

EASA	PROPOSED AIRWORTHINESS DIRECTIVE
	AD No: 2005-XXXX PAD N°: 05-002 Issued/Date: dd/mm/yyyy (Proposed 13/05/2005)

No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registry.

Type Approval Holder's Name	Type/Model designation(s)
Textron Lycoming	Reciprocating engines
TCDS Number: several FAA TCDS	
Foreign AD: None	
Supersedure: This AD supersedes EASA member state AD number: France 1999-088(A) R3	

ATA 72 – Exhaust valve guide – Inspection

Manufacturer:	Textron Lycoming
Applicability:	Textron Lycoming series reciprocating engines installed in aeroplanes and helicopters .
Reason:	<p>Potential for exhaust valve sticking and resultant power loss.</p> <p>Between 1993 and 1998, six helicopter accidents in France have been caused by an engine power loss during a critical phase of the flight, due to exhaust valve sticking. Further investigations have shown that exhaust valve guide wear or contamination was also an issue for aeroplane engines, and had accounted for about 30% of the in flight-shut downs recorded for these engines during a similar period.</p> <p>Lycoming Service Bulletin No. 388C states that the primary method for controlling the exhaust valve gap is using a feeler gage or a dial gage and is based on the radial movements of the valve. In service experience has shown that this method is unsatisfactory. Moreover, it has been found that such inspections were often not performed at all on engines where applicable.</p> <p>The optional method described in Service Bulletin No. 388C has been demonstrated to allow a satisfactory assessment of the guide internal diameter (go/no-go gage) along its full length, therefore effectively reducing the risk of valve sticking or valve failure. It is therefore mandated by this EASA AD. Direct measurement methods of the diameter are also acceptable as alternative means of compliance to this AD.</p>
Effective Date:	TBA
Approval number, date	TBA
Compliance:	<p>The inspection method using a go/no-go gage presented in part 2-B of Service Bulletin Textron Lycoming No. 388C is made mandatory and must be performed as indicated below.</p> <p>1. Helicopter engines</p>

	<p>The next and every following scheduled inspection must be performed according to the go/no-go gage method defined in SB 388C, every 300 operating hours, or earlier if valve sticking is suspected.</p> <p>2. Other aircraft engines</p> <p>2.1 Other aircraft engines not fitted with "Hi-Chrome" exhaust valve guide</p> <p>The next and every following scheduled inspection must be performed according to the go/no-go gage method defined in SB 388C, every 400 operating hours, or earlier if valve sticking is suspected.</p> <p>2.2 Other aircraft engines fitted with "Hi-Chrome" exhaust valve guide (refer to Lycoming SI 1485A for applicability)</p> <p>The next and every following scheduled inspection must be performed according to the go/no-go gage method defined in SB 388C, every 1000 operating hours, or at mid-TBO, whichever occurs first, or earlier if valve sticking is suspected.</p> <p>3. Engines which have not been subjected to the inspections scheduled by SB 388C and which have been operated beyond the inspection thresholds specified in 1 or 2 above as applicable must be inspected within 120 days, according to any of the methods specified in SB388C. The next inspection should be carried out in accordance with paragraph 1 or 2 requirements above.</p> <p>4. Inspection results, and incorporation of SI 1485A if applicable, should be entered in the engine logbook.</p> <p>5. Non-conforming inspection results should be reported to the EASA Propulsion Unit.</p> <p>6. Alternative Means of Compliance</p> <p>Any other method providing a direct measurement of the valve guide inner diameter (example: using a 2 point inner diameter micrometer), according to the limits specified in SB 388C part 2-B paragraph 8 can be used, once approved by EASA.</p>
Ref. Publications:	<p>Service Bulletin Textron Lycoming 388C dated 22 Nov. 2004 Service Instruction Textron Lycoming 1485A dated July 2, 2003</p>
Remarks	<p>This PAD is posted for consultation on 13 May 2005. Comments are requested by e-mail to Mr. K. Boewing, EASA Manager Propulsion Unit, Certification Directorate: Klaus.Boewing@easa.eu.int until 15 June 2005.</p> <p>European Aviation Safety Agency Postfach 101253 D-50452 Köln, Germany</p>