

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2007-28434; Directorate Identifier 2007-CE-053-AD; Amendment 39-15580; AD 2008-13-17]**

**RIN 2120-AA64**

**Airworthiness Directives; Hawker Beechcraft Corporation (Type Certificates No. 3A15, No. 3A16, No. A23CE, and No. A30CE previously held by Raytheon Aircraft Company) F33 Series and Models G33, V35B, A36, A36TC, B36TC, 95-B55, D55, E55, A56TC, 58, 58P, 58TC, G58, and 77 Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** The FAA adopts a new airworthiness directive (AD) for certain Hawker Beechcraft Corporation F33 series and Models G33, V35B, A36, A36TC, B36TC, 95-B55, D55, E55, A56TC, 58, 58P, 58TC, G58, and 77 airplanes. This AD requires you to replace certain circuit breaker toggle switches with improved design circuit breaker toggle switches. This AD results from reports of certain circuit breaker toggle switches used in various electrical systems throughout the affected airplanes overheating. We are issuing this AD to prevent failure of the circuit breaker toggle switch, which could result in smoke in the cockpit and the inability to turn off the switch.

**DATES:** This AD becomes effective on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

On [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], the Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD.

**ADDRESSES:** To get the service information identified in this AD, contact Hawker Beechcraft Corporation, 9709 East Central, Wichita, Kansas 67291; telephone: (800) 429-5372 or (316) 676-3140.

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-2007-28434; Directorate Identifier 2007-CE-053-AD.

**FOR FURTHER INFORMATION CONTACT:** Jose Flores, Aviation Safety Engineer, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: (316) 946-4132; fax: (316) 946-4107.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

On June 29, 2007, 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 Hawker Beechcraft Corporation F33 series and Models G33, V35B, A36, A36TC, B36TC, 95-B55, D55, E55, A56TC, 58, 58P, 58TC, G58, and 77 airplanes. This proposal was published in the *Federal Register* as a notice of proposed rulemaking (NPRM) on July 6, 2007 (72 FR 36912). The NPRM proposed to require you to replace certain circuit breaker toggle switches with improved design circuit breaker toggle switches.

**Comments**

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: Reopen the Comment Period**

The American Bonanza Society and six other commenters request more time to further investigate and evaluate replacing all circuit breaker switches in numerous models of Hawker Beechcraft piston airplanes. One commenter requests the extension to better research the number of service difficulty reports (SDRs), the number of airplanes affected, and the availability of replacement switches.

We do not agree with the commenters. The failure mode creates an internal short circuit that will cause overheating. Testing of the circuit breaker switches revealed all the circuit breaker switches are susceptible to the failure mode and overheating.

We have identified an unsafe condition and determined that reopening the comment period will only allow the unsafe condition to potentially go undetected. If any owner/operator identifies an alternative method of compliance (AMOC) to this AD that will provide a level of safety acceptable to the FAA, they can apply for an AMOC using the procedures outlined in 14 CFR 39.19 and this AD.

We are not changing the final rule AD action based on these comments.

### **Comment Issue No. 2: Change Required Actions**

James Blodgett and Adam Dags suggest that turning off the master switch would better eliminate the problem rather than replacing the circuit breaker switches.

The commenters request that the FAA change the proposed AD action to mandate this change to prevent smoke in the cockpit.

We do not agree with the commenters. Turning off the master switch may mitigate the overheating in some circuit breaker switches. However, in certain flight conditions, removing electrical power could create a more hazardous condition by disabling electrical equipment required for continued safe flight and landing, thus creating an additional unsafe condition.

We are not changing the final rule AD action based on these comments.

### **Comment Issue No. 3: AD Unwarranted**

The American Bonanza Society, the Bonanza Service Ltd., KT Graham Inc., and eight other commenters state that the AD is unwarranted because failure of the affected circuit breaker switches is an uncommon occurrence and that there is no imminent threat to airplane occupants or the public.

The commenters state that they have seen no or very few circuit breaker switch failures in the field. Of the thousands of affected airplanes and over 100,000 circuit breaker switches, none of these resulted in a reportable mishap. High utilization fleet service has shown there is no significant threat of circuit breaker switch overheat.

The commenters state that the testing done by Hawker Beechcraft and the FAA does not indicate a wider threat of failure, and failure in itself will not bring about a dangerous condition. Also, the only switches tested were those that had been previously squawked for overheating and removed under existing maintenance procedures.

We disagree that an AD is unwarranted. A failed circuit breaker switch creating smoke and possible in-flight fire is considered a hazardous condition. Although failure of these circuit breaker switches is uncommon, we have received reports of failures occurring. The resulting hazardous safety effect combined with the number of occurrences and other factors indicate AD action is necessary. 14 CFR 39.5 states that the “FAA issues an AD addressing a product when we find that an unsafe condition exists in the product, and the condition is likely to exist or develop in products of the same type design.” Even though the failures that have happened are uncommon, the condition “is likely to exist or develop” on other affected airplanes. Therefore, AD action is necessary to address the unsafe condition following 14 CFR part 39.

We are not changing the final rule AD action based on these comments.

### **Comment Issue No. 4: AD is too Costly**

The American Bonanza Society, Bonanza Service Ltd., KT Graham Inc., and seven other commenters state that because of the operational history of the affected

airplanes and the uncommon occurrence of failure of the affected circuit breaker switches, the cost per airplane and per fleet appears to be too costly. Operational history does not warrant the cost or impact on the airplane owners/operators.

We do not agree that the AD is not warranted because of the associated cost. We understand that ADs can be costly. However, we have determined that an unsafe condition is likely to exist or develop in other airplanes of the same type design, and the continued operational safety of the affected airplanes must be addressed. Therefore, issuing this AD and not allowing an unsafe condition to go undetected on the affected airplanes overrides the associated cost.

We are not changing the final rule AD action based on these comments.

#### **Comment Issue No. 5: Add Inspection or Testing Before Replacement**

Fred von Zabern and Adam Dagys request allowing inspection or testing to identify the overheating switches before replacement.

Using a test or inspection to identify overheating switches may eliminate the need to replace all the switches in any given airplane. It may also eliminate replacing operable (good) switches.

We do not agree with the commenters. Because of the failure mode, an over voltage test or inspection may not identify the failed circuit breaker switch. The failure condition identified is the failure of an internal wire braid that may create a short circuit inside the housing of the circuit breaker switch. The replacement circuit breaker switch includes added insulation around the wire braid to provide increased isolation and prevent the short circuit. We have determined that all the circuit breaker switches identified in the service information are susceptible to the overheating failure condition, and they need to be replaced to address this unsafe condition.

We are not changing the final rule AD action based on these comments.

### **Comment Issue No. 6: Limit the Applicability of the AD**

The Aircraft Owners and Pilots Association (AOPA), the American Bonanza Society, and Bart Sisson request that we limit the applicability of the AD to Baron Models 58, 58G, 58P, and 58TC airplanes. The commenters also request that we limit the AD to the circuit breaker switches used in high electrical load items, such as lighting, taxi lights, and anti-ice equipment.

The commenters state that the SDRs only affect high electrical load items and only Model 58 airplanes. There are no SDRs or operational history to show all circuit breaker switches are susceptible to the overheating. The airworthiness concern sheet identifies only those circuit breaker switches removed from high current circuits on Baron airplane models.

We do not agree with the commenters. Although the circuit breaker switches that were reported, and used for the investigation, were removed from high electrical load items on Baron airplane models, there is no reason to believe the failure mode is limited to high electrical load circuits or Baron models. The failure mode creates an internal short circuit that will cause overheating regardless of the electrical load. Testing of the circuit breaker switches revealed all the circuit breaker switches are susceptible to the failure mode and overheating. Hawker Beechcraft Recommended Service Bulletin SB 24-3807, Issued: May, 2007, and Raytheon Aircraft Company Recommended Service Bulletin SB 24-3735, Issued: August, 2005, call out all the susceptible circuit breaker switches.

We are not changing the final rule AD action based on these comments.

### **Comment Issue No. 7: Replacement Parts Not Available**

The American Bonanza Society states that there is a shortage of replacement switches available. Manufacturer parts availability shows a shortage of parts. The shortage would not be made up in time to prevent a large number of affected aircraft from

being grounded due to lack of replacement parts at the end of the 12-month compliance time.

We do not agree with the commenter. Hawker Beechcraft has assured us that the replacement parts are either available or could be manufactured within the 12-month compliance time. If there becomes a shortage of parts, we would consider extending the compliance time following the AMOC procedures outlined in 14 CFR 39.19 and this AD.

We are not changing the final rule AD action based on these comments.

#### **Comment Issue No. 8: Promote Education Instead of Issuing a Regulation**

The American Bonanza Society suggests an improved level of safety would result from education in lieu of issuing a regulation.

The commenter states that an educational effort to publicize Beech's guidance and generic electrical fire or overheat procedure for pilots whose pilot's operating handbook (POH) does not contain such a checklist would provide the information necessary to detect and respond in the uncommon event of a switch overheat condition. Beech technical support recommends monitoring the switches by feel to detect looseness and heat and to replace any switch that feels loose or hot to the touch.

We do not agree with the commenter. An educational effort may improve awareness to the unsafe condition; however, it would not eliminate the failure mode. The only way to eliminate the failure mode is to replace the affected circuit breaker switches. We have determined that an education effort is insufficient to correct the unsafe condition.

We are not changing the final rule AD action based on these comments.

#### **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 10,821 airplanes in the U.S. registry.

We estimate the following costs to do the replacement:

<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Total Cost Per Circuit Breaker Toggle Switch</b>	<b>Total Cost on U.S. Operators</b>
1 work-hour X \$80 per hour = \$80 per circuit breaker toggle switch.	\$105 per circuit breaker toggle switch.	\$185 for each circuit breaker toggle switch. Each airplane typically has more than 1 circuit breaker toggle switch installed. Some airplanes may have up to 15.	From \$2,001,885 to replace one circuit breaker toggle switch per affected airplane up to \$30,028,275 to replace 15 circuit breaker toggle switches per airplane.

**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-2007-28434; Directorate Identifier 2007-CE-053-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 a new AD to read as follows:

2008-13-17 **Hawker Beechcraft Corporation (Type Certificates No. 3A15, No. 3A16, No. A23CE, and No. A30CE previously held by Raytheon Aircraft Company) and Raytheon Aircraft Company:** Amendment 39-15580; Docket No. FAA-2007-28434; Directorate Identifier 2007-CE-053-AD.

**Effective Date**

(a) This AD becomes effective on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to the following airplane models and serial numbers that have a part number (P/N) 35-380132-1 through 35-380132-53 circuit breaker toggle switch installed and are certificated in any category:

<b>Models</b>	<b>Serial Numbers</b>
(1) F33 and G33	CD-1235 through CD-1304
(2) F33A	CE-290 through CE-1791
(3) F33C	CJ-26 through CJ-179
(4) V35B	D-9069 through D-10403
(5) A36	E-185 through E-3629 and E-3631 through E-3635
(6) A36TC and B36TC	EA-1 through EA-695
(7) 95-B55	TC-1913, TC-1936 through TC-2456
(8) D55	TE-452 through TE-767
(9) E55	TE-768 through TE-1201
(10) A56TC	TG-84 through TG-94

(11) 58	TH-1 through TH-2124
(12) 58P	TJ-3 through TJ-497
(13) 58TC	TK-1 through TK-151
(14) G58	TH-2126, TH-2127, TH-2131 through TH-2134, TH-2136, TH-2137, TH-2139 through TH-2141, and TH-2143 through TH-2150
(15) 77	WA-1 through WA-312

**Unsafe Condition**

(d) This AD results from reports of certain circuit breaker toggle switches used in various electrical systems through the affected airplanes overheating. We are proposing this AD to prevent failure of the circuit breaker toggle switch, which could result in smoke in the cockpit and the inability to turn off the switch.

**Compliance**

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

<b>Actions</b>	<b>Compliance</b>	<b>Procedures</b>
(1) Replace all affected circuit breaker toggle switches specified in paragraph (c) of this AD with an improved circuit breaker toggle switch, P/N 35-380132-61 through 35-380132-113, as applicable.	Within the next 12 months after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD).	As specified in Hawker Beechcraft Recommended Service Bulletin SB 24-3807, Issued: May, 2007, and Raytheon Aircraft Company Recommended Service Bulletin SB 24-3735, Issued: August, 2005.
(2) Do not install a circuit breaker toggle switch specified in paragraph (c) of this AD.	Before further flight after the replacement required by paragraph (e)(1) of this AD.	Not applicable.

### **Alternative Methods of Compliance (AMOCs)**

(f) The Manager, Wichita 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: Jose Flores, Aviation Safety Engineer, FAA, Wichita ACO, 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: (316) 946-4132; fax: (316) 946-4107. 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**

(g) You must use Hawker Beechcraft Recommended Service Bulletin SB 24-3807, Issued: May 2007; and Raytheon Aircraft Company Recommended Service Bulletin SB 24-3735, Issued: August 2005, 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 Hawker Beechcraft Corporation, 9709 East Central, Wichita, Kansas 67291; telephone: (800) 429-5372 or (316) 676-3140.

(3) You may review copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Kansas City, Missouri 64106; 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/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 June 16, 2008.

James E. Jackson,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2008-14090 Filed 07/01/2008 at 8:45 am; Publication Date: 07/02/2008]