



EASA Safety Information Bulletin

SIB No.: 2012-08
Issued: 03 May 2012

Subject: **Mode S Transponder – Transmission of Erroneous Vertical Rate Information**

Ref. Publications: Rockwell Collins IDOC 0116-07.
 Rockwell Collins Service Bulletin (SB) documents:

- SB TDR-94/94D-34-506 [ref. 523-0816422-001000] dated 2 September 2008.
- SB TDR-94/94D-34-507 [ref. 523-0816423-001000] dated 9 September 2008.
- SB TDR-94()-34-508, [ref. 523-0817821-001000] dated 16 September 2009.
- SB TDR-94()-34-509, [ref. 523-0817822-001000] dated 16 September 2009.

Applicability: Rockwell Collins Mode S transponders, identified by type and Part Number (P/N) in the table below, if used in combination with an Air Data Computer (ADC) utilising ARINC 575, providing inputs to the Rockwell Collins Mode S transponder.

Type	P/N (all serial numbers)
TDR-94	622-9352-007, 622-9352-008, 622-9352-108, 622-9352-207, 622-9352-308 and 622-9352-408
TDR-94D	622-9210-007, 622-9210-008, 622-9210-108, 622-9210-207, 622-9210-308 and 622-9210-408

The Rockwell Collins TRD-94/94D Mode S transponders using ARINC 575 inputs are known to be installed on, but not limited to, aircraft certificated under (FAR, JAR, CS) Parts 23, 25, 27 or 29.

Description: Aircraft configurations, where the ADC supplies ARINC 575 data to the Mode S transponder, cannot support full Mode S Enhanced Surveillance. The Rockwell Collins Mode S transponder does not transmit all the Enhanced Surveillance parameters when interfaced to this type of ADC. Vertical Rate, Label 212, which is used for Enhanced Surveillance, is, however, sent from the ADC to the transponder. The transponder incorrectly processes this data and transmits erroneous vertical rate values.

At this time, insufficient information is available to determine whether the safety concern described in this SIB can be considered an unsafe condition that would warrant Airworthiness Directive (AD) action under [EC 1702/2003](#), Part 21A.3B.

Nevertheless, transmission of erroneous vertical rate information, when such information is used by SSR Mode S ground interrogators, could cause increased workload for the ATC controllers.

Recommendations: EASA recommends that the transponder upgrade, as specified in the referenced SB publication, as applicable, is accomplished at the earliest opportunity.

Contact Rockwell Collins to coordinate the incorporation of the appropriate SB, as applicable to the installation.

Contacts: For further information contact the Safety Information Section, Executive Directorate, EASA; E-mail: ADs@easa.europa.eu.

For copies of any service publication referenced in this SIB, please contact Rockwell Collins Inc., 400 Collins Road NE, Cedar Rapids, Iowa 52498, United States of America, telephone +1-319-265-5467

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