

RotorSport UK Ltd

Service Bulletin

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. Upon completion of the action, the person responsible must enter details into the aircraft logbook/worksheet with the SB and/or CAA MPD (Mandatory Permit Directive) number and sign as normal (see instructions below). For help, contact RotorSport on 44(0)1588 650769, or email info@rotorsport.org.

SB No.: 046 Iss1	CCAR No.: None	Classification:
Aircraft type & model (applicability) RotorSport UK Calidus	Aircraft serial Nos. effected RSUK/CALS/001-017	OPTIONAL or RECOMMENDED or MANDATORY

Problem description & cause of problem if known

The fire-warning system installed in Calidus utilises a special “linear heat detector” cable (LHD) installed in a loop around the engine. When subject to localised heat this cable deforms and its internal conductors make electrical contact, this being detected by the Fire-Warning Module fitted in the cockpit.

This cable is attached to a number of mounting points by means of nylon cable ties and/or stand-offs manufactured from short lengths of rubber hose. Although two ties are used at each mounting (one “loose” around the LHD and one “tight” around the fixing point) it is possible that a nuisance-trip could occur due to the LHD collapsing under the cable tie and making the electrical contact.

An improvement may be made to each mounting by fitting a short length of silicone sleeving under the “loose” cable-tie.

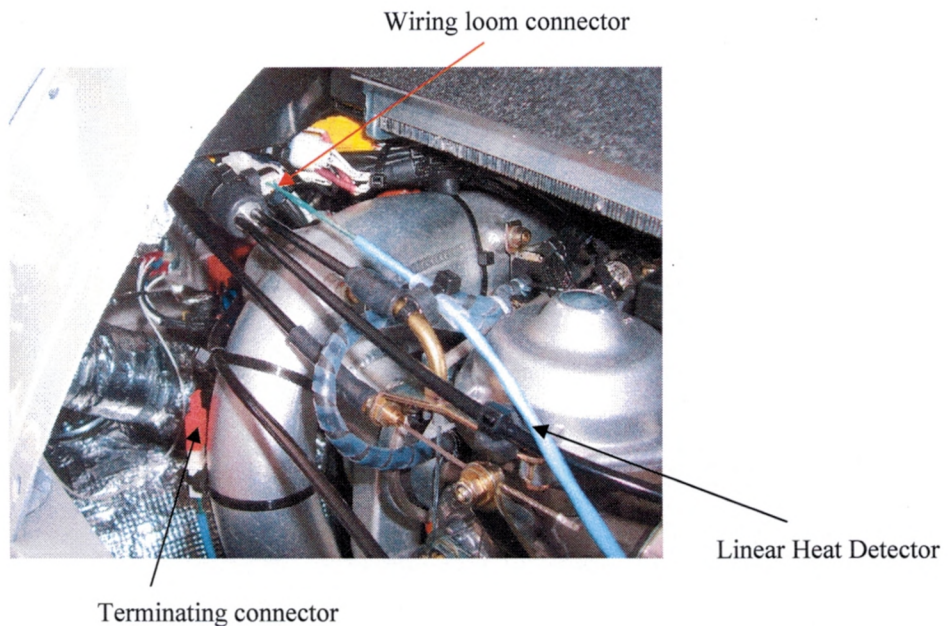
Action required to implement this service bulletin

1. Remove the upper and lower engine cowlings from the aircraft, disconnecting the cable from the external battery-charging connector.

Effective date:
02.06.11

2. Identify the LHD terminations, one has the wiring loom connector, the other has the terminating connector
Cut the cable tie, remove the terminating connector and using special tool AMP 189727-1 extract the inserts from the opposite mating housing. This will enable lengths of silicone sleeving to be fitted over the LHD.

Photo below shows a 914UL installation. The 912ULS installation is similar.



3. Count the number of retaining ties fitted to the LHD. Slide this number of sleeves RSD4653 over the LHD

4. Refit the connector pins, replace the terminating device and replace its retaining cable-tie.

5. Progressively cut the “loose” cable-tie at each mounting position, move the sleeves past then fit the last sleeve at the mounting position using a new cable-tie. Tighten just enough to retain the sleeve without crushing.
(NB: This progressive sequence enables the routing of the LHD to be retained)

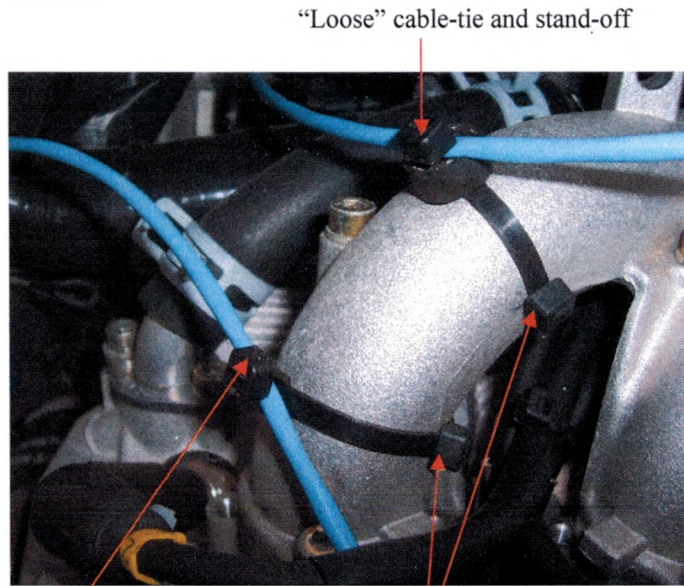
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Photo before modification

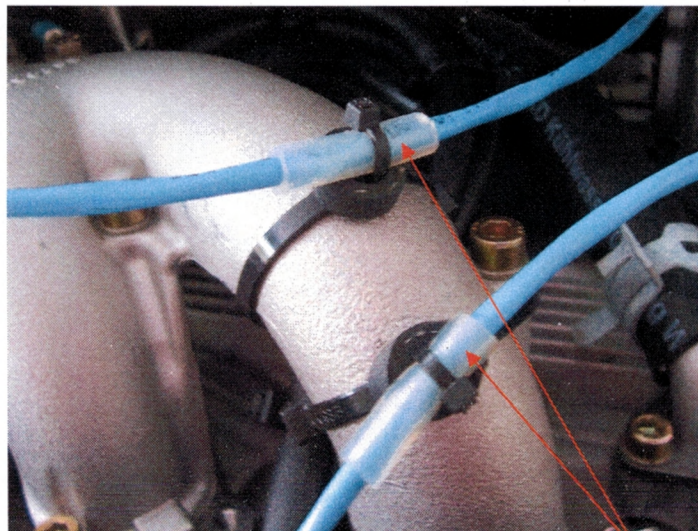


“Loose” cable-tie and stand-off

“Loose” cable-tie

“Tight” cable-ties

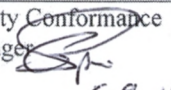
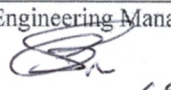
Photo after modification



Sleeves held firmly but not crushed

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<p>6. Test the operation of the Fire-warning system by switching on the Master switch. The system will self-test by illuminating the LED with a pulse red three times then off. If the LED flashes red rapidly and continuously then the LHD cable has been damaged. A solid red indicates system fault which should be investigated (consult RSUK for further information) If the self-test is satisfactory turn off the Master Switch.</p> <p>7. Replace the engine cowlings ensuring that the external battery-charging point is reconnected and that the two vent pipes are correctly fitted through the cowling.</p> <p><u>Parts required to implement this service bulletin</u> Silicone sleeves RSD4653 – set of 20 includes spares Cable-ties (as required)</p>				
<p>Effect on Pilots Handbook or Maintenance Manual? Yes – new text to be incorporated in next revision of Maintenance Manual</p>				
<p>Service Bulletin Completion action: Complete the bulletin implementation worksheet and Issue Permit Maintenance Release Certificate</p> <p>CAA BCAR A3-7 Authorised Person to certify that the work is completed by writing ‘SB-046 Fire-Warning cable sleeves fitted’ 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.</p>				
<p><i>The technical content of this document is approved under the authority of the UK CAA Design Organisation Approval Ref: DAI/9917/06</i></p>				
<p>SB authorised by: (name, signature, and date of signature)</p>				
Quality Conformance Manager  6.9.11	Engineering Manager  6.9.11	Chief Test Pilot (if flight performance or safety effect) N/A CS	CVE (where required)  5.9.11	
Document completion date:	Issued to:	When	Issuer name	Signature
	Internal			
	CAA			
	Owners			
	PFA/BMAA Inspectorate	No		

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Service Bulletin

Aircraft serial no. Registration G-	<h3 style="margin: 0;">Service Bulletin implementation Worksheet</h3>	Date raised: Raised by:	
Purpose – record service bulletin implementation actions taken to inspect aircraft and return to service.		Document reference: SB-046	
Maintenance manual referred to and issue level/date:			
Note; attach SB sheets to this document			
Task	Notes	Eng'r check/date	Inspector check/date
Confirm fire-warning self-test satisfactory			
Check that the fuel and oil vent pipes are correctly pulled through the cowling without any kinks*	*VERY important		
Check that battery charging cable is reconnected			
Customer acceptance: Name: Signature/date:		Aircraft hobbs meter reading Confirm logbooks annotated:	
Permit Maintenance Release: The work recorded above has been completed to my satisfaction and in that respect the aircraft is considered fit for flight.			
Engineer/Inspector signature Name: CAA Authorisation code :		Date of work Location where work completed	

PLEASE FAX THIS BACK TO 01588650769 (or send by email to info@rotorsport.org)