



No.	CF-2003-10	1/2
Issue Date	28 April 2003	

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.

Number: CF-2003-10

Subject: Bell 407 - Tail Rotor Gearbox Case Oil Feed Gallery

Effective: 6 June 2003

Applicability: Bell Helicopter Textron Canada (BHTC) Model 407 Helicopters serial number (S/N) 53000 through 53498, 53500 through 53522, 53524 and 53526, equipped with tail rotor gearbox case part number (P/N) 406-040-406-109 or 406-040-406-113, including these part numbered tail rotor gearbox cases held as spare stock.

Compliance: As indicated, unless already accomplished.

Background: Transport Canada has been informed that a number of tail rotor gearboxes are lacking the required oil feed gallery. This situation reduces the oil supply to duplex bearing P/N 406-040-432-103, which could lead to bearing failure. It has been determined that the splash lubrication of the duplex bearing without the oil feed gallery is sufficient to prevent abnormal wear up to the 1800 hours overhaul period.

BHTC Alert Service Bulletin (ASB) 407-03-57 Rev. B, dated 06 February 2003, provides instruction to create an oil gallery on affected units.

Corrective Actions: **Part I**

- A. Within the next 50 hours air time hours or 30 days, whichever occurs first after the effective date of this directive, identify the tail rotor gearbox case installed on the helicopter and, if applicable, check for the presence of oil feed gallery as per instructions provided in Part I of ASB 407-03-57 Rev. B, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
 - 1. If the oil feed gallery is present, re-identify the case assembly as per instructions in BHTC ASB 407-03-57 Rev. B, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
 - 2. If oil feed gallery is not present, create an oil feed gallery in accordance with Part II of this directive.
- B. For the affected tail rotor gearbox cases consigned in spare stock, accomplish Part I and II, if applicable, of this directive prior to the installation on the helicopter.

Part II

Create the oil feed gallery as per instruction provided in Part II of BHTC ASB 407-03-57 Rev. B, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, in accordance with the following schedule:

- A. For tail rotor gearboxes with less than 1800 hours air time since new - upon reaching 1800 hours air time.

- B. For tail rotor gearboxes with 1800 hours air time or more since new - within the next 50 hours air time or 30 days, whichever occurs first after the effective date of this directive.
- C. For tail rotor gearboxes with less than 1800 hours air time since last overhaul - upon reaching 1800 hours air time.
- D. For tail rotor gearboxes with 1800 hours air time or more since last overhaul - within the next 50 hours air time or 30 days, whichever occurs first after the effective date of this directive.

Authorization: For Minister of Transport



Robin Lau
Acting Chief, Continuing Airworthiness

Contact: Mr. Bogdan Gajewski, Continuing Airworthiness, Ottawa, telephone (613) 952-4450, facsimile (613) 996-9178 or e-mail gajewsb@tc.gc.ca or any Transport Canada Centre.