



SP5

UNBALANCED PISTON

FIRST STAGE

Doc. 12-2813

PRODUCT SERVICE PROCEDURE

This Service Procedure conveys a list of components and procedures that reflect the SP5 first stage as it was configured at the time of this writing (10/18/10).

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GENERAL PROCEDURES

REFER TO GENERAL SERVICE PROCEDURE.....	DOC. NO. 12-2202-r02
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SPECIFICATIONS

Terminology

IP Intermediate Pressure.

Leak Low volume release of air, audible & detectable in water.

Intermediate Pressure

Preferred: 140 to 145 psi (9.7 – 10 bar) at 3,000 psi (207 bar) supply

Acceptable: 137 to 148 psi (9.4 – 10.2 bar) at 3,000 psi (207 bar)

supply

Preferred: 130 to 136 psi (9 – 9.4 bar) at 500 psi (34.5 bar) supply

Acceptable: 127 to 139 psi (8.8 – 9.6 bar) at 500 psi (34.5 bar) supply

Torques

Yoke Retainer (7, 30)	23 to 25 ft-lbs (31.2-33.9 N-m)
DIN Filter Retainer (10)	120 to 140 in-lbs (13.6-15.8 N-m)
DIN Filter Housing (15)	16 to 18 ft-lbs (21.7-24.4 N-m)
Port Plug N/S	35 to 40 in-lbs (4-4.5 N-m)
Hose into First Stage Body	35 to 40 in-lbs (4-4.5 N-m)
Piston Cap (29)	120 to 140 in-lbs (13.6-15.8 N-m)

TOOLS REQUIRED

Standard Tools

Inch Pounds Torque Wrench
 1/2" Open End Wrench
 9/16" Open End Wrench
 5/8" Open End Wrench
 13/16" Open End Wrench
 1" Open End Wrench
 5/32" Hex Key
 1/4" Hex Key
 CO2 Cartridge (discharged)

Specialty Tools

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

PN 40.9315	IP Gauge
PN 40.9520	O-Ring Tool Set
PN 40.6536	DX Spanner
PN 40.9412	1/4" Drift Pin Punch
PN 40.9518	Circlip Pliers

SYMPTOM	POSSIBLE CAUSE	TREATMENT
Restricted airflow and inhalation resistance through the complete system.	<ol style="list-style-type: none"> 1. Cylinder valve not completely opened. 2. Cylinder valve requires service. 3. CONE FILTER (4, 12) is contaminated. 	<ol style="list-style-type: none"> 1. Open valve completely. 2. Connect Regulator to a different cylinder. 3. Replace with new and perform a complete service.
Air leakage detected from inlet openings of First Stage.	<ol style="list-style-type: none"> 1. PISTON HEAD O-RING (27) is damaged or worn. 2. PISTON SHAFT O-RING (25) is damaged or worn. 	<ol style="list-style-type: none"> 1. Replace with new. 2. Replace with new.
Insufficient intermediate pressure.	<ol style="list-style-type: none"> 1. PISTON CAP (29) loose. 2. VALVE SPRING (23) is weakened. 	<ol style="list-style-type: none"> 1. Tighten PISTON CAP (29) onto BODY (21). 2. Replace with new.
Excessive intermediate pressure.	<ol style="list-style-type: none"> 1. Contamination under SHIM (22). 2. HP SEAT (24) damaged or worn. 3. Internal damage to Orifice Cone inside BODY (21). 	<ol style="list-style-type: none"> 1. Clean seating surface and replace SHIM (22) with new. 2. Replace with new. 3. Replace BODY (21).

DISASSEMBLY PROCEDURE



NOTE: Be sure to perform the steps outlined in the General Service Procedure (Doc. No. 12-2202-r02) prior to disassembling the Regulator. Review the Troubleshooting section to better understand which internal parts may need replacing, and to be able to better advise the customer of the service required.

1. Before disassembling the First Stage, remove the low pressure second stage Hoses with a 9/16" open end wrench, the high pressure Hose with a 5/8" open end wrench, and the low pressure inflator Hose with either a 9/16" or 1/2" open end wrench. Remove all remaining **PORT PLUGS N/S** with a 5/32" hex key.
2. Remove and inspect the O-rings now visible on all these items for any signs of decay. Discard if found.
3. Install one of the following items CO₂ Cartridge (discharged) or a HP Hose Fitting (off a condemned/failed HP hose) to the HP Port of the **BODY (21)**, using a HP Port Adaptor if necessary, before proceeding to the next step (**Fig. 1**).



Fig. 1



NOTE: For units received with Yoke Connectors perform step 4Y, for units received with DIN Connectors perform step 4D, and for Yoke DVT units perform 4DVT.



WARNING: DO NOT use a CO₂ Cartridge that has not been discharged.

4Y. Yoke Connector Disassembly:

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



Fig. 2

B. With the CO₂ Cartridge, or HP Hose Fitting facing to the right, lower the **BODY (21)** into a soft-jawed or well-padded Vise with the **YOKE (2)** facing straight up. Turn the **BODY (21)** counterclockwise to ensure the CO₂ Cartridge, or the HP Hose Fitting, is making contact with the jaw of the vise, prohibiting further movement of the BODY. Secure the **BODY (21)** in the vise and apply a thin-wall, or modified, 1" Open End Wrench to the **YOKE RETAINER (7)**. Using firm steady force, turn the **YOKE RETAINER (7)** counterclockwise to remove it. **DO NOT** use impact tools to loosen.



NOTE: It is important that the wrench is properly seated over the entire hex portion of the YOKE RETAINER (7) to prevent any damage to the part (Fig. 3).



Fig. 3



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

C. Remove the **YOKE (2)**, **STYLING CUP (3a)**, and **PROTECTOR CAP (17)** and set them aside. Remove and discard the **RETAINER O-RING (8)** and **DO NOT** attempt to reuse it.

D. Using Internal Circlip Pliers, remove the **RETAINING CLIP (4)** that retains the **CONE FILTER (5)**. The **FILTER (13)** should drop out freely in your hand. Discard, and **DO NOT** attempt to reuse. Remove the **FILTER O-RING (6)** and inspect for any signs of decay. Discard if found.

4D. DIN Connector Disassembly:

A. With the CO2 Cartridge or HP Hose Fitting, facing to the right, lower the First Stage Body into a soft-jawed or well-padded vise with the DIN Connector facing straight up. Turn the **BODY (21)** counter-clockwise to ensure the CO2 Cartridge, or the HP Fitting, making contact with the jaw of the vise, prohibiting further movement of the **BODY (21)**. Secure the First Stage **BODY (21)** in the vise and apply a 1/4" hex key to the **DIN FILTER RETAINER (10)**. Using firm steady force, turn the **DIN FILTER RETAINER (10)** counterclockwise to remove. **DO NOT** use impact tools to loosen (Fig. 4).



Fig. 4



NOTE: In the event that the complete DIN Fitting comes off the First Stage when the DIN FILTER RETAINER is being removed during Disassembly (step 4D), 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.



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

B. Remove the **DIN FACE O-RING (9)** and **RETAINER O-RING (11)** from the **DIN FILTER RETAINER (10)** and inspect for any signs of decay. Discard if found.

C. Lift the **DIN COUPLER WHEEL (12)** straight off the **DIN FILTER HOUSING (15)** and set aside. Apply a 13/16" open-end wrench or deep socket to the Flange at the base of the **DIN FILTER HOUSING (15)** (**Fig. 5**). Using firm, steady force, loosen in a counterclockwise direction to remove. **DO NOT** use impact tools to loosen. Lift the **STYLING CUP (3a)** and **PROTECTOR CAP (17)** off the **BODY (21)** and set aside.



Fig. 5



NOTE: The wrench must be deep enough to seat entirely over the Flange to avoid any damage to the seating surface.

D. After removing the **DIN FILTER HOUSING (15)** from the **BODY (21)**, turn it over and tap lightly to drop out the **DIN CONE FILTER (13)**. Discard the **DIN CONE FILTER (13)**, and **DO NOT** attempt to reuse. Remove and inspect the **FILTER O-RING (14)** for any signs of decay. Discard if found. Remove and discard the **FILTER HOUSING O-RING (16)** and **DO NOT** attempt to reuse.

4DVT. DVT Yoke Connector Disassembly:

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

B. Secure the **BODY (29)** in a padded vise with the yoke facing upwards. Apply a modified 1" crow's foot wrench or modified 1" yoke nut socket over the **DVT YOKE RETAINER (30)**. Using a firm steady force, remove **DVT YOKE RETAINER (30)** by turning it counter-clockwise. **DO NOT** use impact or heat to remove (**Fig. 6**).



Fig. 6



CAUTION: It is important that the wrench or socket is properly seated over the DVT Yoke Retainer (30) to prevent marring or damaging the part.



CAUTION: Tighten the vise only as needed to hold the first stage secure; **DO NOT** over tighten.

Doing so will result in deformation of the parts, rendering them unusable.

C. Remove the **DVT YOKE RETAINER (30)**, **YOKE (2)**, **STYLING CUP (3a)**, and **PROTECTOR CAP (17)**. Inspect the sealing edge (which mates to the valve face) of the **DVT YOKE RETAINER (30)** for scratches or deformation; replace if any found.

D. Remove and discard both **DVT RETAINER O-RINGS (34, 35)** (schedule A) and **DO NOT REUSE**.

E. Remove the **FILTER (33)**, **PLUNGER SPRING (32)** and **PLUNGER (31)** from the **DVT YOKE RETAINER (30)**. Discard the **FILTER (33)** and **PLUNGER (31)** (schedule A) and **DO NOT REUSE (Fig. 7)**.



Fig. 7

5. Invert the **BODY (21)** in the vise and secure as before, with the **PISTON CAP (29)** facing up. Using Piston Body Spanner, loosen the **PISTON CAP (29)** by applying firm steady pressure in a counter-clockwise rotation (**Fig. 8**). **DO NOT** use impact tools to loosen.

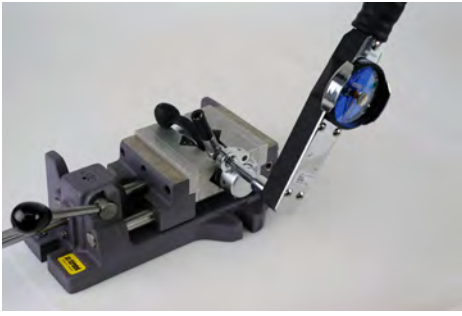


Fig. 8



CAUTION: Tighten the vise only as needed to hold the first stage secure; **DO NOT** over tighten.

Doing so will result in deformation of the parts, rendering them unusable.

6. Remove the **PISTON CAP (29)** from the **BODY (21)** by lifting it straight up. Remove and inspect the **STYLING BAND (28)** for any signs of decay, discard if found. Remove the **VALVE PISTON (26)** and **VALVE SPRING (23)** from the **BODY (21)**.

7. Remove the **SHIMS (22)**, found either inside the cavity of the main body or on the end of the **VALVE SPRING (23)**, and inspect for signs of wear or distortion, discard if found (**Fig. 9**).



Fig. 9



NOTE: Before discarding, it is very important to make a note of the quantity of **SHIMS (22)** that were removed, and identify their correct thickness. Pink is thick and blue is thin.

8. With the use of a penlight and a magnifier, closely examine the seating surface of the Orifice Cone inside the **BODY (21)** for any signs of damage. If found, discard the **BODY (21)** and **DO NOT** attempt to repair or reuse (**Fig. 10**).



Fig. 10



CAUTION: Tighten the vise only as needed to hold the first stage secure; **DO NOT** over tighten. Doing so will result in deformation of the parts, rendering them unusable.

9. Closely examine the **VALVE SPRING (23)** with the use of a magnifier, checking for any signs of corrosion. Discard if found.



CAUTION: If the initial intermediate pressure was lower than 135 PSI (9.3 bar), indicating that the **VALVE SPRING (23)** has weakened, replace the **SPRING** and **DO NOT** attempt to reuse.

10. Remove and discard the **PISTON HEAD O-RING (27)** and the **PISTON SHAFT O-RING (25)**. **DO NOT** attempt to reuse them.

11. Carefully remove the **HP SEAT (24)** from the end of the **VALVE PISTON (26)** shaft by carefully inserting a 1/16" in diameter drift pin, or a blank drill bit, through the opening in the center of the Piston's Head (**Fig. 11**). Using firm, steady force, press the pin through the **VALVE PISTON (26)** until the **HP SEAT (24)** exits the end of the Shaft. **DO NOT** use impact tools to "drive" out the **HP SEAT (24)**. Discard the **HP SEAT (24)** and **DO NOT** attempt to reuse.



Fig. 11

12. Remove the CO2 cartridge, or HP hose fitting, from the **BODY (21)** prior to cleaning.

REASSEMBLY PROCEDURE



NOTE: Prior to Reassembly, it is important to inspect all parts, both new and those being reused, for defects and damage. Inspect to insure that all o-rings are clean and supple, and all parts and components have been thoroughly cleaned and dried in accordance to the General Service Procedure (Doc. No. 12-2202-r02). Inspect all critical sealing surfaces for scratches or imperfections.



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

1. Lubricate and install the **PISTON SHAFT O-RING (25)** onto the shaft of the **VALVE PISTON (26)**, and the **PISTON HEAD O-RING (27)** onto the head of the **VALVE PISTON (26)**. Set the **VALVE PISTON (26)** aside, standing on the flat surface of its head.

2. Install the **HP SEAT (24)** into the end of the **VALVE PISTON (26)** shaft, ensuring that it seats completely flush with the outer edge (**Fig. 12**).



Fig. 12

3. Stand the **BODY (21)** on end with the threaded end (large opening) facing up. Lightly lubricate the required shims. Install the required **SHIMS (22)** over the Stem in the Cavity of the **BODY (21)**. Then install **only one** on the Head of the **VALVE PISTON (26)**, at the Shaft's Base.



NOTE: It is very important to replace the **SHIMS (22)** with the same type and thickness that were removed from each side of the **VALVE SPRING (23)** during the disassembly procedure.

4. Ensuring proper alignment, install the **STYLING BAND (28)** onto the **PISTON CAP (29)**.

5. While holding the **PISTON CAP (29)** secure, carefully insert the **VALVE PISTON (26)**, Head first into the **PISTON CAP (29)** until the Base of the **VALVE PISTON (26)** head is flatly seated against the Bottom of the **PISTON CAP (29)** (**Fig. 13**).



Fig. 13



CAUTION: It is very important to insert the **VALVE PISTON (26)** into the **PISTON CAP (29)** evenly so as not to pinch or damage the **PISTON HEAD O-RING (27)**, **VALVE PISTON (26)** Head, or the interior wall of the **PISTON CAP (29)**.

6. Apply a very light film of lubricant to both ends of the **VALVE SPRING (23)** and place the **VALVE SPRING (23)** over the Stem inside the Cavity of the **BODY (21)**.

7. While holding the **BODY (21)** secure, lower the **PISTON CAP/ VALVE PISTON Assembly** down onto the **BODY (21)**, guiding the **VALVE PISTON (26)** Shaft, Seat first, directly through the center of the **VALVE SPRING (23)** and into the **BODY (21)** (**Fig. 14**). Press straight down firmly while turning clockwise to engage the Threads. Continue to tighten by hand until secure.



Fig. 14

8. Install either a discharged CO2 cartridge or HP hose fitting, which has been set aside for this purpose, into the HP Port of the **BODY (21)**.



CAUTION: DO NOT use a CO2 cartridge which has not been discharged.

9. With the CO2 cartridge, or HP hose fitting, facing to the right, lower the First Stage **BODY (21)** into a soft-jawed or well-padded vise with the **PISTON CAP (29)** facing straight up. Turn the **BODY (21)** clockwise to ensure the CO2 cartridge, or the HP fitting, is making contact with the jaw of the vise, prohibiting further movement of the **BODY (21)**. Secure the First Stage **BODY (21)** into a soft-jawed or well-padded vise with the **PISTON CAP (29)** facing up. Using a DX Spanner and a torque wrench, tighten the **PISTON CAP (29)** by applying firm steady pressure in a clockwise rotation to a torque of **120-140 in/lbs (13.6-15.8 N-m)**. **DO NOT** use impact tools to tighten (**Fig. 15**).



Fig. 15



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

10. Invert the First Stage **BODY (21)** in the vise with the HP Inlet Bore facing straight up. Align the CO2 cartridge, or the HP fitting, as in step 9 and secure the First Stage in the vise.



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



NOTE: For units received with Yoke Connectors perform step 10Y, for units received with DIN Connectors perform step 10D, and for units received with Yoke DVT perform step 10DVT.

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10Y. Yoke Connector Reassembly:

- A. Place the loop end of the **PROTECTOR CAP (17)** and the **STYLING CUP (3a)** over the Yoke Retainer Neck of the **BODY (21)**.
- B. Lubricate and install the **FILTER O-RING (6)** into the **YOKE RETAINER (7)**, at the base of the **CONE FILTER (5)** Cavity of the **BODY (21)** (Fig. 16).

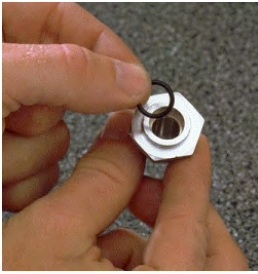


Fig. 16

- C. Install the **CONE FILTER (5)** into the **YOKE RETAINER (7)**, and install the **RETAINING CLIP (4)** into the groove above it, using Internal Circlip Pliers (Fig. 17).



Fig. 17



NOTE: Close examination of the **RETAINING CLIP (4)** will show that one side is slightly rounded and the other is flat. Install with the flat side facing out of the **YOKE RETAINER (7)** to ensure greater holding strength.

- D. Lubricate and install the **RETAINER O-RING (8)** into the groove on the end of the **YOKE RETAINER (7)**.
- E. Insert the threaded end of the **YOKE RETAINER (7)** through the **YOKE (2)**, facing opposite the end that holds the **YOKE SCREW (1)**

F. Holding the **YOKE RETAINER (7)** and **YOKE (2)** together between your thumb and forefinger, insert the **YOKE RETAINER (7)** into the **BODY (21)**, 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 (7)**, tighten it to a torque of 16-18 ft/lbs (21.7-24.4 N-m) while the **Body (21)** is held in a vise (**Fig. 18**).



Fig. 18

G. Install the **YOKE SCREW (1)** into the **YOKE (2)**.

10D. DIN Connector reassembly:

A. Lubricate and install the **FILTER HOUSING O-RING (16)** into the Groove on the end.

B. Place the loop end of the **PROTECTOR CAP (17)** and the **STYLING CUP (3a)** over the Retainer Neck of the **BODY (21)**. Hold the **DIN FILTER HOUSING (15)** between your fingers and insert the **DIN FILTER HOUSING (15)** into the **BODY (21)**, so that the threads seat properly. Hand-tighten in a clockwise direction until secure. Using a 13/16" open end wrench or deep socket that is properly seated over the entire seating surface of the DIN FILTER HOUSING Flange, tighten to a torque of 16-18 ft/lbs (21.7-24.4 N-m) (**Fig. 19**).



Fig. 19

C. Lubricate and install the **FILTER O-RING (14)** into the **DIN FILTER HOUSING (15)**, at the Base of the Cone Filter Cavity. Install the **CONE FILTER (13)** into the **DIN FILTER HOUSING (15)**.

D. Place the loop end of the **PROTECTOR CAP (17)** over the Yoke Retainer Neck of the **BODY (21)**.

E. Install the **DIN COUPLER WHEEL (12)** down over the Stem of the **DIN FILTER HOUSING (15)** with the threaded, smaller end facing up.

F. Lubricate and install the **DIN FACE O-RING (9)** and **RETAINER O-RING (11)** onto the **DIN FILTER RETAINER (10)**.

G. Insert the threaded end of the **DIN FILTER RETAINER (10)** through the **DIN COUPLER WHEEL (12)**, into the **DIN FILTER HOUSING (15)**, and hand-tighten until secure. Apply a 1/4" hex key socket and tighten to a torque of **16-18 ft/lbs (21.7-24.4 N-m)** (if the **DIN FILTER HOUSING (15)** has a hex machined into its Inner Bore) or **120 to 140 in/lbs (13.6-15.8 N-m)** (if it does not have the hex) (**Fig. 20**).



Fig. 20

10DVT. DVT Yoke Connector Reassembly:

A. Install **PLUNGER (31)**, **PLUNGER SPRING (32)** and **FILTER (33)** into the **DVT YOKE RETAINER (30)** (**Fig. 21**).



Fig. 21

B. Place the **DVT YOKE RETAINER (30)** plunger side down onto a clean flat surface; place a lubricated **DVT O-RING (34)** onto the **FILTER (33)**. Apply a small pin punch thru the **O-RING (34)** and lightly depress the filter, plunger spring and plunger and hold in place; carefully work the **O-RING (34)** into the retainer with a brass pick until fully seated, being careful not to damage the o-ring (**Fig. 22**). Once this o-ring is seated, it will hold the plunger/plunger spring/filter components in place. Now install the lubricated **DVT YOKE RETAINER O-RING (35)** into the base of the retainer.



Fig. 22

C. Insert the threaded end of **DVT YOKE RETAINER (30)** thru the **YOKE (2)** with the plunger side facing the threaded hole for the **YOKE SCREW (1)**.

D. Place the **PROTECTOR CAP (17)** and **DVT STYLING CUP (3b)** over the Yoke Retainer Neck of the **BODY (21)** as shown (**Fig 23**).

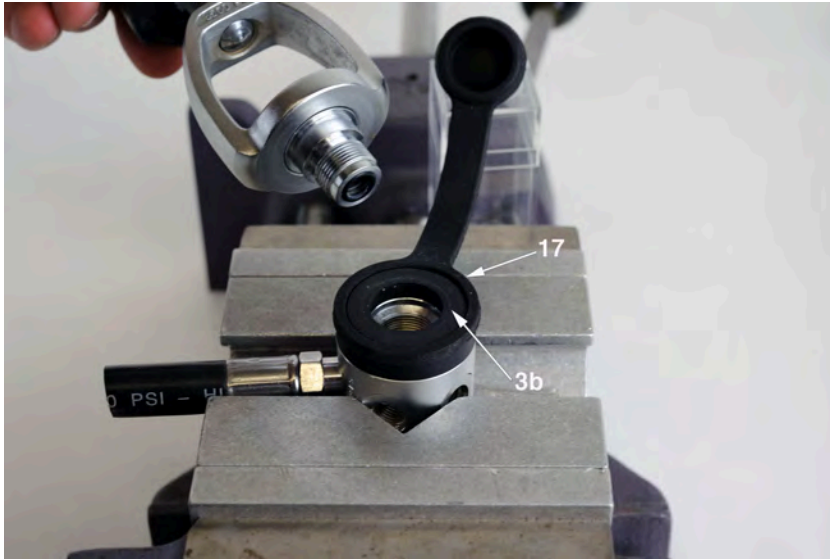


Fig. 23

E. While holding the **DVT YOKE RETAINER (30)**, **YOKE (2)**, **PROTECTOR CAP (17)** and **DVT STYLING CUP (3b)** in place, thread the end of the retainer carefully into the lower **BODY (29)** onto the lubricated threads of the retainer and thread the **DVT YOKE RETAINER (30)** clockwise into the **BODY (29)** hand tight until the retainer has fully seated. Holding the yoke retainer subassembly upside down while inserting into the body will prevent the **DVT YOKE RETAINER O-RING (30)** from being pinched or dislodged before the retainer is fully seated (**Fig 24**).

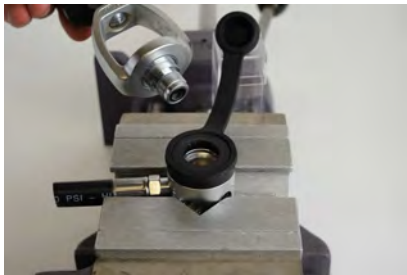


Fig. 24

F. Place the **BODY (29)** into a padded vise and apply a modified 1" crows foot wrench or modified 1" yoke nut socket attached to a calibrated torque wrench and torque the retainer assembly to **23-25 ft-lbs (17-18.4 N-m) (Fig. 25)**.



Fig. 25



CAUTION: Insure that the 1" modified crows foot wrench or 1" modified yoke nut socket is engaged securely over the DVT Yoke Retainer to prevent marring or damage to the part.



CAUTION: Tighten the vise only as needed to hold the first stage secure; **DO NOT** over tighten. Doing so will result in deformation of the parts, rendering them unusable.

11. Lubricate and install all O-RINGS onto all Hoses and **PORT PLUGS N/S**. Install all LP Hoses and **PORT PLUGS N/S** into the **BODY (21)**, and the HP Hose or **PORT PLUG N/S** into the **BODY (21)**, tightening clockwise with a 5/32" hex key socket to a torque of **35-40 in/lbs (3.95-4.5 N-m)**.



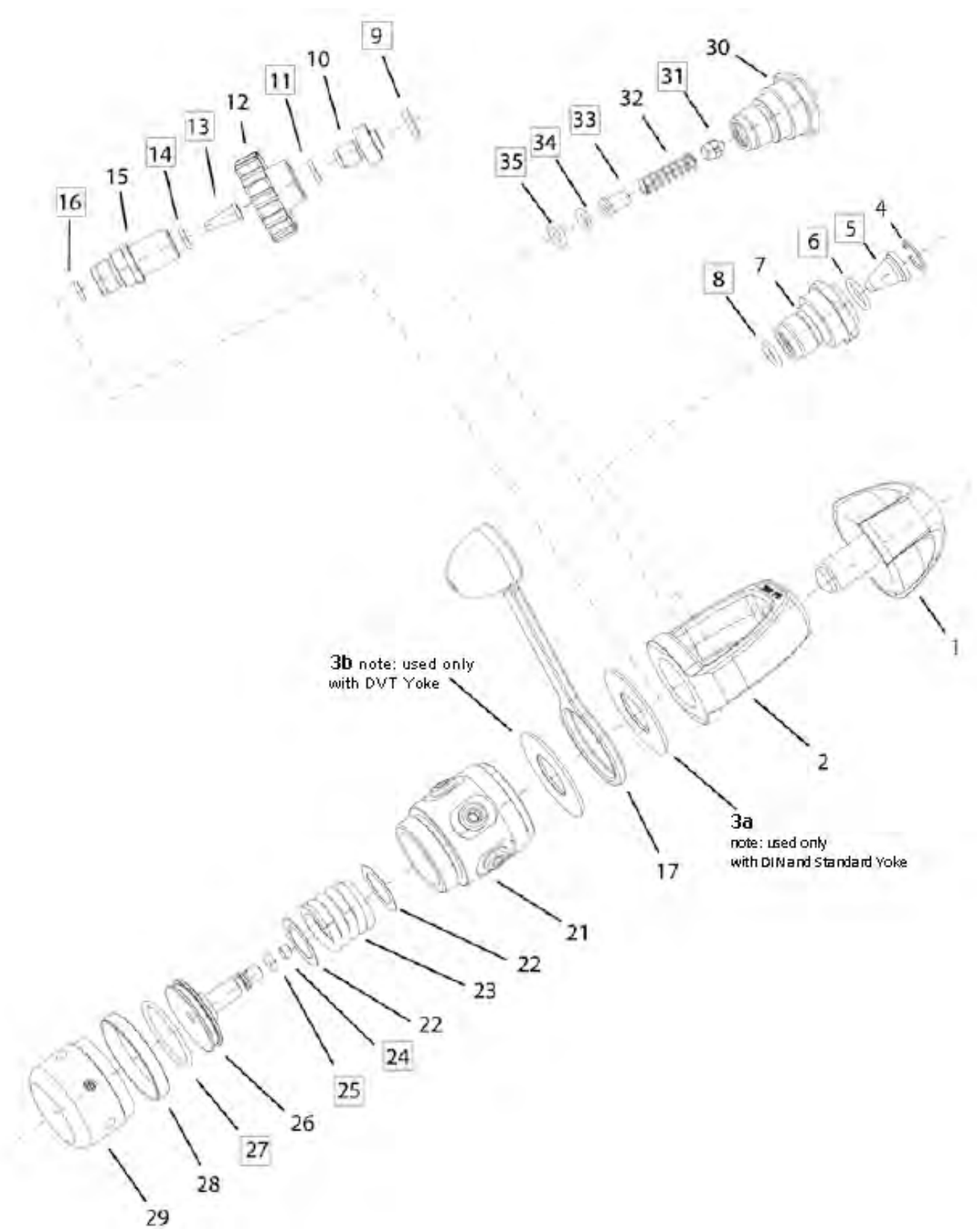
CAUTION: Be certain not to install any low pressure Hose into the High Pressure Port via an Adaptor.

FINAL ADJUSTMENT AND TESTING

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 (207 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 **140-145 PSI (9.7-10 bar)** by adding and/or substituting **SHIMS (22)** to increase or decrease the pressure.



NOTE: Ensure that the intermediate pressure holds stable at 140-145 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 on page 3 to determine possible cause and treatment.



SERVICE PARTS KIT

<u>PART #</u>	<u>DESCRIPTION</u>	<u>NOTES</u>
40.6155	Kit, SVC, Unbal, Yoke Non-DVT	
40.6156	Kit, SVC, Unbal, DIN	
40.6157	Kit, SVC, Unbal, Yoke DVT	

DOCUMENTS

<u>PART #</u>	<u>DESCRIPTION</u>	<u>NOTES</u>
12.2218	Procedure, SVC, SP5	www. OceanicNet.com (FREE)
12.2201	Procedure, Administration	www. OceanicNet.com (FREE)
12.2202	Procedure, Regulator General	www. OceanicNet.com (FREE)

COMMENTS

NUMBER BOX	Numbers in boxes represent Schedule A Parts, included in Service Kit
O-RINGS	Unless specifically listed, O-rings are only offered in 12 packs to minimize costs
NLA, NA	No Longer Available; Not Available
NS	Not Shown
DPL	See Dealer Price List

SP5 SECOND STAGE

<u>DIA.</u>	<u>CAT.</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>NOTES</u>
1	c	6563.07	KNOB, YOKE, BK	Hard rubber. Supersedes 6307.07. Compatible
2	c	6562.3	YOKE, BEADBLAST	PX3. Will function earlier models.
3a	c	6896	STYLING CUP (Non DVT)	*Used only with DIN and Standard Yoke versions
3b	c	7003	STYLING CUP (DVT)	*Used only with DVT Yoke versions
4	c	3530	CLIP, RETAINING	
5	a	3545	FILTER, CONICAL	
6	a	2.013	O-RING	*ORDER 2.013K (12 PK)*

7	c	3450	RETAINER, YOKE	6564 will function, different finish.
8	a	2.011	O-RING	*ORDER 2.011K (12 PK)*
9	a	6374	O-RING, 2.112, DIN	
10	c	4544.2	RETAINER, DIN FILTER	
11	a	2.012	O-RING	*ORDER 2.012K (12 PK)*
12	c	6559	WHEEL, DIN (COMPOSITE)	
13	a	4546	FILTER, CONICAL, DIN	
14	a	2.011	O-RING	*ORDER 2.011K (12 PK)*
15	c	5226	HOUSING, DIN FILTER	6740 will function but there will be a cosmetic gap.
16	a	2.011	O-RING	*ORDER 2.011K (12 PK)*
17	c	6560	CAP, PROTECTOR	Supersedes all previous non-FDX
21	c	5221.3	BODY, SP5	
22	b	85091.01	SHIM, THIN BLUE	
	b	85091.02	SHIM, THICK PINK	
23	c	5272	SPRING, HP, UNBALPIST	Electroplated. Introduced with SP5. Supersedes 85084.
24	a	6850	SEAT, HP, UNBAL PISTON	Supersedes 85085. Aug 2005 added groove for identification.
25	a	2.008	O-RING	*ORDER 2.008K (12 PK)*
26	c	85083	PISTON, VALVE	
27	a	2.023	O-RING	*ORDER 2.023K (12 PK)*
28	c	5216.01	BAND, STYLING, SP5	
29	c	5224.3	CAP, PISTON, SP5	
30	c	6825	RETAINER, YOKE, DVT	
31	a	6903	PLUNGER, DVT	
32	b	6898	SPRING, PLUNGER, DVT	Superseded 6936.
33	a	6810	FILTER, DVT YOKE	
34	a	2.01	O-RING	*ORDER 2.010K (12 PK)*
35	a	2.011	O-RING	*ORDER 2.011K (12 PK)*
NS	c	3462	PLUG, HP 7/16	W/O O-RING
NS	b	3.904	O-RING HP Port Plug	, *ORDER 3.904K(12 PK)*
NS	c	3463	PLUG, LP 3/8, W/O O-RING	
NS	b	3.903	O-RING LP Port Plug	*ORDER 3.903K (12 PK)*

