

# RotorSport UK Ltd

## Service Bulletin

This form is the response from RotorSport UK Ltd against a problem found in the product either in service or test, which requires an immediate action.

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.

If any problems with carrying out the work authorised, contact RSUK immediately on 44(0)1588 650769, or email [info@rotorsport.org](mailto:info@rotorsport.org).

<b>SB No.: 028 issue 1</b>	CCAR No.: None	Classification: <del>OPTIONAL</del> or <del>RECOMMENDED</del> or <b>MANDATORY</b>
Aircraft type & model (applicability) RotorSport UK MTOsport series	Aircraft serial Nos. effected RSUK/MTOsport serial 24 to 036	

### Problem description & cause of problem if known

MTOsports, and , where fitted, MT-03's, have a low fuel level warning system. This uses an LED based sensor, mounted through the rear wall of the left fuel tank. It has been found that some of a batch of these sensors is able to fail in such a manner that the sensor can fall out of the tank and allow the fuel to escape to the low fuel warning level (the warning lamp illuminates when the sensor sees air). The cause is not fully determined, but believed to be component material inconsistency.

This bulletin is for replacement of the sensor with a new type of sensor, embedded in a metal housing.

This service bulletin may also be used to replace sensors in MT-03 or MTOsport gyroplanes unaffected by the mandatory modification.

Safety effect: Major

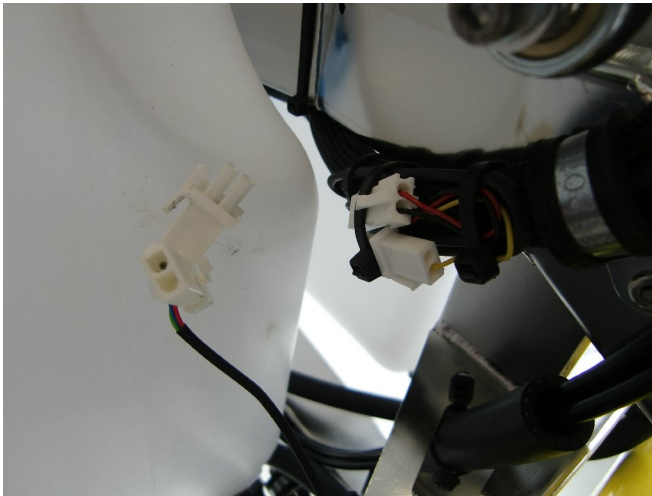
Parts required to implement this bulletin: Replacement sensor: kit RSD7195, Loctite 243 and electrical tool AMP tool 189727-1 or equivalent, length of stiff wire

Effective date:  
14.07.10

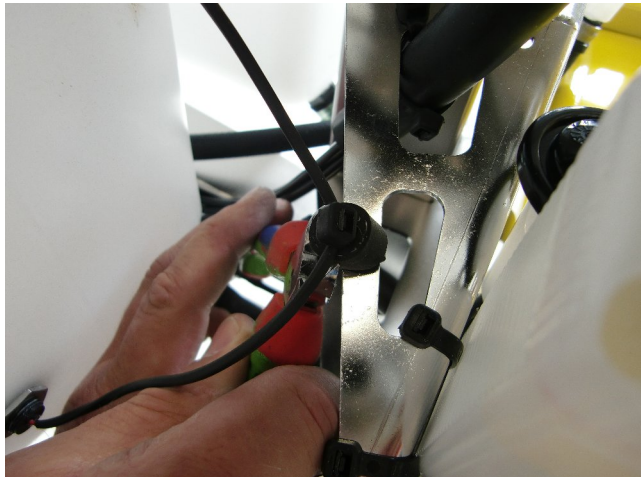
### Action required to implement this bulletin:

Disconnect the battery earth lead and drain the aircraft of fuel (see manual). Then,

1. Disconnect the sensor...



...and remove the cable from the airframe.



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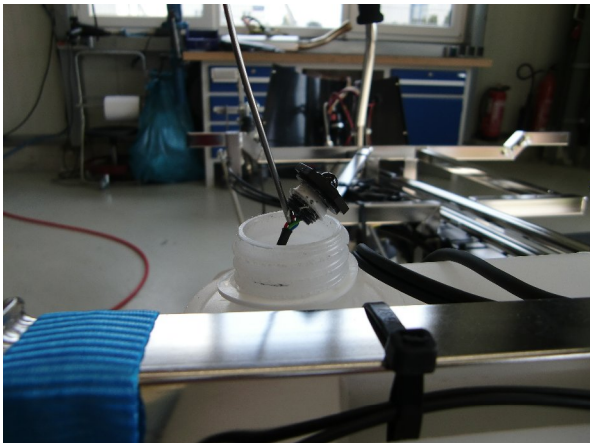
2. Remove cables from original connector plug noting which colour goes to which pin, using AMP tool 189727-1 or equivalent. Retain the connector plug for re-use! Unbolt the low fuel sensor with screw driver and combination wrench.



...and drop the sensor into the fuel tank.



Remove the sensor with the rubber washer from the fuel tank through the filler neck with a wire.



Ensure the washer is removed, in case it falls off the cable, together with any glue/loctite remains.

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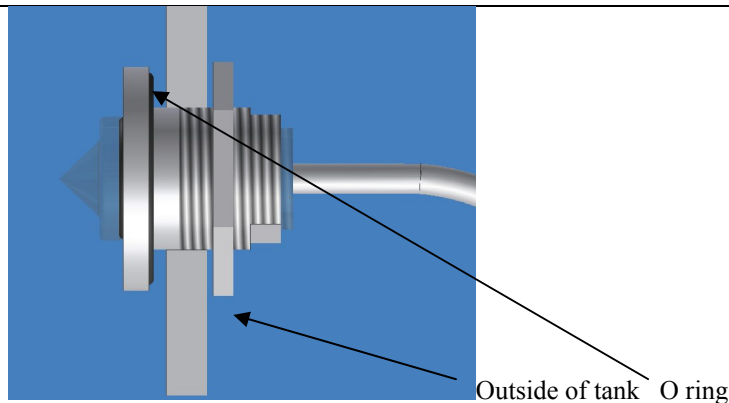
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3. Using a suitable drill, enlarge the tank hole to 14mm, and ensure any debris is removed from the tank. Deburr the hole.
4. **Ensure the tank is clean and free of sealant residue.** If necessary clean the inside of the fuel tank with compressed air.
5. Using a bent wire, pull the sensor assy through the tank and through the hole, ensuring the O ring is fitted to the groove in the metal sleeve. Apply Loctite 243 to the threads, fit nut, and tighten securely. An 11mm AF spanner will fit over the end of the sensor housing to aid tightening. No sealant is needed.
6. Push sensor pins into the plug in the same orientation as the original ones, noting that blue replaces black. Reconnect sensor to aircraft loom, and secure with plastic ties.
7. Reconnect the earth lead.
8. Turn on aircraft electrics with the keyswitch. The low fuel warning must illuminate. If it does not, recheck connections or replace sensor. If OK, turn keyswitch off, and add fuel to tanks to a level above the sensor. Turn keyswitch on; low level warning lamp must not light. Check also for leaks. Rectify as required, and then release to service.



Computer view of sensor loosely fitted to the fuel tank, tank wall sectioned for clarity.

Effect on Pilots Handbook or Maintenance Manual?

Yes, to be noted in the next issue of the maintenance manual

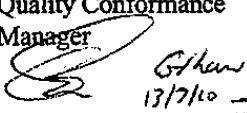
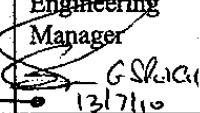
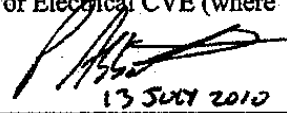
Service Bulletin Completion action:

Complete the bulletin implementation worksheet, and issue Permit Maintenance Release Certificate

CAA BCAR A3-7 Authorised Person to certify that the work is completed by writing 'Sensor replaced as per SB-028' 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.

SB authorised by: (name, signature, and date of signature)

<b>Quality Conformance Manager</b>  13/7/10	<b>Engineering Manager</b>  13/7/10	<b>Chief Test Pilot (if flight performance or safety effect)</b> NOT REQUIRED	<b>Structures or Electrical CVE (where required)</b>  13 JULY 2010	
Document completion date:	Issued to:	When	Issuer name	Signature
	Internal			
	CAA			
	Owners			

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## Service Bulletin

Aircraft serial no.  Registration G-	<b>Service Bulletin implementation Worksheet</b>	Date raised:  Raised by:	
Purpose – record service bulletin implementation actions taken to update aircraft and return to service.		Document reference: <b>SB-028</b>	
Maintenance manual referred to and issue level/date:			
Note; attach SB sheets to this document			
<b>Task</b>	Notes	Eng'r check/date	Inspector check/date
Confirm Low fuel warning lamp illuminates with low fuel			
Confirm no fuel leaks			
Confirm low fuel warning lamp does not illuminate when the fuel level is above the sensor.			
Confirm Loctite 243 used on the sensor nut threads			
Confirm battery earth lead tightened securely			
Confirm sensor cable secured.			
Confirm fuel drain wirelocked (if removed)			
Customer acceptance: Name:  Signature/date:	Aircraft hobbs meter reading  Confirm logbooks annotated:		
<b>Permit Maintenance Release: The work recorded above has been completed to my satisfaction and in that respect the aircraft is considered fit for flight.</b>			
Engineer/Inspector signature  Name: CAA Authorisation code :	Date of work  Location where work completed		