FAA
Aircraft Certification Service

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

SUBJ: BRP-Rotax 912 A, 912 F, 912 S, & 914 F Series Reciprocating Engines

SAIB: NE-08-36
Date: July 16, 2008

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin alerts you, registered owners and operators of **BRP-Rotax (Rotax) 912 A, 912 F, 912 S, and 914 F** series reciprocating engines, of possible abnormal camshaft and hydraulic valve tappet wear. These engines are installed on, but not limited to the following aircraft: Aeromot-Industria Mecanicao Metalurgica AMT-200, AMT-200S, and AMT-300, Aquila Technische Entwicklungen GmbH AT01, Diamond Aircraft Industries (Austria and Canada) DA20-A1, HK36 R, HK36 TC, HK36 TS, HK36 TTC, HK36 TTC-ECO, HK36 TTS, Iniziative Industriali Italiane 650 TC, 650 TCN, 650 TCS, 650 TCNS, and Stemme GmbH S10-VT. These engines might also be installed on amateur built and light sport aircraft. At this time, this airworthiness concern isn't an unsafe condition that would warrant airworthiness directive action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

Background

The European Aviation Safety Agency (EASA) has advised us of possible abnormal camshaft and hydraulic valve tappet wear on certain Rotax 912 and 914 series engines. Service experience indicates that this condition might affect one or two valves on each engine and result in a rough running engine and reduced engine power. This condition could result in an in-flight engine failure if allowed to progress. Based on these findings, the European Aviation Safety Agency (EASA) published airworthiness directive (AD) 2006-0316R1, dated March 13, 2008, that requires initial and repetitive inspections of a magnetic plug to identify abnormal camshaft or valve tappet wear.

The related Rotax service bulletins define the population of engines that may be susceptible to this condition as follows:

912 A series engines from serial number 4,410.681 to serial number 4,410.712,
912 F series engines from serial number 4,412.912 to serial number 4,412.921,
912 S series engines from serial number 4,923.263 to serial number 4,923.380,
914 F series engines from serial number 4,420.595 to serial number 4,420.637,
as well as any 912 or 914 series engines that have had the camshaft or the hydraulic valve tappets or both replaced after January 1, 2006 through and including December 1, 2007.

The inspections are not needed on engines that have hydraulic valve tappets, part number (P/N) 854.095, installed during production and engines that have spare part kit, P/N 881.831, (which includes hydraulic valve tappets, P/N 854.095) installed during engine repair or general overhaul. Engines with hydraulic valve tappets P/N 854.095 installed prior to delivery by BRP-Rotax can be identified by (minor) modification number references for each specific engine design as follows: 85-05 for 912 A; F50-05 for 912 F; S34-04 for 912 S; and F45-04 for 914 F engines. These reference numbers are documented in each individual engine Release Certificate.

BRP-Rotax service bulletins SB-912-051 and SB-914-034 (each dated January 30, 2008) provide additional information related to inspecting the magnetic plug.

Recommendation

We strongly recommend that you inspect the magnetic plug of the affected engines using the schedule and procedures defined in Bombardier-Rotax alert service bulletins SB-912-051, dated January 30, 2008, or SB-914-034, dated January 30, 2008, as applicable.

For Further Information Contact

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