KONGSBERG

RPT transponder pressure relief valve verification and repair	
Product:	Kongsberg Maritime RPT transponder
Contents:	RPT dismantling procedure RPT pressure relief valve verification and repair procedure

RPT dismantling procedure

Caution! Be careful if the RPT has failed (does not answer). The reason may be due to water ingression that can cause a pressure build up inside the transponder.

1. Switch OFF the RPT. Disconnect external cables (if any)
2. Use protective goggles.
3. Move (turn) both channel selector switches back and forth to aid the pressure relief valve opening, in case of pressure built up inside. The valve can be slightly sticky.
4. Prepare to open the transponder in a safe place, out on deck and shielded from people and vital equipment.
5. Fasten the RPT on a stable surface with the transducer against a wall or heavy object. Only the bottom end cap should be able to move.
6. Do not stand in front of the bottom end cap when opening the transponder.
7. Carefully undo the RPT locking screw about 5-6 turns.

   This should break the seal as the O-ring has emerged from the RPT housing. Possible built up pressure will now be released. The design is such that the locking screw still has 4-5 turns left, so the bottom end cap will not blow out.
8. Now the transponder can be completely dismantled.

RPT pressure relief valve verification and repair procedure

Any work must be carried out in a clean, dry area.

Ensure full anti-static precautions have been taken.

1. Dismantle the RPT according to "RPT dismantling procedure" above.
2. Unscrew the four screws holding the interconnection board (round PCB).
3. The PCB is now loose but still attached by 4 wires. Carefully move the PCB to one side so that the two channel switches and the on-off switch (in the middle) is clearly in view (see picture).
4. The on-off switch is assembled differently from the other two, it should have one circlip, and nothing else.

   The two channel selector switches are identical, but should be installed differently. One acts as rotary switch only, the other one acts both as switch and pressure relief valve.

   The one acting as rotary switch only should have one circlip installed right next to the surface of the endcap, and nothing else. The circlip is visible at the bottom of the recess.

   The other switch acting both as switch and pressure relief valve should have:
   a spring,
   a washer, and finally
   a circlip at the very end.
   Because this is recessed, only the washer and circlip are visible.

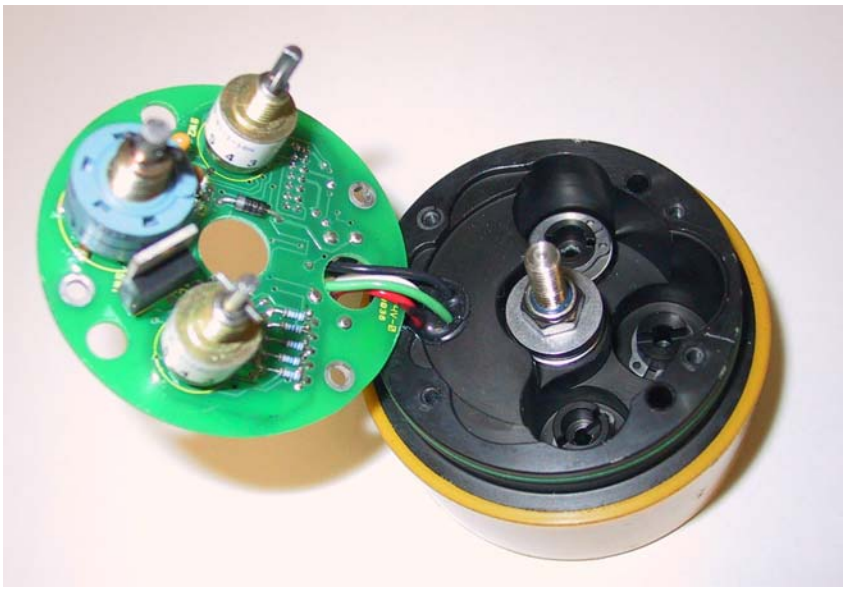
Note!
Do not at any stage during this procedure operate (open) the pressure relief valve. If the valve is opened, there is a risk of catching debris or grit on the o-ring, causing the RPT to leak. If the valve is operated/moved the RPT must undergo a new pressure test. To avoid this, make sure the outside of the valve is properly supported during the next step in this procedure.

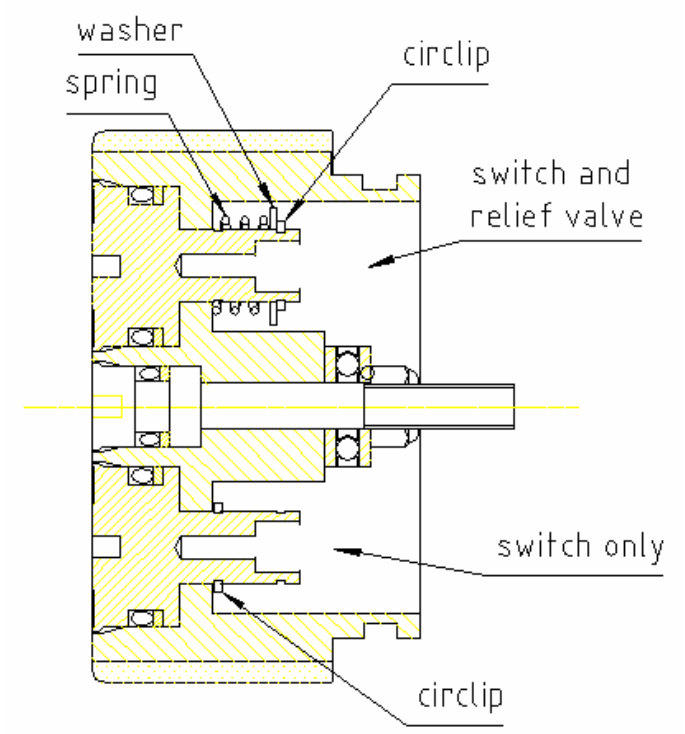
5. To verify correct installation of the relief valve, remove the visible circlip, then the washer and the spring.

   If the valve has been incorrectly fitted with a second (problem causing) circlip this will now be visible at the bottom of the recess (looking exactly like the other "switch only" switch). See attached drawing.
   Remove and discard this second circlip.

   Replace the spring, washer and top circlip, in this order.

6. Refit the PCB and replace the endcap.




washer
spring
circlip
switch and
relief valve
switch only
circlip