

Dive Rite
Regulator Service Manual
RG1208



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Warning

- *This manual is only to be used as a guide for trained regulator technicians. Possession of this guide does not qualify any individual in the service of Dive Rite Breathing Systems. Only qualified Dive Rite dealers can service Dive Rite Products. Improper servicing can lead to serious injury or death.*
- **Only Original Parts ordered from Dive Rite are to be used.**

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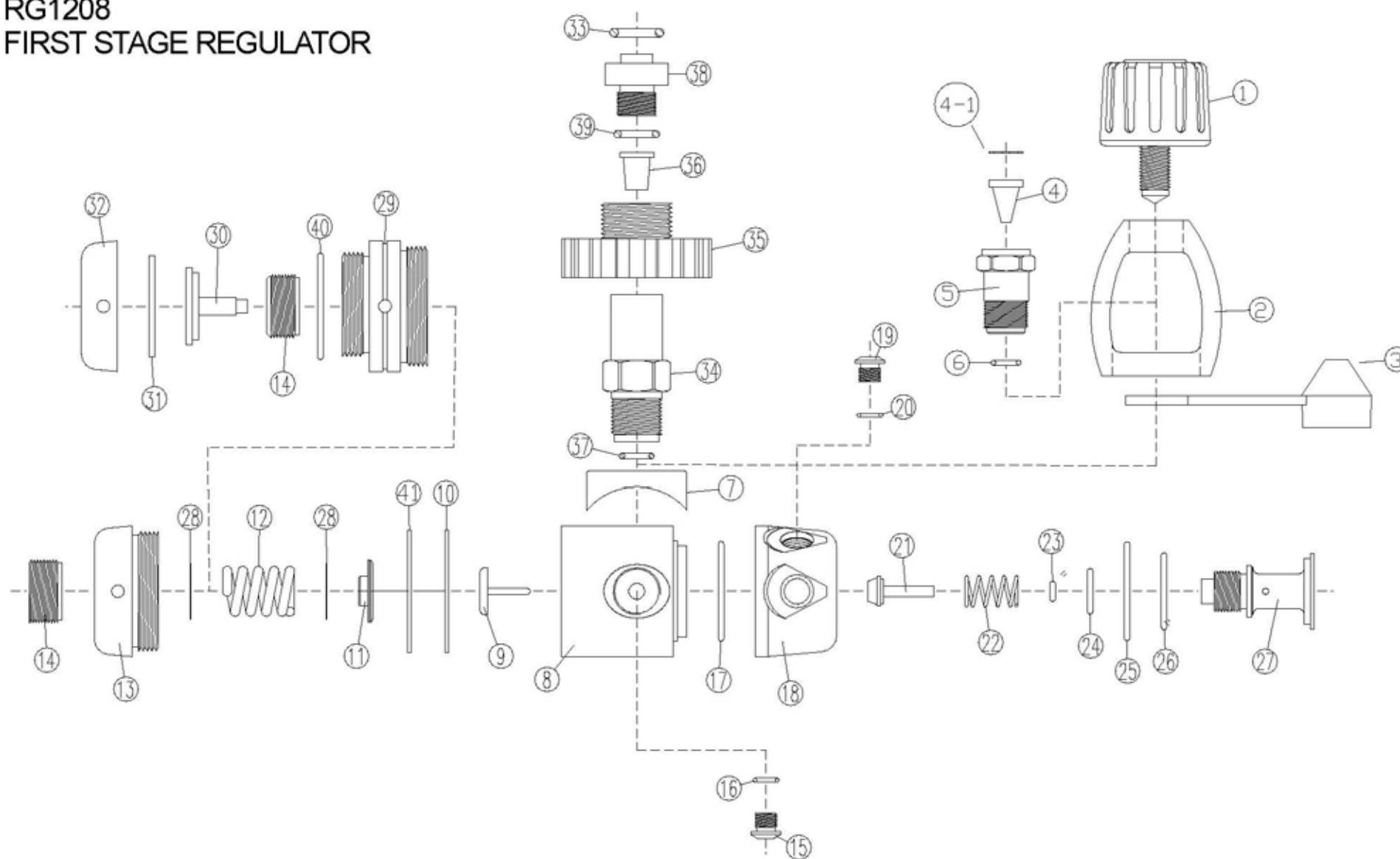
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RG1208 Balanced First stage



RG1208

FIRST STAGE REGULATOR



RG1208 Parts List

| Schematic Number | Dive Rite Part Number | DESCRIPTION | Schematic Number | Dive Rite Part Number | DESCRIPTION | Schematic Number | Dive Rite Part Number | DESCRIPTION | Schematic Number | Dive Rite Part Number | DESCRIPTION |
|------------------|-----------------------|----------------------|------------------|-----------------------|------------------------------|------------------|-----------------------|----------------------------|------------------|--|-------------------------|
| 1 | RG1227 | YOKE SCREW | 11 | RG1307 | SPRING CARRIER | 22 | RG1280 | H.P. VALVE RETURN SPRING | 33 | RG1239 | O-RING |
| 2 | *** | YOKE | 12 | RG1277 | INTERMEDIATE PRESSURE SPRING | 23 | RG1235 | O-RING | 34 | RG1276 | DIN CONNECTOR BODY |
| 3 | RG1228 | DUST COVER | 13 | RG1299 | DIAPHRAGM CAP | 24 | RG1236 | O-RING | 35 | RG1302 | DIN HAND WHEEL |
| 4 | RG1240YOKE | INLET FILTER | 14 | RG1300 | I.P. SPRING ADJUSTMENT SCREW | 25 | RG1237 | THRUST WASHER | 36 | RG1240DIN | INLET FILTER |
| 4-1 | *** | SPRING CLIP | 15 | RG1246 | HP PLUG 7/16 UNF | 26 | RG1238 | O-RING | 38 | RG1275 | DIN LOCKDOWN SCREW |
| 5 | *** | YOKE CONNECTOR BODY | 16 | RG1231 | O-RING | 27 | RG1281 | TURRET RETAINER | 39 | RG1242 | O-RING |
| 6 | RG1241 | O-RING | 17 | RG1232 | O-RING | 28 | RG1244 | PLASTIC WASHER | 40 | RG1243 | O-RING |
| 7 | RG1282 | DIN CONNECTOR SADDLE | 18 | RG1301 | TURRET | 29 | *** | COLD WATER DIAPHRAGM CLAMP | 41 | RG1265 | DIAPHRAGM THRUST WASHER |
| 8 | RG1298 | FIRST STAGE BODY | 19 | RG1245 | LP PLUG 3/8 UNF | 30 | RG1306 | TRANSMITTER | | Note: *** part of a multi-part assembly. | |
| 9 | RG1279 | VALVE LIFTER | 20 | RG1233 | O-RING | 31 | RG1307 | COLD WATER DIAPHRAGM | | | |
| 10 | RG1230-05 | DIAPHRAGM | 21 | RG1234 | HP VALVE SEAT | 32 | | COLD WATER DIAPHRAGM CAP | | | |

RG1208 First Stage Disassembly

- Note the location of plugs and hoses.
- Remove all low pressure hoses.
- Remove high pressure hoses and remaining port plugs.

- 1) Screw port tool into high pressure port. Take care not to damage threads.
- 2) Place port tool with first stage attached into vise with the intermediate pressure adjustment screw in the upright position.



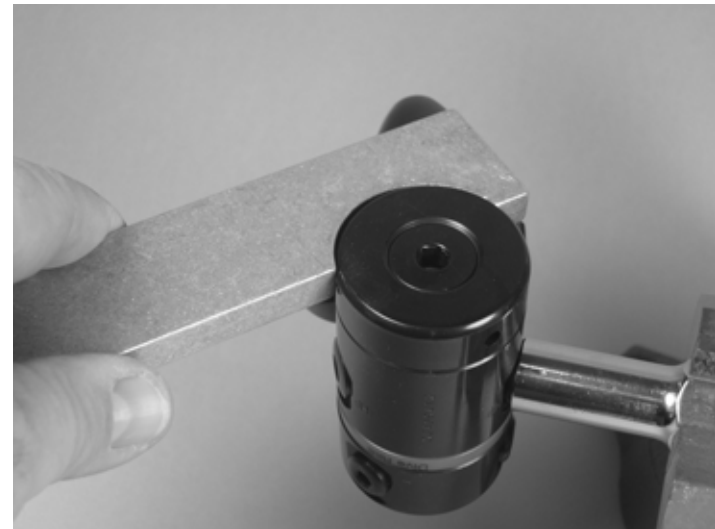
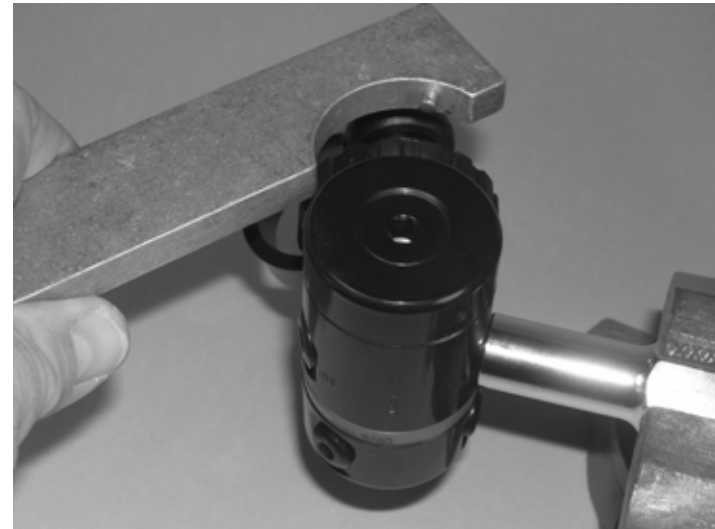
3) Using a 6mm Allen wrench loosen the adjustment screw enough to lessen the spring tension.



4) Place the spanner wrench into the holes of the diaphragm cap.

5) Loosen the cap by applying a firm steady pressure on the housing.

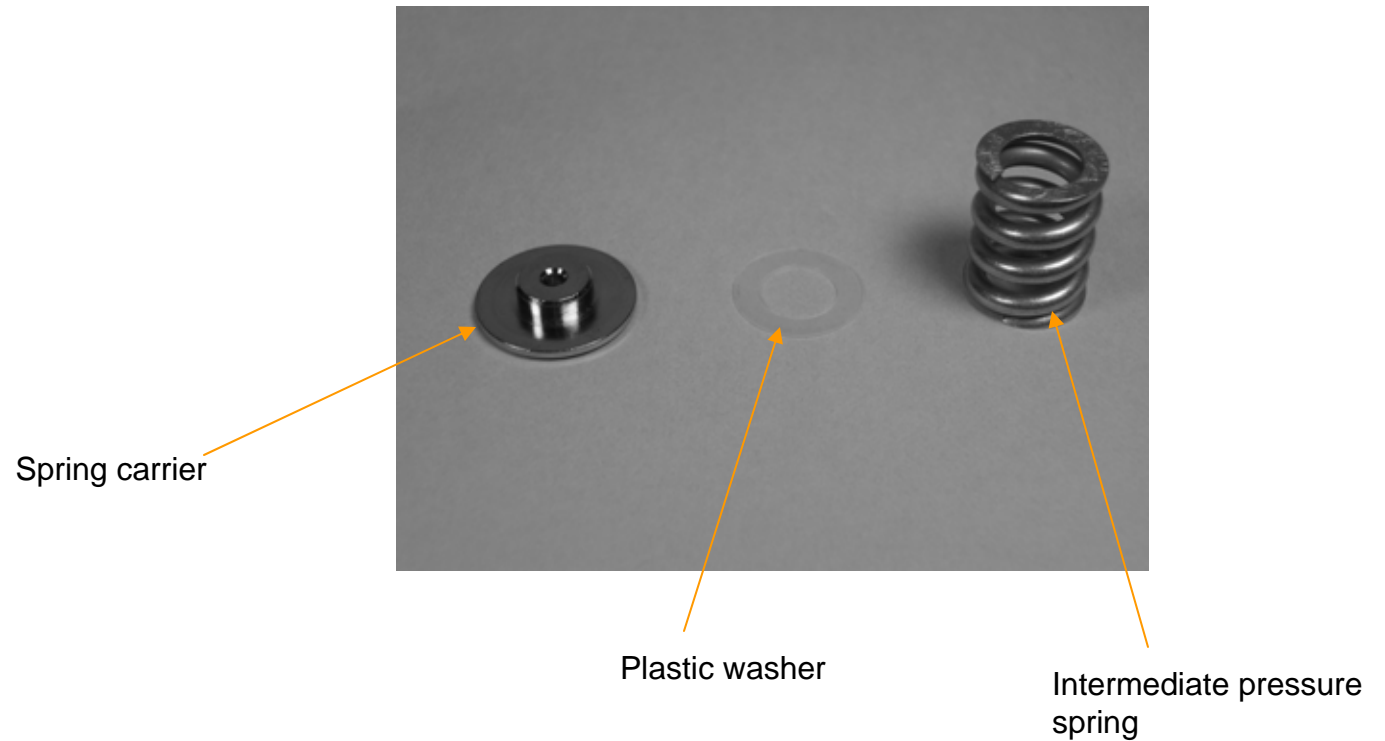
Caution: Rapid jerking can cause the spanner wrench to slip and damage the cap.



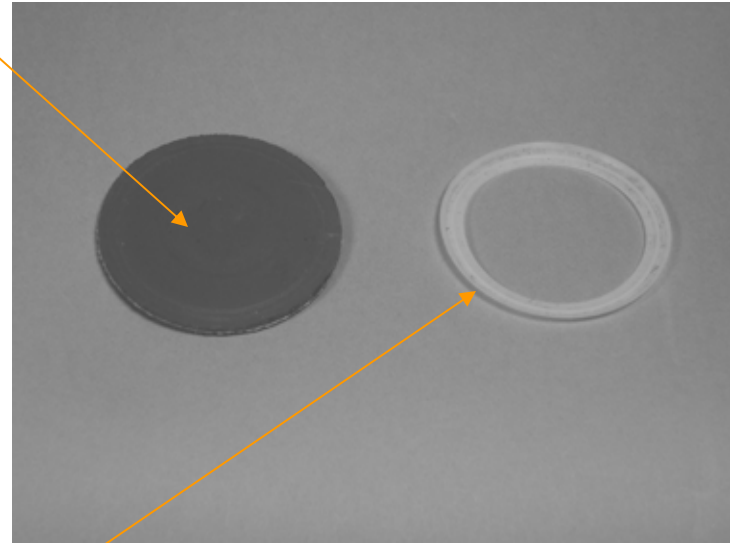
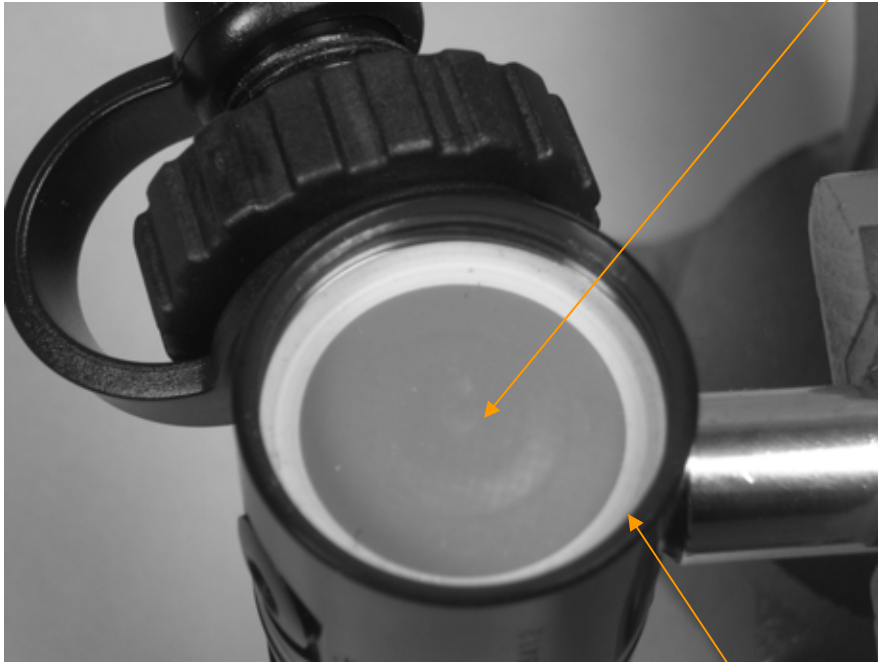
6) Unscrew the diaphragm cap and remove the adjustment screw.



- 7) Remove the intermediate pressure spring.
8) Remove the spring carrier and the plastic washer.
*Note: there is a second plastic washer found
In the adjustment screw.*



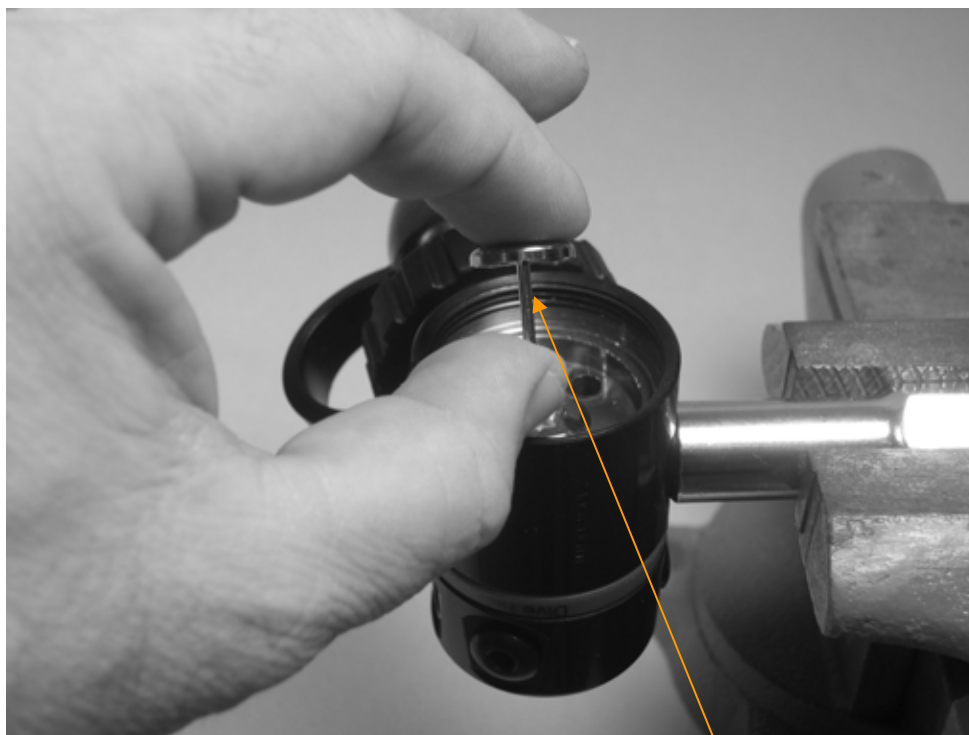
Diaphragm



Thrust Washer

9) Remove the diaphragm and the Thrust washer
Be careful not to damage sealing surfaces.

- 10) Carefully remove the valve lifter.
- 11) Inspect for damage or corrosion.

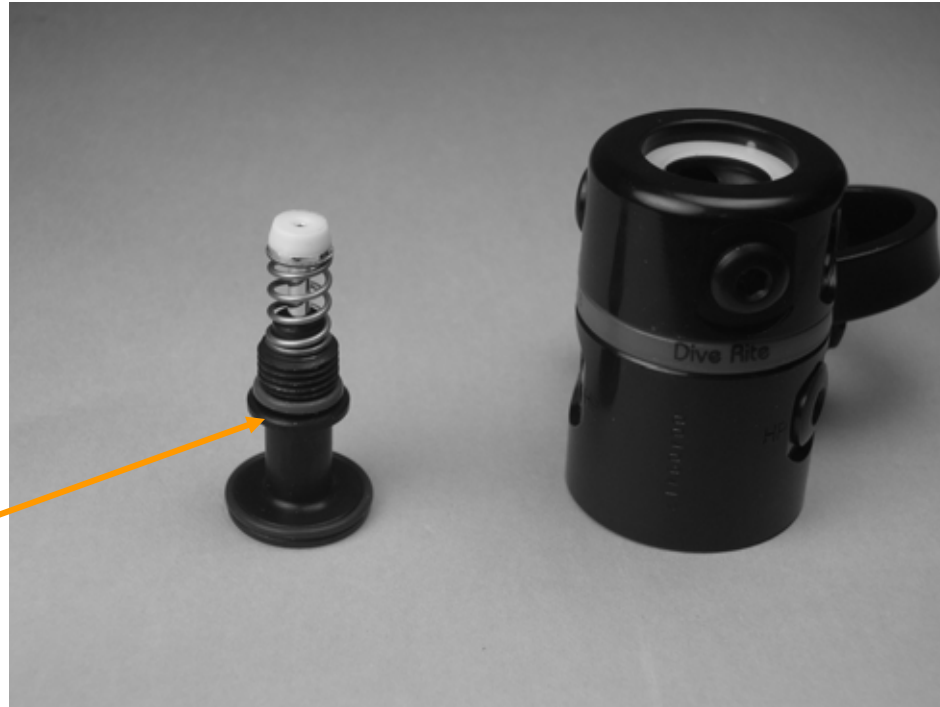


Valve Lifter



12) Remove the regulator from the vise and invert it so that the turret side is facing up.

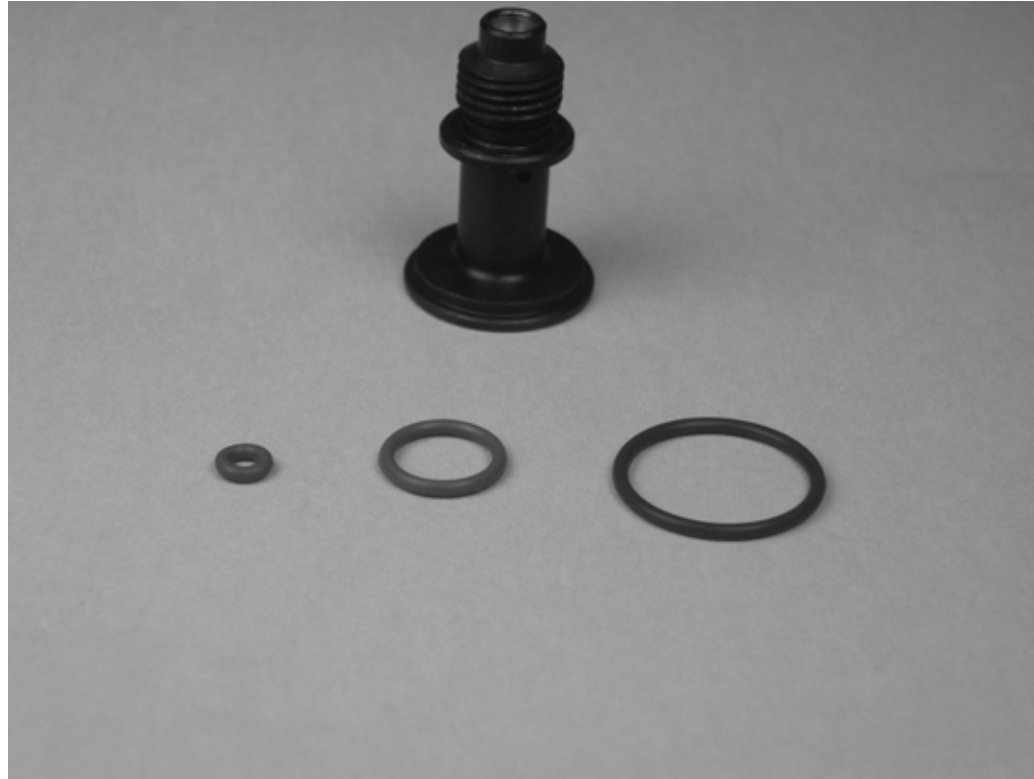
HP valve module



13) Insert a 6mm Allen wrench and remove the turret retainer (HP valve module.)



14) Remove the high pressure valve and spring.



15) Using a pick remove the three “O” rings located on the module
Note: be careful not to scratch the sealing surfaces.



16) Remove the thrust washer from the top of the turret.



17) Remove the large “O” ring and the turret Logo ring.

18) Using a pick remove the exterior “O” ring from the DIN lockdown screw. (If the yoke adaptor is attached unscrew the yoke.) This “O” ring is located in the track surrounding the high pressure inlet.

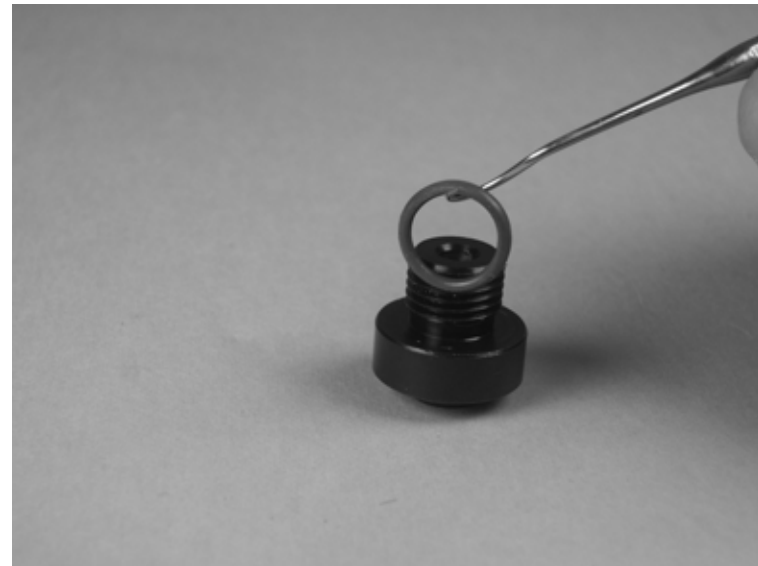




19) Insert a 6mm Allen wrench into the tank Inlet. Loosen and remove DIN lockdown screw.

Note: DIN adaptor uses thread lock. If DIN adaptor comes off as one piece simply use a 7 mm Allen wrench on the bottom of the unit while holding the 6mm wrench already inserted into the DIN lockdown screw.

20) Remove the “O” ring from the base of the DIN lockdown screw.



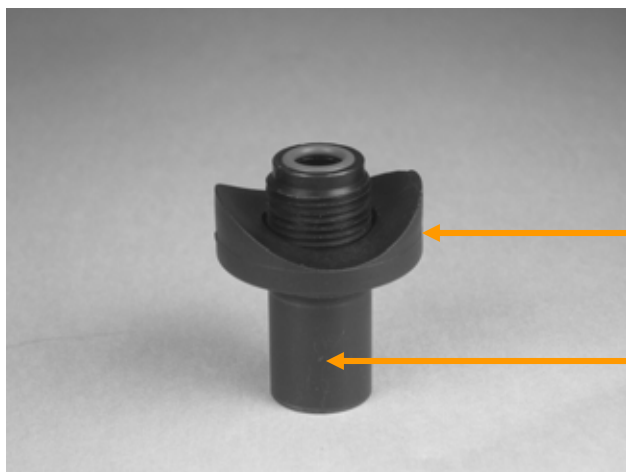
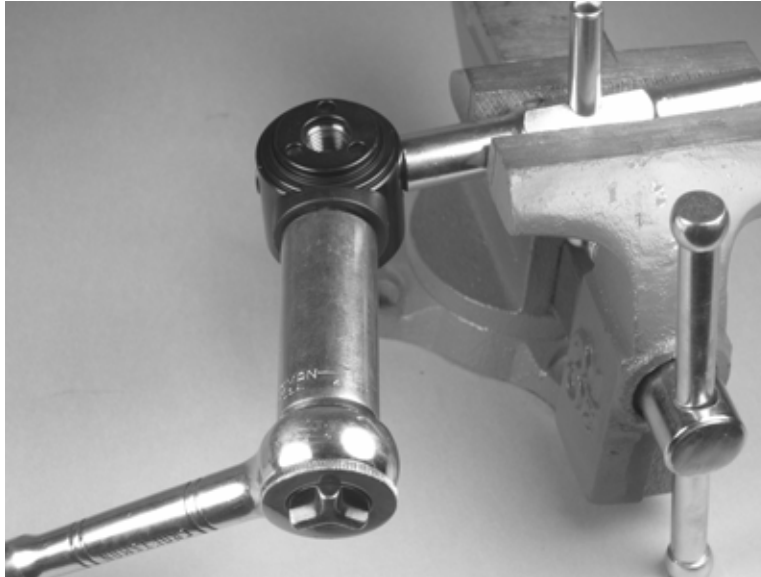


21) Remove the Din hand wheel.



22) Remove the dust cap.

23) Using a 19mm socket wrench loosen and remove the DIN connector and saddle.



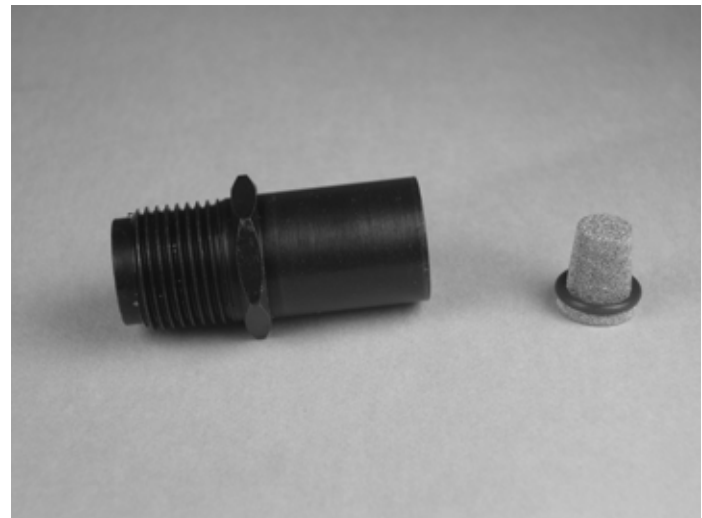
Saddle

DIN Connector

24) Remove the “O” ring from the Din Connector.



25) Remove the cone shaped filter from the DIN Connector.



This completes disassembly of the
Dive Rite RG1208 First stage.



Warning!!! Only original Dive Rite parts are to be used

- All parts that are removed from the serviced regulator and replaced by those in the parts kits are to be returned to Dive Rite.
- Remaining parts should be cleaned in a solution compatible with Nitrox use.
- All points of lubrication should use a Nitrox compatible lubricant.

RG1208 First Stage Service Kit

- RG1230-05 Diaphragm
- RG1231 HP port “O” rings (2)
- RG1232 Turret “O” ring
- RG1233 LP port “O” ring (4)
- RG1234 HP Seat Assembly
- RG1235 HP Seat “O” ring
- RG1236 Turret Retainer “O” ring
- RG1238 Upper Turret Retainer “O” ring
- RG1239 DIN screw “O” ring
- RG1240 Inlet Filter
- RG1241 DIN Connector “O” Ring
- RG1242 Upper Filter “O” ring
- RG1243 Lower Filter “O” ring

Note: The RG1208 Black first stage requires kit # RG1330.

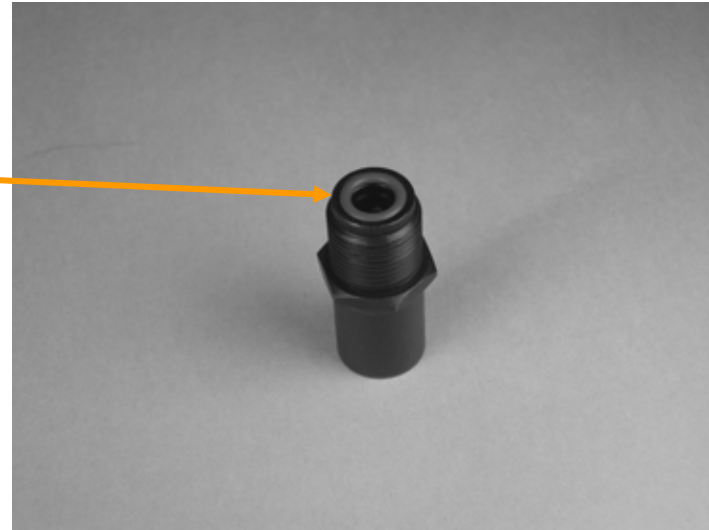
The RG1205 chrome first stage requires kit # RG1261.

Yoke only first stages require kit # RG1261YOKE or # RG1330YOKE.

Assembling the RG1208 First Stage

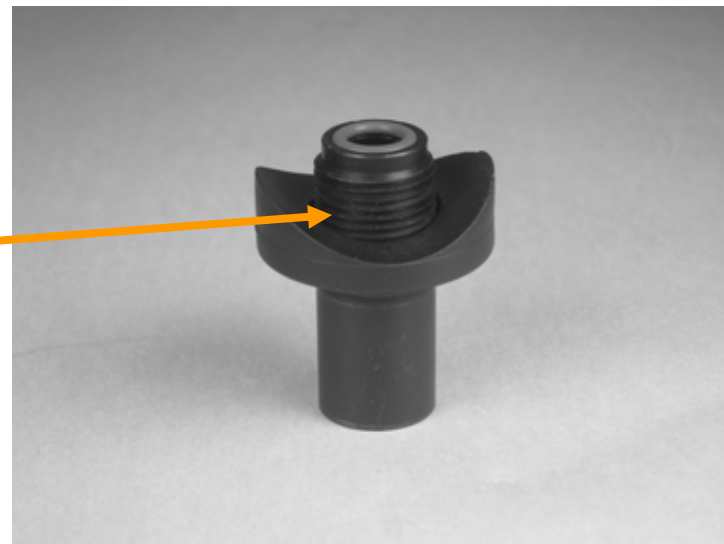


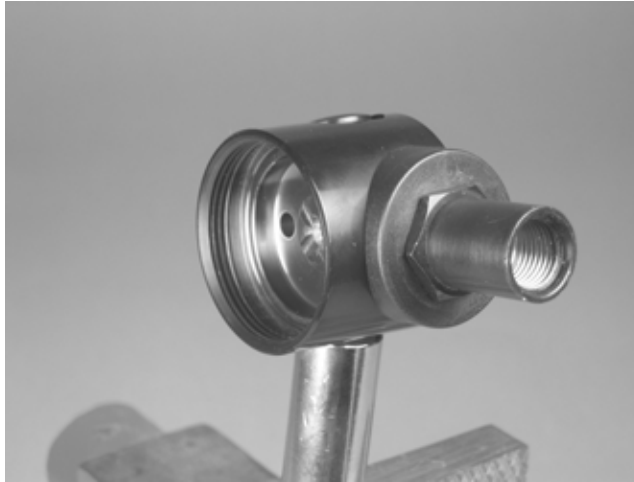
1) Lubricate and install
"O" ring # RG1241
into the DIN connector.



2) Install the saddle with
the curved side facing the threads.

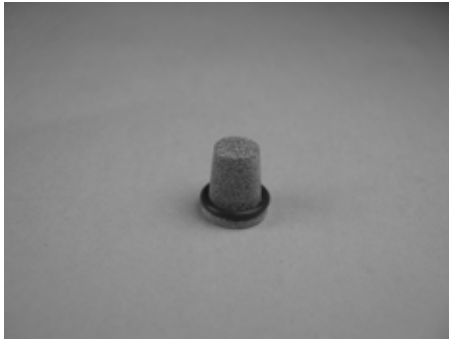
Use one (1) drop of blue thread lock
on the DIN connector.





- 3) Screw the DIN connector into the first stage body after installing the regulator tool. Use a vise to hold the first stage tool firmly.
- 4) Tighten the DIN connector using a 19mm socket wrench.





5) Install the lower filter “O” ring # RG1243 on the filter.

6) Install the filter into the DIN Connector.





7) Install the dust cap assembly over the Din connector.

8) Install the hand wheel over the DIN connector.

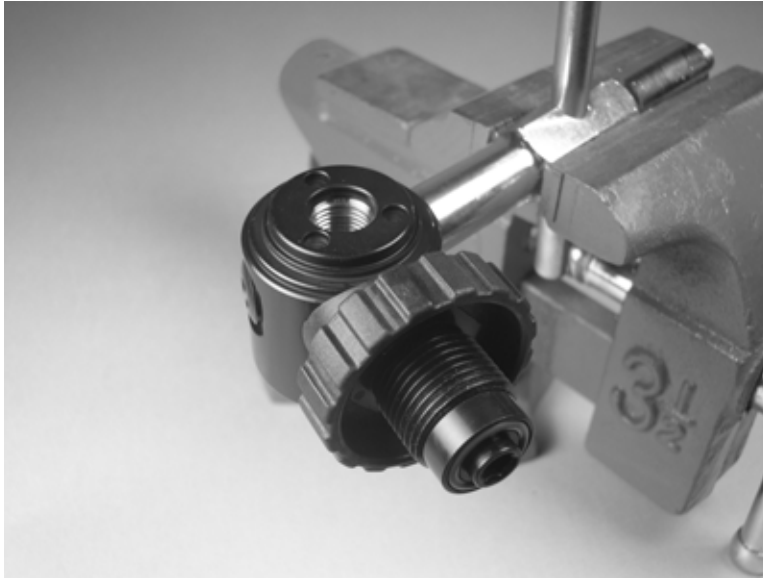




9) Lubricate and install “O” ring
RG1242 on the DIN lockdown screw.

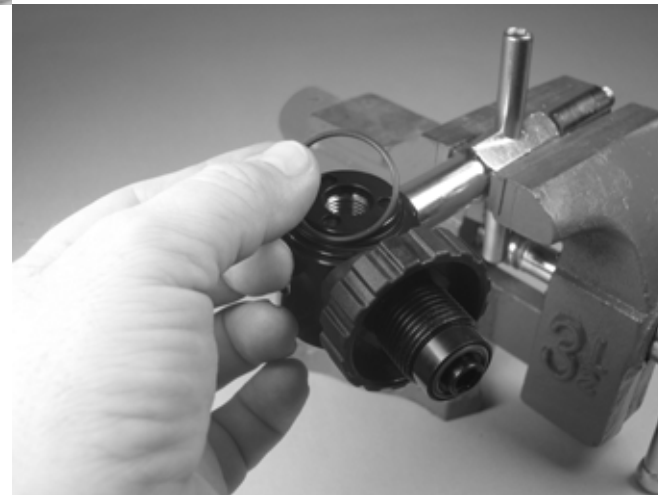
10) Install the lockdown screw into
DIN connector and tighten with
6mm Allen wrench.

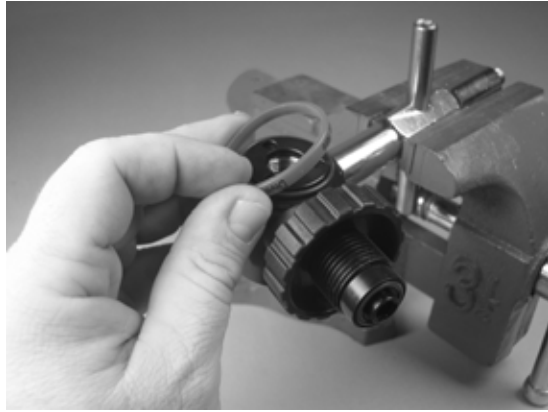




11) Mount the first stage so the turret side is facing upwards.

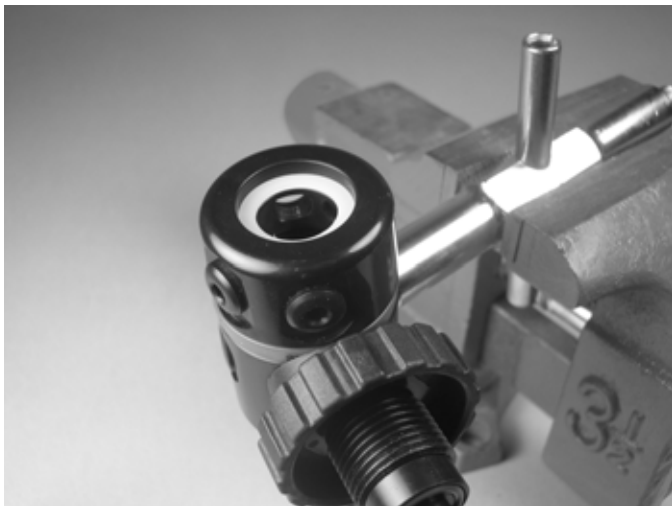
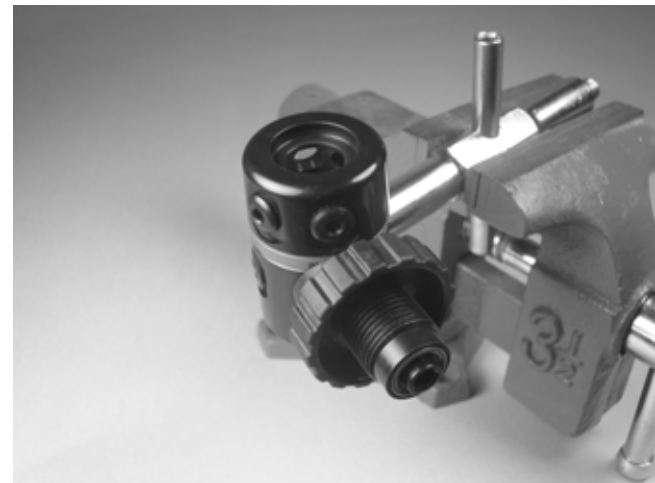
12) Lubricate and install “O” ring # RG1232 on the first stage.





12) Install turret logo ring.

13) Install the turret.



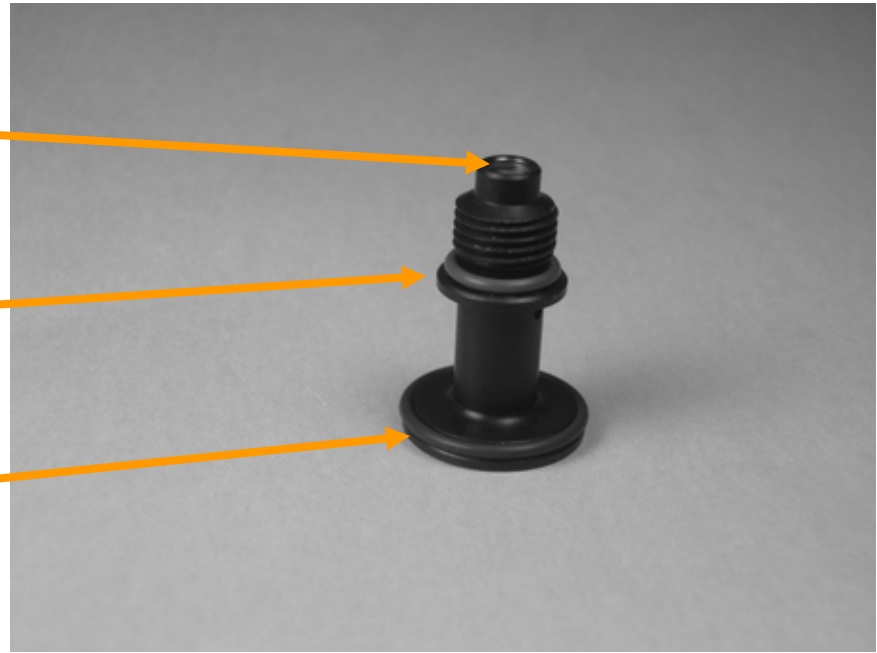
14) Install thrust washer # RG1237.

Preparing the Turret retainer/HP valve module for installation

15) Lubricate and Install “O” ring # RG1235.

16) Install “O” ring # RG1236.

17) Install “O” ring # RG1238.



18) Place spring # RG1280
on top of the HP valve module.

19) Install the new HP valve seat,
RG1234, allow the stem to pass
through the center of the spring
and through "O" ring # RG1235.

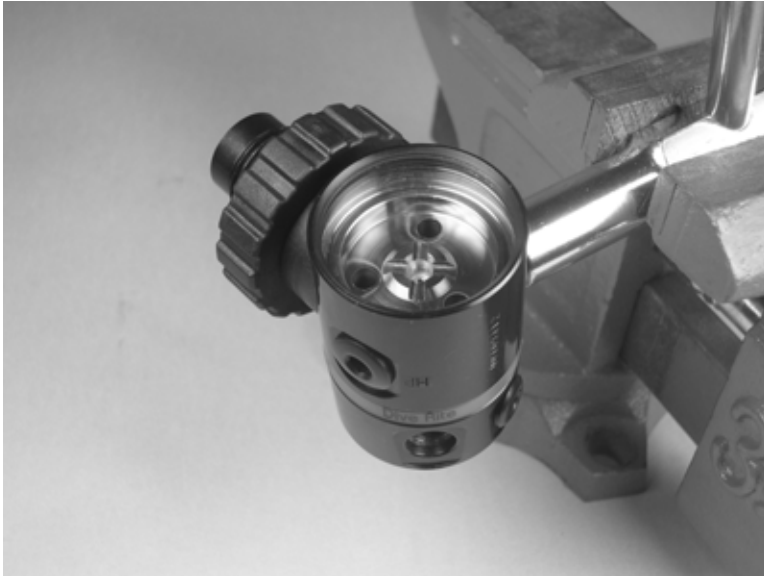




20) Install the completed turret retainer/HP valve module into the first stage by passing it through the turret.

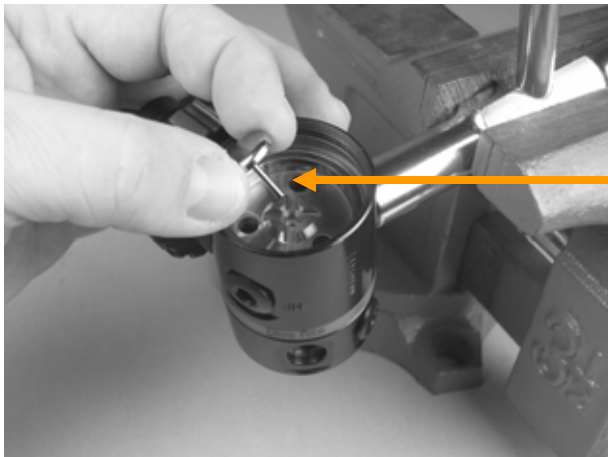


21) Tighten the turret with 6mm Allen wrench.
Be careful not to crimp "O" ring # RG1238.

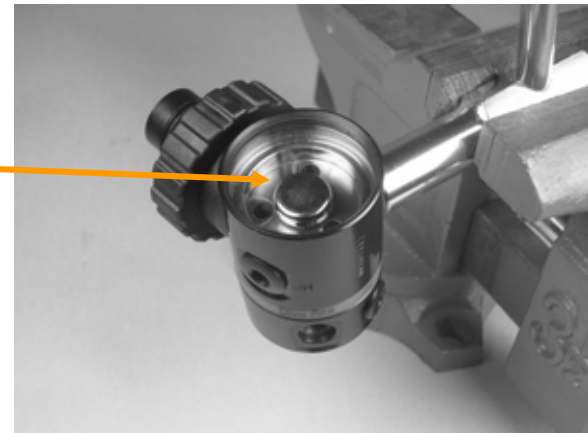


22) Turn the first stage over so that the balance chamber is facing upwards.

23) Install the valve lifter into the first stage body. Press on the valve lifter to verify contact and spring resistance with the HP valve seat, # RG1234.



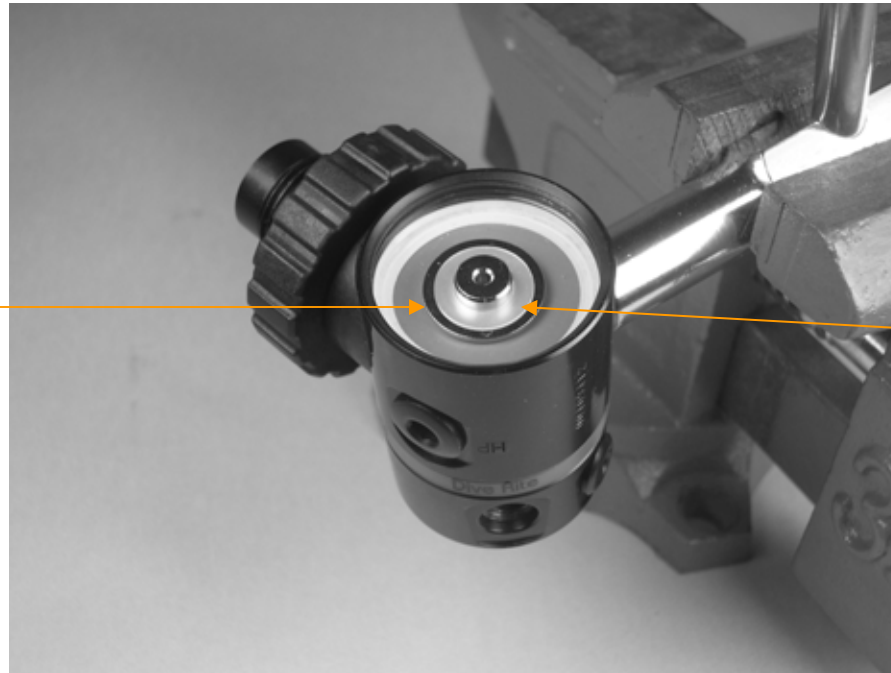
valve
lifter





24) Install diaphragm # RG1230-05; make certain that the diaphragm is seated below the threads and is in contact with the seating surface. Install the thrust washer # RG1265

Spring
Carrier



Washer

- 25) Place the spring carrier on the diaphragm center.
- 26) Place plastic washer on the spring carrier.



27) Place intermediate pressure spring on the spring carrier.

28) Install the adjusting screw (two turns) into the diaphragm cap.





- 29) Install the diaphragm cap over the spring and screw the cap down completely.
- 30) Tighten the diaphragm cap firmly using the spanner wrench with steady even tension.

This completes assembly
of the RG1208 First Stage.

