

[Federal Register: February 20, 2009 (Volume 74, Number 33)]  
[Rules and Regulations]  
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[DOCID:fr20fe09-14]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2008-1205; Directorate Identifier 2008-CE-062-AD; Amendment 39-15811; AD 2009-04-05]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Cessna Aircraft Company Models 182Q and 182R Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Cessna Aircraft Company (Cessna) Models 182Q and 182R airplanes that are equipped with Soci t  de Motorisations A ronautiques (SMA) Aircraft Diesel Engine (ADE) Model SR305-230-1 or Model SR305-230 converted to Model SR305-230-1 installed under Supplemental Type Certificate (STC) SA03302AT. This AD requires you to remove the intercooler and the intercooler inlet and outlet hoses, install a reworked intercooler and new intercooler inlet and outlet hoses, inspect hoses and clamp torques, repetitively inspect installation of the intercooler outlet and inlet hose assemblies for any displacement or damage of clamps or hoses, and, if necessary, replace any damaged clamps or hoses. This AD results from a report of two instances of induction hose disconnection occurring while in service, resulting in a loss of turbo boost and a significant loss of engine power. We are issuing this AD to detect and correct improper intercooler outlet and intercooler inlet hose assembly installations, which could result in loss of turbo boost and a significant loss of engine power. This failure could lead to an inability to maintain constant altitude in flight.

**DATES:** This AD becomes effective on March 27, 2009.

On March 27, 2009, the Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD.

**ADDRESSES:** For service information identified in this AD, contact SMA Customer Service, 10-12 Rue Didier Daurat, 18021 Bourges, France; telephone: +33 (0) 2 48 67 56 00; fax: +33 (0) 2 48 50 01 41; E-mail: customer\_services@smasr.com; Internet: <http://www.smaengines.com>.

To view the AD docket, go to U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, or on the Internet at <http://www.regulations.gov>. The docket number is FAA-2008-1205; Directorate Identifier 2008-CE-062-AD.

**FOR FURTHER INFORMATION CONTACT:** Don O. Young, Aerospace Engineer, ACE-118A, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6079; fax: (770) 703-6097.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

On November 6, 2008, we issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to certain Cessna Models 182Q and 182R airplanes that are equipped with SMA ADE Model SR305-230-1 or Model SR305-230 converted to Model SR305-230-1 installed under STC SA03302AT. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on November 13, 2008 (73 FR 67112). The NPRM proposed to require you to remove the intercooler and the intercooler inlet and outlet hoses, install a reworked intercooler and new intercooler inlet and outlet hoses, inspect hoses and clamp torques, repetitively inspect installation of the intercooler outlet and inlet hose assemblies for any displacement or damage of clamps or hoses, and, if necessary, replace any damaged clamps or hoses.

**Comments**

We provided the public the opportunity to participate in developing this AD. We received no comments on the proposal or on the determination of the cost to the public.

**Conclusion**

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial corrections. We have determined that these minor corrections:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

**Costs of Compliance**

We estimate that this AD affects 7 airplanes in the U.S. registry.

We estimate the following costs to do the replacements:

<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Total Cost Per Airplane</b>	<b>Total Cost on U.S. Operators</b>
4 work-hours X \$80 per hour = \$320	\$3,436	\$3,756	\$26,292

We estimate the following costs to do any inspection of the installation of the intercooler hose assembly that would be required:

<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Total Cost Per Airplane</b>
2 work-hours X \$80 per hour = \$160	Not Applicable.	\$160

We have no way of determining the cost of any necessary replacement that may be required as a result of any inspection.

SMA will provide warranty credit as stated in SMA SAFRAN Group Service Bulletin SB-C182-75-004, Revision No. Basic Issue, dated July 8, 2008.

### **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 AD.

### **Regulatory Findings**

We have 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); and
3. 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.

We prepared a summary of the costs to comply with this AD (and other information as included in the Regulatory Evaluation) and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "Docket No. FAA-2008-1205; Directorate Identifier 2008-CE-062-AD" in your request.

### **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 Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. FAA amends § 39.13 by adding the following new AD:



**2009-04-05 Cessna Aircraft Company:** Amendment 39-15811; Docket No. FAA-2008-1205; Directorate Identifier 2008-CE-062-AD.

**Effective Date**

(a) This AD becomes effective on March 27, 2009.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Models 182Q and 182R airplanes, all serial numbers, certificated in any category, that are equipped with:

- (1) Soci t  de Motorisations A ronautiques (SMA) aircraft diesel engine (ADE) Model SR305-230-1 installed under Supplemental Type Certificate (STC) SA03302AT; or
- (2) SMA ADE Model SR305-230 converted to Model SR305-230-1 (by incorporation of SMA Service Bulletin SB-01-76-002) installed under STC SA03302AT.

**Unsafe Condition**

(d) This AD results from a report of two instances of induction hose disconnection occurring while in service on the air inlet manifold circuit, resulting in a loss of turbo boost and a significant loss of engine power. We are issuing this AD to detect and correct improper intercooler hose assembly installation, which could result in loss of turbo boost and a significant loss of engine power. This failure could lead to an inability to maintain constant altitude in flight.

**Compliance**

(e) To address this problem, you must do the following, unless already done:

<b>Actions</b>	<b>Compliance</b>	<b>Procedures</b>
(1) Remove intercooler part number (P/N) SF01170004-0 and install reworked intercooler P/N SF01170004-1 and remove intercooler inlet and outlet hoses and install new intercooler inlet hose P/N SF01170083-0 and intercooler outlet hose P/N SF01170048-0.	Before further flight as of March 27, 2009 (the effective date of this AD).	Follow SMA SAFRAN Group Service Bulletin SB-C182-75-004, Revision No. Basic Issue, dated July 8, 2008.

(2) Inspect intercooler inlet and outlet hoses and clamps for displacement and re-torque clamps. If you find any displacement do the displacement recovery.	Within the next 25 hours time-in-service (TIS) following installation required by paragraph (e)(1) of this AD.	Follow SMA SAFRAN Group Service Bulletin SB-C182-75-004, Revision No. Basic Issue, dated July 8, 2008.
(3) Inspect the installation of the intercooler outlet hose and intercooler inlet hose assembly for any displacement or damage of clamps or hoses.	Initially inspect within the next 100 hours TIS after the action required by paragraph (e)(1) of this AD or within the next 12 months after the action required by paragraph (e)(1) of this AD, whichever occurs first. Repetitively thereafter inspect at intervals not to exceed 100 hours TIS or 12 months, whichever occurs first.	Follow SMA SAFRAN Group Service Bulletin SB-C182-75-004, Revision No. Basic Issue, dated July 8, 2008.
(4) If, as a result of any inspection required by paragraph (e)(3) of this AD, you find any displacement or damage of clamps or hoses, replace any damaged clamps and hoses.	Before further flight, after the inspection required by paragraph (e)(3) of this AD where you found any displacement or damage of clamps or hoses.	Follow SMA SAFRAN Group Service Bulletin SB-C182-75-004, Revision No. Basic Issue, dated July 8, 2008.
(5) Do not install any intercooler P/N SF01170004-0.	As of March 27, 2009 (the effective date of this AD).	Not Applicable.

### Special Flight Permit

(f) Under 14 CFR part 39.23, we are limiting the special flight permits for this AD by the following conditions:

- (1) Before flight, an inspection of hoses and clamps by a properly certificated mechanic reveals no damaged or disconnected hoses or clamps; and
- (2) You fly by the most direct route to the site where the AD can be performed.

### Alternative Methods of Compliance (AMOCs)

(g) The Manager, Atlanta Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Don O. Young, Aerospace Engineer, ACE-118A, Atlanta ACO, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6079; fax: (770) 703-6097. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

### Material Incorporated by Reference

(h) You must use SMA SAFRAN Group Service Bulletin SB-C182-75-004, Revision No. Basic Issue, dated July 8, 2008, to do the actions required by this AD, unless the AD specifies otherwise.

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

(2) For service information identified in this AD, contact SMA Customer Service, 10-12 Rue Didier Daurat, 18021 Bourges, France; telephone: +33 (0) 2 48 67 56 00; fax: +33 (0) 2 48 50 01 41; E-mail: [customer\\_services@smasr.com](mailto:customer_services@smasr.com); Internet: <http://www.smaengines.com>.

(3) You may review copies of the service information incorporated by reference for this AD at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the Central Region, call (816) 329-3768.

(4) You may also review copies of the service information incorporated by reference for this AD 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/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Kansas City, Missouri, on February 6, 2009.

Kim Smith,  
Manager, Small Airplane Directorate,  
Aircraft Certification Service.