


EASA	AIRWORTHINESS DIRECTIVE							
	<p>AD No.: 2010-0067</p> <p>Date: 12 April 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>							
<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].</p>								
<p>Type Approval Holder's Name : Rockwell Collins Inc.</p>	<p>Type/Model designation(s) : TDR-94 and TDR-94D transponders</p>							
<p>ETSO Authorisation Number : EASA.21O.280 Rev.C</p>								
<p>Foreign AD : None</p>								
<p>Supersedure : This AD supersedes EASA AD 2009-0097 dated 22 April 2009.</p>								
ATA 34	Navigation – Mode S Transponder – Check / Modification							
<p>Manufacturer(s):</p>	<p>Rockwell Collins Inc.</p>							
<p>Applicability:</p>	<p>Rockwell Collins Mode S Transponders identified by type and Part Number (P/N) as follows:</p> <table border="1" data-bbox="544 1330 1458 1615"> <thead> <tr> <th>Type</th> <th>P/N (all serial numbers)</th> </tr> </thead> <tbody> <tr> <td>TDR-94</td> <td>622-9352-004, 622-9352-005, 622-9352-006, 622-9352-007, 622-9352-008, 622-9352-108, 622-9352-207, 622-9352-308, and 622-9352-408</td> </tr> <tr> <td>TDR-94D</td> <td>622-9210-004, 622-9210-005, 622-9210-006, 622-9210-007, 622-9210-008, 622-9210-108, 622-9210-207, 622-9210-308 and 622-9210-408</td> </tr> </tbody> </table> <p>These transponders are known to be installed on, but not limited to, the following aircraft:</p> <ul style="list-style-type: none"> - ATR 42 and ATR 72 aeroplanes, all models. - Bombardier (formerly Canadair) CL-600-1A11, CL-600-2A12 (601 Variant), CL-600-2B16 (601-3A, 601-3R and 604 Variants), CL-600-2B19, CL-600-2C10, CL-600-2D15 and CL-600-2D24 aeroplanes. - Bombardier (formerly De Havilland Canada) DHC-8 aeroplanes, all models. - Dassault Aviation Mystère-Falcon 50 (including EX variant), Mystère-Falcon 900, Falcon 900EX, Falcon 2000 and Falcon 2000EX aeroplanes. - Gulfstream G-IV aeroplanes. - Hawker Beechcraft (formerly Raytheon, Beech) 200 and 400 series aeroplanes, all models. 		Type	P/N (all serial numbers)	TDR-94	622-9352-004, 622-9352-005, 622-9352-006, 622-9352-007, 622-9352-008, 622-9352-108, 622-9352-207, 622-9352-308, and 622-9352-408	TDR-94D	622-9210-004, 622-9210-005, 622-9210-006, 622-9210-007, 622-9210-008, 622-9210-108, 622-9210-207, 622-9210-308 and 622-9210-408
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	<ul style="list-style-type: none"> - SAAB SF340A and 340B aeroplanes. - Sikorsky S-92 helicopters.
Reason:	<p>The European Air Navigation Service Providers (ANSP) have implemented Advanced Surface Movement Guidance & Control Systems (A-SMGCS) to improve the surveillance and control of on-ground aircraft and vehicles, providing conflict detection and alerting on runways.</p> <p>To ensure proper and effective operation of the A-SMGCS, transponder replies to Air Traffic Control Radar Beacon System (ATCRBS) and All-Call interrogations must be inhibited when the aircraft is on ground.</p> <p>Rockwell Collins TDR-94 and TDR-94D Mode S Transponders have two Air/Ground Discrete inputs that may be connected to the aircraft Weight-On-Wheels system. A connection to the Air/Ground #2 discrete will implement an inhibition of ATCRBS, ATCRBS/Mode-S All-Call and Mode-S Only All-Call replies when the aircraft is on the ground. No on-ground reply inhibition occurs if the connection is to the Air/Ground #1 discrete.</p> <p>An aircraft with this transponder interface problem, if not corrected, does not meet the specifications of ICAO Annex 10 volume IV amendment 77 section 3.1.2.10.3.10 "Inhibition of replies" which would lead to degradation of the functioning of the A-SMGCS, could affect the ATC functions in tower, approach and en-route sectors, increase the risk of undetected runway incursions and endangering the aircraft, its occupants and persons on the ground.</p> <p>To address and correct this unsafe condition, EASA issued AD 2009-0097 to require a check of the transponder Air/Ground discrete input connections and, in case of discrepancies, the accomplishment of corrective action.</p> <p>Since that AD was issued, it was discovered that the Applicability of EASA AD 2009-0097 only referred to 'aeroplanes' in which the affected transponders could be installed, inadvertently implying that no helicopters could be affected. Some helicopters (e.g. Sikorsky S-92) are also known to be equipped with the affected transponders to which AD 2009-0097 applies and it has been determined that the unsafe condition addressed by that AD can also occur during taxiing (weight-on-wheels) of helicopters.</p> <p>For the reasons described above, this new AD retains the requirements of EASA AD 2009-0097, which is superseded, and expands the applicability to include the affected transponders when installed on helicopters.</p>
Effective Date:	26 April 2010
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>Re-statement of EASA AD 2009-0097 requirement:</p> <p>(1) For all affected aeroplanes (i.e. fixed-wing), within 12 months after 06 May 2009 [the effective date of EASA AD 2009-0097], accomplish the following:</p> <p>Verify that the transponder Air/Ground discrete input connections are installed in accordance with Table 1 of Rockwell Collins Service Information Letter TDR94() SIL 07-1 (ref. 523-0809129-001000). If the wiring installation is not compliant with the information provided in Table 1 of the SIL, modify the aircraft Air/Ground discrete input connections in accordance with approved aircraft modification instructions.</p> <p>(2) ATR aeroplanes modified in accordance with ATR Service Bulletin (SB) ATR42-34-0164 or SB ATR72-34-1093 (modification n° 05602), as applicable to aeroplane model, including those ATR aeroplanes on which modification n° 05602 was incorporated during production, are not affected by this AD, as this modification is equal to the requirements of paragraph (1) of this AD.</p>

	<p>(3) Bombardier CL-600-2B19, serial number 7122, if modified in accordance with Bombardier SB 601R-34-146, is not affected by this AD, as this modification is equal to the requirements of paragraph (1) of this AD.</p> <p>(4) Dassault aeroplanes modified in accordance with Dassault Aviation SB F50-457 (modifications M2966 and M2968), SB F50-469 (modification M2998), SB F900-354 (modification M3896), SB F900-368 (modification M5013), SB F900EX-239 (modification M3896), SB F900EX-270 (modification M5013), F2000-312 (modifications M2624 and M2632), SB F2000-327 (modification M2468), SB F2000EX-043 (modification M2624) or SB F2000EX-084 (modification M2468), as applicable to aeroplane model, are not affected by this AD, as these modifications are equal to the requirements of paragraph (1) of this AD.</p> <p>New requirement of this AD:</p> <p>(5) For all affected helicopters, within 12 months after the effective date of this AD, accomplish the following:</p> <p>Verify that the transponder Air/Ground discrete input connections are installed in accordance with Table 1 of Rockwell Collins Service Information Letter TDR94() SIL 07-1 (ref. 523-0809129-001000). If the wiring installation is not compliant with the information provided in Table 1 of the SIL, modify the aircraft Air/Ground discrete input connections in accordance with approved aircraft modification instructions.</p>
Ref. Publications:	Rockwell Collins Service Information Letter TDR-94() SIL 07-1, document reference 523-0809129-001000, dated 25 May 2007.
Remarks :	<ol style="list-style-type: none"> 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 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: Rockwell Collins Inc., 400 Collins Road NE, Cedar Rapids, Iowa 52498, United States of America, telephone +1-319-265-5467 Website: www.rockwellcollins.com Email: response@rockwellcollins.com