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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2004-19118; Directorate Identifier 2004-CE-25-AD; Amendment 39-13826; AD 2004-21-05]

RIN 2120-AA64

Airworthiness Directives; Kelly Aerospace Power Systems B-Series Combustion Heaters Models B1500, B2030, B2500, B3040, B3500, B4050, and B4500 (Formerly Owned by JanAero Devices, Janitrol, C&D, FL Aerospace, and Midland-Ross Corporation)

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 96-20-07, which applies to certain B-Series Combustion Heaters Models B1500, B2030, B3040, and B4050 that are installed on airplanes. AD 96-20-07 currently requires you to repetitively test (pressure decay) the combustion tube and overhaul any heater that does not pass any test. AD 96-20-07 also requires you to repetitively test the operation of the combustion air pressure switch and replace any combustion pressure switch that does not pass one of the tests. As a terminating action for the repetitive test requirements of AD 96-20-07, you could install a new ceramic-coated combustion tube and an improved design combustion air pressure switch. This AD is the result of reports that the new ceramic-coated combustion tubes are subject to the same distress as the non-ceramic coated combustion tubes. Consequently, this AD retains the repetitive testing requirements of AD 96-20-07, removes the terminating action for the combustion tube, and adds Models B2500, B3500, and B4500 to the applicability section. We are issuing this AD to prevent combustion by-products (carbon-monoxide exhaust) and fuel leakage from the combustion heaters caused by failure of the combustion heater system. This failure could result in fire or explosion in the airplane and possible carbon monoxide poisoning of the crew and passengers in the cabin.

DATES: This AD becomes effective on November 19, 2004.

On November 14, 1996 (61 FR 51357, October 2, 1996), the Director of the Federal Register approved the incorporation by reference of JanAero Devices Service Bulletin A-103, dated September 1995.

We must receive any comments on this AD by December 20, 2004.

ADDRESSES: Use one of the following to submit comments on this AD:

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
 - Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
 - Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-001.
 - Fax: 1-202-493-2251.
 - Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- 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 comments to this AD, go to <http://dms.dot.gov>. The docket number is FAA-2004-19118.

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:

Has FAA taken any action to this point? Repeated reports of failures of the affected heaters prompted us to issue AD 96-20-07, Amendment 39-9773 (61 FR 51357, October 2, 1996). AD 96-20-07 applies to JanAero Devices B-Series Combustion Heaters, Models B1500, B2030, B3040, and B4050 (formerly owned by Janitrol, C&D, FL Aerospace, and Midland-Ross Corporation), marked as meeting the standards of TSO-C20, that do not incorporate a ceramic combustion tube and a combustion air pressure switch, part number (P/N) 94E42, that are installed on airplanes. AD 96-20-07 currently requires the following:

- Repetitively inspecting (pressure decay test) the combustion tube of the heater;
- Overhauling the heater and replacing the combustion tube with a serviceable tube or replacing the heater assembly if the heater fails any of these tests;
- Repetitively testing the operation of the combustion air pressure switch; and
- Replacing the switch with one of the same design or with one of improved design, P/N 94E42, if the combustion air pressure switch fails any of these tests.

Replacing the heater assembly with a new or rebuilt heater assembly that incorporates a ceramic combustion tube terminates the repetitive inspection requirements.

Replacing the combustion air pressure switch with a P/N 94E42 switch terminates the repetitive operational test requirements.

As an alternative method of compliance to AD 96-20-07, you may disable the heater.

B-Series Combustion Heaters, Models B2500, B3500, and B4500 were exempt from AD 96-20-07 because they incorporated a ceramic-coated combustion tube and a new combustion air pressure switch, P/N 94E42.

You must do the actions in AD 96-20-07 following JanAero Devices Service Bulletin A-103, dated September 1995.

What has happened since AD 96-20-07 to initiate this action? We have received reports that the ceramic-coated combustion tubes are subject to some of the same distress noted in the non-ceramic coated combustion tubes. The ceramic-coated combustion tubes were incorporated as a product improvement in AD 96-20-07 as a terminating action for the repetitive pressure decay.

What is the potential impact if FAA took no action? If not detected and corrected, failure of the combustion heaters could cause combustion by-products (carbon-monoxide exhaust) and fuel to leak. This failure could result in fire or explosion in the airplane and possible carbon monoxide poisoning of the crew and passengers in the cabin.

FAA's Determination and Requirements of the AD

What has FAA decided? We have evaluated all pertinent information and identified an unsafe condition that is likely to exist or develop on other products of this same type design.

Since the unsafe condition described previously is likely to exist or develop on other airplanes that have certain B-Series Combustion Heaters Models B1500, B2030, B2500, B3040, B3500, B4050, and B4500 installed, we are issuing this AD to prevent combustion by-products (carbon-monoxide exhaust) and fuel leakage from the combustion heaters caused by failure of the combustion heater system. This failure could result in fire or explosion in the airplane and possible carbon monoxide poisoning of the crew and passengers in the cabin.

What does this AD require? This AD supersedes AD 96-20-07 with a new AD that retains the repetitive pressure decay test of the combustion tube and the repetitive operational test of the combustion air pressure switch from AD 96-20-07. This AD also removes the terminating action for the repetitive testing requirements of the combustion tube and adds B-Series Combustion Heaters, Models B2500, B3500, and B4500 to the applicability section.

In preparing this rule, we contacted type clubs and aircraft operators to get technical information and information on operational and economic impacts. We did not receive any information through these contacts. If received, we would have included a discussion of any information that may have influenced this action in the rulemaking docket.

How does the revision to 14 CFR part 39 affect this AD? On July 10, 2002, we published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs 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.

Comments Invited

Will I have the opportunity to comment before you issue the rule? 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 submit any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2004-19118; Directorate Identifier 2004-CE-25-AD" in the subject line of your comments. If you want us to acknowledge receipt of your mailed comments, send us a self-addressed, stamped postcard with the docket number written on it; we will date-stamp your postcard and mail it back to you. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it. If a person contacts us through a non-written communication, and that contact relates to a substantive part of this AD, we will summarize the contact and place the summary in the docket. We will consider all comments received by the closing date and may amend the AD in light of those comments.

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 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 "AD Docket FAA-2004-19118; Directorate Identifier 2004-CE-25-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. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 96-20-07, Amendment 39-9773 (61 FR 51357, October 2, 1996), and by adding a new AD to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2004-21-05 Kelly Aerospace Power Systems (Formerly Janaero Devices, Janitrol, C/D, FL Aerospace, and Midland-Ross Corporation): Amendment 39-13826; Docket No. FAA-2004-19118; Directorate Identifier 2004-CE-25-AD; Supersedes AD 96-20-07; Amendment 39-9773.

When Does This AD Become Effective?

- (a) This AD becomes effective on November 19, 2004.

Are Any Other ADs Affected by This Action?

- (b) This AD supersedes AD 96-20-07, Amendment 39-9773.

What Airplanes Are Affected by This AD?

(c) This AD affects Kelly Aerospace Power Systems B-Series Combustion Heaters, Models B1500, B2030, B2500, B3040, B3500, B4050, and B4500, marked as meeting the standards of TSO-C20, that are installed on, but not limited to, the following aircraft (all serial numbers), and are certificated in any category:

Manufacturer	Models
Raytheon Aircraft Company	58, 58P, 58TC, 60, A60, 76, and 95-B55 Series.
Bombardier Inc	CL-215-1A10 (Water Bomber) CL215-6B11 (CL-215T Variant) (CL415 Variant)
The Cessna Aircraft Company	208, 310F, 310G, 310H, 310I, 310J, 310K, 310L, 310N, 310P, 320C, 320D, 320E, 320F, 337 Series, 340, 340A, 414, 414A, 421, 421A, 421B, and 421C.

Note 1: B-Series Combustion Heaters Models B2500, B3500, and B4500 incorporate a new combustion air pressure switch, P/N 94E42. Airplanes that are equipped with P/N 94E42 do not need to conduct an operational test of the combustion air pressure switch. The part number is ink-stamped on the side of these combustion air pressure switches.

What Is the Unsafe Condition Presented in This AD?

(d) This AD is the result of reports that the new ceramic-coated combustion tubes are subject to the same distress as the non-ceramic coated combustion tubes. We are issuing this AD to prevent combustion by-products (carbon-monoxide exhaust) and fuel leakage from the combustion heaters

caused by failure of the combustion heater system. This failure could result in fire or explosion in the airplane and possible carbon monoxide poisoning of the crew and passengers in the cabin.

What Must I Do To Address This Problem?

(e) For airplanes with an affected B-Series combustion heater that does not incorporate an extended-life ceramic-coated combustion tube, do the following:

Actions	Compliance	Procedures
<p>(1) Perform the following:</p> <p>(i) Using a pressure decay test, inspect the combustion tube of the heater; and</p> <p>(ii) Conduct an operational test of the combustion air pressure switch. In some applications, the air pressure switch is remotely mounted on the airframe and not on the heater. Regardless of where the air pressure switch is located, the operational test requirements of this AD still apply.</p> <p>(iii) If an air pressure switch, part number 94E42 is currently installed, the operational test is not required.</p>	<p><i>For airplanes with 450 or more heater hours time-in-service (TIS) accumulated on an installed heater since new installation or since the last overhaul:</i> Within the next 50 hours TIS or 12 calendar months after November 14, 1996 (the effective date of AD 96-20-07), whichever occurs first, unless already done.</p> <p><i>For airplanes with less than 450 heater hours TIS accumulated on an installed heater since new installation or since the last overhaul:</i> Upon the accumulation of 500 heater hours TIS or within the next 12 calendar months after November 14, 1996 (the effective date of AD 96-20-07), whichever occurs first, unless already done.</p> <p><i>After doing the initial inspection and operational test:</i> Repetitively inspect the combustion tube and perform the operational test of the air pressure switch thereafter at intervals not-to-exceed 100 heater hours TIS or 24 calendar months, whichever occurs first.</p>	<p>Follow the applicable instructions in Janitrol Maintenance and Overhaul Manual 24E25-1.</p>
<p>(2) After each inspection required in paragraph (e)(1) of this AD, if the heater does not pass the pressure decay test, overhaul the heater and replace the combustion tube with a serviceable tube or replace the heater assembly.</p>	<p>Prior to further flight after the inspection required in paragraph (e)(1) of this AD in which the combustion tube fails. After the heater is overhauled or replaced with a new heater assembly, the inspection cycle starts over upon the accumulation of 500 heater hours TIS with the repetitive inspection intervals thereafter not-to-exceed 100 heater hours TIS or 24 calendar months, whichever occurs first.</p>	<p>Follow the applicable instructions in Janitrol Maintenance and Overhaul Manual 24E25-1.</p>

<p>(3) After each operational test required in paragraph (e)(1) of this AD, if any air pressure switch does not pass, replace the switch with one of the same design or with a P/N 94E42.</p>	<p>Prior to further flight after the operational test required in paragraph (e)(1) of this AD in which the switch failed. After installing a new switch, repetitively test the air pressure switch thereafter at intervals not-to-exceed 100 heater hours TIS or 24 calendar months, whichever occurs first. Replacing the combustion air pressure switch with a P/N 94E42 switch terminates the repetitive operational testing required in paragraph (e)(1) of this AD.</p>	<p>Follow the applicable instructions in Janitrol Maintenance and Overhaul Manual 24E25-1 and JanAero Devices Service Bulletin # A-103, dated September 1995.</p>
<p>(4) As an alternative method of compliance to the requirements of this AD, you may disable the heater by doing the following:</p> <ul style="list-style-type: none"> (i) Cap the fuel supply line; (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 that there are no fuel leaks; and (vi) Fabricate a placard with the following words: "System Inoperative". Install this placard at the heater control valve within the pilot's clear view. 	<p>As of November 14, 1996 (the effective date of AD 96-20-07).</p>	<p>Not applicable.</p>

Note 2: You may use a heater hour meter to determine heater hours time-in-service (TIS). Also, you may divide aircraft hours TIS in half to calculate heater hours TIS.

(f) For airplanes with an affected B-Series combustion heater that does incorporate an extended-life ceramic-coated combustion tube, do the following:

Actions	Compliance	Procedures
<p>(1) Perform the following:</p> <p>(i) Using a pressure decay test, inspect the combustion tube of the heater; and</p> <p>(ii) Conduct an operational test of the combustion air pressure switch. In some applications, the air pressure switch is remotely mounted on the airframe and not on the heater. Regardless of where the air pressure switch is located, the operational test requirements of this AD still apply.</p> <p>(iii) If an air pressure switch, part number 94E42 is currently installed, the operational test is not required.</p>	<p>Upon the accumulation of 500 heater hours TIS or within the next 100 hours TIS after the November 19, 2004 (the effective date of this AD), whichever occurs later. Repetitively inspect the combustion tube and perform the operational test of the air pressure switch thereafter at intervals not-to-exceed 100 heater hours TIS or 24 calendar months, whichever occurs first.</p>	<p>Follow the applicable instructions in Janitrol Maintenance and Overhaul Manual 24E25-1.</p>
<p>(2) After each inspection required in paragraph (f)(1) of this AD, if the heater does not pass the pressure decay test, overhaul the heater and replace the combustion tube with a serviceable tube or replace the heater assembly.</p>	<p>Prior to further flight after the inspection required in paragraph (f)(1) of this AD in which the combustion tube fails. After the heater is overhauled or replaced with a new heater assembly, the inspection cycle starts over upon the accumulation of 500 heater hours TIS with the repetitive inspection intervals thereafter not-to-exceed 100 heater hours TIS or 24 calendar months, whichever occurs first.</p>	<p>Follow the applicable instructions in Janitrol Maintenance and Overhaul Manual 24E25-1.</p>
<p>(3) After each operational test required in paragraph (f)(1) of this AD, if any air pressure switch does not pass, replace the switch with one of the same design or with a P/N 94E42.</p>	<p>Prior to further flight after the operational test required in paragraph (f)(1) of this AD in which the switch failed. After installing a new switch, repetitively test the air pressure switch thereafter at intervals not-to-exceed 100 heater hours TIS or 24 calendar months, whichever occurs first. Replacing the combustion air pressure switch with a P/N 94E42 switch terminates the repetitive operational testing required in paragraph (f)(1) of this AD.</p>	<p>Follow the applicable instructions in Janitrol Maintenance and Overhaul Manual 24E25-1 and JanAero Devices Service Bulletin # A-103, dated September 1995.</p>

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| (4) As an alternative method of compliance to the requirements of this AD, you may disable the heater by doing the following:
(i) Cap the fuel supply line;
(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 that there are no fuel leaks; and
(vi) Fabricate a placard with the following words: "System Inoperative". Install this placard at the heater control valve within the pilot's clear view. | As of the November 19, 2004 (the effective date of this AD). Not applicable. |
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May I Request an Alternative Method of Compliance?

(g) 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. 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, 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.

Does This AD Incorporate Any Material by Reference?

(h) You must do the actions required by this AD following the instructions in JanAero Devices Service Bulletin A-103, dated September 1995.

(1) On November 14, 1996 (61 FR 51357, October 2, 1996), and in accordance with 5 U.S.C. 552(a) and 1 CFR part 51, the Director of the Federal Register approved the incorporation by reference of JanAero Devices Service Bulletin A-103, dated September 1995.

(2) You may get a copy from Kelly Aerospace Power Systems, PO Box 273, Fort Deposit, Alabama 36032; telephone: (334) 227-8306; facsimile: (334) 227-8596; Internet: <http://www.kellyaerospace.com>. To review copies of this 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-2004-19118.

Issued in Kansas City, Missouri, on October 13, 2004.

William J. Timberlake,
Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

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