OCEANIC®

INNOVATION FIRST

# FDXi
# FIRST STAGE

# SERVICE PROCEDURE

This FDXi Service Procedure conveys a list of components and service procedures that reflect the FDXi as it was configured at the time of this writing.

Doc. 12-2825-r01 (5/21/14)

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# GENERAL PROCEDURES

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

# SPECIFICATIONS

## TORQUES

| | |
|---|---|
| LP Hose | 35 - 40 in-lbs (4 - 4.5 N-m) |
| receiver | 23 - 25 ft-lbs (31.2 - 33.9 N-m) |
| end cap | 23 - 25 ft-lbs (31.2 - 33.9 N-m) |
| spring retainer | 35 to 40 in-lbs (4-4.5 N-m) |
| DIN retainer | 120 to 140 in-lbs (13.6 - 15.8 N-m) |
| port plugs | 35 to 40 in-lbs (4 - 4.5 N-m) |

## ITERMEDIATE SUPPLY PRESSURE

| | |
|---|---|
| Preferred | 138 psi (9.5 bar) |
| Acceptable | 137 to 139 psi (9.4-9.6 bar) |

# TOOLS REQUIRED

## STANDARD TOOLS

Inch Pounds Torque Wrench
Foot Pounds Torque Wrench
5/32" Hex Key
1/4" Hex Drive Socket
3/8" Socket
9/16" Open End Wrench
5/8" Open End Wrench
Long 5/16" Hex Key
Soft Jawed Vise
Magnifier
1' Thin Wall Socket
3/4" Deep Socket
1/4" to 3/8" adapter
1/4" driver extension
Thread Lock Compound
*(Med Strength, Locktite™ 222)*

## SPECIALTY TOOLS

| | |
|---|---|
| P/N 40.6536.1 | HP Cone Tool |
| P/N 40.8538 | End Cap Tool Kit |
| P/N 40.9315 | Intermediate Press. Gauge |
| P/N 40.9520 | O-ring Tool Kit |

Oceanic approved Halocarbon Based Lubricant (See General Procedure Doc. 12-2202 for approved list)

TROUBLESHOOTING

| SYMPTOMS | POSSIBLE CAUSE | TREATMENT |
|---|---|---|
| Restricted airflow and inhalation resistance through complete system. | 1. Cylinder valve not completely opened.<br>2. Cylinder valve requires service.<br>3. **Filter (28 or 43)** is contaminated. | 1. Open valve completely.<br>2. Connect regulator to a different cylinder.<br>3. Replace with new and perform a complete service. |
| Air leakage detected from beneath the **adjustment cup (14)**, inside the **end cap (11)**. | 1. **End cap (11)** is loose.<br>2. **Diaphragm (9)** is worn or damaged.<br>3. Seating surface inside **body (1 or 34)** is damaged. | 1. Tighten **end cap (11)** onto **body (1 or 34)**, using prescribed torque value in Reassembly Procedure.<br>2. Replace with new.<br>3. Replace **body (1 or 34)** with new. |
| Air leakage detected from **receiver (20 or 33)**. | 1. Receiver **O-ring (7)** is damaged or worn.<br>2. Seating surface inside the **body (1 or 34)** is damaged.<br>3. Seating surface on the **receiver (21 or 36)** is damaged. | 1. Replace with new.<br>2. Replace with new.<br>3. Replace with new. |
| Insufficient intermediate pressure. | 1. **End cap (11)** is loose.<br>2. First stage improperly adjusted.<br>3. **Diaphragm spring (12)** is weakened or damaged.<br>4. Seating surface of **body (1 or 34)** beneath **diaphragm (9)** is damaged. | 1. Tighten **end cap (11)** onto **body (1 or 34)**, using prescribed torque value in Reassembly Procedure.<br>2. Readjust according to the procedure specified in Final Adjustment Procedure.<br>3. Replace with new.<br>4. Replace **body (1 or 34)** with new. |
| Excessive intermediate pressure/Intermediate pressure creeps. | 1. First stage improperly adjusted.<br>2. **Seat (4)** is damaged or worn.<br>3. HP seat **O-ring (5)** is damaged or worn.<br>4. Seating surface of **Seat (4)**, **receiver (21 or 36)**, **seat cone (3)**, **body (1 or 34),** or its Orifice Cone is damaged.<br>5. **Spring (6)** is weakened or damaged. | 1. Readjust according to Final Adjustment Procedure.<br>2. Replace with new.<br>3. Replace with new.<br>4. Replace with new.<br>5. Replace with new. |

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 hoses with a 9/16" open end wrench and the high pressure hose(s) with a 5/8" open end wrench.

2. Remove and inspect the O-rings now visible on all these items for any signs of decay. Discard if found.

3. Turn the **environmental cap (19)** counterclockwise by hand to loosen and remove it.

4. Remove the **environmental diaphragm (18)** from the **environmental cap (19)**. If it does not simply fall out, avoid damage by not prying it out. Instead, use compressed air or tap the **environmental cap (19)** on the work counter lightly to free the **environmental diaphragm (18)**. Examine the condition of the **environmental diaphragm (18)**, checking for any signs of wear, distortion, corrosion, or perforation. Discard if found.

5. Lift the **environmental ring (17)** and **transfer piston (16)** off the **end cap (11)**. Inspect the **environmental ring (17)** and **transfer piston (16)** for any signs of wear or deterioration. Discard if found.

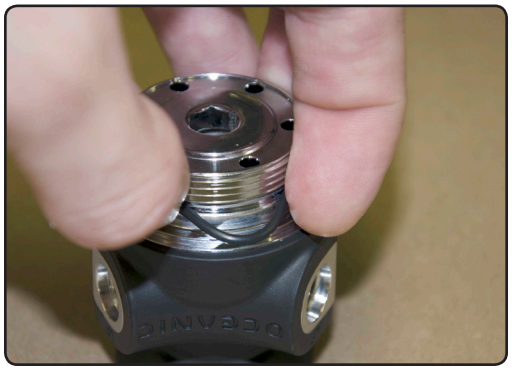


Fig. 1

6. Using care not to scratch or damage the **end cap (11)** remove the environmental **O-ring (15)** *(Fig. 1)*. Inspect the environmental **O-ring (15)** for any signs of wear or deterioration. Discard if found.

**! CAUTION: It is important to remove the RECEIVER (21 or 36) end components first to avoid damage to the orifice of the SEAT CONE (3) located inside the BODY (1 or 34).**

**! NOTE: For units received with YOKE Connectors perform step 7Y, for units received with DIN Connectors perform step 7D.**

7Y. Yoke Connector Disassembly:

A. Remove the **knob (39)** from the **yoke (35)**.

**! NOTE: It is not necessary to disassemble the telescoping KNOB (39) assembly unless it shows signs of corrosion or degraded operation. If not servicing the KNOB (39) assembly, skip to step F.**

B. Carefully pry the **knob cap (40)** from the **knob (39)** with a fine blade screwdriver at one of the four slots in the **knob cap (40)** (Fig. 2).

**! NOTE: The slots are not imediately apparent. Look carefully.**

C. Turning counterclockwise, remove the **spring retainer (38)** with a slotted screwdriver.

D. Remove the **knob spring (41)** and **knob shaft (37)** *(Fig. 3)*.

E. Using the magnifier, closely examine the **knob spring (41)** for any signs of corrosion. Discard if found and **DO NOT** attempt to reuse.

F. Apply a 1" thin wall socket, 1/4" extension, 1/4" to 3/8" adapter, and wrench to the **yoke receiver (36)**, and turn counterclockwise to remove *(Fig. 4)*. **DO NOT** use impact to loosen.

G. Remove the **yoke receiver (36)**, **yoke (35)**, and **dust cap (29)**.

H. Remove the **seat (4)** from the **yoke receiver (36)**. Discard, regardless of condition, and **DO NOT** attempt to reuse it.

I. Remove the **spring (6)**. Using the magnifier, closely examine the **yoke receiver (36)** for any signs of corrosion. Discard if found and **DO NOT** attempt to reuse.

J. Using care not to scratch or damage the **yoke receiver (36)**, remove the HP seat **O-ring (5)** from inside the **yoke receiver (36)**. Discard, regardless of condition, and **DO NOT** attempt to reuse it.

K. Remove and inspect the receiver **O-ring (7)** for any signs of decay. Discard if found.

L. Using snap ring pliers remove the **retaining ring (46)** from the **yoke receiver (36)** *(Fig. 5)*.

M. Carefully pry out the **filter retainer (42)** from the **yoke receiver (36)**, using a plastic O-ring pick.

N. Remove the **plunger (31)** and **DVT spring (44)**.

Fig. 2

Fig. 3

Fig. 4

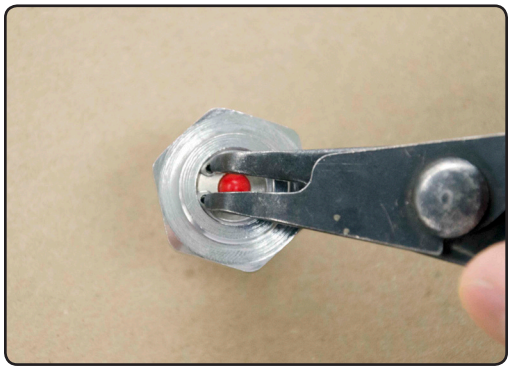


Fig. 5

O. Carefully, remove the **O-ring (45)** from the **yoke receiver (36)** with an O-ring pick *(Fig. 6)*. Discard and **DO NOT** attempt to reuse.

Fig. 6

P. Turn the **yoke receiver (36)** upside down, and the **fiter (43)** will drop out. Discard the **filter (43)**. **DO NOT** reuse.

7D. DIN Connector Disassembly:

A. Secure the **body (1 or 34)** in a soft-jawed or well padded vise. Apply a 1/4" hex key driver to the **DIN retainer (22)**, and loosen it in a counterclockwise direction to remove *(Fig. 7)*.

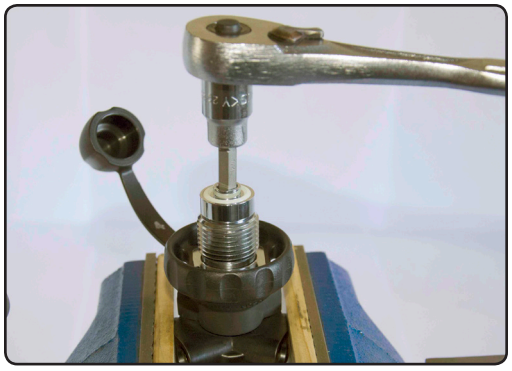


Fig. 7

! **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.**

B. Carefully, remove the **O-rings (2, 27, 33)** from the **DIN retainer (22)** with an O-ring pick. Discard the **O-rings (2,27,33)**, and **DO NOT** attempt to reuse.

C. The **filter (28)** is now protuding from the **DIN retainer (22)**. Lift it out with the **DVT spring (32)** and **plunger (31)**. Discard the **filter (28)**, **DVT spring (32)**, and **plunger (31)**. **DO NOT** attempt to reuse.

D. Lift the **DIN wheel (20)** straight off of the **DIN receiver (21)**, to remove.

E. Using 3/4" socket , turn the **DIN receiver (21)** in a counterclockwise direction to remove it from the **body** (1 or 34) *(Fig. 8)*.

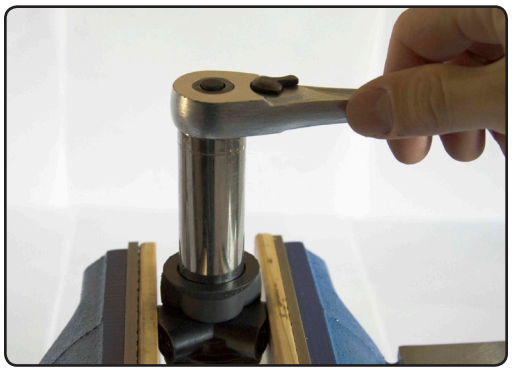


Fig. 8

F. Remove the **seat (4)** from the **DIN receiver (21)**. Discard, regardless of condition, and **DO NOT** attempt to reuse it.

G. Remove the **spring (6)**. Using the magnifier, closely examine the **DIN receiver (21)** for any signs of corrosion. Discard if found and **DO NOT** attempt to reuse.

H. Using care not to scratch or damage the **DIN receiver (21)**, remove the HP seat **O-ring (5)** from inside the **DIN receiver (21)**. Discard, regardless of condition, and **DO NOT** attempt to reuse it.

I. Remove and inspect the receiver **O-ring (7)** for any signs of decay. Discard if found.

D. Lift the **dust cap (29)** straight off the **body (1 or 34)**.

8. Secure the **body (1 or 34)** in a soft-jawed or well padded vise. Apply a 5/16" hex key to the **adjustment cup (14)**, and turn counter clockwise to remove it *(Fig. 9)*.

**! 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.**

9. Remove the **washer (13)** and diaphragm **spring (12)**. Inspect the **washer (13)** for any signs of wear or distortion. Discard if found.

10. Using a magnifier, inspect the diaphragm **spring (12)** for any signs of corrosion. Discard if found, and **DO NOT** attempt to reuse.

11. Secure the first stage in a soft-jawed or well padded vise and apply a 3/8" socket drive wrench with a Oceanic Pronged End Cap Tool to the **end cap (11)** *(Fig. 10)*. Turn the **end cap (11)** counterclockwise to remove it from the **body (1 or 34)**. Lift out the **diaphragm plate (10)** and inspect it 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.**

12. Using a 5/32" hex key, install the **HP plugs (26)** into the open HP port, and **LP plugs (25)** into all but one of the LP ports. Check to ensure that 1 of the 4 LP ports is free of obstruction, and all other ports are sealed.

13. Remove the **diaphragm (9)** from the **body (1 or 34)** by covering the **receiver (21 or 36)** opening in the **body (1 or 34)** with the palm of your hand and directing short blasts of low pressure air through the open LP port. Lift the **diaphragm (9)** out carefully and discard, regardless of its condition, and **DO NOT** attempt to reuse it.

**! CAUTION: DO NOT attempt to remove the DIAPHRAGM (9) with the use of a metallic instrument. Doing so will seriously damage the brass seating surface of the BODY (1 or 34).**

14. Remove the **body (1 or 34)** from the vise and remove the **button pin (8)** by pressing in on the shaft with your finger. Check for any signs of wear, distortion, or corrosion. Discard if found.

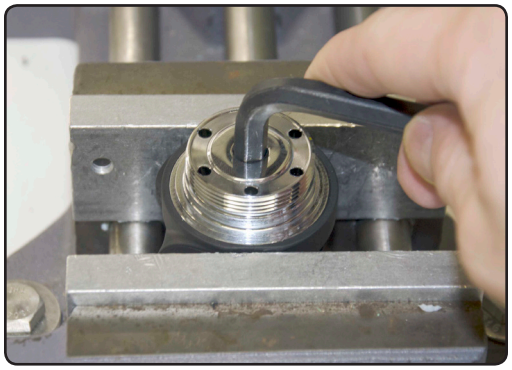


Fig. 9

Fig. 10

15. Gently insert the longer tapered end of an HP Cone Tool directly into the **seat cone (3)** which is held inside the **body (1 or 34)**. Pull the tool straight out to remove the **seat cone (3)** from the **body (1 or 34)** *(Fig. 11)*.

Fig. 11

16. Remove the HP cone **O-ring (2)**, being very careful to avoid damaging the **seat cone (3)**. Discard the **O-ring (2)**, and **DO NOT** attempt to reuse it. Inspect the **seat cone (3)** for any signs of damage or corrosion. Discard if found.

17. Remove all **plugs (25/26)** with a 5/32" hex key. Remove and inspect the plug **O-rings (23/24)** for any signs of decay. Discard if found.

## 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. Lubricate and install the HP cone **O-ring (2)** onto the **seat cone (3)**, and place the sealing edge of the **seat cone (3)** down onto the smaller end of a clean HP Cone Tool. Use care not to damage the seating surface of the **seat cone (3)** as this is done.

Fig. 12

2. Guide the HP cone/tool assembly into the HP chamber of the **body (1 or 34)**, taking care to properly align the **seat cone (3)** with the recess in the HP chamber. Carefully press the **seat cone (3)** completely into place and withdraw the tool, pulling it straight out.

3. Place the stem of the **button pin (8)** directly into the center hole in the **body (1 or 34)**, ensuring that it enters without any restriction *(Fig. 12)*.

4. Position the **diaphragm (9)** flat, directly over the opening of the **body (1 or 34)**. Gently push the edges of the **diaphragm (9)** down inside the internal threads of the **body (1 or 34)**, one thread at a time. rotate the **body (1 or 34)** while doing this, to facilitate an even seating of the **diaphragm (9)**, and closely inspect it to ensure it is well seated in the groove at the base of the threads *(Fig. 13)*.

Fig. 13

**! CAUTION: NEVER lubricate the DIAPHRAGM (9).**

**! CAUTION: DO NOT force the DIAPHRAGM (9) into the BODY (1 or 34) in a manner that will damage either the lip or surface of the DIAPHRAGM (9), or the Threads of the BODY (1 or 34). The use of a sharp instrument, such as a screwdriver, is to be strictly avoided.**

5. Place the **diaphragm plate (10)** into the **body (1 or 34)** on top of the **diaphragm (9)** with the collar facing up.

6. Thread the **end cap (11)** into the **body (1 or 34)** turning it clockwise by hand until secure.

7. While holding the **body (1 or 34)** secure in a soft jawed or well padded vise, use a torque wrench with an Oceanic Pronged End Cap Tool to tighten the **end cap (11)** into the **body (1 or 34)** to a torque of 23 - 25 ft-lbs (31.2 - 33.9 N-m) *(Fig. 14)*.

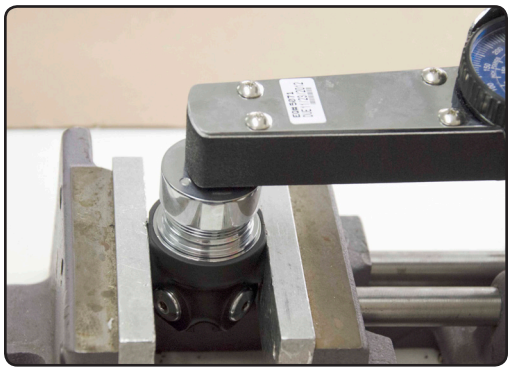


Fig. 14

**! 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.**

8. Apply a very light film of lubricant to both ends of the **diaphragm spring (12)**, and insert it down through the **end cap (11)** on to the **diaphragm plate (10)**.

9. Place the spring **washer (13)** directly onto the upper end of the **diaphragm spring (12)** and install the **adjustment cup (14)** into the **end cap (11)**. Using a 5/16" hex key, turn the **adjustment cup (14)** clockwise until only 2 threads are showing *(Fig. 15)*.

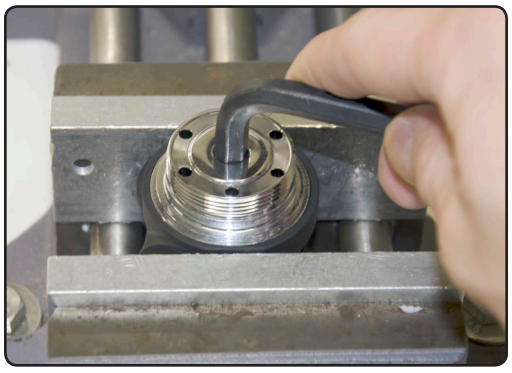


Fig. 15

**! NOTE: For units received with YOKE Connectors perform step 10Y, for units received with DIN Connectors perform step 10D.**

10Y. Yoke Connector Reassembly:

**! NOTE: If the telescoping knob was not disassembled, skip to step D.**

A. Slide the notched end of the **knob shaft (37)** through the base of the **knob (39)**. Then apply a drop of medium strength thread lock compound (Loctite™ 222) to the threads of the smaller diameter end of the **knob shaft (37)**.

B. Place the **knob spring (41)** into the **knob (39)**, and tighten the **spring receiver (38)** clockwise with a slotted blade screwdriver onto the **knob shaft (37)** until it stops, torque 120 - 140 in-lbs (13.6 - 15.8 N-m) *(Fig. 16)*. **DO NOT** overtighten.

C. Press the **knob cap (40)** into the **knob (39).**

D. Install the **filter (43)** into the yoke **receiver (36)** *(Fig. 17)*.

E. Carefully, install the **O-ring (45)** into the **yoke receiver (36)** *(Fig. 18)*.

F. Install the **plunger (31)** into one end of the **spring (44)**.

H. Set the **plunger (31)** and **spring (44)**, spring side down on the counter. Then set the **filter retainer (42)** on top of the **plunger (31)**.

I. Lift the **fiter retainer (42)**, **plunger (31)**; **spring (44)** and set them into the **yoke retainer (36)**, **plunger (31)** side up. Then press the **filter retainer (42)** straight down *(Fig. 19)*. The friction from the **O-ring (45)** should temporarily hold the parts in place.

Fig. 16

Fig. 17

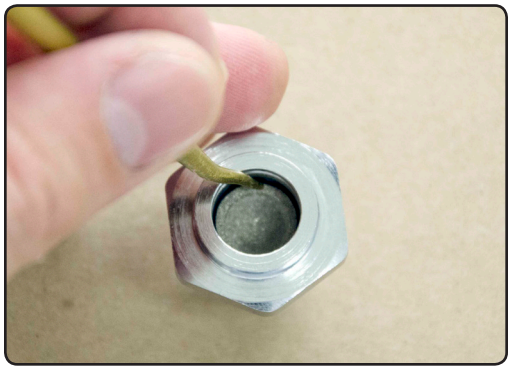


Fig. 18

Fig. 19

J. Using snap ring pliers, install the **retaining ring (46)** to secure the DVT assembly *(Fig. 20)*.

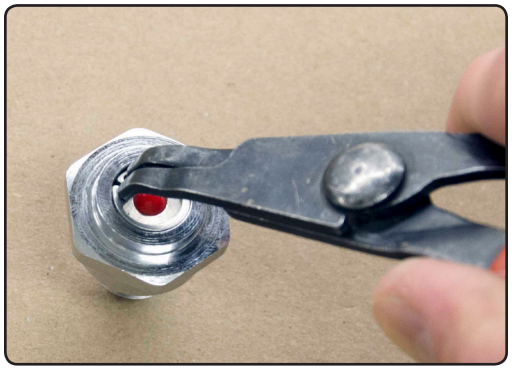


Fig. 20

K. Lightly lubricate and install the receiver **O-ring (7)** onto the **yoke receiver (36)** and the HP seat **O-ring (5)** into the inner bore of the **yoke receiver (36)**.

L. Apply a very light film of lubricant to both ends of the **spring (6)** and the lower 1/4" of the shaft of the **HP seat (4)**. Install the **spring (6)** onto the end of the **yoke receiver (36)**.

M. Carefully guide the shaft of the **seat (4)** so that it passes through the **spring (6)** and into the HP seat **O-ring (5)** in the inner bore of the **yoke receiver (36)** *(Fig. 21)*.

Fig. 21

N. Place the **dust cap (29)** into the groove in the **body (1 or 34)**.

O. Carefully place the threaded end of the **yoke receiver (36)** through the base of the **yoke (35)**, facing opposite the end that holds the **yoke knob (39).**

P. While holding the **yoke receiver (36)** inside the **yoke (35)**, guide the assembly into the center of the receiver opening in the **body (1 or 34)**. Ensure that the hole in the center of the **seat (4)** goes straight down over the **button pin (8)** without scratching/damaging the seating surface. While pressing down, engage the threads of the **yoke receiver (36)** clockwise into the **body (1 or 34)** by hand.

Q. Apply a 1" thin wall socket, 1/4" extension, 1/4" to 3/8" adapter, and wrench to the **yoke receiver (36)**, and turn clockwise to to a torque of 23 - 25 ft-lbs (31.2 - 33.9 N-m) *(Fig. 22)*.

Fig. 22

R. Turning clockwise, thread the **yoke knob (39)** into the **yoke (35)**.

10D. DIN Connector Reassembly:

A. Lubricate and install the receiver **O-ring (7)** onto the **DIN receiver (21)** and the HP seat **O-ring (5)** into the inner bore of the **DIN receiver (21)** *(Fig. 23)*.

B. Lightly lubricate both ends of the **spring (6)**. Install the **spring (6)** onto the end of the **DIN receiver (21)**.

C. Lightly lubricate the lower 1/4" of the shaft of the **HP seat (4)**. Then carefully guide the shaft of the **seat (4)** so that it passes through the **spring (6)** and into the HP seat **O-ring (5)** in the inner bore of the **DIN receiver (21)** *(Fig. 24)*.

D. Place the **dust cap (29)** into the groove in the **body (1 or 34)**.

E. While looking into the **body (1 or 34)**, insert the seat/receiver assembly directly into the center of the receiver opening in the **body (1 or 34)**. Ensure that you can see the pin portion of the **button pin (8)** during this action; so the hole in the center of the **seat (4)** goes straight down over the **button pin (8)** without scratching/damaging the seating surface.

F. While holding the **body (1 or 34)** secure in a soft jawed or well padded vise, turn the **DIN receiver (21)** clockwise to engage the threads by hand. Then apply a 3/4" deep socket and torque wrench to the **DIN receiver (21)**, and tighten it to a torque of 23 - 25 ft-lbs (31.2 - 33.9 N-m) *(Fig. 25)*.

! **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.**

G. Install the **DIN wheel (20)** onto the **DIN receiver (21)**.

H. Install the **plunger (31)**, **spring (32)**, **filter (28)**, and **O-RING (2)** into the **DIN RETAINER (21)** *(Fig. 26)*.

I. Install the DIN retainer **O-ring (27)** over the threaded end of the **DIN retainer (22)**.

J. Insert the threaded end of the **DIN retainer (22)** through the **DIN wheel (20)**, into the **DIN receiver (21)**, and hand tighten it clockwise. Then apply a 1/4" hex driver and torque wrench to the **DIN retainer (22)**, and tighten it to a torque of 120 to 140 in-lbs (13.6 - 15.8 N-m).

K. Install the DIN face **O-ring (33)**.

Fig. 23

Fig. 24

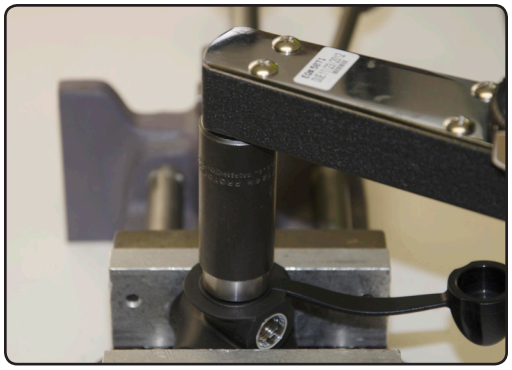


Fig. 25

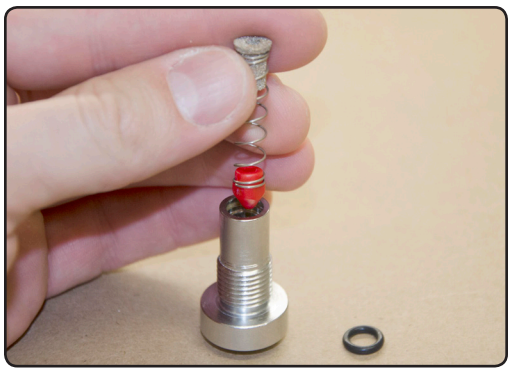


Fig. 26

11. Lubricate and install port plug **O-rings (23/24)** onto the **plugs (25/26)**. While holding the **body (1 or 34)** secure, install the **plugs (25/26)** into the **body (1 or 34)**, tightening clockwise with a 5/32" hex key driver to a torque of 35 - 40 in-lbs (4 - 4.5 N-m).

12. Lubricate and install all hose O-rings onto hoses, and install the hoses into the **body (1 or 34)**. While holding the **body (1 or 34)** 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 a 9/16" open end wrench to a torque of 35-40 in-lbs (4-4.5 N-m).

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

**! NOTE: Proceed to the Final Adjustment Section before installing the ENVIRONMENTAL END CAP (19) assembly.**

## FINAL ADJUSTMENT

1. Connect a recently calibrated low pressure test gauge to a low pressure hose. Then connect the first stage with second stage and low pressure test gauge to a pure breathing gas source of 3000 psi (206.8 bar). 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 137 to 139 PSI (9.4-9.6 bar) by turning the **adjustment cup (14)** clockwise to increase the pressure or counterclockwise to decrease it.

**! NOTE: Turn the ADJUSTMENT CUP (14) 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 137 TO 139 PSI (9.4-9.6 bar), 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.**

## ENVIRONMENTAL CAP COMPONENT REASSEMBLY

1. Leave the regulator pressurized after adjusting the first stage and continue as follows.

2. Lightly lubricate and install the environmental **O-ring (15)** onto the base of the **end cap (11)** *(Fig. 27)*.

Fig. 27

3. Place the **styling ring (17)**, larger diameter end first, down over the threads and onto the collar of the **end cap (11)**.

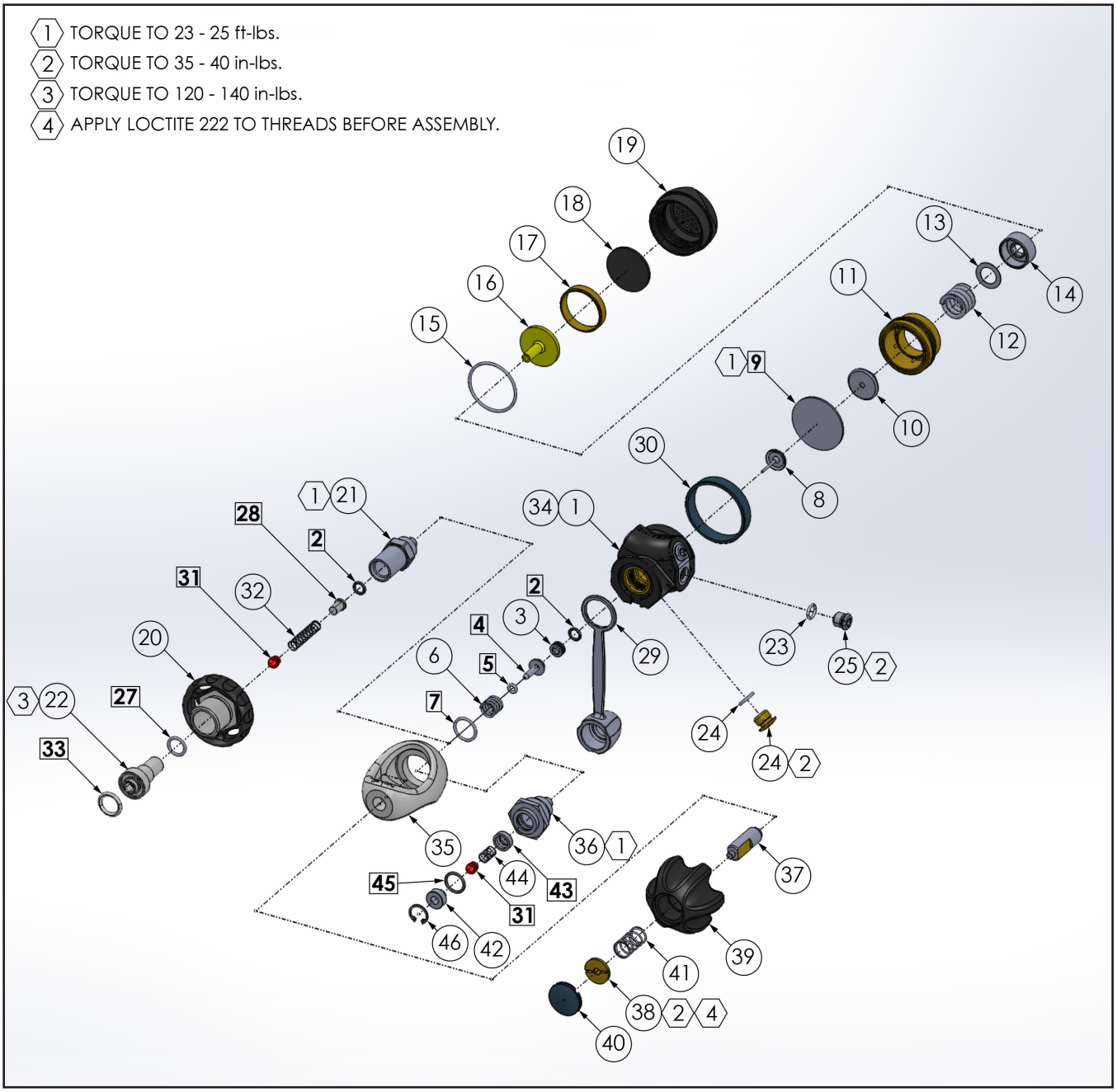
4. Place the **environmental ring (17)** into the groove on the top of the **end cap (11)**.

5. Place the stem of the **transfer piston (16)** into the opening of the **adjustment cup (14)**. Then drop the **transfer piston (16)** into the **environmental ring (17)** *(Fig. 28)*.

6. Place the **environmental diaphragm (18)** flat inside the **environmental end cap (19)**. Install the **Environmental end cap (19)**, threading it clockwise by hand until fully seated, onto the **end cap (11)**. **DO NOT** use any tools to tighten.

7. Close the Breathing Gas Supply Valve. Purge all pressure using the Second Stage, and remove the regulator from the breathing gas source.

Fig. 28



SERVICE PARTS KIT

| PART# | DESCRIPTION | NOTES |
|---|---|---|
| 40.6128 | KIT, SVC, FDXi, YOKE, DVT | |
| 40.6135 | KIT, SVC, FDXi, DIN, DVT | |

DOCUMENTS

| PART# | DESCRIPTION | NOTES |
|---|---|---|
| 12.2825 | Procedure, SVC, FDXi | |
| 12.2202 | Procedure, Regulator General | |

COMMENTS

| | |
|---|---|
| NUMBER BOX | Numbers in boxes represent Schedule A Parts, included in Service Kit |
| NLA, NA | No Longer Available; Not Available |
| NS | Not Shown |
| DPL | See Dealer Price List |

FDXI FIRST STAGE

| DIA. | CAT. | P/N | DESCRIPTION | NOTES |
|---|---|---|---|---|
| 1 | c | 8591.24 | BODY, WHITE VER. | |
| **2** | **a** | **2.010** | **O-RING** | **DIN QTY: 2 / YOKE QTY: 1** |
| 3 | c | 8170 | SEAT CONE | |
| **4** | **a** | **6490** | **SEAT** | |
| **5** | **a** | **6498** | **O-RING** | |
| 6 | c | 6512 | SPRING | |
| **7** | **a** | **2.015** | **O-RING** | |
| 8 | c | 8168 | BUTTON PIN | |
| **9** | **a** | **6893** | **DIAPHRAGM** | |
| 10 | c | 7007 | PLATE, DIAPHRAGM | |
| 11 | c | 8373 | END CAP | |
| 12 | c | 6717 | SPRING, DIAPHRAGM | |
| 13 | b | 6524 | WASHER | |
| 14 | c | 6518 | ADJUSTMENT CUP | |
| 15 | b | 2.027 | O-RING | |
| 16 | c | 8372 | TRANSFER PISTON | |
| 17 | c | 8371 | ENVIRONMENTAL RING | |
| 18 | b | 8374 | DIAPHRAGM, ENVIRONMENTAL | |
| 19 | c | 8370 | END CAP, ENVIRONMENTAL | |
| 20 | c | 8584.300 | DIN WHEEL ASSY | DIN ONLY |
| 21 | c | 8493 | DIN RECEIVER | DIN ONLY |

| DIA. | CAT. | P/N | DESCRIPTION | NOTES |
|---|---|---|---|---|
| 22 | c | 8492 | DIN RETAINER | DIN ONLY |
| 23 | b | 3.903 | O-RING | QTY: 4 |
| 24 | b | 3.904 | O-RING | QTY: 2 |
| 25 | c | 3463 | PLUG LP | QTY: 4 |
| 26 | c | 3462 | PLUG HP | QTY: 2 |
| **27** | **a** | **3.905** | **O-RING** | **DIN ONLY** |
| **28** | **a** | **6810** | **FILTER** | **DIN ONLY** |
| 29 | c | 8592.01 | DUST CAP | |
| 30 | c | 8572 | RING, TRIM | |
| **31** | **a** | **6903** | **PLUNGER** | |
| 32 | b | 6898 | SPRING | DIN ONLY |
| **33** | **a** | **6374** | **O-RING** | **DIN ONLY** |
| 34 | c | 8592.01 | BODY, BLACK VER. | |
| 35 | c | 8586 | YOKE, INLINE 2011 | YOKE ONLY |
| 36 | c | 8566 | YOKE, RECEIVER | YOKE ONLY |
| 37 | c | 8582 | SHAFT, COMPACT KNOB | YOKE ONLY |
| 38 | c | 8583 | RETAINER, SPRING | YOKE ONLY |
| 39 | c | 8588 | KNOB, 2011 | YOKE ONLY |
| 40 | c | 8571 | KNOB CAP | YOKE ONLY |
| 41 | c | 8648 | SPRING, KNOB COMPACT | YOKE ONLY |
| 42 | c | 8567 | RETAINER, FILTER | YOKE ONLY |
| **43** | **a** | **8568** | **FILTER** | **YOKE ONLY** |
| 44 | b | 9443 | SPRING | YOKE ONLY |
| **45** | **a** | **2.014** | **O-RING** | **YOKE ONLY** |
| 46 | b | 3530 | RETAINING RING | YOKE ONLY |