

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 39**

[Docket No. 97-ANE-01; Amendment 39-9936; AD 97-04-12]

RIN 2120-AA64

**Airworthiness Directives; Pratt & Whitney Canada PT6 Series Turboprop Engines**

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that is applicable to certain Pratt & Whitney Canada (PWC) PT6 series turboprop engines. This action requires a one-time visual inspection of compressor bleed-off valves (BOVs) to determine if an affected supplier's code number is on the cover; and, if so, this AD requires the removal of the bleed valve cover assembly from the compressor bleed valve housing assembly and inspection of the cotter pin and the guide shaft pin. If the cotter pin or guide shaft pin is not acceptable, this AD requires modifying the compressor BOV or replacing it with a serviceable part. This amendment is prompted by reports of two malfunctions of compressor BOVs that resulted in inflight engine power reduction. The actions specified in this AD are intended to prevent engine power reduction due to malfunction of the compressor BOV, which could result in a forced landing and loss of the aircraft.

**DATES:** Effective March 14, 1997.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 14, 1997.

Comments for inclusion in the Rules Docket must be received on or before April 28, 1997.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 97-ANE-01, 12 New England Executive Park, Burlington, MA 01803-5299.

The service information referenced in this AD may be obtained from Pratt & Whitney Canada, 1000 Marie-Victorin, Longueuil, Quebec, Canada J4G 1A1; telephone (514) 677-9411, fax (514) 647-3620. This information may be examined at the FAA, New England Region, Office of the Assistant Chief

Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Diane Cook, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (617) 238-7134, fax (617) 238-7199.

**SUPPLEMENTARY INFORMATION:** Transport Canada, which is the airworthiness authority for Canada, recently notified the FAA that an unsafe condition may exist on certain Pratt & Whitney Canada (PWC) PT6 series turboprop engines installed on single engine aircraft. Transport Canada advises that it has received reports of two malfunctions of compressor bleed-off valves (BOVs) on PWC PT6A-25C series engines, resulting in inflight engine power reduction. The investigation revealed that the cause of the compressor BOV malfunction was broken cotter pins. The debris from the cotter pins interfered with the movement of the BOV piston, which resulted in the BOV remaining in the closed position. The cotter pins broke due to stress loading from the guide shaft pin, which was improperly installed and loose. Further investigation indicates the compressor BOVs from the two malfunctions are from the same supplier. All BOVs produced from this supplier, which is approximately 1,000 compressor BOVs since January 1995, are the suspect population. The compressor BOVs are common to all PWC PT6 series engine models. This condition, if not corrected, could result in engine power reduction due to malfunction of the compressor BOV, which could result in a forced landing and loss of the aircraft.

Pratt & Whitney Canada has issued the following Service Bulletins (SBs): 14251, Revision 1, dated December 2, 1996; 13287, Revision, dated December 2, 1996; 12134, Revision 1, dated December, 1996; 4204, dated December 10, 1996, Original; 3344, Revision 1, dated December 3, 1996; and 1538, Revision 3, dated December 2, 1996. The SBs describe procedures for visually inspecting BOVs to determine if the affected supplier's code number (No.) is on the cover. If the code No. is present, the SB describes the procedures for the removal of the bleed valve cover assembly from the bleed valve housing assembly, the inspection of the cotter pin and the guide shaft pin, the installation of a new compressor valve cover assembly if necessary, the reassembly of the bleed valve cover assembly to the bleed valve assembly,

and the reidentification of the bleed valve assembly. Transport Canada classified these SBs as mandatory and issued Emergency AD CF-96-24, which is applicable to all PT6A engines installed in single engine aircraft, in order to assure the airworthiness of these engines in Canada.

This engine model is manufactured in Canada and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, Transport Canada has kept the FAA informed of the situation described above. The FAA has examined the findings of Transport Canada, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

Since an unsafe condition has been identified that is likely to exist or develop on other engines of the same type design registered in the United States, the proposed AD would require, within 100 hours time in service after the effective date of this AD, but no later than April 2, 1997, a one-time visual inspection of compressor BOVs to determine if the affected supplier's code No. 8070, is on the cover. No further action is required if code No. 8070 is not on the cover, or if the compressor BOV has been marked with the reidentification "RE71" adjacent to the part number. If code No. 8070 is found and the compressor BOV has not been marked for reidentification, this AD requires inspecting the cotter pin for any wear indications and the guide shaft pin for any movement described in the applicable SB. If the cotter pin or guide shaft pin is not acceptable, this AD requires, prior to further flight, modifying the compressor BOV or replacing it with a serviceable part. If the conditions of the cotter pin and the guide shaft pin are acceptable, this AD requires the replacement of the cotter pin, and the reidentification of the bleed valve assembly in accordance with the PW SB. The calendar end-date of April 2, 1997, was determined based upon safety considerations and parts availability. The actions would be required to be accomplished in accordance with the SBs described previously.

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good

cause exists for making this amendment effective in less than 30 days.

#### Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption **ADDRESSES**. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 97-ANE-01." The postcard will be date stamped and returned to the commenter.

The regulations adopted herein will not have substantial direct effects 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. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation

under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption **ADDRESSES**.

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

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

#### Adoption of the Amendment

Accordingly, pursuant to 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 USC 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. Section 39.13 is amended by adding the following new airworthiness directive:

97-04-12 Pratt & Whitney Canada: Amendment 39-9936. Docket 97-ANE-01.

*Applicability:* Pratt & Whitney Canada (PWC) PT6 series turboprop engines manufactured after January 1, 1995, or any PT6 series engines that have had their compressor bleed-off valve (BOV) changed after January 1, 1995, and which are installed in single-engine aircraft including, but not limited to the following aircraft: Air Tractor AT, Ayres Turbo Thrush Commander, Cessna 208 Caravan, Argo Aircraft G169B, Embraer EMB-312 Tucano, Frakes AF-CAT, Pilatus PC-6, PC-7, PC-9, and PC-12, Schweitzer AG-CAT, Aerospatiale Socata TBM-700, and Raytheon (Beech) T-34C.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

*Compliance:* Required as indicated, unless accomplished previously.

To prevent engine power reduction due to malfunction of the compressor BOV, which could result in a forced landing and loss of the aircraft, accomplish the following:

(a) Within 100 hours time in service (TIS) after the effective date of this AD, but no later than April 2, 1997, perform a visual inspection of compressor BOVs to determine if the affected supplier's code number (No.) 8070, is on the cover, in accordance with the following PWC Service Bulletins (SBs), as applicable: 14251, Revision 1, dated December 2, 1996; 13287, Revision 1, dated December 2, 1996; 12134, Revision 1, dated December 2, 1996; 4204, dated December 10, 1996, Original; 3344, Revision 1, dated December 3, 1996; and 1538, Revision 3, dated December 2, 1996.

(b) No further action is required if code No. 8070 is not on the cover of the compressor BOV, or if the compressor BOV has been marked with the reidentification "RE71" adjacent to the part number.

(c) For compressor BOVs with code No. 8070 and no reidentification "RE71" marking, prior to further flight remove and inspect the cotter pin for any wear indications and inspect the guide shaft pin for any movement in accordance with the applicable SB listed in paragraph (a) of this AD.

(1) If the cotter pin or guide shaft pin is not acceptable in accordance with the applicable SB listed in paragraph (a) of this AD, prior to further flight, modify the compressor BOV in accordance with the applicable SB listed in paragraph (a) of this AD, or replace it with a serviceable part.

(2) If the cotter pin and the guide shaft pin are acceptable in accordance with the applicable SB listed in paragraph (a) of this AD, prior to further flight, replace the cotter pin with a serviceable part.

(d) Assemble and install the compressor bleed valve cover assembly on the housing assembly and reidentify the bleed valve assembly with "RE71" in accordance with the applicable SB listed in paragraph (a) of this AD.

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office. The request should be forwarded through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Engine Certification Office.

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(g) The actions required by this AD shall be accomplished in accordance with the following PWC SBs:

Document No.	Pages	Revision	Date
14251 ..... Total pages: 9.	1-9	1 .....	December 2, 1996.
13287 ..... Total pages: 11.	1-11	1 .....	December 2, 1996.
12134 ..... Total pages: 8.	1-8	1 .....	December 2, 1996.
4204 ..... Total pages: 11.	1-11	Original ..	December 10, 1996.
3344 ..... Total pages: 11.	1-11	1 .....	December 3, 1996.
1538 ..... Total pages: 9.	1-9	3 .....	December 2, 1996.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Pratt & Whitney Canada, 1000 Marie-Victorin, Longueuil, Quebec, Canada J4G 1A1; telephone (514) 677-9411, fax (514) 647-3620. Copies may be inspected at the

FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.  
(h) This amendment becomes effective on March 14, 1997.

Issued in Burlington, Massachusetts, on February 18, 1997.  
James C. Jones,  
*Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.*  
[FR Doc. 97-4993 Filed 2-26-97; 9:21 am]  
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