

COBRA Bailout System: Leakage at the Joint Between the Y-piece and the Interface Block - JFD Guidance Note

Members' attention is brought to the recent Guidance Note issued by JFD relating to the potential for leakage on the Compact Bailout Rebreathing Apparatus (COBRA) at the joint between the Y-piece and the interface block on the COBRA helmet.

For convenience, the Guidance Note has been attached overleaf as an appendix to this document, but it can also be found online at:

https://www.jfdglobal.com/files/9716/4321/3247/DB500-PGN-19_R0.pdf

For more information, please contact bill.chilton@imca-int.com.



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Background

JFD have had reports that leakage has occasionally been observed at the joint between the Y-piece and the interface block.



ISSUE

Leakage at the joint between the Y-piece and the interface block

The joint between the Y-piece and the Interface block on the COBRA helmet uses an o-ring seal. Additionally, the joint is coated with silicone RTV as a back-up measure. Although this joint has performed satisfactorily, there have been occasional reports of gas leakage in this area, especially if the helmet receives a knock or impact. The potential for leakage is increased because the spigot and bore are not circular, therefore any twisting at the joint tends to pull the o-ring away from part of the bore causing leakage.

Any time this leakage has been observed, it has been minor and the positive pressure in the COBRA set has prevented water ingress.



Figure 1 - Joint between the Y-piece and interface block with o-ring seal



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SOLUTION

A replacement o-ring has been identified, that has a larger cross section but a smaller internal diameter. This increased volume of sealing material fills the joint more fully, preventing any leak even if the Y-piece is substantially manipulated. It is not necessary or recommended to use silicone RTV in conjunction with this new seal.

This arrangement is now in service on a number of vessels operated by one COBRA user.

Users may fit this new seal to their COBRA helmets at any convenient time.

Users who are satisfied with the performance of the original arrangement may continue with this.

To fit the new seal, disconnect the helmet hose from the Y-piece and remove the clamp holding the Y-piece to the helmet. Remove the two screws fixing the Y-piece to the interface block. Withdraw the Y-piece, discard the o-ring and clean all silicone from the bore and the spigot.

Stretch the new o-ring over the spigot, lubricate and refit the Y-piece to the interface block, pulling the items together using the fixing screws. Refit the other parts, remembering to seal the clamp screws with silicone RTV where they pass through the helmet shell.

Replacement o-ring part number RN0813-7. These will be made available to users on request.

Contact:

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