

# RotorSport UK Ltd Service Bulletin (Permit)

<b>Title: Cavalon fuel-tank inlay ring</b>		
<b>SB-109 Iss1</b>	<b>Related documents</b> Modification: MC-347 CCAR No.: None	<b>Compliance Category:</b>  <del>OPTIONAL</del> <small>or</small> <b>RECOMMENDED or MANDATORY</b>
<b>Applicability</b>		
<b>Aircraft type &amp; model:</b> Cavalon	<b>Aircraft serial Nos. affected:</b> RSUK/all prior to CVLN/018	
The maintenance manual to be referenced is this stated or subsequent issue.		RSUK0288 Iss: 3
<p>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 505060, or email <a href="mailto:compliance@rotorsport.org">compliance@rotorsport.org</a>.</p> <p>The technical content of this document is approved under the authority of the UK CAA Design Organisation Approval Ref: <b>DAI/9917/06</b></p>		

## Documentation (Service Bulletin Completion action)

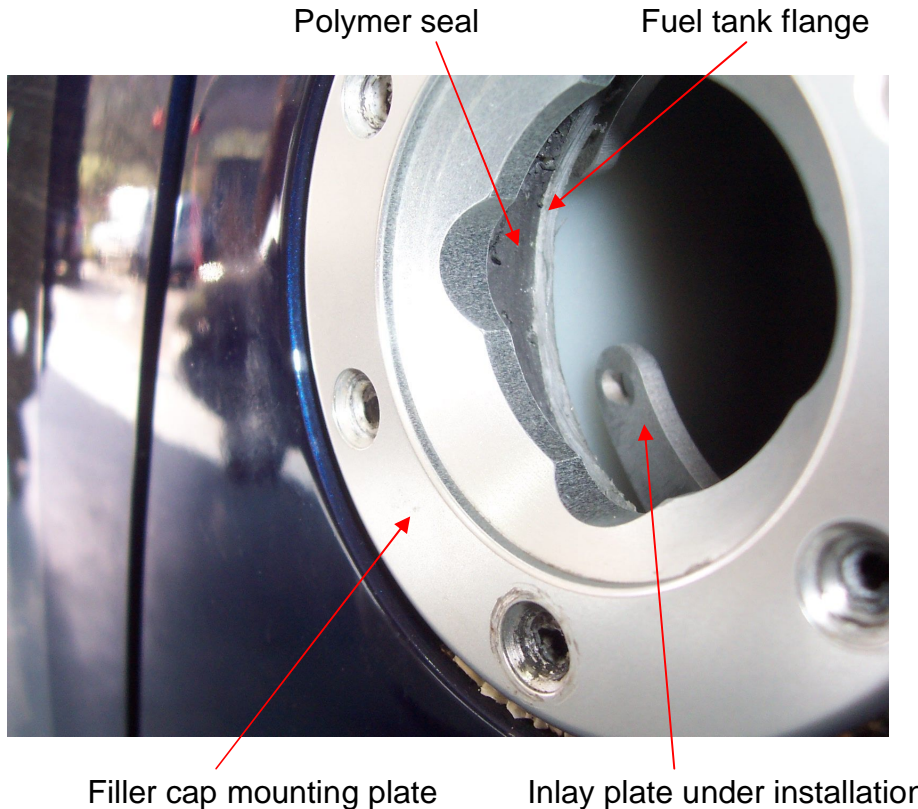
- a) Entries within the aircraft logbooks, eg CAA BCAR A3-7 Authorised Person to certify that the work is completed by writing '*SB-109 Cavalon fuel tank inlay ring incorporated*' in the aircraft logbook white pages, and record the action in the pink pages entitled 'Aircraft Modifications'. Both entries must be signed by the CAA Authorised Person together with their CAA Authorisation number.
- b) Completion of the SB worksheet attached, This contains a PMR statement, and a final check item that no tools or equipment have been left within the aircraft)
- c) A Type Approval change application document is not required.
- d) Any other Permit Maintenance Release to Service form requirements.

<b>Document approval signatures</b>			
<b>Engineering Manager</b>	<b>CVE (as required)</b>	<b>Chief Test Pilot (if flight performance or safety effect)</b>	<b>Head of Airworthiness</b>
	<b>Not required as MC-347 signed</b>	<b>Not required as no flight effect</b>	

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

Some Cavalon owners have complained of a fuel smell in the cockpit, noticeable mainly after standing with the doors closed. This has been traced to small gaps in the sealing between the fuel tank flange and the composite body. Under this service bulletin an aluminium "inlay ring" is placed inside the filler neck and by means of longer fuel filler mounting screws allows the fuel tank flange to be pulled uniformly against the seal.



## Manpower estimates

Accomplishment of this Service Bulletin requires the following personnel

- (i) A3-7 Authorised engineer

Estimated man-hours to complete the task as a stand-alone item are; 1-1/2 hours

## Tooling required

7mm AF ring spanner bent to fit fuel inlet  
Hand tools

## Weight and Balance Effects

Insignificant weight increase

## Manuals affected

POH RSUK0287 is not affected.  
AMM RSUK0288 to contain description of the modification at next revision.

## Previous Modifications that affect the SB

None

## Accomplishment instructions (Action required to implement this bulletin):

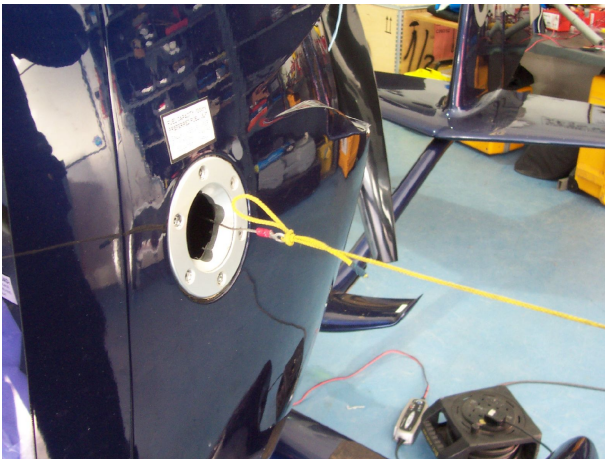
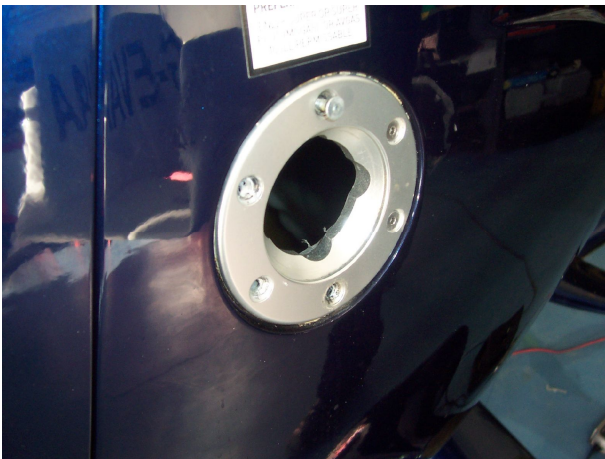
Effective date of this SB is 09.02.16

There is no relevant MPD or other outside body documentation to be referenced.

## Instructions

Position the aircraft on level ground with the brakes applied. The work detailed below may be carried-out with some fuel in the tank, but the tank(s) must not be full. Ensure that a suitable fire-extinguisher is to-hand. When drilling through the filler-neck flange ensure that no debris falls into the tank – use of slow rpm will assist, but if this does occur the fuel must be “vacuumed” out of the tank with a large-bore syphon tube

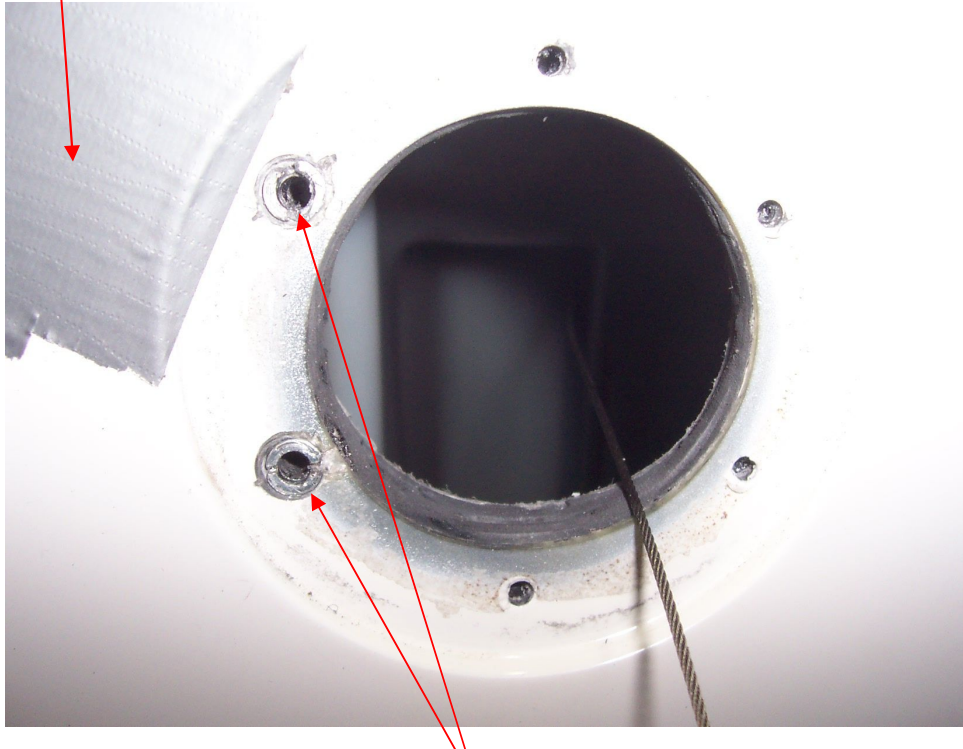
1. Using the specially formed spanner to hold and retrieve the nuts and plain washers inside the filler neck remove the 6-off M4 countersunk screws. The top screw retains the braided earth strap – attach a safety string to this to avoid loss inside the fuel tank.





- The two most fwd screw positions do not pass into the fuel tank void but into rivnuts secured in the body moulding. These must be carefully and progressively drilled-thru 4.1mm diameter. If the drill bites into the rivnut and causes it to spin in the body the fuel cap mounting plate must be removed completely by prising it off the cork gasket between it and the body. (The gasket is bonded in place with Loctite 5331 sealant). The rivnut heads may then be slotted (using a Dremmel or similar tool) to enable the rivnut heads to be held still during drilling.

Protective tape



Two rivnut heads slotted for drilling

- Replace the fuel cap mounting plate into position with its gasket and sealant.
- Form the inlay ring so that it may be "spiralled" into position inside the filler neck. Position the open slot to the front of the aircraft



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5. Fit M4 x 50 screws on the front two mountings and M4x40 screws on the others. Use an M4 stiff nut and plain washer on each screw. Ensure that the earth strap is refitted to the top-most fastener. When all fasteners are in place tighten in sequence, hand-tight only to avoid distortion of the filler neck flange

Note: the screw and nut are both stainless-steel and the threads may “pick-up” during tightening – this can be mitigated by use of a thread lubricant compatible with petrol (e.g. LM-grease or engine oil)

6. Replace the filler cap, adjusting the back nut if required to give a positive clamping action.

## **Material information (Parts required to be made to implement this service bulletin):**

No parts manufactured during embodiment

## **List of components (with purchasable part nos)**

- 1-off Fuel tank inlay plate BT42216
- 4-off M4 x 40 hex socket countersink screw (stainless-steel) RSD6414
- 2-off M4 x 50 hex socket countersink screw (stainless-steel) RSD6415
- 6-off M4 trilobal stiff-nut (stainless steel) RSD6416
- 6-off M4 x 12 plain washer RSD6111

## **Interchangeability**

No effect

## **Parts disposition**

- a) Disposal requirements – normal waste
- b) Environmental hazards of parts containing hazardous materials – N/A
- c) Scrap requirements (eg mutilate scrapped items beyond use) – N/A

# RotorSport UK Ltd Service Bulletin (Permit)

Service Bulletin implementation Worksheet			
Aircraft type: Cavalon	Serial no:	G-	
Worksheet completed by:		Document ref: SB-109 iss 1	
Worksheet cross-checked by (if applicable):			
Purpose – record service bulletin implementation actions taken to inspect aircraft and return to service.			
Maintenance manual referred-to and issue level:			
<b>Note: attach SB sheets to this document</b>			
Task	Notes	Eng'r check/date	Inspector check/date
Original screws/washers/nuts removed, none fallen into fuel tank			
Rivnuts drilled through satisfactorily			
Inlay plate installed correctly, six screws tightened, earth strap in place			
Confirm no debris in tank	Visual inspection with LED-torch		
Filler cap replaced			

Customer acceptance:	
Name:	Aircraft hobbs meter reading:
Signature/date:	Confirm logbooks annotated:
Permit Maintenance Release:	
<b><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></b>	
Engineer signature and date:	Location where work completed
CAA PMR Authorisation ref :	