EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2012-0110 **Date: 20 June 2012** Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

Design Approval Holder's Name :	**Type/Model designation(s) :**
Turboméca	TM 333 engines

TCDS Number :	EASA.E.030
Foreign AD :	Not applicable
Supersedure :	None

ATA 73	**Engine – Fuel Shut-off Valve – Inspection / Replacement**
Manufacturer(s):	Turboméca S.A.
Applicability:	TM 333 2B2 and TM 333 2M2 engines, all serial numbers. TM 333 2B2 engines are known to be installed on, but not limited to, Hindustan Aeronautics Limited "Dhruv" (ALH) helicopters. TM 333 2M2 engines are known to be installed on, but not limited to, Hindustan Aeronautics Limited "Cheetal" helicopters.
Reason:	The safety analyses of the TM 333 2B2/2M2 engines have been updated by Turboméca and it has been found that the probability of an internal fuel leak in the shut-off valve (fitted on the high pressure fuel pump and metering unit) have increased. This condition, if not detected and corrected, could lead to the following consequences: • an uncommanded in-flight shut-down (IFSD), in case of quick deceleration, or • the unavailability of the 30-second one-engine inoperative (OEI) power for the TM 333 2B2, and • the unavailability of the maximum Take-off power for the TM 333 2M2. An uncommanded IFSD on a single-engine helicopter, or the unavailability of OEI power on a twin-engine helicopter, may result ultimately in an unsafe condition for the helicopter. To address this condition, Turbomeca have introduced a new maintenance task in the applicable engine Maintenance Manuals, consisting in

	accomplishing repetitive checks of the fuel shut-off valve at intervals not to exceed 300 engine flight hours (EFH) for detecting internal fuel leaks. For the reasons described above, this AD requires accomplishment of repetitive checks of the fuel shut-off valve.
Effective Date:	04 July 2012
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) For TM 333 2B2 engines, within 300 EFH after the effective date of this AD and thereafter at intervals not to exceed 300 EFH (with a tolerance of 10 EFH), accomplish a fuel shut-off valve leak check in accordance with the instructions of Task 05-10-10-200-801-A01 of the Airworthiness Limitation Section of the Turbomeca TM 333 2B2 Maintenance Manual (MM), document X 333 H8 450 2. (2) For TM 333 2M2 engines, within 300 EFH after the effective date of this AD and thereafter at intervals not to exceed 300 EFH (with a tolerance of 10 EFH), accomplish a fuel shut-off valve leak check in accordance with the instructions of Task 05-20-10-201-870-A01 (Inspections after 300h) of the Turbomeca TM 333 2M2 MM, document X 333 B2 450 2. (3) If any discrepancy is detected during any of the checks as required by paragraphs (1) or (2) of this AD, before next flight, replace the affected fuel shut-off valve with a serviceable valve. (4) Replacement of a fuel shut-off valve as required by paragraph (3) of this AD does not constitute terminating action for the repetitive inspections as required by paragraphs (1) and (2) of this AD. (5) From the effective date of this AD, do not install a fuel shut-off valve on an engine or an engine on a helicopter, unless the fuel shut-off valve is in compliance with the requirements of this AD. (6) Compliance with the requirements of paragraphs (1), (2), (3) and (5) of this AD can be demonstrated by: (6.1) Revising as follows the approved Aircraft Maintenance Programme, on the basis of which the operator or the owner ensures the continuing airworthiness of each operated helicopter: Incorporate the fuel shut-off valve leak check, as specified in paragraph (1) or (2) of this AD, as applicable to engine Model, including the applicable corrective action and compliance time, and (6.2) Complying with the approved Aircraft Maintenance Programme described in paragraph (6.1) of this AD.
Ref. Publications:	TM 333 2B2 Maintenance Manual X 333 H8 450 2 Update 20 TM 333 2M2 Maintenance Manual X 333 B2 450 2 Update 10 modified by temporary revision N° 05-02. The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
Remarks :	1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in

	this AD, please contact: Turboméca Operator Support & Sales TM 333, 40220 Tarnos – France, Telephone: +33 (0)5 59 74 44 95; Fax: +33 (0)5 59 74 45 16 or contact your nearest technical representative at www.turbomeca-support.com