

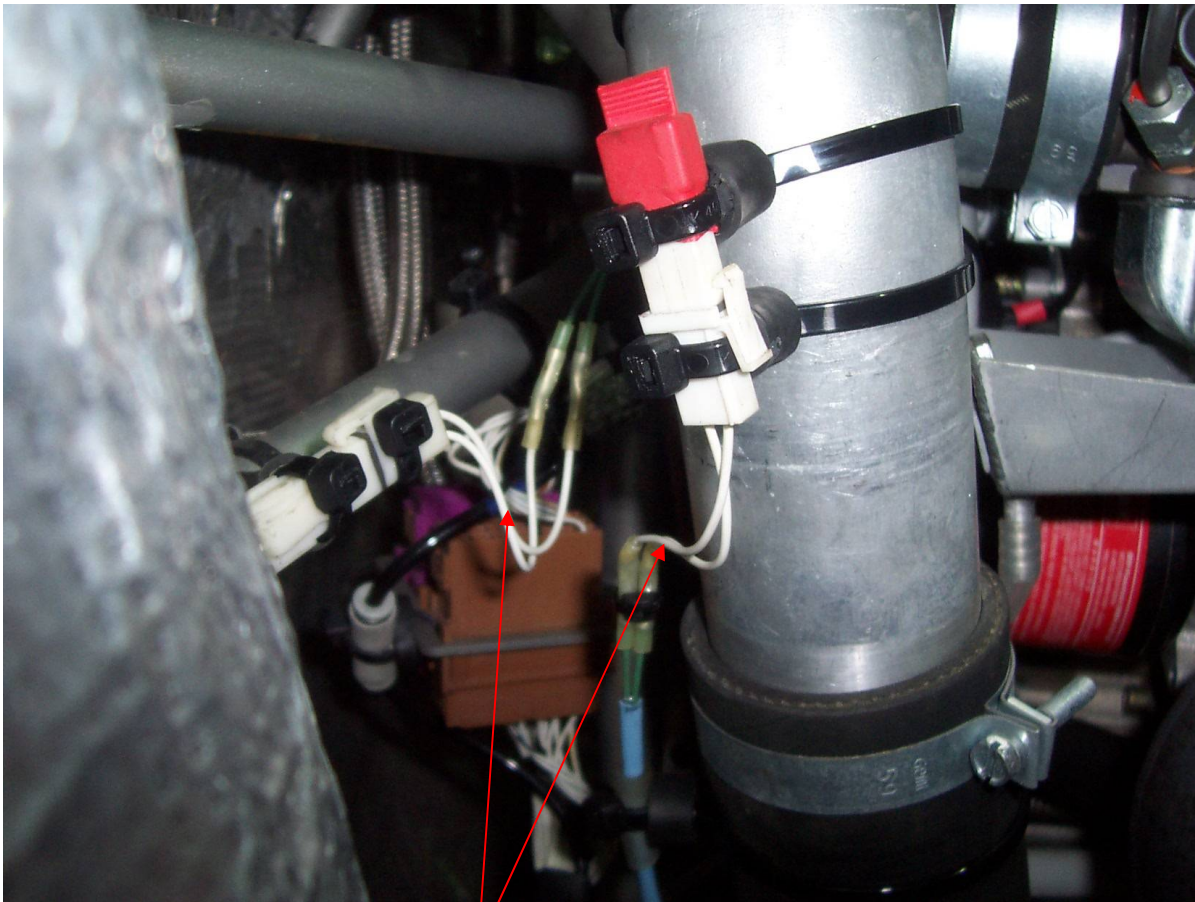
RotorSport UK Ltd Service Bulletin

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|---|---|--|
| Title: Fire-warning cable terminal improvement | | |
| SB No.: 081 Iss1 | Related documents MC No:271 CCAR No.: 017, 052 | Compliance Category: OPTIONAL or RECOMMENDED or MANDATORY |
| Applicability | | |
| Aircraft type & model: Calidus Cavalon | Aircraft serial Nos. affected: RSUK/CALS/001 onwards RSUK/CVLN/001 onwards | |

This form is the response from RotorSport UK Ltd either against a problem found in the product in service requiring a containment or rectification action, or as service information for aircraft modification incorporation. For help, contact RotorSport on 44(0)1588 650769, or email info@rotorsport.org.

Reason and overview of the Service Bulletin (cause of problem if known)

The fire-warning system fitted to Calidus and Cavalon aircraft makes use of a special sensing cable (Protectowire) that has rigid steel conductors with a meltable coating. Terminating and joining this special cable has been difficult to achieve and unreliable in service, as the rigid conductors are difficult to crimp into the small connector terminals and are prone to open-circuit failure from vibration. By introducing short lengths of flexible cable the connector crimps can be made more reliable and larger insulated butt-crimps used to join to the rigid cable.



Installation on Cavalon

Approval

The technical content of this document is approved under the authority of the UK CAA Design Organisation Approval Ref: **DAI/9917/06**

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| <p><u>Manpower estimates</u> Accomplishment of this Service Bulletin SB-081 requires the following personnel (i) A3-7 Authorised engineer</p> <p>Estimated manhours to complete the task as a standalone item are; 0.5hrs</p> | | |
| <p><u>Tooling required</u> Connector terminal extraction tool Proprietary crimp pliers with tooling for insulated butt-crimps Hot-air gun</p> | | |
| <p><u>Weight and Balance Effects</u> No effect</p> | | |
| <p><u>Manuals affected</u> Calidus AMM RSUK0061 and Cavalon AMM RSUK0288 amended to recognise MC-271 and this SB-081 at next issue.</p> | | |
| <p><u>Previous Modifications that affect the SB</u> None</p> | | |
| <p><u>Accomplishment instructions (Action required to implement this bulletin):</u> Effective date of this SB-081 is 03.03.14 There is no relevant MPD or other outside body documentation to be referenced. This task may be carried-out by any A3-7 approved person.</p> <ol style="list-style-type: none"> 1) Making reference to the aircraft AMM remove the aircraft cowlings to gain access to the white connectors that are: <ul style="list-style-type: none"> ② joining the blue Protectowire to the aircraft wiring loom ② joining the blue Protectowire to the terminating resistor Remove cable-ties as required for access 2) Remove the Protectowire cable ends from the connector shell and remove the crimp terminals by cutting free 3) Fit a 50-60mm length of #22AWG Raychem cable with a new crimp terminal and locate into the connector. Dress the other end to length and connect to the Protectowire with a butt-crimp. Repeat for the other cables. Heat-shrink the sleeving and cable-tie the installation as required. 4) Remove the terminating resistor to test the system with deliberate open-circuit – the red warning light should illuminate to a “solid” condition when the master switch turned on. 5) Connect together the two terminals, so simulating a fire-warning. The red warning light should flash continuously until reset by the master switch | | |

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| 6) Connect either terminal to ground so simulating a fault to ground. The red warning light should illuminate to a “solid” condition when the master switch turned on | | |
| 7) Remove all test cables and replace the terminating resistor, using cable-ties to attach to the engine frame. Turn on the master switch to test the system in its normal state. The red warning light should flash three times then go off. | | |
| 8) Replace the cowlings | | |
| <u>Material information (Parts required to be made to implement this service bulletin):</u> No parts manufactured during embodiment | | |
| <u>List of components (with purchasable part nos)</u> Raychem cable #22AWG white (RSD4623) – approximately 240mm Insulated butt-crimp (RSD4790) – 4-off Cable-tie 2.4mm (RSD4206) - as required Cable-tie 4.7mm (RSD4207) - as required | | |
| <u>Interchangeability</u> Not affected | | |
| <u>Parts disposition</u> a) Disposal requirements (whether discard or re-use) - dispose of removed cable-ties and crimp terminals in normal waste. b) Environmental hazards of parts containing hazardous materials - none c) Scrap requirements – eg mutilate scrapped items beyond use – not applicable | | |
| <u>Documentation (Service Bulletin Completion action)</u> a) Entries within the aircraft logbooks - CAA BCAR A3-7 Authorised Person to certify that the work is completed by writing ‘SB-081 incorporated’ in the aircraft logbook white pages, and record the action in the pink pages entitled ‘Aircraft Modifications’. Both entries must be signed by the CAA Authorised Person together with their CAA Authorisation number. b) Completion of an SB worksheet (attached), This contains a PMR statement and a final check item that no tools or equipment have been left within the aircraft) | | |

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| Document approval signatures | | | |
| Engineering Manager | CVE (as required) | Chief Test Pilot (if flight performance or safety effect) Not required | Head of Airworthiness |

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| Service Bulletin implementation Worksheet | | | |
|--|--|-------------------------------|----------------------|
| Aircraft type: | Serial no: | G- | |
| Worksheet completed by: | | Document ref: | |
| Worksheet cross-checked by (if applicable): | | SB-081 Iss1 | |
| Purpose – record service bulletin implementation actions taken to inspect aircraft and return to service. | | | |
| Maintenance manual referred-to and issue level/date: | Calidus - RSUK0061 Iss6 (date tba) Cavalon – RSUK0288 Iss4 (date tba) (Delete as applicable) | | |
| Note: attach SB sheets to this document | | | |
| Task | Notes | Eng'r check/date | Inspector check/date |
| Remove cowlings noting any damage | If cracks or splits found refer to RSUK If cosmetic damage found advise owner | | |
| Replace terminations as described in SB-081 | | | |
| Test system by switching-on master switch <ul style="list-style-type: none"> ⌚ Open circuit ⌚ Short circuit (simulated fire-warning) ⌚ Fault to ground | | | |
| Replace terminating resistor and verify correct system function on power-up | | | |
| Refit cowlings | | | |
| | | | |
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| | | | |
| Customer acceptance: | | | |
| Name: | | Aircraft hobbs meter reading: | |
| Signature/date: | | Confirm logbooks annotated: | |
| Permit Maintenance Release: | | | |
| <i>'The work recorded above has been completed to my satisfaction and in that respect the aircraft is considered fit for flight. I confirm that no tools, equipment or debris have been left in the aircraft'</i> | | | |
| Engineer signature and date: | | Location where work completed | |
| CAA Authorisation code : | | | |