



AIRWORTHINESS DIRECTIVE

This Airworthiness Directive (AD) is issued pursuant to Canadian Aviation Regulation (CAR) 521.427. No person shall conduct a take-off or permit a take-off to be conducted in an aircraft that is in their legal custody and control, unless the requirements of CAR 605.84 pertaining to ADs are met. Standard 625 - Aircraft Equipment and Maintenance Standards Appendix H provides information concerning alternative means of compliance (AMOC) to ADs.

Number:

CF-2017-36

Effective Date:

29 December 2017

ATA:

31

Type Certificate:

H-112

Subject:

Indicating/Recording System – Engine Chip Detector Short to Ground

Applicability:

Bell Helicopter Textron Canada Limited (BHTCL) model 505 helicopters serial numbers 65011 through 65023, 65025 through 65028, 65030 through 65032, 65034 and 65036.

Compliance:

Within 25 hours air time or 30 days, whichever occurs first, from the effective date of this AD.

Background:

There have been three occurrences where metallic debris in the engine oil lubrication system of the model 505 helicopter has caused the Garmin Engine Airframe (GEA) 12 Volts Direct Current (VDC) reference voltage to be shorted to ground. Subsequent analysis of the debris in accordance with the engine maintenance manual confirmed that the debris were not significant.

A short to ground of the 12 VDC reference voltage results in the loss of display of important flight parameters: the main rotor rotations per minute (Nr), fuel quantity, transmission oil pressure and temperature, generator voltage and ammeter parameters are marked invalid with a red "X" on the Primary Flight Display (PFD) and the Multi-Function Display (MFD).

The simultaneous loss of caution, advisory and system performance indications for multiple helicopter systems, particularly when the initiating event may be the activation of the engine chip detector, is considered to be an unsafe condition.

Corrective Actions:

Replace relay panel assembly part number (P/N) SLS-075-002-107 with the relay panel assembly P/N SLS-075-002-109 in accordance with the Accomplishment Instructions of BHTCL Alert Service Bulletin 505-17-04, dated 6 December 2017 or later revision approved by the Chief, Continuing Airworthiness, Transport Canada.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 15 December 2017

Contact:

Ross McGowan, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.