

# PŘÍKAZ K ZACHOVÁNÍ LETOVÉ ZPŮSOBILOSTI

**CAA-AD-022/2002**

Datum vydání: 15. února 2002

## LETOUN - MOTOR - VYSOKOTLAKÉ OLEJOVÉ ČERPADLO (ATA 79) - VÝMĚNA

**Týká se:** letadel ATR 42-200, -300 a -320.

**Datum účinnosti:** 18. dubna 2002

**Provést v termínech:** Jak je popsáno v DGAC AD 2002-071-091(B), od data účinnosti tohoto PZZ.

**Postup provedení prací:** Dle DGAC AD 2002-071-091(B) (příloha tohoto PZZ).

Poznámky: Provedení tohoto PZZ musí být zapsáno do letadlové knihy. Případné dotazy týkající se tohoto PZZ adresujte na ÚCL sekce technická - Ing. Stibůrek. Pokud to vyžaduje povaha tohoto PZZ, musí být zapracován do příslušné části dokumentace pro obsluhu, údržbu a opravy letadla. Tento PZZ byl vypracován na základě DGAC AD 2002-071-091(B).

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**Úřad pro civilní letectví**

**DGAC AD No.: 2002-071-091(B)**  
**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 PW 120/121 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 PW 120, PW 121 HP Oil Pump PRV's by PRV modified in accordance with Pratt & Whitney Canada Service Bulletin 21570.

**REF.:** PRATT & WHITNEY CANADA Service Bulletin 21570.

**EFFECTIVE DATE:** FEBRUARY 02, 2002