Airworthiness Directive 2004-25-16 R1 Summary

Subject:	Prevent failure of the fuel regulator shutoff valve		
Manufacturer:	Heaters, Fuel Regulator Shutoff Valves	Category:	Appliance
Effective Date:	06/20/2005	Recurring:	Yes
Supersedes:	N/A	Superseded By:	N/A

For complete information on this AD, please see:
AD 2004-25-16 R1 FAA Copy
AD 2004-25-16 R1 Preamble
AD 2004-25-16 R1 CFR Copy

Model Applicability:
This AD applies to aircraft equipped with a fuel regulator shutoff valve part number (P/N) 14D11, A14D11, B14D11, C14D11, 23D04, A23D04, B23D04, C23D04, or P23D04 used with B1500, B2030, B2500, B3040, B3500, B4050, or B4500 B-Series combustion heaters.

Applicable Manufacturers Service Information:
Kelly Aerospace Power Systems Service Bulletin No. A-107A, Issue Date: September 6, 2002
Piper Vendor Service Publication VSP-150, dated January 31, 2003

Summary:
The FAA is revising Airworthiness Directive (AD) 2004-25-16, which applies to aircraft equipped with a fuel regulator shutoff valve part number (P/N) 14D11, A14D11, B14D11, C14D11, 23D04, A23D04, B23D04, C23D04, or P23D04 used with B1500, B2030, B2500, B3040, B3500, B4050, or B4500 B-Series combustion heaters. AD 2004-25-16 currently requires you to repetitively inspect the fuel regulator shutoff valve (visually or by pressure test) for fuel leakage and replace the fuel regulator shutoff valve with an improved design replacement part with a manufacturer's date code of 02/02 or later if fuel leakage is found. AD 2004-25-16 also allows you to disable the heater as an alternative method of compliance. Since we issued AD 2004-25-16, we received several comments requesting a revision to paragraph (e)(2). Consequently, this AD retains the actions required in AD 2004-25-16 and revises the requirements in paragraph (e)(2) to remove a required action. We are issuing this AD to prevent failure of the fuel regulator shutoff valve, which could result in fuel leakage in aircraft with these combustion heaters. This failure could result in an aircraft fire.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2004–19693; Directorate Identifier 2004–CE–40–AD; Amendment 39–14076; AD 2004–25–16 R1]

RIN 2120–AA64

Airworthiness Directives; Kelly Aerospace Power Systems Part Number (P/N) 14D11, A14D11, B14D11, C14D11, 23D04, A23D04, B23D04, C23D04, or P23D04 Fuel Regulator Shutoff Valves (Formerly Owned by ElectroSystems, JanAero Devices, Janitrol, C&D Airmotive Products, FL Aerospace, and Midland-Ross Corporation)

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is revising Airworthiness Directive (AD) 2004–25–16, which applies to aircraft equipped with a fuel regulator shutoff valve part number (P/N) 14D11, A14D11, B14D11, C14D11, 23D04, A23D04, B23D04, C23D04, or P23D04 used with B1500, B2030, B2500, B3040, B3500, B4050, or B4500 B-Series combustion heaters. AD 2004–25–16 currently requires you to repetitively inspect the fuel regulator shutoff valve (visually or by pressure test) for fuel leakage and replace the fuel regulator shutoff valve with an improved design replacement part with a manufacturer's date code of 02/02 or later if fuel leakage is found. AD 2004–25–16 also allows you to disable the heater as an alternative method of compliance. Since we issued AD 2004–25–16, we received several comments requesting a revision to paragraph (e)(2). Consequently, this AD retains the actions required in AD 2004–25–16 and revises the requirements in paragraph (e)(2) to remove a required action. We are issuing this AD to prevent failure of the fuel regulator shutoff valve, which could result in fuel leakage in aircraft with these combustion heaters. This failure could result in an aircraft fire.

DATES: This AD becomes effective on June 20, 2005.

On January 5, 2005 (69 FR 75228, December 16, 2004), the Director of the Federal Register approved the incorporation by reference of Kelly Aerospace Power Systems Service Bulletin No. A–107A, Issue Date: September 6, 2002; and Piper Vendor Service Publication VSP–150, dated January 31, 2003.

ADDRESSES: To get the service information identified in this AD, contact Kelly Aerospace Power Systems, P.O. Box 273, Fort Deposit, Alabama 36032; telephone: (334) 227–8306; facsimile: (334) 227–8596; Internet: *http://www.kellyaerospace.com*.

To view the AD docket, go to the Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL–401, Washington, DC 20590–001 or on the Internet at *http://dms.dot.gov*. The docket number is FAA–2004–19693; Directorate Identifier 2004–CE–40–AD.

FOR FURTHER INFORMATION CONTACT: Kevin L. Brane, Aerospace Engineer, Atlanta Aircraft Certification Office, FAA, One Crown Center, 1985 Phoenix Boulevard, Suite 450, Atlanta, GA 30349; telephone: (770) 703–6063; facsimile: (770) 703–6097.

SUPPLEMENTARY INFORMATION:

Discussion

What events have caused this AD? Reports of certain regulator shutoff valves leaking caused FAA to issue AD 2001–08–01, Amendment 39–12178 (66 FR 19718, April 17, 2001). AD 2001–08–01 required you to visually inspect and pressure test the fuel regulator shutoff valves for leaks and replace the fuel regulator shutoff valve if leaks were found.

The affected fuel regulator shutoff valves are part of the B1500, B2030, B2500, B3040, B3500, B4050, and B4500 combustion heater configuration.

Operators of aircraft with the affected fuel regulator shutoff valves installed and mechanics who did the actions of AD 2001–08–01 provided suggestions for improvement to the AD. Based on that feedback, FAA superseded AD 2001–08–01 with AD 2001–17–13, Amendment 39–12404 (66 FR 44027, August 22, 2001).

AD 2001–17–13 retained the actions of AD 2001–08–01, except it required only the visual inspection or the pressure test of the fuel regulator shutoff valves (not both) and listed the affected fuel regulator shutoff valves by part number instead of series. AD 2001–17–13 also included a provision for disabling the heater as an alternative method of compliance.

The FAA continued to receive reports of problems with these fuel regulator shutoff valves. This service history reflects that the inspections should be repetitive instead of one-time. Based on this information, FAA superseded AD 2001–17–13 with AD 2004–25–16, Amendment 39–13904 (69 FR 75228, December 16, 2004).

AD 2004–25–16 retains the actions required in AD 2001–17–13, makes the inspection repetitive, and requires installing improved design replacement parts.

What has happened since AD 2004–25–16 to initiate this AD action? We inadvertently retained an action from AD 2001–17–13 and made it repetitive. After each inspection of the fuel regulator shutoff valve for signs of fuel leaks and no leaks are found, AD 2004–25–16 requires the valve cover to be marked with the date of inspection.

Since AD 2004–25–16 made that inspection repetitive, it is not feasible to mark the valve cover with the date of each inspection. Therefore, we are revising AD 2004–25–16 to remove this action.

What is the potential impact if FAA took no action? This condition, if not corrected, could result in fuel leakage in aircraft with these combustion heaters, which could result in an aircraft fire with consequent damage or destruction.

Has FAA taken any action to this point? 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 aircraft equipped with a fuel regulator shutoff valve part number (P/N) 14D11, A14D11, B14D11, C14D11, 23D04, A23D04, B23D04, C23D04, or P23D04 used with B1500, B2030, B2500, B3040, B3500, B4050, or B4500 B-Series combustion heaters. This proposal was published in the **Federal Register** as a notice of proposed rulemaking (NPRM) on March 9, 2005 (70 FR 11588). The NPRM proposed to revise AD 2004–25–16 with a new AD that would retain the actions required in AD 2004–25–16 and removes the requirement to mark the valve cover with the date of inspection as specified in paragraph (e)(2) of the AD.

Comments

Was the public invited to comment? We provided the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and FAA's response to each comment:

Comment Issue No. 1: Remove the Piper Models PA–30 and PA–39 Airplanes From the Applicability

What is the commenter's concern? Three commenters state that an incident involving a Piper Model PA–31 airplane prompted the AD. The PA–31 airplane has a different fuel regulator shutoff valve configuration and a larger heater than Models PA–30 and PA–39 airplanes.

Model PA–31 airplanes run 35 pounds per square inch (PSI) fuel pressure at all times the engines are operating to the pressure regulator shutoff valve. The fuel line on Model PA–31 airplanes is also larger than the fuel line on Models PA–30 and PA–39 airplanes.

Model PA–30 airplanes run 7.5 PSI fuel pressure and the fuel line is 1/16 inch with an internal orifice of 1/32 inch. Therefore, the Model PA–30 airplane has one-fifth the pressure going to the regulator shutoff valve. Models PA–30 and PA–39 airplanes also have a fuel shutoff valve approximately 12 inches up-line from the pressure regulator shutoff valve.

According to the Aircraft Flight Manual, this valve should be closed except when the heater is in operation. When the manual fuel valve is closed, there is no pressure on the regulator resulting in little to no chance of fuel leakage.

The commenters request Models PA–30 and PA–39 airplanes be removed from the applicability of the AD.

What is FAA's response to the concern? The description of fuel system line sizes and volumes described by the commenters does not match those shown in the type design of the Models PA–30 and PA–39 airplanes.

The fuel pressure values stated by the commenters are below those seen in the supply line to Model PA–30 airplanes. Although the fuel regulator and shutoff valve supply pressures in Models PA–30 and PA–39 airplanes are below that of PA–31 series airplanes (as indicated by the commenters), the pressures are similar to that of other aircraft models for which leakage has been documented through the submittal of service difficulty reports.

The evaluation of leaking fuel regulator and shutoff valves has revealed a loss of clamping of the diaphragm by the assembly fasteners. This may be attributed to distortion of the diaphragm resulting in displacement or local thinning, local distortion of the housings either at or between the fastener locations or a loss of fastener preload.

We are not changing the final rule AD action based on this comment. If an individual operator has an airplane configuration that is different than that specified in the type design, he/she may request an alternative method of compliance (AMOC) following the procedures in the AD and 14 CFR part 39.

Comment Issue No. 2: Change the Compliance Time From 100 Hours Time-in-Service (TIS) Aircraft Operating Service to 100 Hours TIS Heater Operating Service or at the Annual Inspection

What is the commenter's concern? The commenter states that most Model PA–30 airplanes are based in warm climates where the heater is used for only a few hours a year. According to the Aircraft Flight Manual, this valve should be closed except when the heater is in operation. When the manual fuel valve is closed, there is no pressure on the regulator resulting in little to no chance of fuel leakage.

The commenter states the requirement to inspect every 100 hours TIS on the airplane imposes an unnecessary burden.

The commenter requests the inspection time change to 100 hours of heater operation or at the next annual inspection.

What is FAA's response to the concern? The evaluation of leaking fuel regulator and shutoff valves may be attributed to the deterioration of the diaphragm material itself. As with any other rubberized material, this results from environmental exposure over a period of time. As the described mechanisms do not directly relate to heater operation, the inspection interval was selected as aircraft TIS and not heater TIS. Although the use of a manual fuel shutoff valve may reduce the likelihood of fuel leakage when the heater is not operating, it does not reduce the effects of TIS on the condition of the fuel regulator and shutoff valve.

The owner/operator may request an extension or different compliance time through an AMOC by following the procedures in the AD and 14 CFR part 39.

We are not changing the final rule AD action based on this comment.

Conclusion

What is FAA's final determination on this issue? We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for the changes discussed above and minor editorial corrections. We have determined that these changes and 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.

Changes to 14 CFR Part 39—Effect on the AD

How does the revision to 14 CFR part 39 affect this AD? On July 10, 2002, the FAA published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's AD system. This regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

Costs of Compliance

What is the cost impact of this revision? Since we are revising AD 2004–25–16 to remove a required action from the previous AD, there is no cost impact for this revision.

Authority for This Rulemaking

What authority does FAA have for issuing this rulemaking action? 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

Will this AD impact various entities? 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.

Will this AD involve a significant rule or regulatory action? 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–2004–19693; Directorate Identifier 2004–CE–40–AD'' in your request.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, 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. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2004–25–16, Amendment 39–13904 (69 FR 75228), and by adding a new AD to read as follows:

2004–25–16 R1 Kelly Aerospace Power Systems (formerly owned by ElectroSystems, JanAero Devices, Janitrol, C&D Airmotive Products, FL Aerospace, and Midland-Ross Corporation): Amendment 39–14076; Docket No. FAA–2004–19693; Directorate Identifier 2004–CE–40–AD; revises AD 2004–25–16, Amendment 39–13904.

When Does This AD Become Effective?

(a) This AD becomes effective on June 20, 2005.

What Other ADs Are Affected By This Action?

(b) This AD revises AD 2004–25–16, Amendment 39–13904.

What Airplanes Are Affected by This AD?

(c) This AD applies to aircraft equipped with a fuel regulator shutoff valve part number (P/N) 14D11, A14D11, B14D11, C14D11, 23D04, A23D04, B23D04, C23D04, or P23D04 used with B1500, B2030, B2500, B3040, B3500, B4050, or B4500 B-Series combustion heaters. The following is a list of aircraft where the B-Series combustion heater could be installed. This is not a comprehensive list and aircraft not on this list that have the heater installed through field approval or other methods are still affected by this AD:

Manufacturer	Aircraft models/series
(1) Bombardier Inc	CL–215, CL–215T, and CLT–415.
(2) Cessna Aircraft Company	208, T303, 310F, 310G, 310H, 310I, 310J, 310K, 310L, 310N, 310P, 310Q, 320C, 320D, 320E, 320F, 337 Series, 340, 340A, 414, 414A, 421, 421A, 421B, and 421C.
(3) The New Piper Aircraft Inc	PA–23 Series, PA–30, PA–31 Series, PA–34 Series, PA–39, and PA–44 Series.
(4) Raytheon Aircraft Corporation	95–B55 Series, 58, 58TC, 58P, 60, A60, and 76.

Note 1: The B1500, B2030, B2500, B3040, B3500, B4050, or B4500 B-Series combustion heaters were previously manufactured by Janitrol, C&D Airmotive Products, FL Aerospace, and Midland-Ross Corporation.

What Is the Unsafe Condition Presented in This AD?

(d) This AD is the result of numerous reports of fuel regulator shutoff valves leaking fuel. We are issuing this AD to prevent failure of the fuel regulator shutoff valve, which could result in fuel leakage in aircraft with these combustion heaters. This failure could result in an aircraft fire.

What Must I Do To Address This Problem?

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

Actions	Compliance	Procedures
(1) Visually inspect or pressure test the fuel regulator shutoff valve for any signs of fuel leaks.	Within the next 25 hours aircraft time-in-service (TIS) after January 5, 2005, (the effective date of AD 2004–25–16), unless already done within the last 75 hours aircraft TIS (*e.g.,* compliance with AD 2001–08–01 or 2001–17–13). Repetitively inspect thereafter at intervals not to exceed 100 hours aircraft TIS or 12 months, whichever occurs first. This is established to coincide with 100-hour and annual with 100-hour and annual inspections.	Locate the pressure shutoff valve in the installation using the applicable maintenance manual for valve location, removal, and installation instructions. Follow the procedures in Kelly Aerospace Power Systems Service Bulletin No. A–107A, Issue Date: September 6, 2002, for the visual inspection or the pressure test.
(2) If no fuel leaks or no signs of fuel stains are found during each inspection required by paragraph (e)(1) of this AD, make a log book entry with the date of inspection (month/year).	Prior to further flight after each inspection required in paragraph (e)(1) of this AD.	Follow the procedures in Kelly Aerospace Power Systems Service Bulletin No. A–107A, Issue Date: September 6, 2002.
(3) If any signs of fuel leaks or any signs of fuel stains are found during any inspection required in paragraph (e)(1) of this AD, replace the valve with a new valve of appropriate part number (P/N) that has a manufacturer's date code of 02/02 or later. For Piper PA–31–350 model aircraft, replace P/N A23D04–7.5 valve with P/N P23D04–7.5 Ensure there are no fuel leaks in the replacement valve by following the inspection and documentation requirements in paragraphs (e)(1) and (e)(2) of this AD.	Before further flight after the inspection where any fuel leak was found.	Follow Kelly Aerospace Power Systems Service Bulletin No. A–107A, Issue Date: September 6, 2002; Piper Vendor Service Publication VSP–150, dated January 31, 2003; and the applicable maintenance manual.
(4) As an alternative method of compliance to this AD, you may disable the heater provided you immediately comply with inspection, identification, and replacement requirements of this AD when you bring the heater back into service. Do the following actions when disabling: (i) Cap the fuel supply line upstream of the fuel regulator and shutoff valve; (ii) Disconnect the electrical power and ensure that the connections are properly secured to reduce the possibility of electrical spark or structural damage; (iii) Inspect and test to ensure that the cabin heater system is disabled; (iv) Ensure that no other aircraft system is affected by this action; (v) Ensure there are no fuel leaks; and (vi) Fabricate a placard with the words: ''System Inoperative''. Install this placard at the heater control valve within the pilot's clear view.	If you choose this option, you must do it before the next required inspection specified in paragraph (e)(1) of this AD. To bring the heater back into service, you must do the actions of paragraphs (e)(1), (e)(2), and (e)(3) of this AD (inspection, identification, and replacement, as necessary).	Not Applicable.
(5) Only install a fuel regulator shutoff valve with a manufacture date code of 02/02 or later.	As of January 5, 2005, (the effective date of AD 2004–25–16).	Not Applicable.

May I Request an Alternative Method of Compliance?

(f) You may request a different method of compliance or a different compliance time for this AD by following the procedures in 14 CFR 39.19.

(1) Unless FAA authorizes otherwise, send your request to your principal inspector. The principal inspector may add comments and will send your request to the Manager, Manager, Atlanta ACO, FAA. For information on any already approved alternative methods of compliance, contact Kevin L. Brane, Aerospace Engineer, Atlanta Aircraft Certification Office, FAA, One Crown Center, 1985 Phoenix Boulevard, Suite 450, Atlanta, GA 30349; telephone: (770) 703–6063; facsimile: (770) 703–6097.

(2) Alternative methods of compliance approved for AD 2004–25–16, which is revised by this AD, are approved as alternative methods of compliance with this AD.

Does This AD Incorporate Any Material By Reference?

(g) You must do the actions required by this AD following the instructions in Kelly Aerospace Power Systems Service Bulletin No. A–107A, Issue Date: September 6, 2002; and Piper Vendor Service Publication VSP–150, dated January 31, 2003.

(1) On January 5, 2005 (69 FR 75228, December 16, 2004), and in accordance with 5 U.S.C. 552(a) and 1 CFR part 51, the Director of the Federal Register previously approved the incorporation by reference.

(2) To get a copy of the service information, contact Kelly Aerospace Power Systems, P.O. Box 273, Fort Deposit, Alabama 36032; telephone: (334) 227–8306; facsimile: (334) 227–8596; Internet: *http://www.kellyaerospace.com.* To review copies of the service information, go to the National Archives and Records Administration

(NARA). For information on the availability of this material at NARA, go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html* or call (202) 741–6030. To view the AD docket, go to the Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL–401, Washington, DC 20590–001 or on the Internet at *http://dms.dot.gov*. The docket number is FAA–2004–19693; Directorate Identifier 2004–CE–40–AD.

Issued in Kansas City, Missouri, on April 28, 2005.

John R. Colomy,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05–8884 Filed 5–5–05; 8:45 am]

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