

# AIRWORTHINESS DIRECTIVE

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*Inspection and/or modifications described below are mandatory. No person may operate a product to which this Airworthiness Directive applies except in accordance with the requirements of this Airworthiness Directive.*

Translation of 'Consigne de Navigabilité' ref. : 2002-071-091(B)  
In case of any difficulty, reference should be made to the French original issue.

## ATR

### ATR 42 aircraft

Engines - High pressure oil pump - Pressure Regulating Valve (PRV) (ATA 79)

#### 1. APPLICABILITY:

ATR 42-200, -300, and -320 model aircraft.

#### 2. REASONS:

During years 1999 and 2000, three cases of propeller pitch lock, during final approach, have been experienced on ATR fleet. During two of these events the asymmetric power resulting from the propeller pitch lock was not recognised by the crew during landing and the aircraft veered off the runway after selection of reverse power while the "Low Pitch" condition was not effective for both engines.

A first measure has been to provide operators with enhanced operational procedures associated with reverse application. This has led ATR to revise the Airplane Flight Manual to add instructions that prohibit the crew from selecting the reverse position on the engines in the event of propeller asymmetric power. This AFM revision was mandated by AD No. 2000-436-080(B).

Extensive investigations were performed on the suspected components of the propeller pitch control system to isolate the root cause of the pitch lock issue. Performance anomalies were evidenced on two HP Oil pump.

Based on the test results, these HP Oil Pump anomalies, when independently considered, would not lead to a propeller pitch lock. Nevertheless, the analysis of how the HP Oil Pump PRV fitted on the PW120/121 is interacting with the propeller control systems shows that this equipment could be a contributing factor to a propeller pitch lock condition especially when associated with oil contamination.

The actions rendered mandatory by this Airworthiness Directive (AD) are intended to modify pressure regulating valves (PRV) in order to avoid a propeller pitch lock situation and reduced controllability of the aircraft during landing.

**3. ACTIONS:**

The following measures are rendered mandatory from the effective date of this AD.

At the first opportunity and before June 30, 2004, replace all Pratt & Whitney Canada PW120, PW121 HP Oil Pump PRV' s by PRV modified in accordance with Pratt & Whitney Canada Service Bulletin 21570.

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REF. : PRATT & WHITNEY CANADA Service Bulletin 21570.

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**EFFECTIVE DATE : FEBRUARY 02, 2002**