

# RotorSport UK Ltd

Poplar Farm, Prolley Moor, Wentnor, Bishops Castle, Shropshire, SY9 5EJ

## Service Information Letter

**SIL-013**

**Issue: 2**

**Dated: 23.07.13**

**CCAR no: CCAR-026**

The purpose of this document is to communicate information that may be of benefit to pilot owners of RotorSport aircraft. If there is any clarification required of the content of the letter, contact RSUK on 44(0)1588 650769, or email [info@rotorsport.org](mailto:info@rotorsport.org). Document completed iaw BP 2.20.

### Aircraft type & model applicability:

All Calidus aircraft

Any MT-03 and MTOsport fitted with low-fuel level sensor (see below)

### Aircraft serial numbers affected:

RSUK/CLDS/001 onwards

RSUK/MT03/any, RSUK/MTOS/any (see below)

## Subject: 2-year replacement of low-fuel-level sensor

### Safety effect:

Contingent

### Weight and CG effect:

None

### Background:

The low-fuel warning system of RSUK aircraft utilises an optical solid-state sensor fitted in the left-hand fuel tank where it is permanently immersed in fuel. These sensors are defined by the manufacturers as fuel-resistant.

Continued Airworthiness review of these sensors indicates that they may be rendered unable to detect a low fuel level in service over time, as a result of additives used in forecourt Mogas degrading their characteristics. RotorSport is unable to determine which fuel source or additives, or why, as this information is unavailable, and as this unregulated fuel may be changed at will by the manufacturer.

RotorSport recommend that, where used with Mogas, the low fuel warning sensor is replaced at two yearly intervals.

Alternatively, RotorSport recommend a system functional check (that the low fuel warning lamp lights with low fuel) at six monthly intervals. This is readily accomplished by syphoning or pumping the bulk of the fuel from the filler inlet then draining the final few litres through the drain valve under the aircraft.

### Discussion:

Two types of sensor have been fitted to RSUK aircraft, manufactured respectively by Honeywell (Part number RSD4335) and Optomax (Part number RSD4555). Earlier aircraft were fitted with the Honeywell sensor and later aircraft with the Optomax sensor. However, it should be noted that SB-028 (Mandatory for MTOS/024 to 036 inclusive under MPD 2010-005 R1) refers to replacement of the Honeywell sensor with the Optomax type. Some other MTOS and MT-03 may also have been fitted with the Optomax sensor during field-service, so either type may be found installed. The two devices are visibly different, as shown by the photographs below:



Honeywell sensor (plastic body)



Optomax sensor assembly (aluminium housing)

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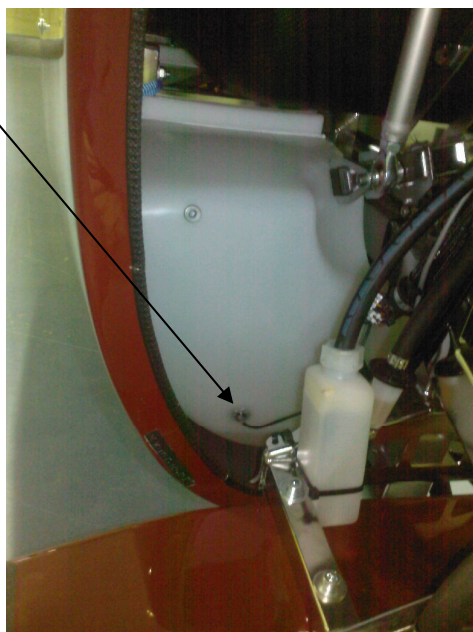
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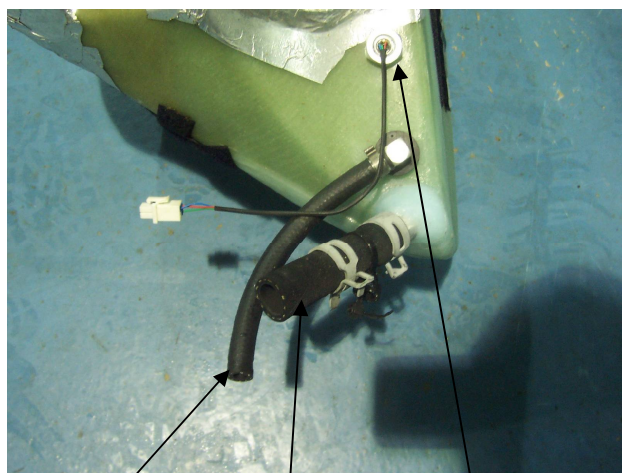
The fuel sensor of MT-series aircraft is readily accessible from the rear of the aircraft - see AMM's RSUK0012 (MT-03) and RSUK0044 (MTOsport)



To access the fuel sensor in Calidus aircraft it is necessary to drain all fuel and remove the left-hand fuel tank (see AMM RSUK0061). Only Optomax sensors will be found in Calidus aircraft.



Tank removed from LHS of aircraft



Delivery hose    Transfer hose    Sensor

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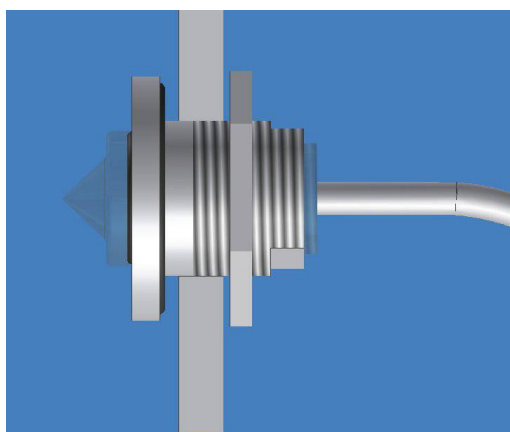
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RSUK/MT03/any, RSUK/MTOS/any (see below)



Installation arrangement for Optomax sensor assembly  
(sensor, aluminium housing, O-rings and back-nut)

**Recommendation:**

The low-fuel sensor RSD4555 or RSD4335 should be replaced every two years (alternatively function checked every six months). Replacement sensors are supplied with metal housing, O-ring and back-nut as Installation kit RSD7195.

Any "Honeywell" sensor RSD4335 may be replaced with the "Optomax" device by embodiment of Service Bulletin SB-028.

**References:**

None

**Approval Statement:**

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

**Effect on Pilots Handbook or Maintenance Manual:**

Additional text to be added to next issue of each AMM RSUK0012 (MT-03), RSUK0044 (MTOsport), RSUK0061 (Cavalon).

**SIL authorised by:**

Quality Conformance Manager	Engineering Manager	Chief Test Pilot (if flight performance or safety effect)	Head of Airworthiness or CVE (where required)
Name: G Speich	Name: G Shaw	Name:  Not required	Name:
Signature and date:	Signature and date:	Signature and date:	Signature and date: