Transport Canada Transports Canada

Canada

# No. CF-87-17R1

## AIRWORTHINESS DIRECTIVE

The following airworthiness directive (AD) may be applicable to an aircraft which our records indicate is registered in your name. ADs are issued pursuant to Canadian Aviation Regulation (CAR) 593. Pursuant to CAR 605.84 and the further details of CAR Standard 625, Appendix H, the continuing airworthiness of a Canadian registered aircraft is contingent upon compliance with all applicable Ads. Failure to comply with the requirements of an AD may invalidate the flight authorization of the aircraft. Alternative means of compliance shall be applied for in accordance with CAR 605.84 and the above- referenced Standard.

This AD has been issued by the Continuing Airworthiness Division (AARDG), Aircraft Certification Branch, Transport Canada, Ottawa, telephone (613) 952-4357.

## CF-87-17R1 PRATT & WHITNEY CANADA

Applies to Pratt & Whitney Canada (P&WC) PT6B-36A engine models S/N 36043 to S/N 36112 inclusive and to those engines incorporating Pratt & Whitney Canada Service Bulletin No. 11022.

Compliance is required as indicated.

There have been six (6) instances of a third stage stator vane failure. In all cases this was accompanied by an increase in turbine temperature (T5). A recent case resulted in an in-flight shut-down.

To reduce high cycle fatigue of the third stage stator vanes and until the modification at Part B below is incorporated, accomplish the following unless previously accomplished:

For engines not incorporating Pratt & Whitney Canada Service Bulletin No. 11034 dated 3 January 1989:

1) From the effective date of this Directive, operation of engines in the following gas generator speed ranges (N1) in a steady state is prohibited:

a) 30 000 RPM to 30 900 RPM (78.0% to 80.5%); and

b) 36 700 RPM to 37 500 RPM (95.6% to 97.6%).

2) For engines which have accumulated 25 hours or less in service, install a vibration damping device by 25 hours service, in accordance with Pratt & Whitney Canada Service Bulletin No. 11033 dated 31 December 1987 or later revision approved by the Director, Airworthiness Branch, Transport Canada, Ottawa.

3) For engines which have accumulated more than 25 hours in service:

a) Install a vibration damping device within 25 hours service or within 12 calendar months, whichever comes first, from the effective date of this Directive, in accordance with P&WC Service Bulletin No. 11033 dated
31 December 1987 or later revision approved by the Director, Airworthiness Branch, Transport Canada, Ottawa; and

b) Install a new third stage stator assembly within 100 hours service or 12 calendar months, whichever comes first, from the effective date of this Directive, in accordance with PT6B-6/36A Overhaul Manual P/N 3034443.

4) All engine third stage stator assemblies are limited to 600 hours service life.

B. Incorporation of the modifications detailed in Pratt & Whitney Canada Service Bulletin No. 11034 dated

3 January 1989 or later revision approved by the Director, Airworthiness Branch, Transport Canada, Ottawa on engines installed on an aircraft is terminating action for the modification requirements and life limitation at Parts A.2, A.3 and A.4 above. The operating restrictions of A.1(a) & (b) shall be retained until all engines on a given aircraft have been modified in accordance with P&WC SB No. 11034.

Alternative means of compliance with the requirements of this directive may be used only if approved by

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the Director, Airworthiness Branch, Transport Canada, Ottawa.

This revision supersedes the previous issue of Airworthiness Directive CF-87-17 issued on 22 December 1987.

This directive becomes effective 20 February 1989.

Pursuant to CAR 202.51 the registered owner of a Canadian aircraft shall, within seven days, notify the Minister in writing of any change of his or her name or address. To request a change of address, contact the Civil Aviation Communications Centre (AARC) at Place de Ville, Ottawa, Ontario K1A 0N8, or 1-800-305-2059, or http://www.tc.gc.ca/civilaviation/communications/centre/address.asp.

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