



# DX4

(BALANCED DIAPHRAGM)

## SERVICE PROCEDURE

This DX4 Product Service Procedure conveys a list of components and service procedures that reflect the DX4 as it was configured at the time of this writing (5/23/02).

It also contains Supplemental Information intended to assist the Authorized Oceanic Regulator Service Technician who is servicing a DX4 configured with older components.

**DX4 BALANCED DIAPHRAGM FIRST STAGE**

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**REFER TO** ..... **DOC. 12-2202**

**SPECIFICATIONS**

<b>Torques</b>			<b>Intermediate Pressure</b>	
P/N 6564	Yoke Retainer	23 to 25 ft-lbs	Preferred	138 to 142 psi
P/N 4544-300	DIN Filter Retainer	120 to 140 in-lbs ft-lbs	Acceptable	137 to 143 psi
*If the DIN Filter Housing has a hex machined into the Inner Bore, increase DIN Filter Retainer torque to 16 to 18 ft-lbs.				
P/N 6565	DIN Filter Housing	16 to 18 ft-lbs		
P/N 3462	HP Port Plug	35 to 40 in-lbs		
P/N 3463	LP Port Plug	35 to 40 in-lbs		
P/N 6608	Receiver	80 to 100 in-lbs		
P/N 6609	End Cap	20 to 22 ft-lbs		
P/N 6613	Environ. End Cap	20 to 22 ft-lbs		
	HP Hose into First Stage Body	35 to 40 in-lbs		
	LP Hose into First Stage Body	35 to 40 in-lbs		
	Inflator Hose into First Stage Body	35 to 40 in-lbs		

**TOOLS REQUIRED**

<b>Standard Tools</b>	<b>Specialty Tools</b>
Inch Pounds Torque Wrench	P/N 40.2302 Christo-Lube MCG111 - 2 oz
Foot Pounds Torque Wrench	P/N 40.6536 3/8" Socket Drive DX Spanner
5/32" Hex Key Socket	P/N 40.6536.1 HP Cone Tool
1/4" Hex Key Socket	P/N 40.9311 Filter Circlip Pliers
1/2" Open End Wrench	P/N 40.9315 Intermediate Press. Gauge
9/16" Open End Wrench	P/N 40.9520 O-ring Tool Kit
5/8" Open End Wrench	
13/16" Open End Wrench	
1" Open End Wrench	
5/32" Allen Key	
5/16" Allen Key	
1/8" Allen Key	
1/4" Allen Key	
Soft Jawed Vise	

**DX4 BALANCED DIAPHRAGM FIRST STAGE**

<b>TROUBLE SHOOTING</b>		
<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>	<b>TREATMENT</b>
* <b>Restricted airflow and inhalation resistance through complete system.</b>	<ol style="list-style-type: none"> <li>1. Cylinder valve not completely opened.</li> <li>2. Cylinder valve requires service.</li> <li>3. CONE FILTER (4,12) is contaminated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Open valve completely.</li> <li>2. Connect Regulator to a different cylinder.</li> <li>3. Replace with new and perform a complete service.</li> </ol>
* <b>Air leakage detected from beneath the ADJUSTMENT CUP (38) inside the END CAP (35, 39).</b>	<ol style="list-style-type: none"> <li>1. END CAP (35,39) is loose.</li> <li>2. DIAPHRAGM (32) is worn or damaged.</li> <li>3. DIAPHRAGM WASHER (33) is damaged or incorrectly seated.</li> <li>4. Seating surface inside BODY (30) is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten END CAP onto BODY, using prescribed torque value in Reassembly Procedure.</li> <li>2. Replace with new.</li> <li>3. Reseat or replace with new.</li> <li>4. Replace BODY with new.</li> </ol>
* <b>Air leakage detected from RECEIVER (21).</b>	<ol style="list-style-type: none"> <li>1. RECEIVER O-RING (22) is damaged or worn.</li> <li>2. Seating surface inside the BODY (30) is damaged.</li> <li>3. Seating surface on the RECEIVER (21) is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace with new.</li> <li>2. Replace with new.</li> <li>3. Replace with new.</li> </ol>
* <b>Insufficient intermediate pressure.</b>	<ol style="list-style-type: none"> <li>1. END CAP (35,39) loose.</li> <li>2. First Stage improperly adjusted.</li> <li>3. DIAPHRAGM SPRING (36) is weakened or damaged.</li> <li>4. Seating surface of BODY (30) beneath DIAPHRAGM (32) is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten END CAP onto BODY, using prescribed torque value in Reassembly Procedure.</li> <li>2. Readjust according to procedure specified in Reassembly Procedure.</li> <li>3. Replace with new.</li> <li>4. Replace BODY with new.</li> </ol>
* <b>Excessive intermediate pressure/intermediate pressure creeps.</b>	<ol style="list-style-type: none"> <li>1. First Stage improperly adjusted.</li> <li>2. HP SEAT (25) damaged or worn.</li> <li>3. HP SEAT O-RING (23) damaged or worn.</li> <li>4. Seating surface of HP SEAT (25), or RECEIVER (21), or HP CONE (28), or BODY (30) is damaged.</li> <li>5. RETAINING SPRING (24) is weakened or damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Readjust according to Reassembly Procedure.</li> <li>2. Replace with new.</li> <li>3. Replace with new.</li> <li>4. Replace with new.</li> <li>5. Replace with new.</li> </ol>

## DISASSEMBLY PROCEDURE

**△ NOTE:** Be sure to check and record the intermediate pressure and perform the Leak Detection Test outlined in the Initial Inspection Procedures prior to disassembling the Regulator. Review the Troubleshooting Section to gain a better idea of which internal parts may be worn, and to better advise your customer of the service that is needed.

1. Before disassembling the First Stage, remove the low pressure second stage Hoses with a 9/16" open end wrench, the high pressure Hose(s) with a 5/8" open end wrench, and the low pressure inflator Hose with either a 9/16" or 1/2" open end wrench.
2. Remove and inspect the O-RINGS now visible on all these items for any signs of decay. Discard if found.

**⚠ CAUTION:** It is important to remove the RECEIVER (21) End Components first to avoid damage to the Cone of the HP SEAT (25) located inside the BODY (30).

3. Using 1/4" hex key, turn the RECEIVER (21) in a counter clockwise direction to remove it from the BODY (30). (Fig. 1)
4. Remove the HP SEAT (25) and TRANSFER PIN (26) from the RECEIVER (21). Discard the HP SEAT, regardless of condition, and DO NOT attempt to reuse it. Inspect the TRANSFER PIN for signs of wear or distortion. Discard if found.
5. Remove the RETAINING SPRING (24). Using the magnifier, closely examine the SPRING for any signs of corrosion. Discard if found and DO NOT attempt to reuse.
6. Using care not to scratch or damage the RECEIVER (21), remove the HP SEAT O-RING (23) from inside the RECEIVER (Fig. 2). Discard, regardless of condition, and DO NOT attempt to reuse.
7. Remove and inspect the RECEIVER O-RING (22) for any signs of decay. Discard if found.
8. Gently insert the longer, tapered end of a Cone Removal/Installation Tool directly into the HP CONE (28), which is held inside the BODY (30). Pull the Tool straight out to remove the HP CONE (28) from the BODY (Fig. 3).
9. Remove the HP CONE O-RING (27), being very careful to avoid damaging the HP CONE (28). Discard the HP CONE O-RING, and DO NOT attempt to reuse. Inspect the HP CONE for any signs of damage or corrosion. Discard if found.



Fig. 1



Fig. 2



Fig. 3

## DX4 BALANCED DIAPHRAGM FIRST STAGE

**△ NOTE:** Perform step 10 only if an Environmental Kit has been installed.

10. Environmental Kit Disassembly:

A. Turn the plastic ENVIRONMENTAL CAP (42) counter clockwise by hand to loosen and remove.

B. Gently peel the lip of the ENVIRONMENTAL DIAPHRAGM (41) away from the Brim of the ENDCAP (39) and lift out to remove. Examine the condition of the ENVIRONMENTAL DIAPHRAGM, checking for any signs of wear, distortion, corrosion, or perforation. Discard if found.

C. Turn the First Stage DIAPHRAGM side down and remove the TRANSFER PISTON (40). Check for any signs of wear, distortion, or corrosion. Discard if found.

11. Place the First Stage on the repair bench, situated with the YOKE SCREW, or DIN Connector, facing farthest away, vertically. Holding the YOKE, or DIN Connector, firmly in place, apply a 5/16" hex key to the ADJUSTMENT CUP (38), and turn counter clockwise to remove (Fig. 4).

12. Remove the SPRING WASHER (37) and DIAPHRAGM SPRING (36). Inspect the WASHER for any signs of wear or distortion. Discard if found.

13. Using a magnifier, closely inspect the DIAPHRAGM SPRING (36) for any signs of corrosion. Discard if found and DO NOT attempt to reuse.

14. Secure the First Stage in a soft-jawed or well padded vise and apply a 3/8" socket drive wrench with a 3/8" Socket Drive Spanner to the ENDCAP (35, 39). (Fig. 5) Turn the ENDCAP counter clockwise to remove it from the BODY (30). Lift out the DIAPHRAGM WASHER (33) and DIAPHRAGM PLATE (34), and inspect for signs of wear or distortion. Discard if found.

**⚠ CAUTION:** Tighten the vise only as needed to hold the First Stage secure, and DO NOT overtighten. Doing so will result in permanent damage, rendering it inoperable.

15. Using a 5/32" hex key, install HP PORT PLUGS (17) into the open HP Ports, and LP PORT PLUGS (19) into all but one of the LP Ports. Check to ensure that 1 of the 4 LP Ports is open, and all other Ports are sealed. Tighten the YOKE SCREW (1) to ensure that the PROTECTOR CAP (16) is securely sealed over the YOKE RETAINER (6).

16. Remove the DIAPHRAGM (32) from the BODY (30) by covering the RECEIVER opening in the BODY with the palm of your hand and directing short blasts of low pressure air through the open LP Port (Fig. 6). Lift the DIAPHRAGM out carefully and discard, regardless of its condition, and DO NOT attempt to reuse.



Fig. 4



Fig. 5



Fig. 6

## DX4 BALANCED DIAPHRAGM FIRST STAGE

**⚠ CAUTION: DO NOT attempt to remove the DIAPHRAGM (32) with the use of a metallic instrument. Doing so will seriously damage the brass seating surface of the BODY (30).**

17. Remove the BUTTON (31) and inspect for signs of wear or distortion. Discard if found.

18. Remove all PORT PLUGS (17, 19) with a 5/32" hex key. Remove and inspect the PORT PLUG O-RINGS (18, 20) for any signs of decay. Discard if found.

19. Secure the First Stage BODY (30) in a soft jawed or well padded vise with the YOKE Assembly, or the DIN Connector, facing up.

**⚠ CAUTION: Tighten the vise only as needed to hold the First Stage secure, and DO NOT overtighten. Doing so will result in permanent damage, rendering it inoperable.**

**△ NOTE: For units received with YOKE Connectors perform step 20Y, for units received with DIN Connectors perform step 20D.**

20Y. Yoke Connector Disassembly:

A. Remove the YOKE SCREW (1) from the YOKE (2).

B. Apply a thin wall, or modified, 1" open end wrench to the YOKE RETAINER (6). Using firm steady force, turn it counter clockwise to remove it. DO NOT use impact to loosen.

**△ NOTE: It is important that the wrench is properly seated over the entire hex portion of the YOKE RETAINER (6) to prevent any damage to the part (Fig. 7).**

C. Remove the YOKE RETAINER (6), the YOKE (2), and the PROTECTOR CAP (16) and set them aside. Remove and discard the RETAINER O-RING (7). DO NOT attempt to reuse.

D. Using Internal Circlip Pliers, remove the RETAINING CLIP (3) that retains the CONE FILTER (4). The CONE FILTER should drop out freely into your hand. Discard, and DO NOT attempt to reuse. Remove and discard the FILTER O-RING (5). DO NOT attempt to reuse.

20D. DIN Connector Disassembly:

A. Apply a 1/4" hex key to the DIN FILTER RETAINER (9) and loosen in a counter clockwise direction to remove (Fig. 8). Remove the DIN FACE O-RING (8) and FILTER RETAINER O-RING (10) and inspect for any signs of decay. Discard if found.

\* Refer to Supplemental information on page 12.

B. Lift the DIN COUPLER WHEEL (11) straight off the DIN FILTER HOUSING (14), remove the PROTECTOR CAP (16), and set them aside. Apply a 13/16" open end wrench to the flange at the base of the DIN FILTER HOUSING (Fig. 9).



Fig. 7

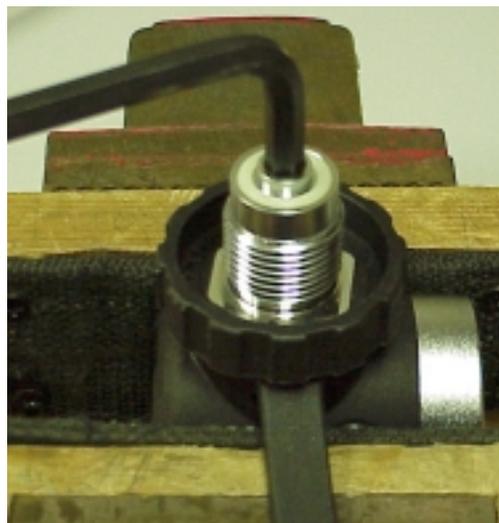


Fig. 8



Fig. 9

## DX4 BALANCED DIAPHRAGM FIRST STAGE

C. Using firm, steady force, loosen in a counter clockwise direction to remove. DO NOT use impact to loosen.

**NOTE:** It is important that the wrench is deep enough to seat entirely over the Flange to avoid any damage to the seating surface.

D. After removing the DIN FILTER HOUSING (14) from the BODY (30), turn it over and tap lightly to drop out the DIN CONE FILTER (12). Discard the DIN CONE FILTER and DO NOT attempt to reuse. Remove and inspect the FILTER O-RING (13) for any signs of decay. Discard if found. Remove and discard the DIN FILTER HOUSING O-RING (15). DO NOT attempt to reuse.

20. Using your thumbs, push and peel the upper tab of the BODY BOOT (29) from the groove in the BODY (30), and remove the BODY BOOT (Fig. 10). Check for any signs of damage or distortion. Discard if found.



Fig. 10

## REASSEMBLY PROCEDURE

**NOTE:** Prior to reassembly, it is necessary to inspect all parts, both new and those that are being reused. Check to ensure that O-RINGS are clean and supple, and that every part and component has been thoroughly cleaned.

**WARNING:** Use only genuine Oceanic parts, subassemblies, and components whenever assembling Oceanic products. DO NOT attempt to substitute an Oceanic part with another manufacturer's, regardless of any similarity in shape, size, or appearance. Doing so may render the product unsafe, and could result in serious injury or death of the user.

1. Ensuring proper alignment, install BODY BOOT (29) onto BODY (30). Then secure the First Stage BODY in a soft jawed or well padded vise, with the threaded HP Inlet Bore facing straight up.

**CAUTION:** Tighten the vise only as needed to hold the First Stage secure, and DO NOT overtighten. Doing so will result in permanent damage, rendering it inoperable.

**NOTE:** For units received with YOKE Connectors perform step 2Y, for units received with DIN Connectors perform step 2D.

2Y. Yoke Connector Reassembly:

A. Install the FILTER O-RING (5) into the YOKE RETAINER (6), at the Base of the Filter Cavity in the BODY (30). (Fig. 11)

B. Install the CONE FILTER (4) into the YOKE RETAINER (6) and install the RETAINING CLIP (3) into the Groove above it, using Internal Circlip Pliers (Fig. 12).



Fig. 11



Fig. 12

## DX4 BALANCED DIAPHRAGM FIRST STAGE

**△ NOTE: Close examination of the RETAINING CLIP (3) will show that one side is slightly rounded and the other is flat. Install with the flat side facing out of the YOKE RETAINER (6) to ensure greater holding strength.**

C. Lubricate and install the YOKE RETAINER O-RING (7) into the Groove on the end.

D. Insert the threaded end of the YOKE RETAINER (6) through the YOKE (2), facing opposite the end that holds the YOKE SCREW (1). (Fig. 13)

E. Place the Loop End of the PROTECTOR CAP (16) over the raised Lip on the Saddle Face of the BODY BOOT (29), and hold it in place. Holding the YOKE RETAINER (6), and YOKE (2) together between your thumb and forefinger, mate the YOKE RETAINER into the BODY (30), so that the threads seat properly. Hand tighten in a clockwise direction until secure. Using a thin-wall, or modified, 1" open end wrench that is properly seated over the entire hex portion of the YOKE RETAINER, tighten **to a torque of 16-18 ft-lbs.**

F. Install the YOKE SCREW (1) into the YOKE (2).

## 2D. DIN Connector Reassembly:

A. Lubricate and install the DIN FILTER HOUSING O-RING (15) into the Groove on the end of the DIN FILTER HOUSING (14).

B. Install the DIN FILTER HOUSING (14) into the BODY (30) so that the threads seat properly, and hand tighten in a clockwise direction until secure.

C. Using a thin-wall, or modified, 13/16" open end wrench that is properly seated over the entire seating surface of the FILTER HOUSING (15) Flange, tighten **to a torque of 16-18 ft-lbs.**

D. Lubricate and install the FILTER O-RING (13) into the DIN FILTER HOUSING (14), at the Base of the Filter Cavity. Install the DIN CONE FILTER (12) into the DIN FILTER HOUSING.

E. Place the Loop End of the PROTECTOR CAP (16) over the raised Lip on the Saddle Face of the BODY BOOT (29), and hold in place.

F. Install the DIN COUPLER WHEEL (11) down over the Stem of the DIN FILTER HOUSING (13), with the threaded end facing up.

G. Lubricate and install the DIN FACE O-RING (8) and FILTER RETAINER O-RING (10) onto the DIN FILTER RETAINER (9).

H. Insert the threaded end of the DIN FILTER RETAINER (9) through the DIN COUPLER WHEEL (11), into the DIN FILTER HOUSING (14), and tighten until secure. Apply a 1/4" hex socket and tighten **to a torque of 16-18 ft-lbs.**



Fig. 13

## DX4 BALANCED DIAPHRAGM FIRST STAGE

3. Place the stem of the BUTTON (31) directly into the Center Hole in the BODY (30), ensuring that it enters without any restriction (Fig. 14).
4. Position the DIAPHRAGM (32) flat, directly over the Opening of the BODY (30). Gently push the edges of the DIAPHRAGM down inside the internal threads of the BODY, one thread at a time. Rotate the BODY while doing this, to facilitate an even seating of the DIAPHRAGM, and closely inspect to ensure it is well seated at the base of the threads (Fig. 15).

**⚠ CAUTION: DO NOT force the DIAPHRAGM into the BODY in a manner that will damage either the lip or surface of the DIAPHRAGM, or the threads of the BODY. The use of a sharp instrument, such as a screwdriver, is to be strictly avoided.**

5. Place the DIAPHRAGM WASHER (33) into the BODY (30) on top of the DIAPHRAGM (32) with the Collar facing up.
6. Lay the DIAPHRAGM PLATE (34) into the Center of the DIAPHRAGM WASHER (33), with its flat surface against the DIAPHRAGM (32).
7. Thread the END CAP (35, 39), into the BODY (30), turning clockwise by hand until secure.
8. Secure the First Stage BODY in a soft jawed or well padded vise, and using a 3/8" Socket Drive Spanner on a foot-pounds torque wrench, tighten the END CAP (35, 39) into the BODY (30) to a torque of 20-22 ft-lbs (Fig. 16).
9. Apply a very light film of lubricant (Christo Lube MCG111) to both ends of the DIAPHRAGM SPRING (36), and place it on the DIAPHRAGM PLATE (34).
10. Place the SPRING WASHER (37) directly onto the upper end of the DIAPHRAGM SPRING (36) and install the ADJUSTMENT CUP (38) into the END CAP (35, 39). Using a 5/16" hex key, turn the ADJUSTMENT CUP clockwise until only two threads are showing.
11. Lubricate and install the HP CONE O-RING (27) onto the HP CONE (28), and place the Sealing Edge of the HP CONE down onto the smaller end of a clean two-part Cone Removal/Installation Tool. Use care not to damage the seating surface of the HP CONE as this is done. Lower the large opening of the installation tool sleeve over the HP CONE until the Edge of the Narrow Opening is even with the Base of the HP CONE (28).



Fig. 14



Fig. 15



Fig. 16

## DX4 BALANCED DIAPHRAGM FIRST STAGE

12. Guide the HP CONE/Tool Assembly into the High Pressure Chamber of the BODY (30), taking care to align the HP CONE (28) with the Recess in the High Pressure Chamber properly (Fig. 17). Carefully press the HP CONE completely into place and withdraw the Tool, pulling it straight out.
13. Lightly lubricate and install the RECEIVER O-RING (22) onto the RECEIVER (21) and the HP SEAT O-RING (23) into the Inner Bore of the RECEIVER. Lightly lubricate the threads of the RECEIVER.
14. Apply a very light film of lubricant to both ends of the RETAINING SPRING (24) and the lower 1/4" of the HP SEAT (25) Shaft. Install the RETAINING SPRING onto the end of the RECEIVER (21).
15. Carefully guide the Shaft of the HP SEAT (25) so that it passes through the RETAINING SPRING (24) and into the HP SEAT O-RING (23) in the inner bore of the RECEIVER (21). (Fig. 18)
16. Carefully insert the TRANSFER PIN (26) into the Opening of the HP SEAT (25).
17. While looking into the BODY (30) so that you may see the HP CONE (28), insert the SEAT/RECEIVER Assembly directly into the Center of the RECEIVER Opening in the BODY (30) and carefully guide the TRANSFER PIN (26) through the Center of the HP CONE and into the BUTTON (31) (Fig. 19). During this step, USE CAUTION to avoid touching the HP CONE as the TRANSFER PIN passes through the Center of it.
18. While holding the BODY (30) secure, turn the RECEIVER (21) clockwise to engage the threads and using a 1/4" hex key, tighten the RECEIVER into the BODY **to a torque of 80-100 in-lbs.**
19. Lubricate and install PORT PLUG O-RINGS (18, 20) onto the PORT PLUGS (17, 19). While holding the BODY (30) secure, install the PORT PLUGS into the BODY (30), tightening clockwise with a 5/32" hex key socket **to a torque of 35-40 in-lbs.**
20. Lubricate and install all Hose O-rings onto Hoses and install the Hoses into the BODY (30). While holding the BODY secure, tighten the low pressure Second Stage Hose(s) clockwise with a 9/16" open end wrench, the high pressure hose(s) with a 5/8" open end wrench, and the low pressure Inflator Hose(s) with either a 9/16" or 1/2" open end wrench, **to a torque of 35-40 in-lbs.**

**NOTE:** It is important to connect the primary Second Stage to the LP port identified by the letter R molded onto the BODY BOOT (29) above it for optimum performance.

**CAUTION:** Be certain not to install any low pressure Hose into a high pressure PORT via an adaptor.



Fig. 17



Fig. 18



Fig. 19

## DX4 BALANCED DIAPHRAGM FIRST STAGE

## FINAL ADJUSTMENT

1. Connect a recently calibrated Low Pressure Test Gauge to a low pressure Hose, and connect the First Stage with Second Stage and Low Pressure Test Gauge to a pure breathing gas source of 3000 psi. Slowly open the supply valve to pressurize the Regulator, and purge the Second Stage several times.
2. Adjust the intermediate pressure, if necessary, to read 138 to 142 psi by turning the ADJUSTMENT CUP (38) clockwise to increase the pressure or counter clockwise to decrease it (Fig. 20).

**△ NOTE:** Turn the ADJUSTMENT CUP (38) no more than 1/8 of a turn at a time, pausing to purge the Second Stage several times to gain an accurate reading of the intermediate pressure before adjusting further.

**△ NOTE:** Ensure that the intermediate pressure holds stable at 138 TO 142 psi, and does not creep or fluctuate after the Second Stage has been purged several times. If creeping is detected, refer to the Troubleshooting Section to determine possible cause and treatment.

**△ NOTE:** Perform the following steps only if an Environmental Kit is being installed.

## ENVIRONMENTAL KIT REASSEMBLY

1. Insert the TRANSFER PISTON (40) into the ENVIRONMENTAL END CAP (39). (Fig. 21)
2. Turn the air supply off and bleed off intermediate pressure. Insert the ENVIRONMENTAL DIAPHRAGM (41) over the Top of the ENVIRONMENTAL END CAP (39) with the thin Perimeter Seal facing down. Ensure that the thin Perimeter Seal is seated completely into the circular Groove in the ENVIRONMENTAL END CAP (39). (Fig. 22)
3. Thread the plastic ENVIRONMENTAL CAP (42) onto the ENVIRONMENTAL END CAP (39), being very careful to avoid cross threading, and tighten clockwise by hand until secure. DO NOT use tools to tighten.
4. Turn on the air supply and purge the Second Stage several times, and check once more to ensure proper intermediate pressure of 138 to 142 psi.



Fig. 20



Fig. 21



Fig. 22

**DX4 BALANCED DIAPHRAGM FIRST STAGE**

Dia.  
No. Part # Description

**YOKE VERSION**

- 1c 6307.07 SCREW, YOKE (BK)
- 2c 6562 YOKE
- 3c 3530 CLIP, RETAINING
- 4a 3545 FILTER, CONE**
- 5a 2.013 O-RING, FILTER**
- 6c 6564 RETAINER, YOKE
- 7a 2.011 O-RING, RETAINER**

**DIN VERSION**

- 8a• 6374 O-RING, DIN FACE
- 9c 4544-300 RETAINER, DIN FILTER
- 10a• 2.012 O-RING, FILTER RETAINER
- 11c 6559 WHEEL, DIN COUPLER
- 12a• 4546 FILTER, DIN CONE
- 13a• 2.011 O-RING, FILTER
- 14c 6565 HOUSING, DIN FILTER
- 15a• 2.011 O-RING, FILTER HOUSING

**YOKE and DIN VERSIONS**

- 16c 6560 CAP, PROTECTOR (BK)
- 17c 3462 PLUG, HP PORT
- 18c 3.904 O-RING, HP PORT PLUG
- 19c 3463 PLUG, LP PORT
- 20c 3.903 O-RING, LP PORT PLUG
- 21c 6608 RECEIVER
- 22c 2.015 O-RING, RECEIVER
- 23a• 6498 O-RING, HP SEAT**
- 24c 6512 SPRING, RETAINING
- 25a• 6490 SEAT, HP**
- 26c 6517 PIN, TRANSFER
- 27a• 2.010 O-RING, HP CONE**
- 28c 6489 CONE, HP
- 29c 6610.07 BOOT, BODY
- 30c 6607 BODY
- 31c 6514 BUTTON
- 32a• 4913 DIAPHRAGM**
- 33b 4917 WASHER, DIAPHRAGM
- 34c 6450 PLATE, DIAPHRAGM
- 35c 6609 CAP, END
- 36c 6513 SPRING, DIAPHRAGM
- 37b 6524 WASHER, DIAPHRAGM
- 38c 6611 CUP, ADJUSTMENT

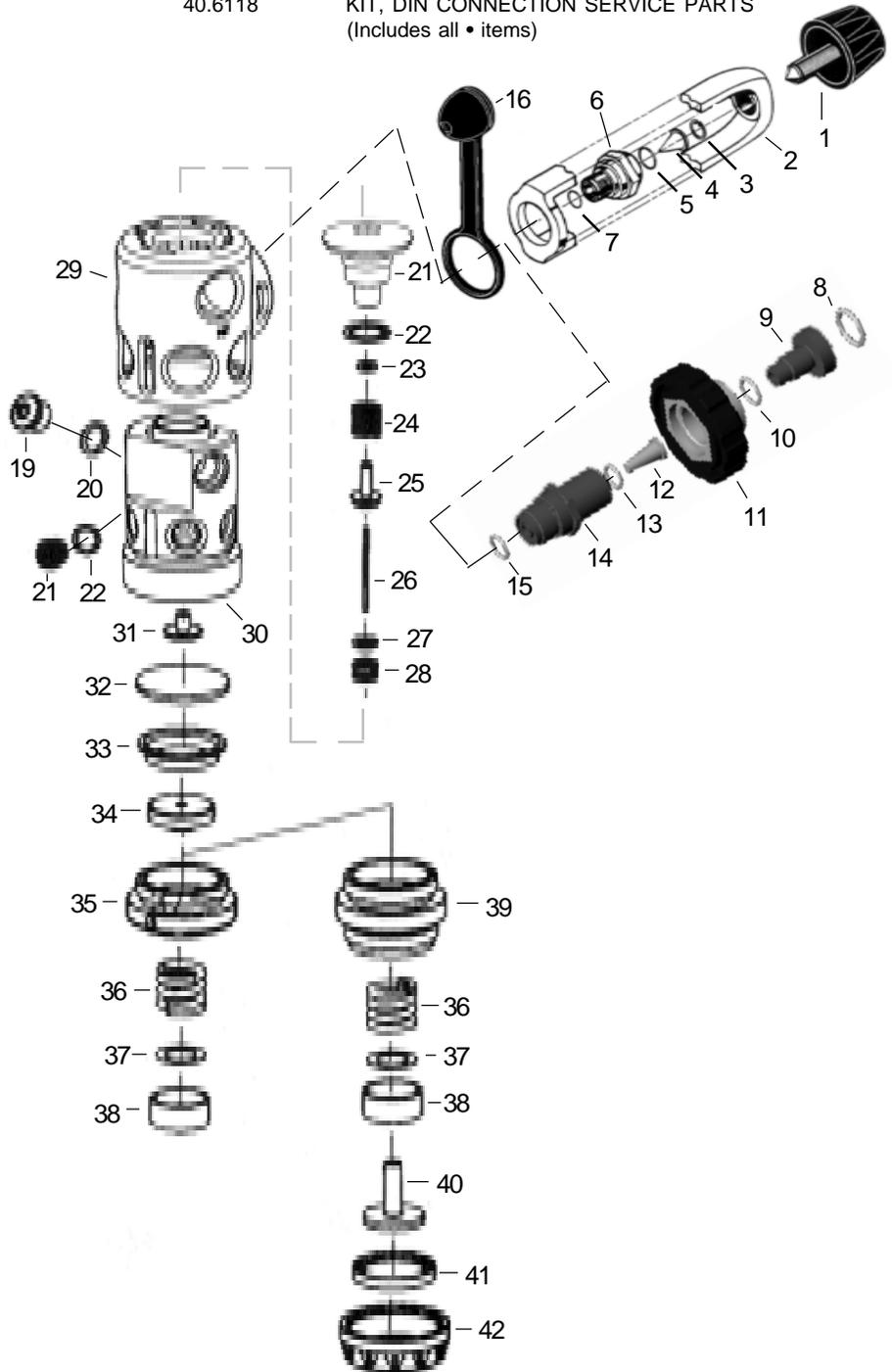
Dia.  
No. Part # Description

**40.4045.99 KIT, ENVIRONMENTAL**

- 39c 6613 CAP, ENVIRONMENTAL END
- 40c 6516 PISTON, TRANSFER
- 41c 6511 DIAPHRAGM, ENVIRONMENTAL
- 42c 6302.3 CAP, ENVIRONMENTAL

**SERVICE PARTS KITS**

- 40.6113 KIT, YOKE CONNECTION SERVICE PARTS  
(Includes all **Bold** items.)
- 40.6118 KIT, DIN CONNECTION SERVICE PARTS  
(Includes all • items)



**DX4 BALANCED DIAPHRAGM FIRST STAGE****SUPPLEMENTAL INFORMATION**

Due to design enhancements that have been made since the DX4 was originally released, the unit being serviced may not have the same components previously described.

The intent of this Supplemental Information is to assist the Oceanic Regulator Service Technician with identification of previous component parts and provide guidelines for their reuse or replacement.

The exploded view diagram on page 12 can be used as a reference for older units.

**DIN FITTING**

In the event that the complete DIN Fitting comes off the First Stage when the DIN FILTER RETAINER is being removed during Disassembly (step 20D, page 6), it will be necessary to disassemble the Fitting to replace the FILTER.

If the DIN FILTER HOUSING has a hex machined into the end opening of the Inner Barrel, hold the HOUSING with a 7/32" hex key and remove the DIN FILTER RETAINER using a 1/4" hex key.

If the DIN FILTER HOUSING does not have a hex machined into the end opening of the Inner Barrel, insert a flat blade screwdriver into the opening to hold the HOUSING and remove the DIN FILTER RETAINER using a 1/4" hex key. If the HOUSING becomes damaged, it must be replaced.