bulletin A340–34–4273, Revision 01, including Appendix 01, dated June 12, 2013.

(iii) Airbus Mandatory Service Bulletin A340–34–5093, Revision 01, including Appendix 01, dated June 12, 2013.

(2) Replace with a flat plate having P/N F3411007920000 or P/N F3411007920100, in

accordance with a method approved by either the Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA) or its delegated agent.

**(i) Modification of Installation**

For airplanes on which any AOA sensor conic plate has been replaced with an AOA sensor flat plate, in accordance with the applicable service information specified in paragraph (i)(1), (i)(2), or (i)(3) of this AD: Within 5 months after the effective date of this AD, modify the installation of the AOA sensor flat plates so that the plates are flush with the fuselage, in accordance with the applicable service information identified in paragraph (h)(1)(i), (h)(1)(ii), or (h)(1)(iii) of this AD.

(1) Airbus Mandatory Service Bulletin A330–34–3293, including Appendix 01, dated January 31, 2013.

(2) Airbus Mandatory Service Bulletin A340–34–4273, including Appendix 01, dated January 30, 2013.

(3) Airbus Mandatory Service Bulletin A340–34–5093, including Appendix 01, dated January 30, 2013.

**(j) Exception to the Requirements of Paragraphs (g) and (h) of this AD**

For airplanes on which Airbus modification 203285 (improved AOA flat plate protection treatment) has been embodied in production: The actions specified in paragraphs (g) and (h) of this AD are not required, provided that, since first flight, no AOA probe conic plate having P/N F3411060200000 or P/N F3411060900000 has been installed.

**(k) Parts Installation Prohibition**

As of the effective date of this AD, no person may install, on any airplane, an AOA sensor conic plate having P/N F3411060200000 or P/N F3411060900000 or an AOA protection cover having P/N 98D34203003000.

**(l) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM–116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057–3356; telephone (425) 227–1138; fax (425) 227–1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) *Airworthy Product*: For any requirement in this AD to obtain corrective actions from a manufacturer, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they were approved by the State of Design Authority (or its delegated agent, or the DAH with a State of Design Authority's design organization approval). For a repair method to be approved, the repair approval must specifically refer to this AD. You are required to ensure the product is airworthy before it is returned to service.

**(m) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information EASA Airworthiness Directive 2013–0023, dated February 1, 2013, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/>

#!documentDetail;D=FAA-2013-0363-0002.

(2) Service information identified in this AD that is not incorporated by reference may be viewed at the addresses specified in paragraphs (n)(3) and (n)(4) of this AD.

**(n) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Airbus A330 Temporary Revision TR293, Issue 1.0, dated December 4, 2012, to the Airbus A330 Airplane Flight Manual (AFM).

(ii) Airbus A340 Temporary Revision TR294, Issue 1.0, dated December 4, 2012, to the Airbus A340 Airplane Flight Manual (AFM).

(iii) Airbus Mandatory Service Bulletin A330–34–3293, Revision 01, including Appendix 01, dated June 12, 2013.

(iv) Airbus Mandatory Service Bulletin A340–34–4273, Revision 01, including Appendix 01, dated June 12, 2013.

(v) Airbus Mandatory Service Bulletin A340–34–5093, Revision 01, including Appendix 01, dated June 12, 2013.

(3) For service information identified in this AD, contact Airbus SAS—Airworthiness Office—EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet <http://www.airbus.com>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on February 14, 2014.

**Jeffrey E. Duven,**

*Manager, Transport Airplane Directorate,  
Aircraft Certification Service.*

[FR Doc. 2014-07235 Filed 4-2-14; 8:45 am]

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2012-1202; Directorate Identifier 2012-NE-38-AD; Amendment 39-17816; AD 2014-07-02]

RIN 2120-AA64

#### Airworthiness Directives; Rolls-Royce Deutschland Ltd & Co KG Turbofan Engines

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

**ACTION:** Final rule.

**SUMMARY:** We are superseding airworthiness directive (AD) 2012-26-14 for all Rolls-Royce Deutschland Ltd & Co KG (RRD) BR700-715A1-30, BR700-715B1-30, and BR700-715C1-30 turbofan engines. AD 2012-26-14 required removal from service of certain high-pressure (HP) compressor stages 1 to 6 rotor disc assemblies before exceeding certain thresholds. This AD requires removal from service at those same thresholds but restricts the applicability to engines exposed to silver-plated nuts, and removes the terminating action statement required by AD 2012-26-14. This AD was prompted by RRD development of a new silver-free nut that, if installed with a new HP compressor stages 1 to 6 rotor disc assembly, would correct the unsafe condition identified in AD 2012-26-14. We are issuing this AD to prevent failure of the HP compressor stages 1 to 6 rotor disc assembly, which could lead to an uncontained engine failure and damage to the airplane.

**DATES:** This AD is effective May 8, 2014.

#### Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2012-1202; 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 AD, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The address for the Docket

Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

#### FOR FURTHER INFORMATION CONTACT:

Robert Morlath, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: (781) 238-7154; fax: (781) 238-7199; email: [robert.c.morlath@faa.gov](mailto:robert.c.morlath@faa.gov).

#### SUPPLEMENTARY INFORMATION:

##### Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2012-26-14, Amendment 39-17309 (78 FR 2195, January 10, 2013), (“AD 2012-26-14”). AD 2012-26-14 applied to the specified products. The NPRM published in the *Federal Register* on November 19, 2013 (78 FR 69316). The NPRM proposed to continue to require removal from service of certain HP compressor stages 1 to 6 rotor disc assemblies before exceeding certain thresholds. The NPRM also proposed to restrict the applicability to engines exposed to silver-plated nuts, and to remove the terminating action statement required by AD 2012-26-14.

##### Comments

We gave the public the opportunity to participate in developing this AD. We considered the comments received.

#### Request To Include a Mandatory Terminating Action

RRD requested that we include the installation of a new HP compressor stages 1 to 6 rotor disc assembly with silver-free nuts, part number (P/N) U755872, as a necessary terminating action to the parts removal requirements of this AD, because this would eliminate the unsafe condition caused by silver nut corrosion.

We disagree. The flight cycle limits imposed by this AD on engines operating with silver-plated nuts provide an acceptable level of safety. Requiring operators to purchase a new HP compressor stages 1 to 6 rotor disc assembly and new silver-free nuts would be an undue economic burden. If an operator chooses to install a new HP compressor stages 1 to 6 rotor disc assembly and silver-free nuts, P/N U755872, this AD would no longer apply to that engine. We did not change this AD.

#### Request To Require the Replacement of Affected P/Ns at Listed Intervals

RRD requested that instead of requiring a one-time replacement of the HP compressor stages 1 to 6 rotor disc assembly installed with silver-plated nuts, we require replacement of the P/Ns at intervals published in European Aviation Safety Agency (EASA) AD 2012-0230, Initial Issue, dated October 30, 2012.

We disagree. Our proposed AD did not require a one-time replacement. This AD requires, for any HP compressor stages 1 to 6 rotor disc assembly that has ever been installed with silver-plated nuts, replacement at the cyclic limits stated in paragraphs (e)(1) and (e)(2) of this AD, which are equivalent to the cyclic limits stated in EASA AD 2012-0230, Initial Issue, dated October 30, 2012. We did not change this AD.

#### Request To Update Service Information References to the Most Recent Versions

RRD requested that we update references to service bulletins (SBs) to the most recent versions.

We disagree. We do not reference any SBs in this AD. We did not change this AD.

#### Conclusion

We reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD as proposed.

#### Costs of Compliance

We estimate that this AD affects 255 engines installed on airplanes of U.S. registry. We also estimate that it will take about 20 hours per engine to comply with this AD. The average labor rate is \$85 per hour. Prorated parts life will cost about \$13,500 per engine. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$3,876,000.

#### 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