

# **RIVERTRACE ENGINEERING LTD**



**109166**

**INSTRUCTIONS FOR REPLACING SMART CELL  
BILGE OIL ALARM**

**SMART CELL-BILGE**

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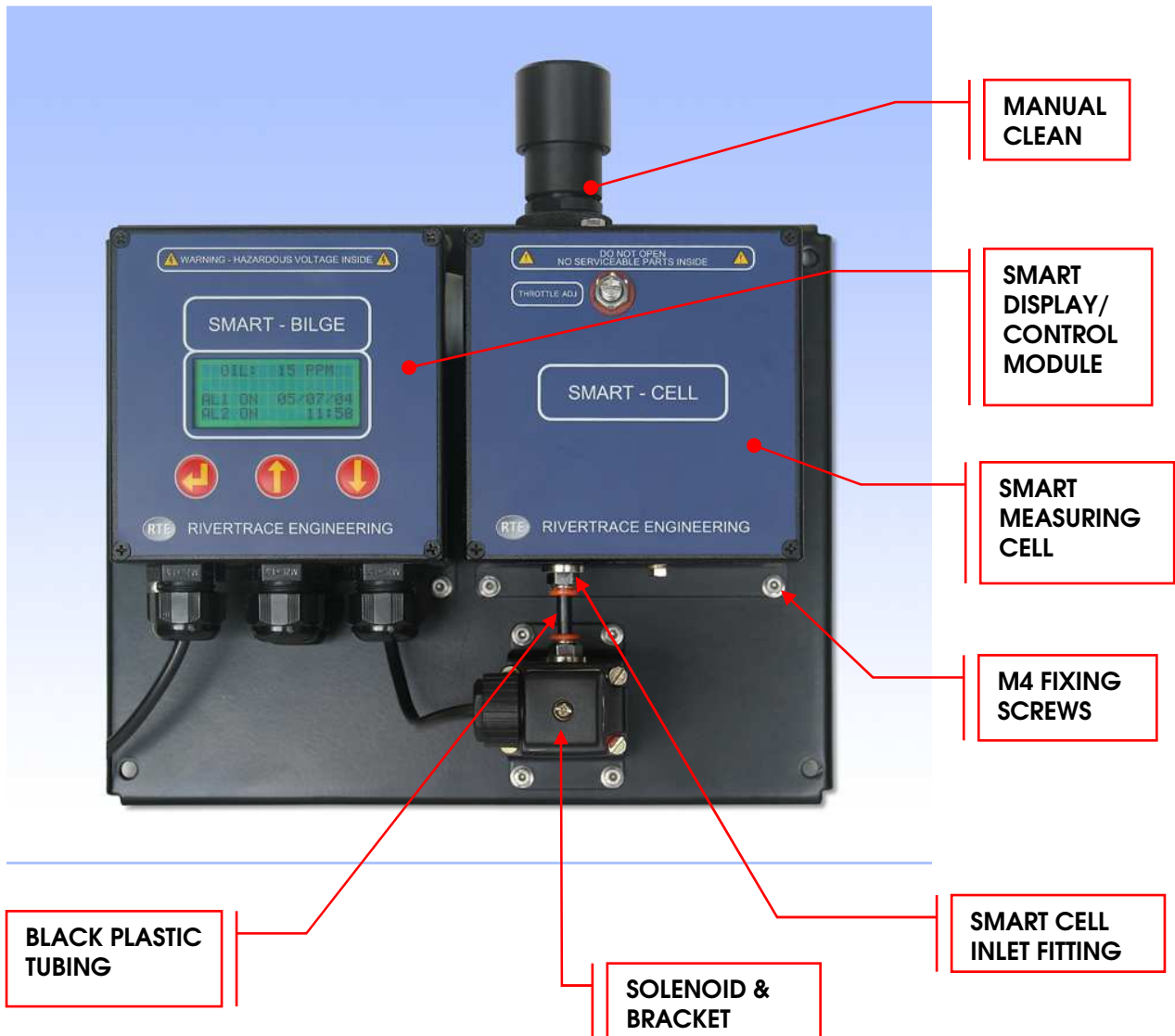
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## ***Section 1***

### ***SMART CELL - BILGE Overview***

**FIG 1.1**  
**OVERVIEW OF SMART CELL - BILGE**



### **IMPORTANT NOTICE**

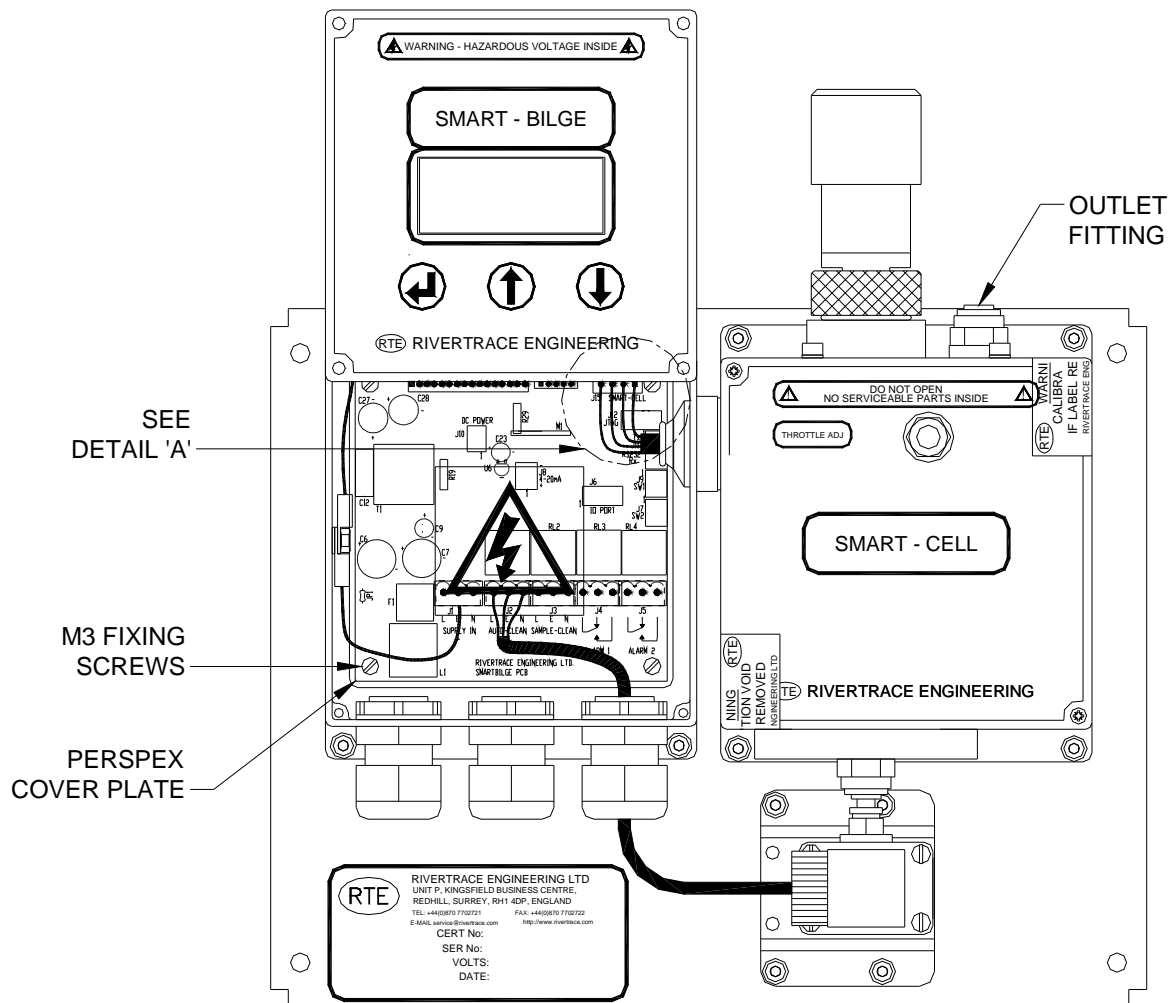
**ISOLATE THIS DEVICE FROM THE MAINS SUPPLY BEFORE ANY WORK IS CARRIED OUT  
ALL WORK TO BE CARRIED OUT BY A SUITABLY SKILLED ENGINEER**

**ENSURE THAT THE SAMPLE & CLEAN WATER SUPPLIES ARE TURNED OFF**

## Section 2

# SMART CELL Removal Instructions

**FIG 2.1**  
**POSITIONING OF DISPLAY/CONTROL MODULE LID**

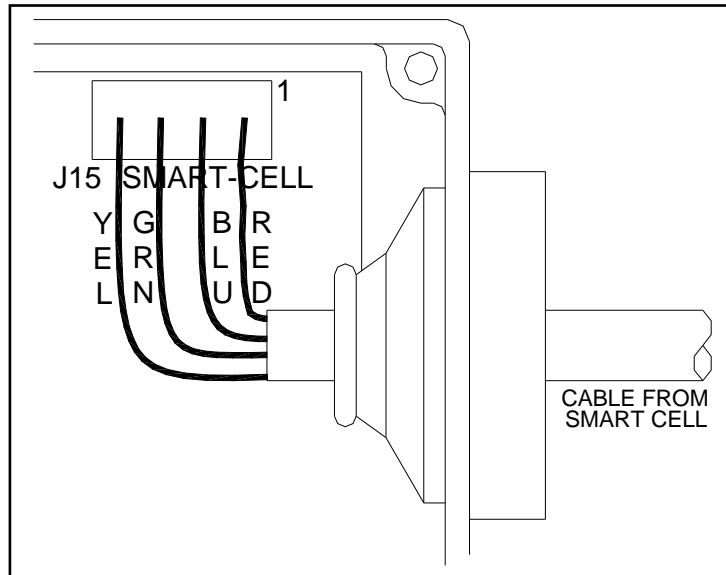


The first stage to remove the SMART CELL is to undo the 4 screws holding on the SMART DISPLAY/CONTROL MODULE Lid. These are fitted with 'O' rings, be sure not to loose these. Use 2 of the screws to secure the Lid as shown in **Fig 2.1**.

Next remove the Perspex Safety Cover, undo the 4 retaining screws which are fitted with retaining washers which should keep the screws attached to the cover plate. Put the cover plate and screws to one side.

Once the cover plate has been removed the cable connecting the SMART CELL to the SMART DIPLAY/CONTROL MODULE can be removed. This is located at the top right hand corner Identified as J15. See **Fig 2.2**.

**FIG 2.2**  
**DETAIL 'A' INTERCONNECTING CABLE**



The connector can be pulled off from the PCB to aid removal of the cable. Remove the 4 cores from the connector block by releasing the terminal screws. Place the connector block back onto the PCB to ensure it is not lost.

The SMART CELL can now be released from the backplate by removing the 4 M4 fixings screws as shown in **Fig 1.1**. Ensure that the screws, washers and lock washers are not lost as these will be required when fitting the new SMART CELL.

The Plastic Tube shown in **Fig 1.1** should now be released, by pushing back the collar on the SMART CELL inlet fitting.

The SMART CELL can now be removed from the backplate, pay attention to the interconnecting cable, which must be pulled through the rubber grommet on the SMART DISPLY/CONTROL MODULE. **REMOVE THE MANUAL CLEAN ASSY AND RETAIN FOR FITTING IN REPLACEMENT CELL**

*If being fitted to an earlier SMART BILGE Assembly the Solenoid Bracket will have to be replaced with new one separately purchased from Rivertrace. Remove the 4 fixing screws & washers holding the bracket to the backplate. Remove the solenoid valve by removing the 4 screws & washers on the under side and retain these fixings. (SEE NOTE BELOW)*

**NOTE - THIS PROCEDURE WILL ONLY BE REQUIRED IF USING AN OLDER SMART BILGE ASSEMBLY. THIS WILL BE EASY TO SEE AS THE SMART MEASURING CELL WILL LOOK DIFFERENT TO THE NEW SPARE CELL.**

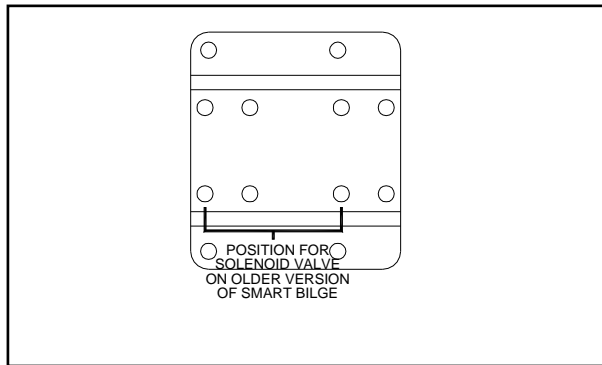
## ***Section 3***

### ***SMART CELL Fitting Instructions***

Remove the new SMART CELL from the packaging.

Position the new SMART CELL onto the backplate and feed the interconnection cable from the SMART CELL through the rubber grommet on the SMART DISPLAY/CONTROL MODULE. Push the new SMART CELL up against the SMART DISPLAY/CONTROL MODULE and lightly secure one of the M4 screws with washer and lock washer into the top right hand hole as retained from earlier.

Lightly fit the remaining 3 M4 screws with washer and lock washers. Once all are in position fully tighten.

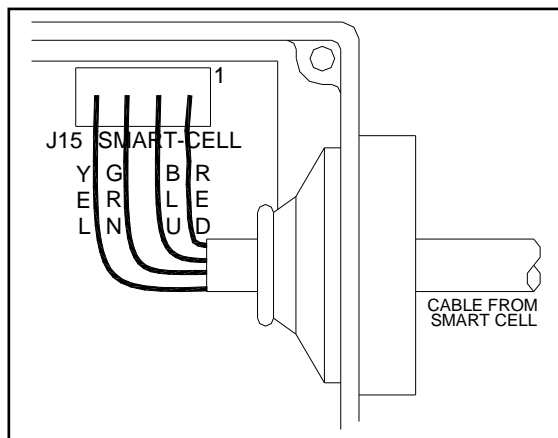


**FIG 3.1**  
**SOLENOID/BRACKET FITTING DETAILS**

*Fit the solenoid to the new bracket using the retained screws& washers in the hole positions shown opposite.  
The black plastic tube may have to be trimmed to ensure a good fit. Once this has been done push into the solenoid valve and then the SMART CELL inlet fitting.*

Next make of the interconnection cable as shown in **Fig 3.2**

**FIG 3.2**  
**INTERCONNECTING CABLE DETAILS**



Pull through the cable. Remove the connector block from the PCB and insert the cables ensuring the correct orientation as shown here and tighten the terminal screws.  
Push connector block back onto PCB.

Refit the Perspex Safety Cover Plate and lid using the screws and 'O' rings as retained.

**REFIT THE MANUAL CLEAN ASSY THAT WAS REMOVED – REPLACE WIPER IF IT LOOKS WORN WITH THE ONE SUPPLIED IN THE KIT.**

Reapply the mains supply and turn on the Sample & Clean Water supply to the unit.