



COBRA Guidance Note

Background

After an incident where a COBRA set flooded due to hot water entering the scrubber housing, JFD have made the decision to replace the current sectional scrubber liner with a seamless item. It is also necessary to replace the hot water jacket around the liner. This Guidance Note contains the fitting instructions for the upgrade kit.



OVERVIEW

The revised COBRA Scrubber / Hot Water Housing Body Upgrade Kit (Part No. DB5002505) features a seamless liner which removes the risk of hot water entering the breathing loop.

Additionally the revised COBRA Scrubber / Hot Water Housing Body allows dis-assembly of the hot water jacket to allow cleaning by the user.



Figure 1 - Revised Scrubber / Hot Water Housing



FITTING INSTRUCTIONS

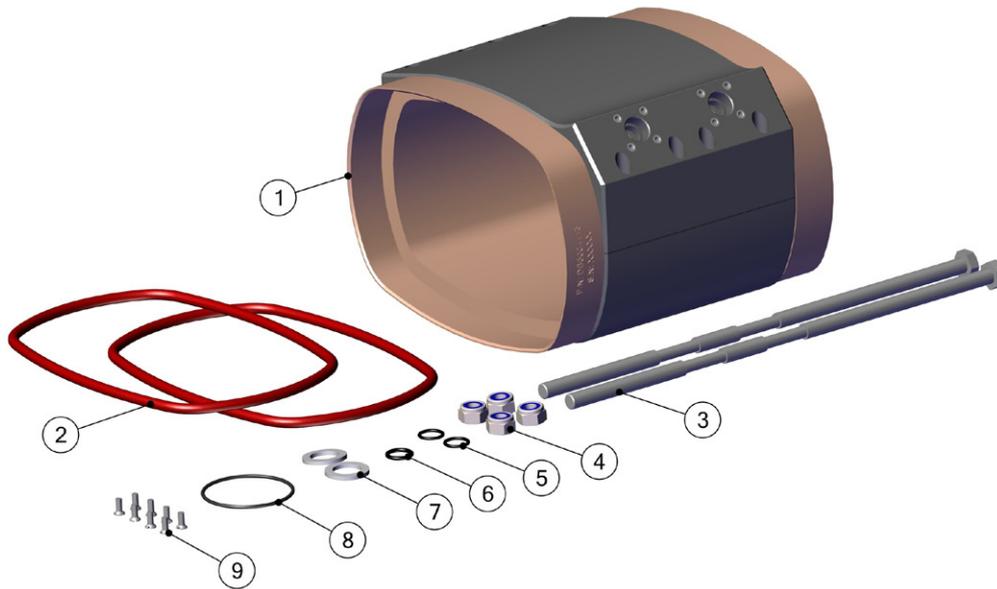


Figure 2 - Upgrade Kit Contents

Item	Description	Qty	Part No
1	Scrubber / Hot Water Housing Body	1	-
2	O-ring, Plenum to housing body	2	RN0358-7
3	Tie-rod (long)	2	DB5004124
4	Nylock nut M8	4	FN019
5	O-ring, Water connection	2	RN2512-7
6	O-ring, Piston assembly to Scrubber housing	1	E16663
7	PTFE Washer, Lee-jet housing	2	DB5003550
8	O-ring, Exhale tube	1	RN0519-7
9	Machine Screw, CSK, Slotted, M3 X 0.5 X 8LG	8	E15370

Table 1 - Upgrade Kit Contents



TOOLS REQUIRED

- 2 off 13 mm AF Spanner
- 13 mm AF socket
- Torque wrench
- Small flat blade screwdriver

PROCEDURE

1. Dis-assemble the backpack in accordance with Operation and Maintenance Manual, paragraph 13.1 Backpack Disassembly.
2. Using two 13 mm spanners remove the four tie-bars from the housing, discard the four nylock nuts.
3. Set aside the two longer tie-bars for return to JFD Ltd.
4. Separate the inlet and outlet plenums from the housing body.
5. Using a flat blade screwdriver remove the two hot water connections from the water jacket.
6. Remove and discard the O-rings from the water connections. Lubricate the replacement O-rings from the upgrade kit with Christo-lube and fit to the water connections.
7. Fit the hot water connections to the new housing, spare machine screws are included in the upgrade kit.
8. Set aside the housing body for return to JFD Ltd.
9. Remove and discard the O-rings from the plenums. Lubricate the replacement O-rings from the upgrade kit with Christo-lube and fit to the plenums.
10. Fit the inlet and outlet plenums to the revised housing body.
11. Use the revised long tie-bars supplied with the upgrade kit. Using two 13 mm spanners fit the tie-bars to the housing. Torque the nylock nuts to 20 lbf/in / 2.2 Nm.
12. Re-assemble the set using the replacement O-ring and washers from the upgrade kit.
13. Carry out a bench test procedure in accordance with the Operation and Maintenance Manual section 10.
14. Return the removed housing body and two longer tie-bars to JFD Ltd, F.A.O Graeme Clark.
 - 14.1 If the removed parts are not being returned to JFD they must be put beyond use and disposed of in accordance with local regulations.

Notes:

- Removed parts may be recycled, refer to Table 2 below.
- It is not intended that the revised hot water jacket is fully sealed. A small amount of hot water (<0.5 L/min) will leak to the exterior of the set when in use.

Description	Material
Collar, Ring and Sleeve	Phosphor Bronze
Hot Water Jacket	Acetal Copolymer
Tie-rod	Stainless Steel, 316

Table 2 - Removed Parts Materials



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ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	DB5003128	PLENUM, INLET, SCRUBBER, COBRA	1
2	N/A	BODY ASSEMBLY	1
3	DB5003129	PLENUM, OUTLET, SCRUBBER, COBRA	1
4	DB5003155	ADAPTOR, 9/16", HOT WATER, COBRA	2
5	DB5004124	BOLT, MODIFIED, SCRUBBER, COBRA	2
6	E15370	SCREW, M/C, CSK, SLOTTED, M3 X 0.5 X 8LG	8
7	FB55561	BOLT, HEX, M8 X 1.25 X 220 LG, A4-70	2
8	FN019	NUT, NYLOC, M8, 316 ST. STEEL	4
9	RN2512-7	O-RING	2
10	RS0358-7	O-RING	2

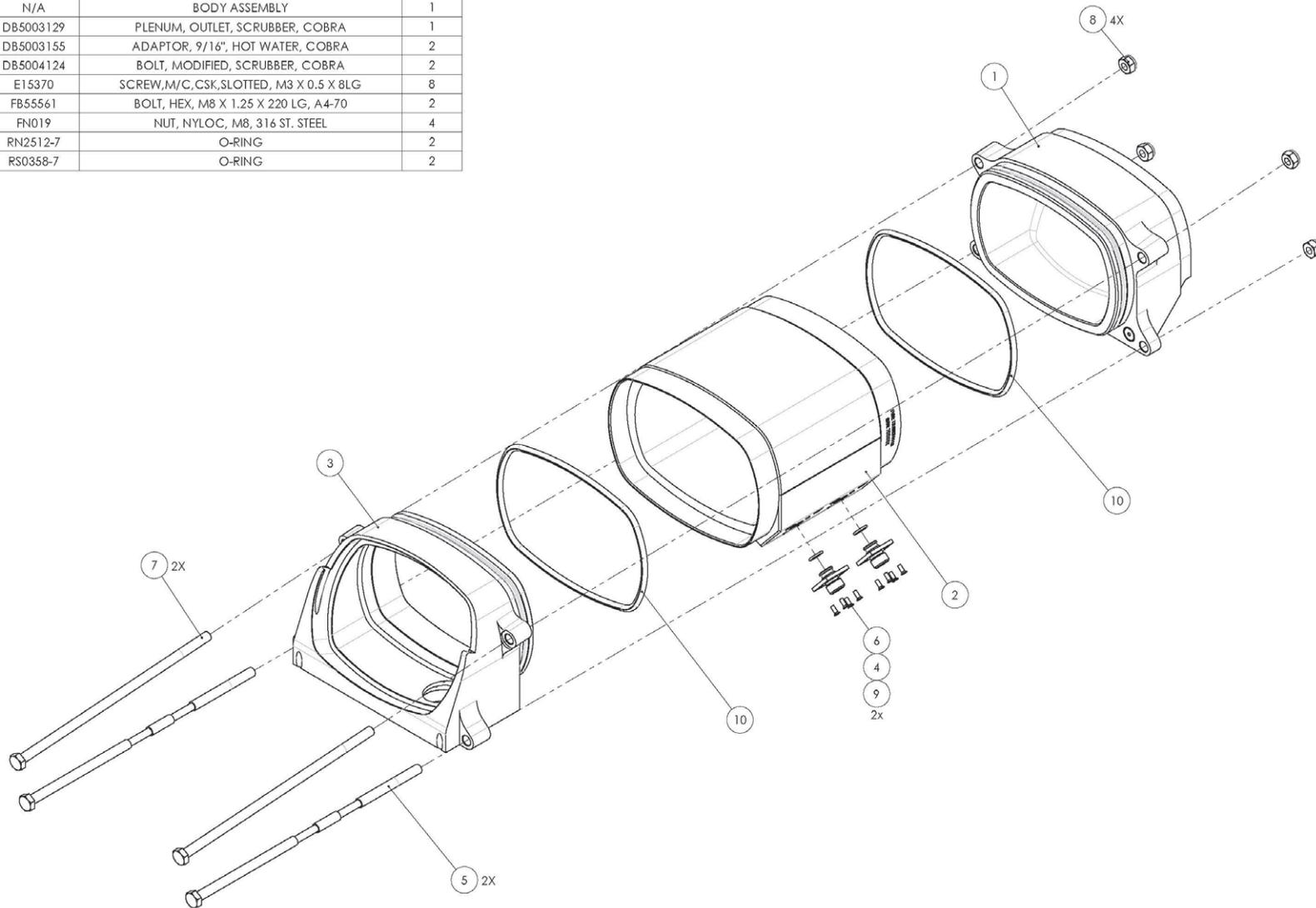


Figure 3 - Scrubber Housing Assembly



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ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	DB5004113	LINER, SCRUBBER HOUSING, DOUBLE SOCKET, COBRA	1
2	DB5004119	SHELL, PAIR, WATER JACKET, COBRA	1
3	DB5004121	GASKET, THIN, HOT WATER JACKET, COBRA	2
4	FB78929	SCREW, CAP, SOCKET HEAD, M4 X 0.7, 35 LG, 316SS	8
5	FN35529	INSERT, M3, TAPPEX TRISERT-3, 316 STAINLESS	8
6	FN56433	INSERT, M4, TAPPEX TRISERT-3, 316 STAINLESS	8
7	RS4240	O-RING	2

END ELEVATION
(SCALE 1:3)

SECTION A-A
(SCALE 1:3)

ISOMETRIC VIEWS

EXPLODED ISOMETRIC VIEW

NOTES:
1. CLEAN ITEM 1 FOR OXYGEN SERVICE IN ACCORDANCE WITH GEN-WP-001.

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