

COBRA Bailout System: Various Issues – JFD Guidance Note

Members' attention is brought to the recent Guidance Note issued by JFD relating to various issues on the Compact Bailout Rebreathing Apparatus (COBRA) that have occurred recently and to provide information on future changes.

For convenience, the Guidance Note has been attached below as an appendix to this document, but it can also be found online at: https://www.jfdglobal.com/files/2916/8614/5947/DB500-PGN-23_Various_Minor_Items.pdf.

For more information, please contact Bill.Chilton@imca-int.com



COBRA Guidance Note

Background

The purpose of this Product Guidance Note is to share various (mostly minor) issues which have occurred recently and provide information relating to future changes.



ISSUE 1

A number of back covers have been supplied with alternative hinges fitted. This causes the door to remove to the right, rather than the left. A number were also supplied with the hinges fitted upside down. Although this has no immediate effect on the functionality of the set, a potential problem exists if a spare door is required.



Figure 1 - Correct Orientation



Figure 2 - Incorrect hinges and fitted upside down



SOLUTION

All spare doors are supplied with a full set of hinges, so it will be possible to fit the replacement door in all cases.

For users wishing to standardise their sets, the correct hinge pt. no. DB5004141 is available from JFD on request.



COBRA Bailout System

21 March 2023

Page 2 of 6



ISSUE 2

After extended periods where COBRA helmets were not in use, users reported deformation of the COBRA mouthpiece when deployed.



SOLUTION

During periods of inactivity, users are advised to store COBRA helmets with the mouthpiece deployed.



ISSUE 3

It has been acknowledged for some time that the bores of the breathing hose connectors are subject to excessive wear. This, in-turn, can lead to minor leaks at this location. This has led to operational difficulties such as early termination of dives.



SOLUTION

JFD has now made stainless steel breathing hose connectors available. Early trials of these items have shown much reduced wear and associated problems. Details of the replacement parts are as shown below:



Figure 3 - Adaptor, Breathing Hose, Inhale, COBRA, SS316 – Order Code DB5004122



Figure 4 - Adaptor, Rotowink, Exhale, COBRA, SS316 – Order Code DB5004123



ISSUE 4

Various reports have been received relating to bending of the positive pressure rod DB5003356.

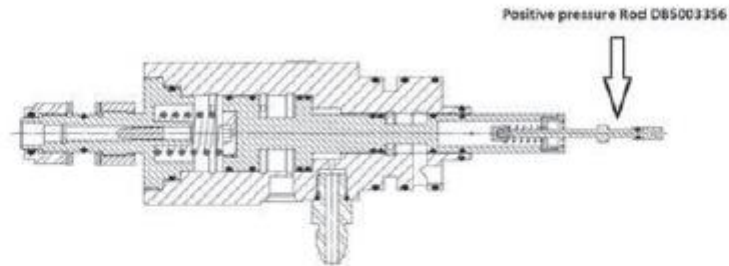


Figure 5 - Piston Assembly Showing Positive Pressure Rod



SOLUTION

Likely reasons for bending to this rod are adjusting the demand valve setting via the diaphragm opening or manually purging the set to drain the cylinders more quickly. If either of these techniques is used, care must be taken to not damage the positive pressure rod.



ISSUE 5

User requested additional protection for Breathing Hoses.



SOLUTION

JFD can now provide Cordura covers for COBRA breathing hoses, pt. no. DB5002921



Figure 6 - Breathing Hose Cover, DB5002921



COBRA Bailout System

21 March 2023

Page 4 of 6



ISSUE 6

Users have reported occasions where, after a full green rotowink has been achieved in the bell, the rotowink has not remained fully green when the diver has left the bell to perform a leak test directly below the bell. This shows a relative reduction in internal pressure of only a few millibars.



SOLUTION

In this case, the leak test should be performed as normal. If there is zero visible leakage, it is not necessary to return to the bell to investigate the rotowink. The diver may then descend further. This descent will cause the COBRA set to add gas and achieve the full positive pressure. If a full green rotowink is achieved at this stage, the dive may proceed as normal.



ISSUE 7

When current stocks are exhausted, JFD will no longer supply pt. no. DB5002318 Telescopic Sleeve Assembly, COBRA.



Figure 7- DB5002318 Telescopic Sleeve Assembly, COBRA Pressure Rod



SOLUTION

For the first replacement after DB5002318 becomes unavailable, pt. no. DB5002495 should be purchased. This is a direct replacement for DB5002318. DB5002495 allows replacement of the mouthpiece + inner sleeve section which was previously not possible.

For subsequent replacements, pt. no. DB5002967 should be purchased. This kit consists of the mouthpiece, seals and retaining clip.



Figure 8 - DB5002495



Figure 9 - Mouthpiece Section from Kit DB5002967



COBRA Bailout System

21 March 2023

Page 5 of 6



ISSUE 8

A user experienced an unexpected disconnection of a breathing hose from the helmet connector.



SOLUTION

The nut will turn 2 full turns after engaging with the adaptor on the helmet. Ensure the nut is properly engaged. Failure to properly fit and tighten the nut can lead to unexpected disconnection of the hose. No thread should be visible on the helmet connector when the connection is correctly made.



ISSUE 9

Users have reported increased breathing resistance when using COBRA in various orientations.



SOLUTION

This is a well understood characteristic with all rebreathers. A proportion of the required breathing effort is caused by the pressure difference between the user's lungs and the current relative position of the rebreather counterlungs. For example, if a diver (using COBRA) is on his front, the counterlungs are higher in the water column i.e. at a lower pressure than the diver's lungs. The diver will have to work harder to fill his lungs with gas. Conversely, if the diver is on his back, the counterlungs will be at a higher pressure and the diver may well require extra effort to exhale. Other positions, of course, lie between these extremes.



Figure 10 - Diver Face Down, Easy Exhale, Harder Inhale



Figure 11 - Diver Face Up, Easy Inhale, Harder Exhale



COBRA Bailout System

21 March 2023

Page 6 of 6



ISSUE 10

Users have requested additional detail relating to maintenance periods, hygiene procedure and corrective maintenance.



SOLUTION

JFD will issue a revised manual in early 2023 with additional detail as requested.



ISSUE 11

Users have requested spares which JFD have not historically supplied



SOLUTION

The following parts have been created and are now available as spares

DB5002951 Lee Jet Complete With Housing, COBRA
DB5002952 Lever, Complete, Demand Valve, COBRA
DB5002953 Swivel C/W Filter, 2 Stage Regulator, COBRA
DB5002968 Piston Activation c/w Insert
DB5002960 Plenum, Outlet, c/w Inserts
DB5002957 Plenum, Inlet, c/w Inserts
DB5002954 Head, c/w Inserts

Contact:

Please contact Graeme Clark (Head of Commercial Products) for any further updates or queries.

Email: g.clark@jfdglobal.com

Telephone: + 44 (0)7770553198