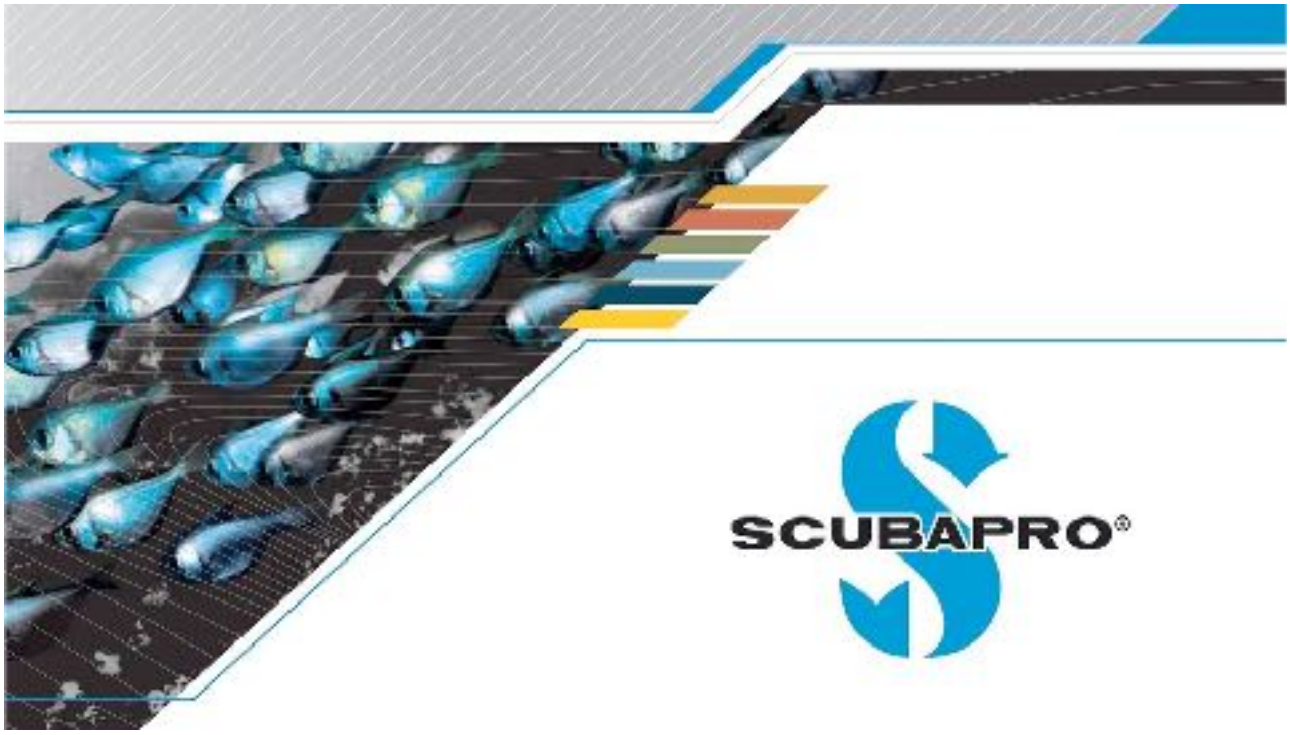


SCUBAPRO®

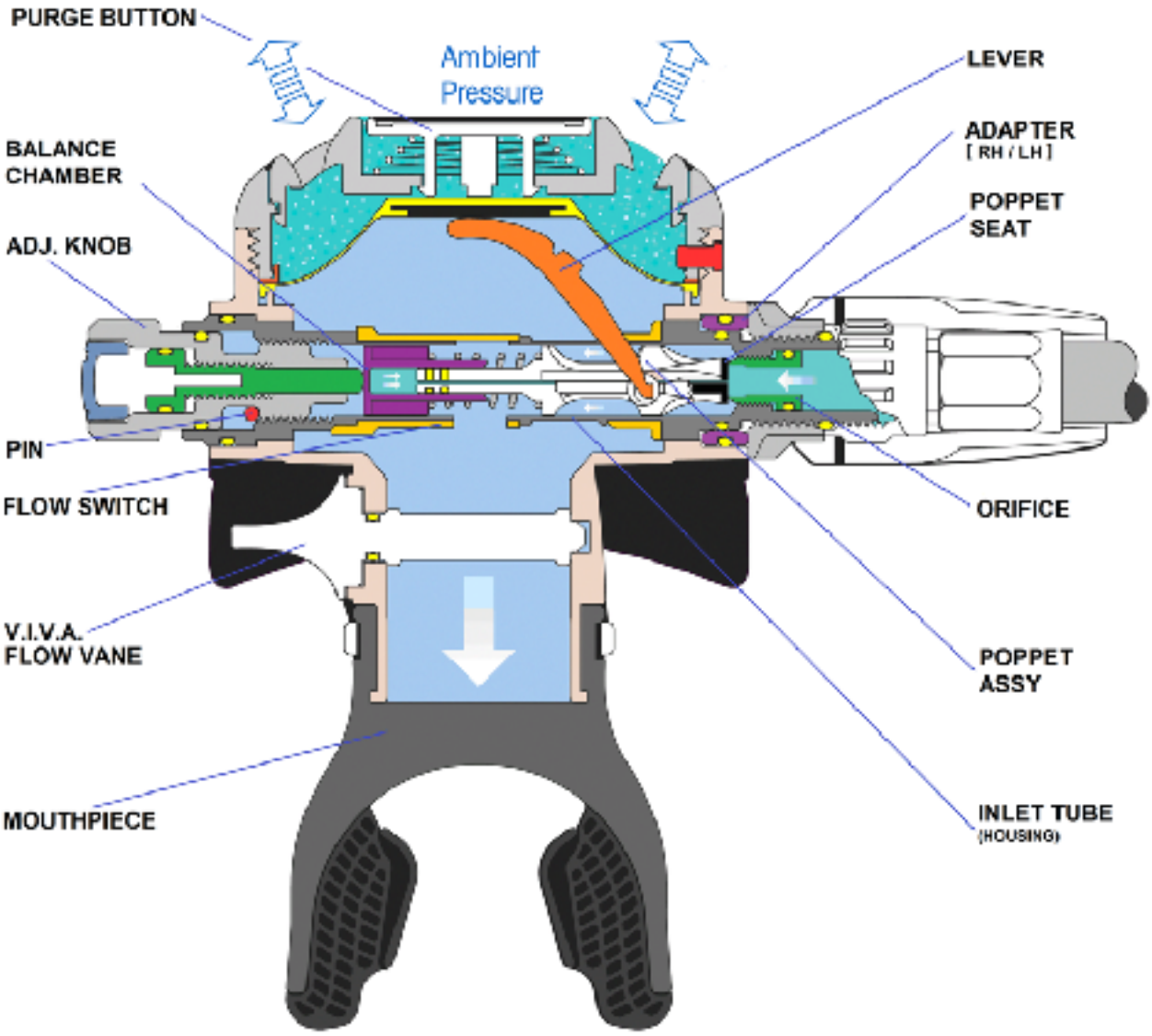
MAINTENANCE PROCEDURE

G260

revision 03
2013-04

SCUBAPRO

JOHNSON OUTDOORS


PURGE BUTTON
Ambient
Pressure
LEVER
ADAPTER
[RH / LH]
BALANCE
CHAMBER
POPPET
SEAT
ADJ. KNOB
PIN
FLOW SWITCH
ORIFICE
V.I.V.A.
FLOW VANE
POPPET
ASSY
MOUTHPIECE
INLET TUBE
(HOUSING)

MAINTENANCE PROCEDURE FOR G260

This maintenance procedure is based upon the attached schematic.

WARNING

This maintenance procedure is only for appointed Scubapro technicians that followed a complete course on equipment repair and in no case can replace a technical repair course delivered by a SCUBAPRO/ UWATEC appointed staff.

This procedure is a generic description for the G260. The attached schematic is an overview for the maintenance procedure. The dedicated regulator schematic must be used for parts replacements.

TOOLS

Blow gun	40.978.000
2nd Stage adjustment tool	41.043.010
Grease Christo Lube MCG111	41.493.125
Screwdriver bowl end 3/32 ”	43.002.101
Universal tool regulator (new model)	43.040.000
G260 cover tool	43.300.020C
O-ring extractor	43.300.107
VIVA flow vane extractor	43.300.225
Regulator hose tool (on 2nd stage)	43.300.235
Countermat	43.900.999
Digi-Mag 6000 Digital Magnehelic incl. Magnehelic mouthpiece	
Allen key, 4 mm	
Cutter small model	
Pliers small model	
Screwdriver flat blade small model	
Wooden chopstick or soft polymer stick	

DISASSEMBLY

1. Slide the sleeve(s) back and unscrew the L.P. hose from the 1st and 2nd stage.
2. Remove the o-rings from the L.P. hose with the o-ring extractor.
3. Remove the mouthpiece clip or strap and remove the mouthpiece.
4. Remove the pin with the screwdriver from the case.

5. Unscrew the cover assy, remove the ring and diaphragm.

6. Remove the purge button and spring by pushing on two of the four tabs of the purge button.

7. Remove the o-ring from the thread of the inlet tube with the o-ring extractor and unscrew the nut with the universal tool

8. Push slowly the inlet tube through the case by about 2 centimetres and rotate clockwise about 45°. Then rotate back to the original position and lower the lever at the same time to take the assembly of the case.

9. Remove the two o-rings from the inlet tube.

10. Remove the adaptor from the case and the o-ring from the adaptor.

11. Screw the adjustment knob half a turn in, to allow removing the (locking) pin.

12. Unscrew the adjustment knob completely and remove it from the inlet tube.

13. Remove the o-ring from the adjustment knob.

14. Remove with the small screwdriver the plug from the adjustment knob.

15. Unscrew - with the 4 mm Allen key - the fine adjustment screw from the adjustment knob and remove the o-ring from the fine adjustment screw.

16. Push carefully - with the small screwdriver - through the orifice to remove the poppet assy, spring and balance chamber out of the inlet tube and remove the seat and 2 o-rings from the poppet.

17. Screw the orifice out of the valve body with the universal tool. Remove the orifice with care, by pushing it carefully with a wooden chopstick or soft polymer stick out of the inlet tube.

18. Remove the o-ring from the orifice.

19. It is not necessary to remove the lever from the inlet tube for cleaning. If necessary, spread the lever legs carefully and remove one lever tab before the other to minimize the risk of distorting the lever. Remove also the (anti friction) sleeve from the inlet tube.

20. To clean the inlet tube properly the flow switch must be removed.

21. It is not necessary to carry out this step unless the (V.I.V.A) flow vane needs replacement.

    - Place the flow vane horizontally, then insert the flow vane extractor **through the mouthpiece** tube and place the slit of the tool on the flow vane. Position the rounded tip of the tool against the shoulder of the flow vane (the angled portion of the tool should rest on the mouthpiece tube) and use the tool as a lever to push the flow vane out of the housing.
    - Remove the o-ring from the flow vane.

22. To remove the exhaust cover, use the bowl end screwdriver to push the pin out of the exhaust cover and case.

23. It is not necessary to carry out this step unless the exhaust valve needs replacement.

    - Pull on the exhaust valve to remove it from the case.

PARTS CLEANING

Refer to the parts cleaning procedure.

ASSEMBLY

After careful inspection of the cleaned parts and the static o-rings that do not need replacement, prepare all the parts that need to be changed at every annual service.

1. If the exhaust valve has been removed, it must be replaced.

   - Insert the new exhaust valve and use the pliers to pull it from the inside of the case.
   - Make sure that the valve is correctly fitted, the shoulder on the valve tail should stick out of the retainer and the lip of the valve should rest properly on the regulator case.
   - Check the valve by pulling slightly on the lip at several places and make sure the outer part of the valve rests on the regulator case.

2. Place the exhaust cover and insert the pin, making sure it is correctly centred.

3. If the flow vane has been removed, it must be replaced.

   - Place a new o-ring. Do not lubricate the o-ring, in order not to have a loose flow vane.
   - Make sure that the flow vane is right in front of the cavity's in the case and push the flow vane hard in the case.
     note: the ''pointer arrow'' on the small edge of the flow vane must - looking from the mouthpiece- be visible and pointing to the case.

4. Place the o-ring on the orifice, slightly lubricate the threads and the o-ring.

5. Use the universal tool to screw the orifice about 3 or 4 turns in the inlet tube.

6. Place the 2 o-ring's on the inlet tube.

7. Place the o-ring on the adapter.

8. If the (anti friction) sleeve has been removed, it must be replaced by a new one. Take care that it is placed correctly on the inlet tube.

9. In case the lever has been removed from the inlet tube, reassemble as follows:

   - First of all verify the symmetry of the lever when placed on a flat surface. The four legs should touch the flat surface without any distortion. In case of doubt, replace the lever.
   - Identify the injection hole on the inlet tube. When the injection mark is facing the technician, the lever should be positioned above the inlet tube.
   - First enter one lever tab in the square hole of the (anti friction) sleeve then, with the minimum possible distortion, glide the other lever tab over the sleeve into the other square hole. Check again that there is no distortion of the lever.

10. Insert the flow switch on the inlet tube. The triangular tip should be facing the adjustment knob side.

11. The G260 offers the possibility of reversing the hose side. The standard configuration is the hose that comes over the RIGHT shoulder.

    If the LEFT shoulder configuration is required, 2 actions must be taken:

    a. Rotate the flow switch to open the injection hole facing the technician when the treaded side of the inlet tube is on the left.
    b. Place the adapter on the left side of the case.

    For the standard – RIGHT shoulder - configuration:

    c. Rotate the flow switch to open the injection hole facing the technician when the treaded side of the inlet tube is on the right.
    d. Place the adapter on the right side of the case.

12. Place the 2 o-rings on the poppet. Place the seat on a flat and clean surface. Hold the poppet vertically to insert the seat into it. Push firmly into place. Lubricate the 2 o-rings, taking care to place some grease in between the o-rings.

13. Place the spring and the balance chamber on the poppet.

14. Hold the inlet tube with the lever facing the sky.

    Hold the poppet, spring and balance chamber and position the poppet assembly so that the 2 tabs face the ground.

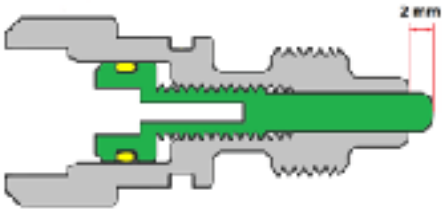
    Glide the poppet assembly inside the inlet tube, making sure the poppet does not rotate.

    The poppet should engage in the lever tabs.

    Verify by pushing on the balance chamber with the polymer stick and by depressing simultaneously the lever.

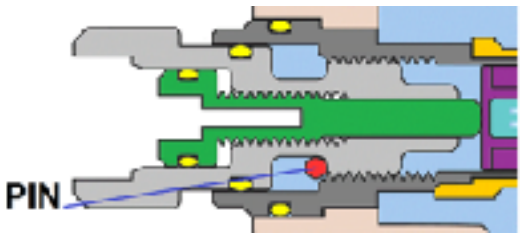
15. Place the o-ring on the fine adjustment screw.

    Slightly lubricate the o-ring and threads and screw the fine adjustment screw with the 4 mm Allen key inside the adjustment knob, until the shaft comes about 2 mm. out on the other side.



16. Place the o-ring on the adjustment knob and lubricate both o-ring and threads.

17. Screw the adjustment knob in the inlet tube (about 6 turns), until the (locking) pin can be inserted. Then UNSCREW the adjustment knob to HOLD the (locking) pin.



18. Insert the inlet tube assembly inside the case, placing the lever facing the diaphragm. Check if the injection hole is facing the mouthpiece tube.

19. Slightly lubricate the inlet tube threads. Screw the nut and tighten moderately with the regulator hose tool.

20. Place the o-ring over the thread of the inlet tube.

21. Position the diaphragm making sure that it is not distorted.

22. Assemble the spring and purge button in the cover assembly.

    The G260 offers a anti set possibility to prevent the orifice to set in the seat. After assembly of the purge button check this by lightly push on the purge and simultaneously turn the purge $^{1}/_{8}$ of a turn anti clockwise. This action will retract the poppet with the seat from the orifice.

23. Snap the diaphragm ring on the cover assembly and check or the diaphragm ring can turn freely.

24. Screw the cover assembly with the cover tool in the case, align the holes for the pin and insert the pin.

25. Assemble the mouthpiece.

26. Slightly lubricate and place the o-rings on the L.P. hose and screw the L.P. hose on a appropriate and well adjusted 1st stage.

THE 2nd STAGE IS NOW READY FOR ADJUSTMENT

ADJUSTMENT

WARNING: To adjust a 2nd stage correctly, it's must be connected to a appropriate and well adjusted 1st stage (with a interstage pressure between 9,3 - 9,7 bar) and a tank with a minimal filling pressure of 180 bar.

1. Check or the adjustment knob is still screwed out completely to achieve the lightest breathing resistance and position the V.I.V.A. flow vane in the max. position.

2. Before connecting the 2nd stage adjustment tool to the 2nd stage and without pushing on the purge, slowly blow through the inlet tube to detect a leak. This information will indicate or the orifice is in contact (no leak) or not (leak) with the seat.

   If a leak is detected, screw the 2nd stage adjustment tool to the 2nd stage and slowly screw the orifice one turn clockwise and repeat the test. If there is no leakage, the 2nd stage can be adjusted.

3. Connect the Digi-Mag adapter mouthpiece to the G260 mouthpiece and turn on the Digi-Mag. Zeroize the Digi-Mag pressure sensor if needed.

4. Connect the appropriate and well adjusted 1st stage to a tank with a minimal filling pressure of 180 bar, connect the 1st stage to the 2nd stage adjustment tool with the L.P. hose and **slowly** open the tank valve.

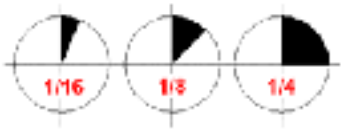
5. Push **slowly** on the tool adjustment knob to counteract the thrust of the interstage pressure, turn slowly the knob to look for the groove of the orifice.

   As soon as the groove is found, slowly unscrew the adjustable orifice - counter clockwise - until a small leak is detected, then screw in the orifice - just enough clockwise - to stop the leak.

6. Cycle the 2nd stage 10 times or more by pushing on the purge, then readjust as indicated above.

7. Inhale slowly through the Digi-Mag and note the cracking effort. It should be between 1,0 to 1,2 inches of water (2,5 to 3,0 milibars).

8. If the cracking effort is higher then indicated, use the 4 mm Allen key and unscrew by a ¼ turn the fine adjustment screw inside the adjustment knob.

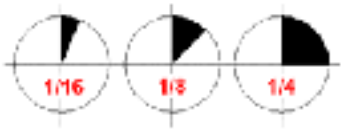


   Hold the adjustment knob tight, otherwise not the fine adjustment screw will be unscrewed, but the adjustment knob will be unscrewed inside the inlet tube.

   note : The adjustable orifice **MUST** always be readjusted as per paragraph 5 and 6 before measuring the cracking effort again.

   Proceed by successive steps to reach the recommended values(1,0 to 1,2 inches of water or 2,5 to 3,0 milibars).

9. If the cracking effort is lower then indicated, use the 4 mm Allen key and screw by a ¼ turn the fine adjustment screw inside the adjustment knob.



note : The adjustable orifice **MUST** always be readjusted as per paragraph 5 and 6 before measuring the cracking effort again.

Proceed by successive steps to reach the recommended values(1,0 to 1,2 inches of water or 2,5 to 3,0 milibars).

10. Check the final adjustment: it must be possible to push the purge button 2 mm without a leakage of the 2nd stage.

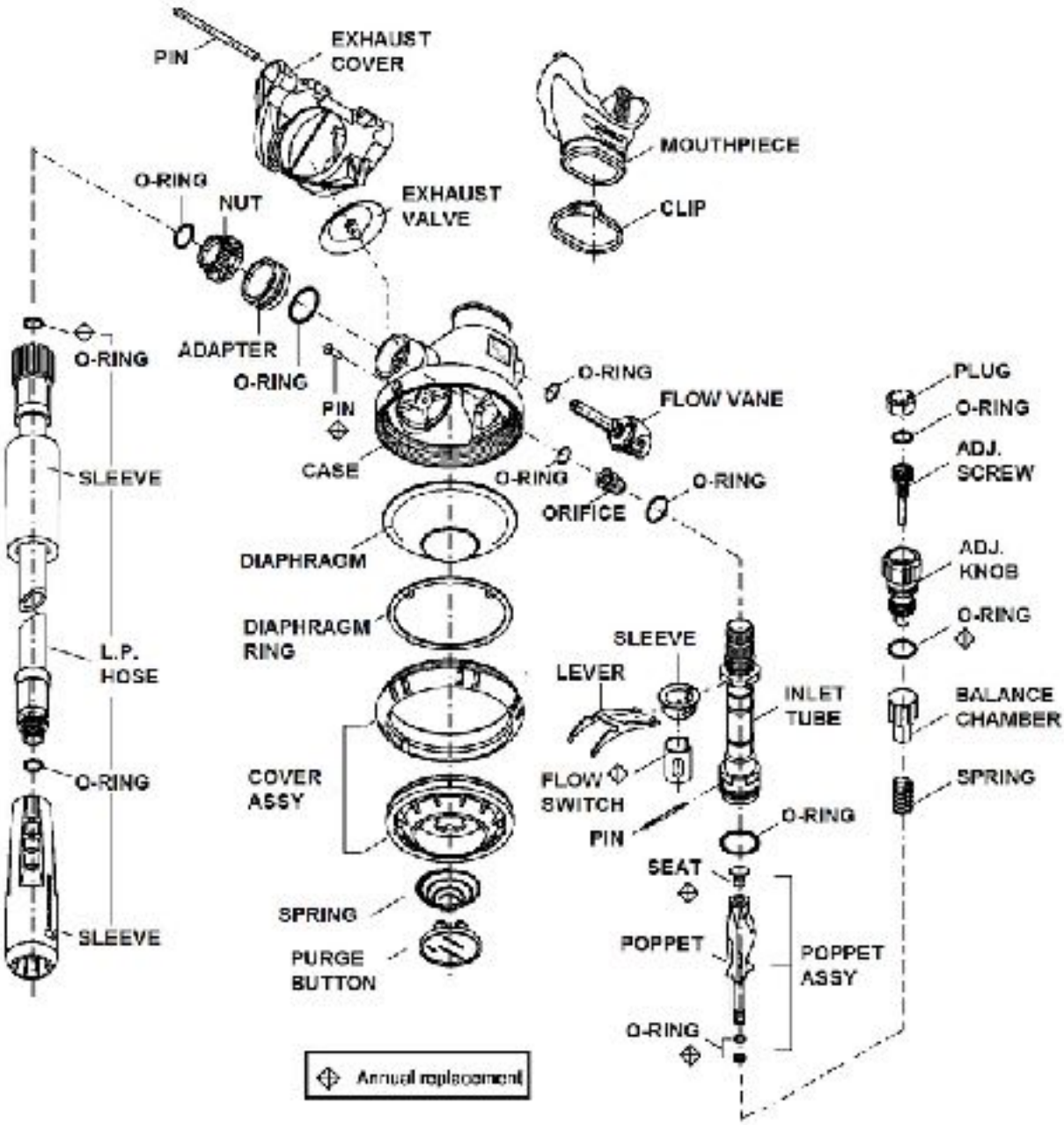
11. Remove the adapter mouthpiece of the Digi-Mag from the G260 mouthpiece.

12. Fit the plug in the adjustment knob.

13. Close the tank valve, purge and remove the 2nd stage adjustment tool.

note: before removing the 2nd stage adjustment tool, make sure that the adjustment knob is retracted out of the groove in the orifice to ensure that the 2nd stage adjustment tool is no longer connected to the orifice. Otherwise the adjustment can be changed while unscrewing the 2nd stage adjustment tool.

14. Slightly grease the thread on the inlet tube and L.P. hose, screw the L.P. hose on the 2nd stage and reposition the sleeve(s).


PIN
EXHAUST COVER
MOUTHPIECE
O-RING
NUT
EXHAUST VALVE
CLIP
O-RING
ADAPTER
O-RING
PIN
O-RING
FLOW VANE
PLUG
O-RING
ADJ. SCREW
SLEEVE
CASE
O-RING
O-RING
ORIFICE
DIAPHRAGM
ADJ. KNOB
O-RING
DIAPHRAGM RING
SLEEVE
LEVER
INLET TUBE
BALANCE CHAMBER
L.P. HOSE
FLOW SWITCH
SPRING
COVER ASSY
PIN
O-RING
O-RING
SEAT
SPRING
POPPET
POPPET ASSY
PURGE BUTTON
O-RING
Annual replacement