


EASA	AIRWORTHINESS DIRECTIVE
	<p>AD No.: 2010-0130</p> <p>Date: 29 June 2010</p> <p>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.</p>
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].	
Type Approval Holder's Name : SOCATA	Type/Model designation(s) : TBM 700 aeroplanes
TCDS Number : EASA A.010	
Foreign AD : Not applicable	
Supersedure : This AD supersedes EASA AD 2008-0129R1-E dated 31 July 2008	
ATA 21	Air Conditioning – Alternator and Vapour Cycle Cooling System Compressor Support and Drive Assembly – Removal / Replacement / Inspection / Modification
Manufacturer(s):	SOCATA (formerly EADS SOCATA)
Applicability:	TBM 700 N aeroplanes serial number (s/n) from 434 up to 509 inclusive, from 511 up to 516 inclusive, 519, 520, from 522 up to 525 inclusive. Note : TBM850 is the commercial designation of the TBM700N
Reason:	<p>Following the rupture of an alternator and vapour cycle cooling system pulley drive assembly, the AD 2008-0067-E was published to require the replacement of the pulley drive assembly by a new one of an improved design.</p> <p>Later on, cases of rupture of the alternator and vapour cycle cooling system compressor drive shaft and of cracks on the standby-alternator and compressor support were reportedly found.</p> <p>Such failures could lead to the loss of the alternator and of the vapour cycle cooling systems, and could also cause mechanical damage inside the power plant compartment.</p> <p>To address this condition, the AD 2008-0129-E superseded AD 2008-0067-E and mandates the removal, as a temporary measure, of the compressor drive belt and of the torque limiter, the conditional replacement of the pulley drive shear shaft, and repetitive inspections for cracks of the pulley drive assembly and of the alternator/compressor support.</p> <p>Revision 1 of the AD 2008-0129-E introduced an alternative temporary solution with the aim to restore the capability to make use of the air conditioning system. This solution consists in replacing the original pulley</p>

	<p>drive assembly by a time-limited assembly of a new design, corresponding to the SOCATA modification MOD 70-0240-21.</p> <p>A definitive solution has been released for production aeroplanes by implementation of SOCATA modification MOD 70-0243-21 or Service Bulletin (SB) 70-176-21 for in-service aeroplanes.</p> <p>This AD which supersedes EASA AD 2008-0129R1-E retaining its requirements, limits the AD applicability and requires accomplishment of the terminating action.</p>
Effective Date:	13 July 2010
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless already accomplished:</p> <p>(1) For aeroplanes s/n 434 to 459 inclusive, prior to next flight after 14 July 2008 [the effective date of the AD 2008-0129R1-E]:</p> <ul style="list-style-type: none"> (a) Remove the pulley drive assembly, the torque limiter, the compressor drive belt and the alternator/compressor support, in accordance with paragraph (§) C of the accomplishment instructions of EADS SOCATA SERVICE BULLETIN (SB) 70-161-21 amendment 2 and (b) Inspect for cracks, the pulley drive surfaces and the alternator/compressor support welds, in accordance with § D.1 of the accomplishment instructions of SB 70-161-21 amendment 2. <p>If any crack is detected, before further flight, replace or conditionally repair the cracked unit as instructed in § D.2 of the accomplishment instructions of SB 70-161-21 amendment 2.</p> <ul style="list-style-type: none"> (c) Before accomplishment of § (d) of this AD, replace any pulley drive shear shaft that has never been replaced before 14 July 2008 [the effective date of the AD 2008-0129R1-E], or that has, on 14 July 2008 [the effective date of the AD 2008-0129R1-E], accumulated 30 Hours Time in Service (TIS) or more, with a serviceable shaft, in accordance with § E of the accomplishment instructions of SB 70-161-21 amendment 2. <p>NOTE 1: In the event an operator is unable to establish the accumulated hours TIS on a given shaft installed on an airplane, the total hours accumulated on the airplane must be used in the determination of the replacement time for the shaft.</p> <ul style="list-style-type: none"> (d) Prior to next flight and until further notice: <ul style="list-style-type: none"> - Re-install the pulley drive assembly and the alternator/compressor support, <u>without</u> re-installing compressor drive belt or the torque limiter, as instructed in § F of the accomplishment instructions of SB 70-161-21 amendment 2 and - Install on the instrument panel and in the Pilot's primary field of vision, the following placard <div style="border: 1px solid black; padding: 5px; text-align: center; margin: 10px 0;"> <p>"AIR COND" INOPERATIVE RECOMMENDED "AIR COND" SWITCH POSITION: "MANUAL"</p> </div> <ul style="list-style-type: none"> - And insert the SB 70-161-21 amendment 2 in the Pilot's Operating Handbook.

	<p>Permission to ferry an airplane to a maintenance location to accomplish actions required by paragraph (1) of this AD is granted provided that the air conditioning is switched off during the all flight duration.</p> <p>(2) For all airplanes, at the next scheduled maintenance inspection or within 100 Flight Hours (FH) after 14 July 2008 [the effective date of the AD 2008-0129R1-E], whichever occurs first, and thereafter at intervals not to exceed 100 FH, inspect for cracks, the pulley drive surfaces and the alternator/compressor support welds, in accordance with § C, D, F and G.1) to G.3) of the accomplishment instructions of SB 70-161-21 amendment 2.</p> <p>NOTE 2: For accomplishment of the repetitive inspections required by paragraph (2) of this AD, the paragraph C.2) of the accomplishment instructions of SB 70-161-21 amendment 2. does not apply since the torque limiter has already been removed.</p> <p>(3) As an alternate to the requirements of paragraphs (1) and (2) of this AD, do the following actions at the operator's discretion and/or when motivated by spare parts availability:</p> <p>(a) Install a zero-timed pulley drive assembly P/N T700G215510000000 as instructed in § D.1, I and J of the accomplishment instructions of SB 70-161-21 amendment 3, and</p> <p>(b) Thereafter, at intervals not to exceed 100 FH, inspect for cracks, the alternator/compressor support welds, in accordance with the accomplishment instructions of § B,G, H, I and J of SB 70-161-21 amendment 3, and</p> <p>(c) Upon accumulation of 400 hours TIS, replace each pulley drive assembly P/N T700G215510000000 by a zero-timed one.</p> <p>NOTE 3: Compliance with the requirements of paragraph (3) of this AD restores the capability to make use of the air conditioning system.</p> <p>(4) At the next scheduled check of the aeroplane or within 5 months after the effective date of this AD, whichever occurs first, replace the alternator/compressor support and pulley drive assemblies by new design ones, P/N T700G215500700100 (alternator/compressor support) and P/N T700G215513500000 (Pulley drive assembly), in accordance with the accomplishment instructions of SB 70-176-21 amendment 1.</p> <p>(5) After the effective date of this AD, do not install on an aeroplane an alternator/compressor support P/N T700G215500700000 and a Pulley drive assembly P/N T700G215510000000.</p> <p>(6) Accomplishment of corrective actions as required by paragraph (4) of this AD constitutes terminating action for the requirements of paragraphs from (1) to (3) inclusive of this AD.</p> <p>NOTE 4: Service Bulletin 70-161-21 amendment 4 has been published by Socata in order to close the range of aeroplanes serial numbers concerned by temporary actions.</p>
Ref. Publications:	SOCATA Service Bulletin 70-161-21 amendment 2, 3 and 4.

	<p>SOCATA Service Bulletin 70-176-21 amendment 1.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>
Remarks:	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. This AD was issued as PAD 10-052 on 25 May 2010 for consultation until 22 June 2010. The Comment Response Document can be found at http://ad.easa.europa.eu/. 3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact: <p style="text-align: center;">SOCATA- Direction des services-65921 Tarbes Cedex 9-France Tel. 33 (0) 62 41 73 00 Fax : + 33 (0) 62 41 76 54 or for the U.S.A SOCATA NORTH AMERICA.–North Perry Airport–7501 South Airport Rd. Pembroke Pines, FL 33023-United States of America Tel.: 1 (954) 893 1400 Fax: 1 (954) 964 4141</p>