

Dive Rite Regulator Service Manual RG1208-5



Copyright 2011 Lamartek Inc. D/B/A Dive Rite

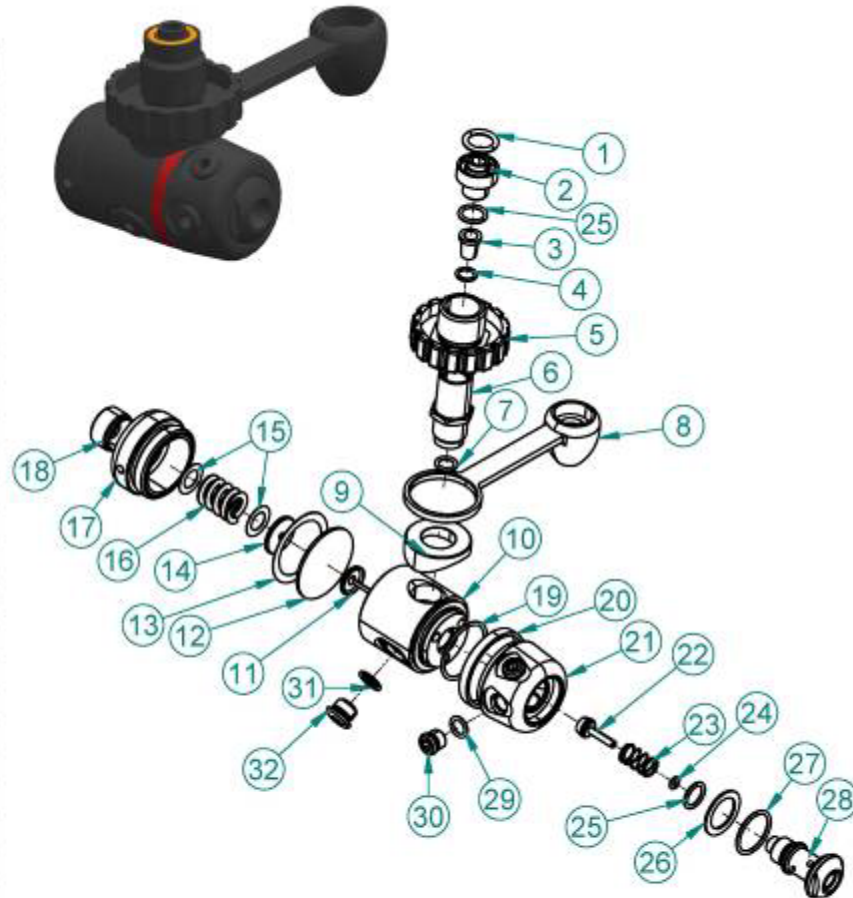
Warning

- *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.**

RG1208-5 Balanced First stage



NO	ITEM CODE	DESCRIPTION	QTY
1	RG1239	O-RING	1
2	RG1275	DIN LOCKDOWN SCREW	1
3	RG1240DIN	INLET FILTER	1
4	XXXXX	O-RING	1
5	RG1302	DIN HANDWHEEL	1
6	RG1276	DIN CONNECTOR BODY	1
7	RG1241	O-RING	1
8	RG1228	DUST COVER	1
9	RG1282	DIN CONNECTOR SADDLE	1
10	RG1298	FIRST STAGE BODY	1
11	RG1279	VALVE LIFTER	1
12	RG1230-08	DIAPHRAGM	1
13	RG1265	DIAPHRAGM THRUST WASHER	1
14	RG1307	SPRING CARRIER	1
15	RG1244	PLASTIC WASHER	2
16	RG1277	INTERMEDIATE PRESSURE SPRING	1
17	RG1299	DIAPHRAGM CAP	1
18	RG1300	I.P. SPRING ADJUSTMENT SCREW	1
19	RG1232	O-RING	1
20	XXXXX	LOGO RING	1
21	RG1301	TURRET	1
22	RG1234	HP VALVE SEAT	1
23	RG1280	HP VALVE RETURN SPRING	1
24	RG1235	O-RING	1
25	RG1236	O-RING	2
26	RG1237	THRUST WASHER	1
27	RG1238	O-RING	1
28	RG1281-5P	TURRET RETAINER - 5TH LP PORT	1
29	RG1233	O-RING	4
30	RG1245	LP PLUG 3/8 UNF	4
31	RG1231	O-RING	2
32	RG1246	HP PLUG 7/16 UNF	2



Disassembly of the RG1208-5 First Stage

- 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.



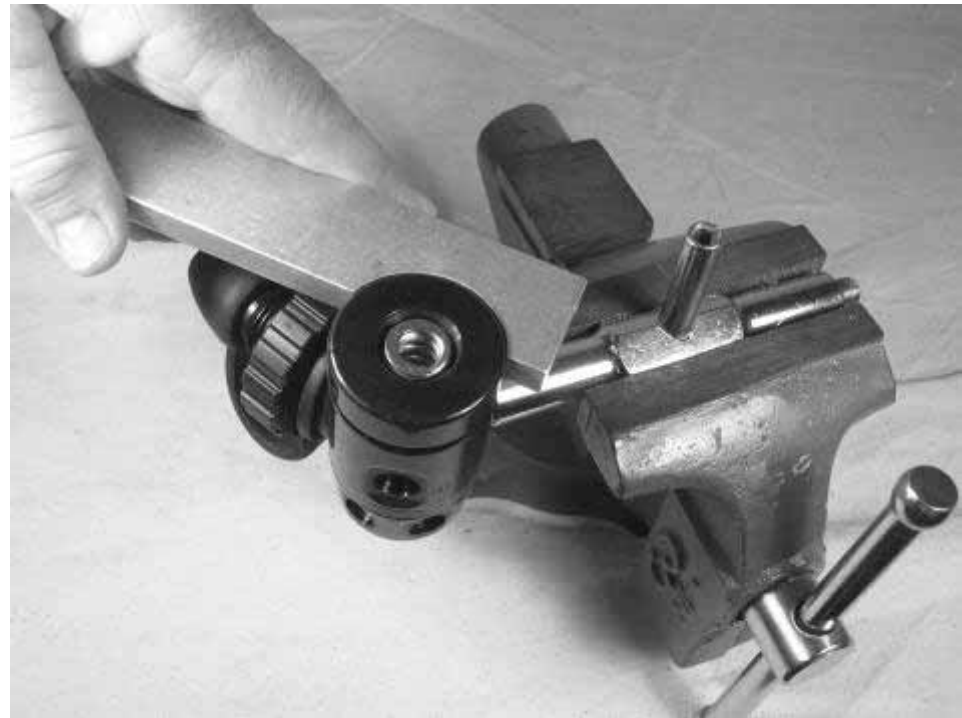
3) Using a 6mm Allen wrench loosen and remove the adjustment screw.



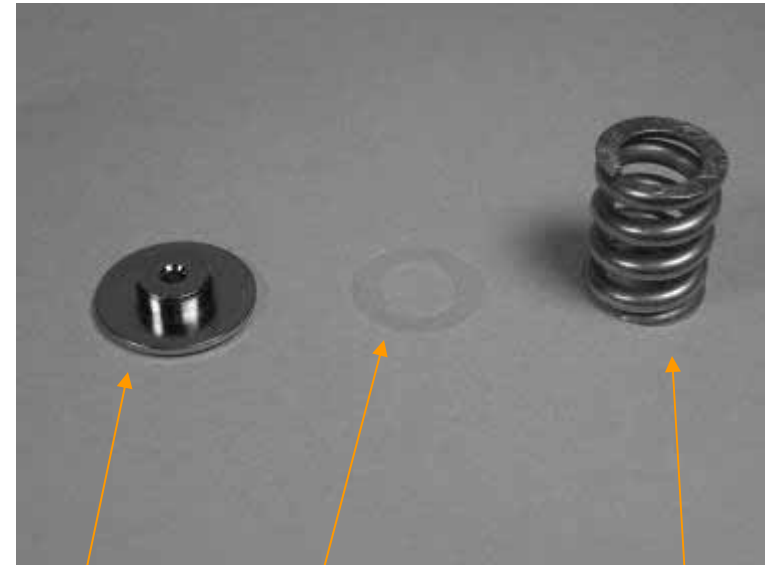
4) Place the spanner wrench into the holes of the diaphragm cap.

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.



- 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.*



Spring carrier

Plastic washer

Intermediate pressure
spring



Thrust Washer



Diaphragm

9) Remove the thrust washer and diaphragm.
Be careful not to damage sealing surfaces.
*Remove the diaphragm by using a pick to puncture it
halfway between the middle and the edge. This will
avoid damaging the sealing surface*

- 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.

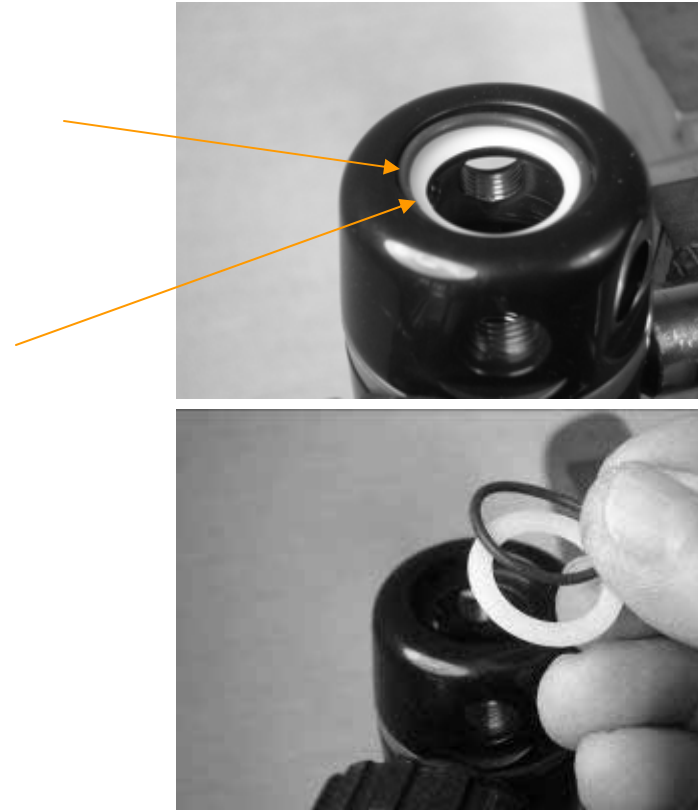
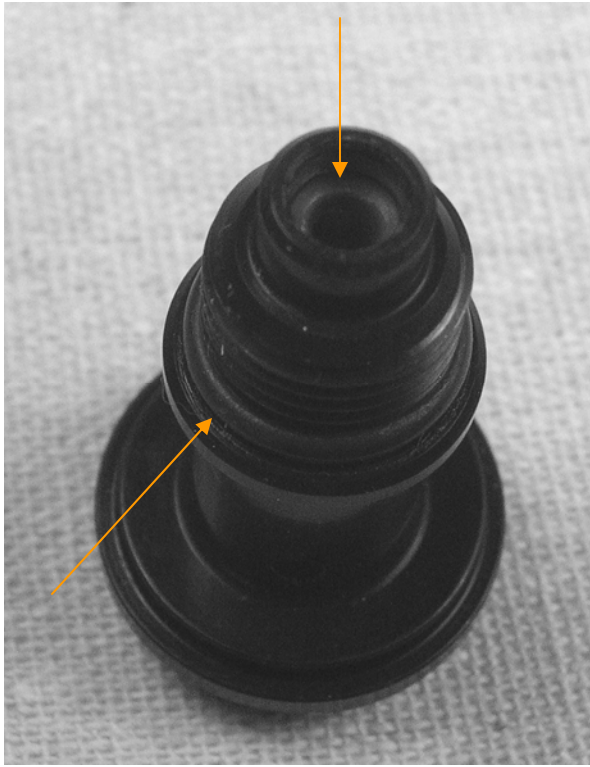


HP valve module

13) Insert a 6mm Allen wrench into the 5th port and remove the turret retainer (HP valve module.) Alternatively, an 11/16" open-end wrench may be used.
The turret retainer has a torque setting of 125 in-lbs (14.1 Nm)



14) Remove the high pressure valve and spring.



15) Using a pick remove the two “O” rings located on the module
Remove the “O” ring and thrust washer from the turret
Note: be careful not to scratch the sealing surfaces.



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

17) 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.

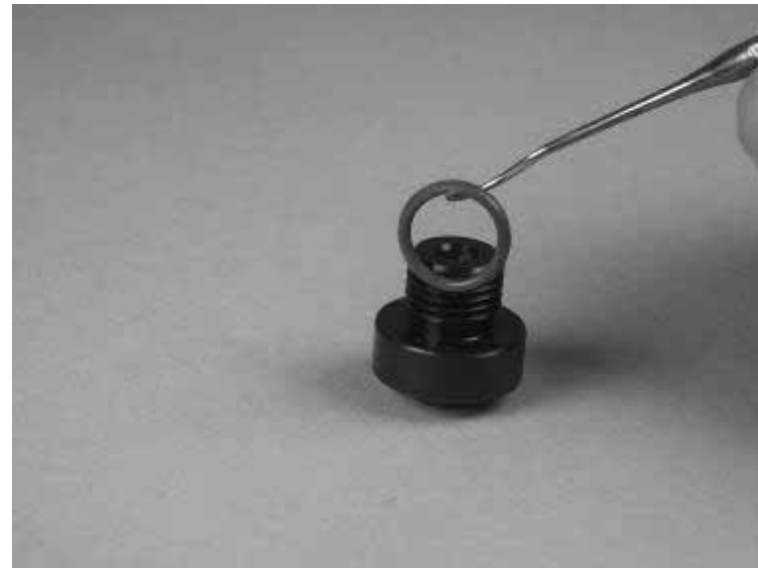




18) Insert a 6mm Allen wrench into the tank Inlet. Loosen and remove DIN lockdown screw.

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.

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



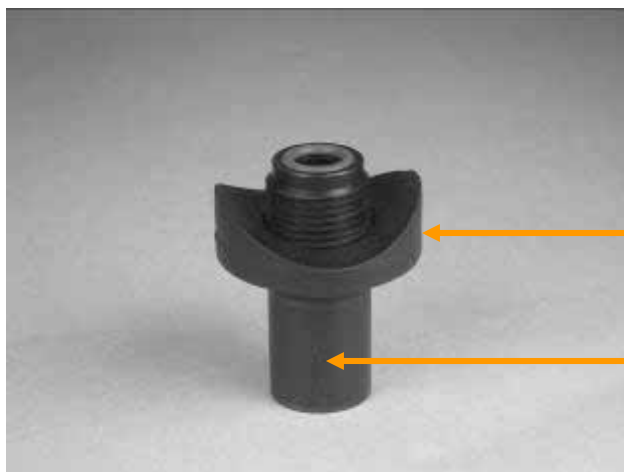


20) Remove the Din hand wheel.



21) Remove the dust cap.

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



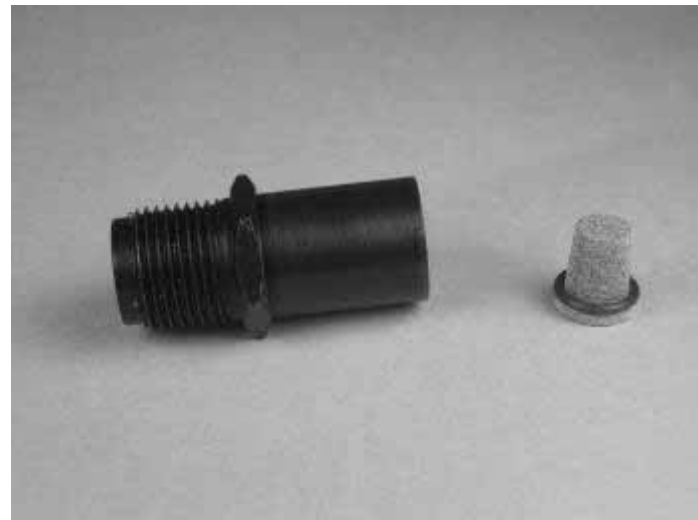
Saddle

DIN Connector

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



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



This completes disassembly of the
Dive Rite RG1208-5 First stage.



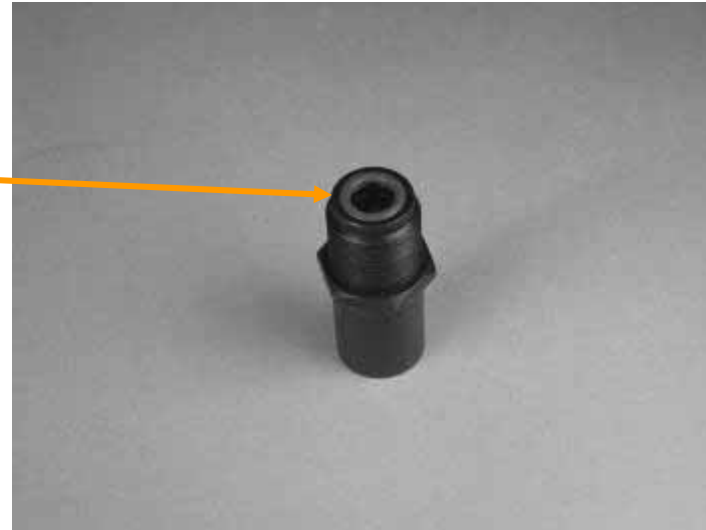
Warning!!! Only original Dive Rite parts are to be used

- 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.

Assembling the RG1208-5 First Stage

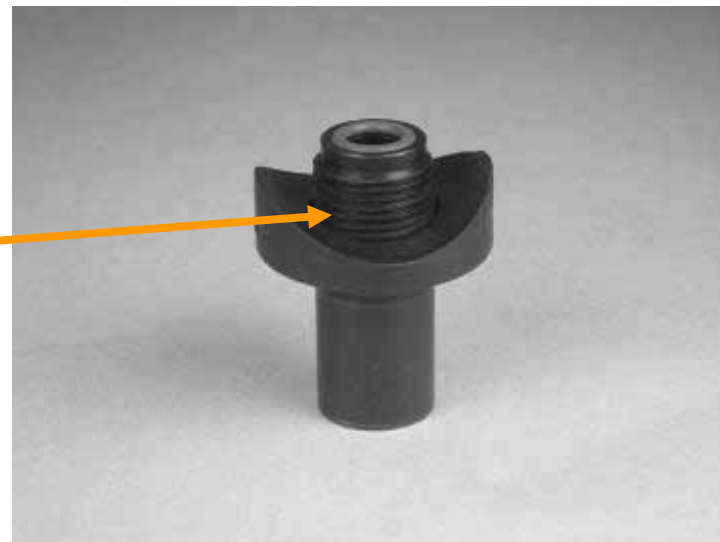


1) Lubricate and install
"O" ring # RG1241
into the DIN connector.



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.

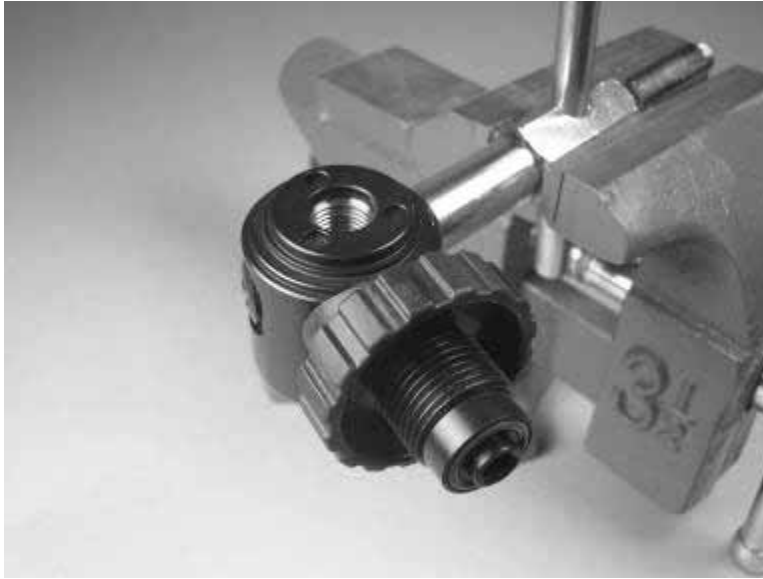




9) Lubricate and install “O” ring
RG1242 on the DIN lockdown screw.

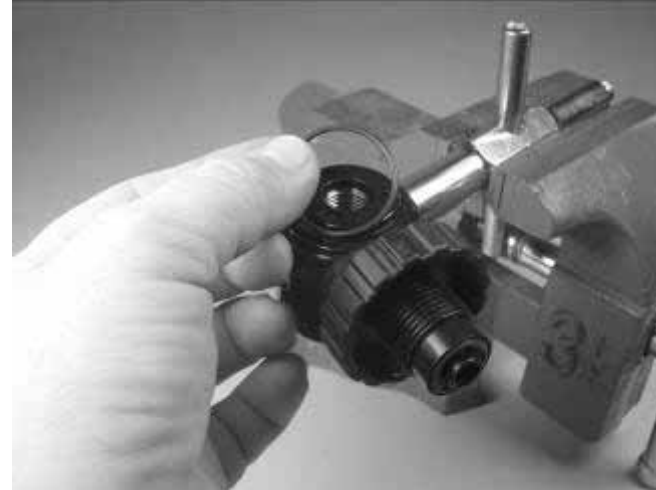
10) Install the lockdown screw into
DIN connector and tighten with
6mm Allen wrench.

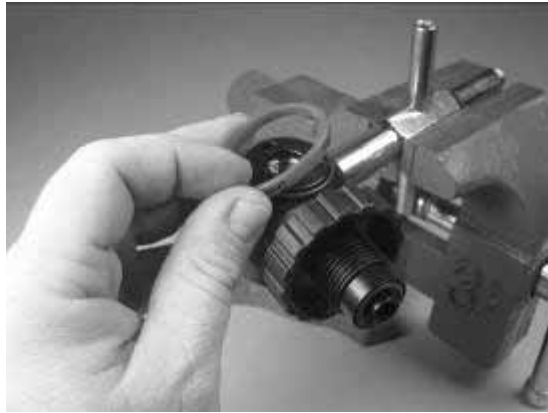




11) Mount the first stage so the turret side is facing upwards.

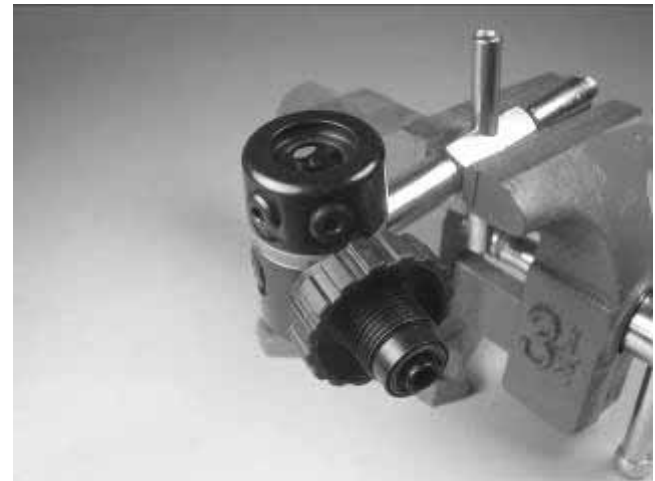
12) Lubricate and install “O” ring # RG1232 on the first stage.





12) Install turret logo ring.

13) Install the turret.

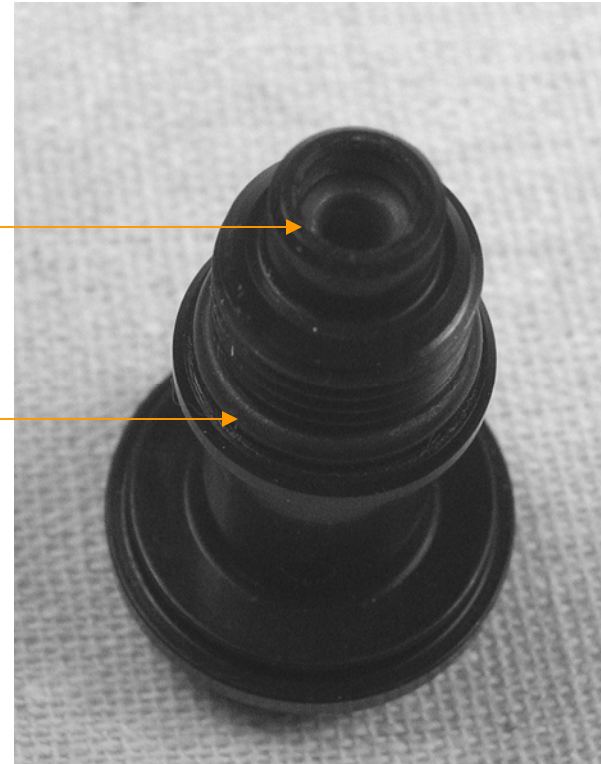


14) Install thrust washer # RG1237
And "O" ring # RG1238

Preparing the Turret retainer/HP valve module for installation

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

16) Install “O” ring # RG1236.



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

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





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



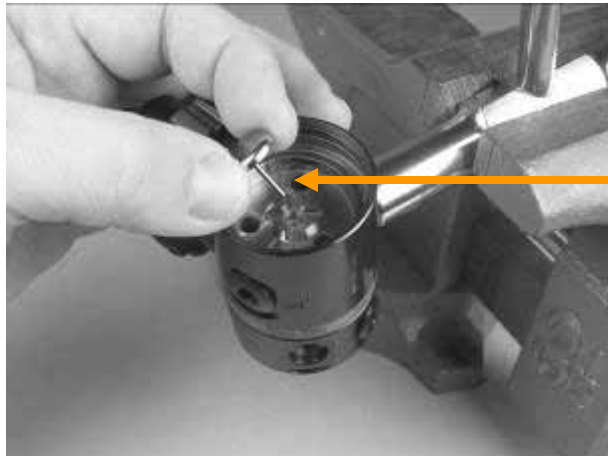
20) Tighten the turret with 6mm Allen wrench.
Be careful not to pinch "O" ring # RG1238.

Torque Retainer Turret to 125 in-lbs (14.1 Nm)

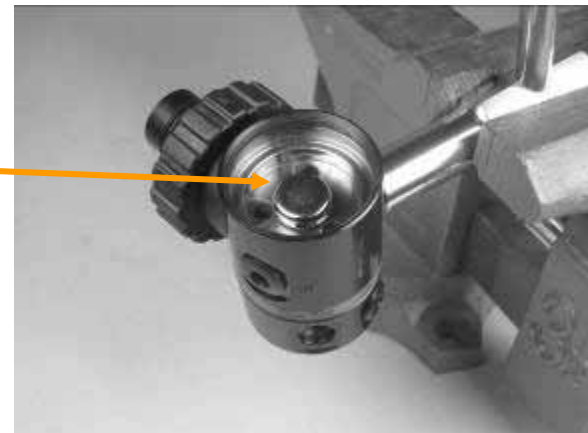


22) Turn the first stage over so that the balance chamber is facing upwards.

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.



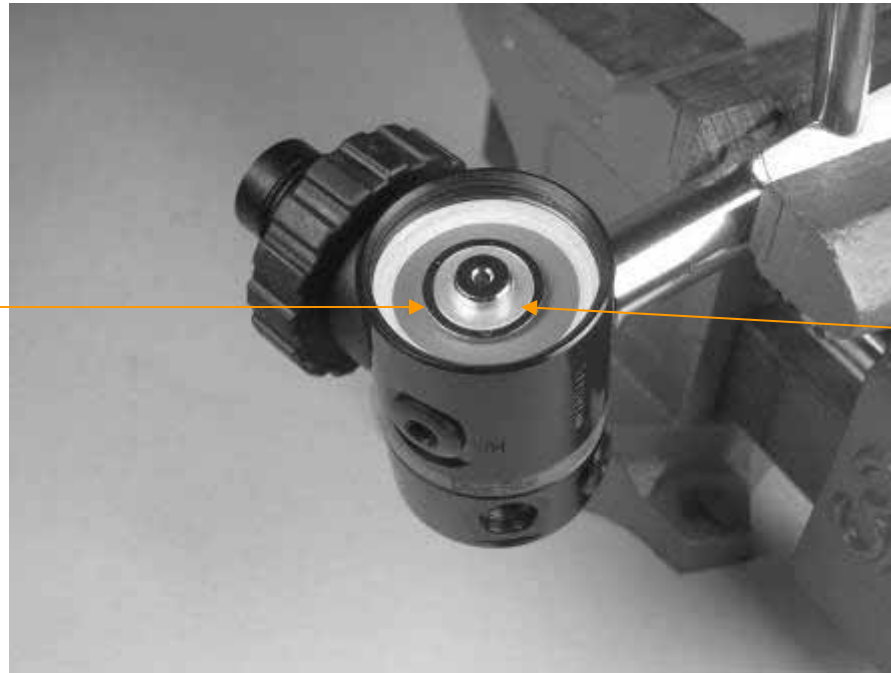
valve
lifter





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.

