

[Federal Register: April 2, 2010 (Volume 75, Number 63)]  
[Rules and Regulations]  
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From the Federal Register Online via GPO Access [wais.access.gpo.gov]  
[DOCID:fr02ap10-9]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2009-1259; Directorate Identifier 2009-NE-41-AD; Amendment 39-16253; AD 2010-07-08]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Kelly Aerospace Energy Systems, LLC Rebuilt Turbochargers**

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

**ACTION:** Final rule; request for comments.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Kelly Aerospace Energy Systems, LLC (KAES) rebuilt turbochargers. This AD requires removal from service of certain part number (P/N) and serial number (S/N) rebuilt turbochargers. This AD results from three reports of infant mortality turbine wheel failure in rebuilt turbochargers, since June of 2007. We are issuing this AD to prevent separation or seizure of the turbocharger turbine, which could result in full or partial engine power loss, loss of engine oil, and smoke in the airplane cabin.

**DATES:** This AD becomes effective April 19, 2010. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of April 19, 2010.

We must receive any comments on this AD by June 1, 2010.

**ADDRESSES:** Use one of the following addresses to comment on this AD:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: U.S. Docket Management Facility, Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: (202) 493-2251.

Contact Kelly Aerospace Energy Systems, LLC, 2900 Selma Highway, Montgomery, Alabama 36108; telephone (334) 386-5400; fax (334) 386-5450; or go to: <http://www.kellyaerospace.com>, for the service information identified in this AD.

**FOR FURTHER INFORMATION CONTACT:** Gary Wechsler, Aerospace Engineer, Propulsion, Atlanta Aircraft Certification Office, 1701 Columbia Avenue, College Park, GA 30337; telephone (404) 474-5575; fax (404) 474-5606.

**SUPPLEMENTARY INFORMATION:** In October 2009, we were made aware by KAES that since June 2007, three turbochargers rebuilt by KAES have failed. Two had turbine wheel head separation and the third had a turbine shaft seizure. Investigation revealed that a steel wire brush was used to remove the accumulated coking that had built up on these turbine wheels being reclaimed for re-use in rebuilt turbochargers. This procedure created a rough surface finish on the turbine wheel shaft that exceeded allowable limits. The rough surface finish can disrupt the required formation of a hydrodynamic layer of oil between the shaft and mating bearings. This condition, if not corrected, could result in separation or seizure of the turbocharger turbine, which could result in full or partial engine power loss, loss of engine oil, and smoke in the airplane cabin.

### **Relevant Service Information**

We have reviewed and approved the technical contents of Kelly Aerospace Energy Systems, LLC Service Bulletin (SB) No. 039 A, dated February 10, 2010. That SB identifies the rebuilt turbochargers by P/N and S/N that are suspect of having a rough shaft surface finish exceeding allowable limits.

### **FAA's Determination and Requirements of This AD**

The unsafe condition described previously is likely to exist or develop on other KAES rebuilt turbochargers of the same type design. For that reason, we are issuing this AD to prevent separation or seizure of the turbocharger turbine, which could result in full or partial engine power loss, loss of engine oil, and smoke in the airplane cabin. This AD requires removal from service of certain P/N and S/N rebuilt turbochargers. You must use the service information described previously to determine what S/N rebuilt turbochargers are affected by this AD.

### **FAA's Determination of the Effective Date**

Since an unsafe condition exists that requires the immediate adoption of this AD, we have found that notice and opportunity for public comment before issuing this AD are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

### **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to send us any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. FAA-2009-1259; Directorate Identifier 2009-NE-41-AD" in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it.

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 with FAA personnel concerning this AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office 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 the same as the Mail address provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

## **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 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 placed it in the AD Docket. You may get a copy of this summary at the address listed under ADDRESSES.

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

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

## **Adoption of the Amendment**

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. The FAA amends § 39.13 by adding the following new airworthiness directive:



**2010-07-08 Kelly Aerospace Energy Systems, LLC (formerly Kelly Aerospace Power Systems):**  
Amendment 39-16253. Docket No. FAA-2009-1259; Directorate Identifier 2009-NE-41-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective April 19, 2010.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to certain serial numbers (S/Ns) of Kelly Aerospace Energy Systems, LLC (KAES) rebuilt turbochargers listed by part number (P/N) in the following Table 1 of this AD. The affected S/Ns are listed in Table III of Kelly Aerospace Energy Systems, LLC Service Bulletin (SB) No. 039 A, dated February 10, 2010.

**Table 1 – Part Numbers of Rebuilt Turbochargers Affected**

406610-9005	406610-9015	406610-9018	406610-9019	406610-9020	406610-9021
406610-9025	406610-9026	406610-9028	406610-9029	406610-9030	406610-9032
407810-9001	406990-9004	408610-9001	409170-9001	409680-9011	465680-9001
465680-9004	465680-9005	465930-9002	465930-9003	465292-9002	465292-9004
465398-9002	407540-9003	466881-9001	466642-9001	466642-9002	466642-9005
466304-9003	600572-9000*	600573-9000*	600574-9001*	600575-9001*	600575-9002*
600576-9000*	600700-9001*	600803-9001*	600803-9002*	N/A	N/A

\* P/Ns with an asterisk may have a CF prefix.

These rebuilt turbochargers are installed on, but not limited to, the engines and aircraft listed in Table IV of Kelly Aerospace Energy Systems, LLC SB No. 039 A, dated February 10, 2010.

**Unsafe Condition**

(d) This AD results from three reports of infant mortality turbine wheel failure in rebuilt turbochargers, since June of 2007. We are issuing this AD to prevent separation or seizure of the turbocharger turbine, which could result in full or partial engine power loss, loss of engine oil, and smoke in the airplane cabin.

## **Compliance**

(e) You are responsible for having the actions required by this AD performed within 10 hours time-in-service after the effective date of this AD, unless the actions have already been done.

## **Turbocharger Removal From Service**

(f) Remove from service the rebuilt turbochargers listed by P/N in paragraph (c) of this AD that have a S/N listed in Table III of Kelly Aerospace Energy Systems, LLC SB No. 039 A, dated February 10, 2010.

## **Installation Eligibility of Removed Turbochargers**

(g) Removed turbochargers listed in Table III of Kelly Aerospace Energy Systems, LLC SB No. 039 A, dated February 10, 2010, are eligible for installation once they are overhauled by an FAA-approved repair station. That overhaul must include replacing the turbine wheels listed by P/N in Table II of Kelly Aerospace Energy Systems, LLC SB No. 039 A, dated February 10, 2010, replacing the turbine wheel mating bushings, and marking the attached Return To Service Tag with this AD number, which is AD 2010-07-08.

## **Installation Prohibition**

(h) After the effective date of this AD, do not install any of the turbochargers listed in Table III of Kelly Aerospace Energy Systems, LLC SB No. 039 A, dated February 10, 2010, unless the turbocharger is overhauled as specified in paragraph (g) of this AD.

## **Alternative Methods of Compliance**

(i) The Manager, Atlanta Aircraft Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

## **Special Flight Permits**

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

- (1) Use of minimum crew.
- (2) Flight made during daytime, using visual flight rule conditions.
- (3) Maximum flight altitude of 12,000 feet mean-sea-level, based upon terrain.

## **Related Information**

(k) Contact Gary Wechsler, Aerospace Engineer, Propulsion, Atlanta Aircraft Certification Office, 1701 Columbia Avenue, College Park, GA 30337; telephone (404) 474-5575; fax (404) 474-5606, for more information about this AD.

## **Material Incorporated by Reference**

(l) You must use Kelly Aerospace Energy Systems, LLC Service Bulletin No. 039 A, dated February 10, 2010, to determine which turbocharger(s) are affected by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Kelly Aerospace Energy Systems, LLC, 2900 Selma Highway, Montgomery, Alabama 36108, telephone (334) 386-5400, fax (334) 386-5450, or go to:

<http://www.kellyaerospace.com>, for a copy of this service information. You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or 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 Burlington, Massachusetts, on March 23, 2010.

Robert J. Ganley,  
Acting Manager, Engine and Propeller Directorate,  
Aircraft Certification Service.