

Number: SB 2X-31-05 R2

Issued: April 16, 2009

Revised: August 27, 2009

SNS SUBJECT: 31-30 RECORDERS - Recoverable Data Module Replacement

1. COMPLIANCE

Mandatory: Cirrus Design considers this Service Bulletin to be MANDATORY. Accomplish this Service Bulletin within 100 flight hours or at annual inspection, whichever occurs first. Compliance time begins upon receipt of this Service Bulletin.

This Service Bulletin has been revised to update the Warranty Information.

Operators who have successfully complied with the original release of this Service Bulletin dated April 16, 2009, or Revision 1 of this Service Bulletin dated May 26, 2009 need take no further action.

2. EFFECTIVITY

Cirrus Design SR22 Serials 3026 thru 3368 w/ Perspective Avionics.

3. APPROVAL

FAA approval has been obtained on all technical data in this Service Bulletin that affects type design.

4. PURPOSE

Cirrus Design recently discovered a condition on aircraft with Perspective Avionics where the Aircraft Data Logger (ADL) fails to store data correctly. Upon investigation, it was determined that the condition is caused by the Recoverable Data Module (RDM) internal software. To correct this condition, the affected RDM must be replaced with an RDM with improved software.

5. DESCRIPTION

This Service Bulletin contains instructions for the replacement and testing of an improved RDM.

6. WARRANTY INFORMATION

Cirrus Design will cover parts and labor costs for this Service Bulletin if the work is accomplished at an authorized Cirrus Design Service Center. The Warranty Claim Form must be properly filled out and submitted to Cirrus Design in order to obtain a warranty credit.

7. MANPOWER REQUIREMENTS

3.0 man-hours.

8. OTHER PUBLICATIONS AFFECTED

SR22 Airplane Maintenance Manual (p/n 13773-001)

SR22 Illustrated Parts Catalog (p/n 13774-001)

9. WEIGHT AND BALANCE

N/A

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10. MATERIAL INFORMATION

The following parts are required to comply with this Service Bulletin.

Please contact supplier for replacement.

Item No.	Description	P/N or Spec.	Supplier	Quantity
1	Recoverable Data Module	24618-005	Heads Up Technologies, Inc. 2033 Chennault Ste 100 Carrollton, TX 75006 972-980-4890 800-367-4770	1

11. ACCOMPLISHMENT INSTRUCTIONS

- A. Remove key from ignition.
- B. Set BAT 1, BAT 2, and AVIONICS switches to OFF positions.
- C. Pull FUEL QTY, GPS NAV GIA 1, and STALL WARNING circuit breakers.
- D. Remove access panel RE2. (Refer to AMM 6-00)
- E. Remove access panel LE1. (Refer to AMM 6-00)
- F. Remove rudder. (Refer to AMM 55-40)
- G. Remove existing RDM.

Note: To facilitate access to RDM cable and cable ties, the pitch trim cartridge may be disconnected from the aft empennage bellcrank. (Refer AMM to 27-30)

- (1) Remove cable ties securing RDM cable to empennage.
- (2) Disconnect RDM connector from wire harness.
- (3) Remove screws and washers securing RDM to empennage. Remove RDM from airplane.
- H. Package removed RDM and ship to Heads Up Technologies to receive a replacement RDM.
- I. Install replacement RDM.
 - (1) Position RDM to empennage and secure with screws and washers.
 - (2) Connect RDM connector to wire harness.

WARNING: Verify no interference exists between RDM cable and flight controls.

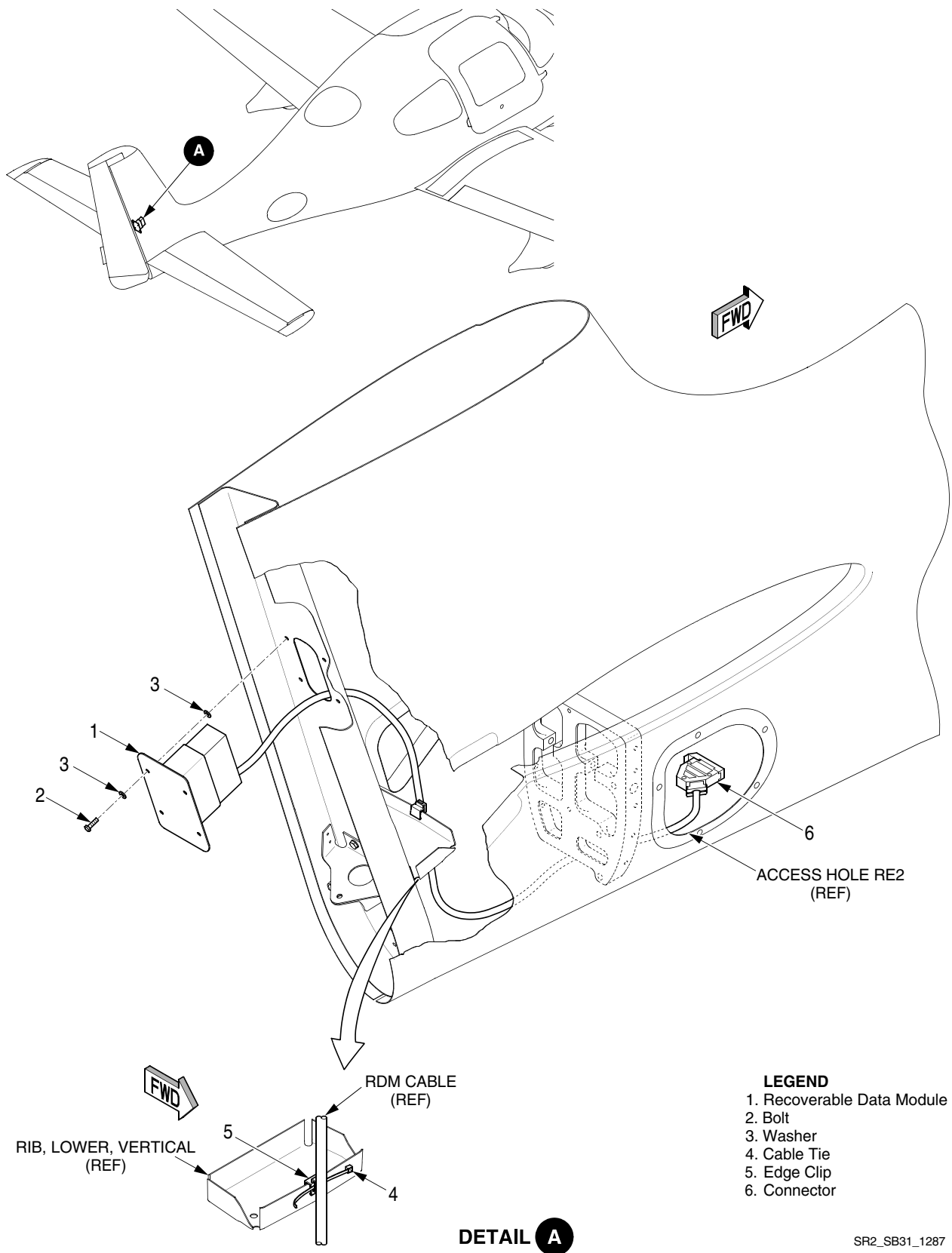
- (3) Install cable ties securing RDM cable to empennage.
- (4) If disconnected during removal, connect pitch trim cartridge to aft empennage bellcrank. (Refer to AMM 27-30)
- J. Reset FUEL QTY, GPS NAV GIA 1, and STALL WARNING circuit breakers.
- K. Perform Operational Test - Aircraft Data Logger System.
 - (1) Set BAT 1 switch to ON position.
 - (2) Open center armrest console and remove glove box trim to access diagnostic LED. (Refer to AMM 25-10)

- (3) Verify diagnostic LED indicates normal operation as described by condition 5 below. If diagnostic LED does not indicate condition 5, use the table to troubleshoot.

Note: During system power-up sequence, the diagnostic LED will briefly cycle through conditions 1, 3, and 4 before reaching final condition 5.

Condition	LED Status	RDM Status	Troubleshooting
1	Off	No power to RDM	Verify power connections to RDM. If condition remains, replace RDM. If condition still remains, contact Cirrus for disposition.
2	Steady on	RDM failure	Verify power and data connections to RDM. If condition remains, replace RDM. If condition still remains, contact Cirrus for disposition.
3	Flashing 0.25 second on, 0.25 second off	RDM initializing	Verify power and data connections to RDM. If condition remains, replace RDM. If condition still remains, contact Cirrus for disposition.
4	Flashing 1.0 second on, 1.0 second off	No data from GIA 63W Integrated Avionics Unit	Verify data connections from GIA 63W to RDM. If condition remains, replace RDM. If condition still remains, contact Cirrus for disposition.
5	Three to four 0.03 second flashes per second	Normal operation	-

- (4) Install glove box trim. (Refer to AMM 25-10)
- (5) Set BAT 1 switch to OFF position.
- L. Install rudder. (Refer to AMM 55-40)
- M. Install access panel LE1. (Refer to AMM 6-00)
- N. Install access panel RE2. (Refer to AMM 6-00)
- O. Complete airplane records by noting compliance with SB 2X-31-05 R2 in Aircraft Logbook.



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Figure 1
Recoverable Data Module Installation

EFFECTIVITY:
Cirrus Design SR22 Serials 3026 thru 3368 w/ Per-
spective Avionics.

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Service Loop Evaluation Form

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Contact Information:

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Chapter Number: Section Number: Figure No (IPC or WM only): _____

Page Number: Page Date: Illustration Number (if applicable): _____

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Please rate the quality of the illustrations.	(good)	4	3	2	1	(poor)
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Are the Material and Accomplishment Instructions accurate?	(good)	4	3	2	1	(poor)
Is the Manpower estimate accurate?	(good)	4	3	2	1	(poor)

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