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High Security Outdoor Public Bike Pump Gauge

Service Manual

Maintenance Item	Frequency	Time required	Procedure
Air chuck renewal	every 3-12 months as required	2 minutes	Page 2
Lubrication of pump rod	every 6-12 months as required	2 minutes	Page 4
Full pump overhaul	every 24+ months as required	30 minutes	Page 4

1. Air Chuck Renewal

Tools Needed:

-16mm Cone Wrench

Parts Needed:

-Saris Infrastructure 151122 air chuck

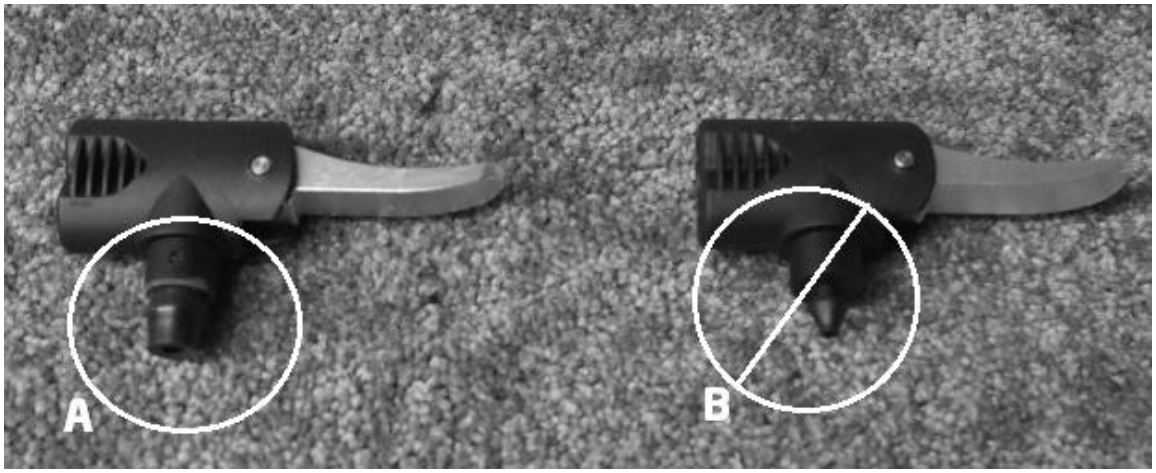
Steps:

1. Extend the aluminum lever

2. Place 16mm Cone Wrench in the slots of the aluminum hose adapter (attached to Air Chuck)

3. While holding 16mm cone wrench steady, use other hand to twist off the Air Chuck, twisting it in a counter-clockwise direction.

4. Make sure replacement Air Chuck has a rubber stopper on the plastic nipple. Rubber tube is attached in photo A and not in photo B.



5. While holding 16mm cone wrench steady, screw new Air Chuck in to the aluminum hose adapter, twisting Air Chuck clockwise. Tighten until firm, but do not over-tighten.

2. Lubrication of pump rod

Parts needed:

-White lithium grease

Steps:

1. Extend piston rod by pulling up on handle. Using the Saris Infrastructure white lithium grease, apply grease to the outside of the piston rod. Cycle the pump up and down 10 times. Wipe excessive grease off.

3. Full pump overhaul

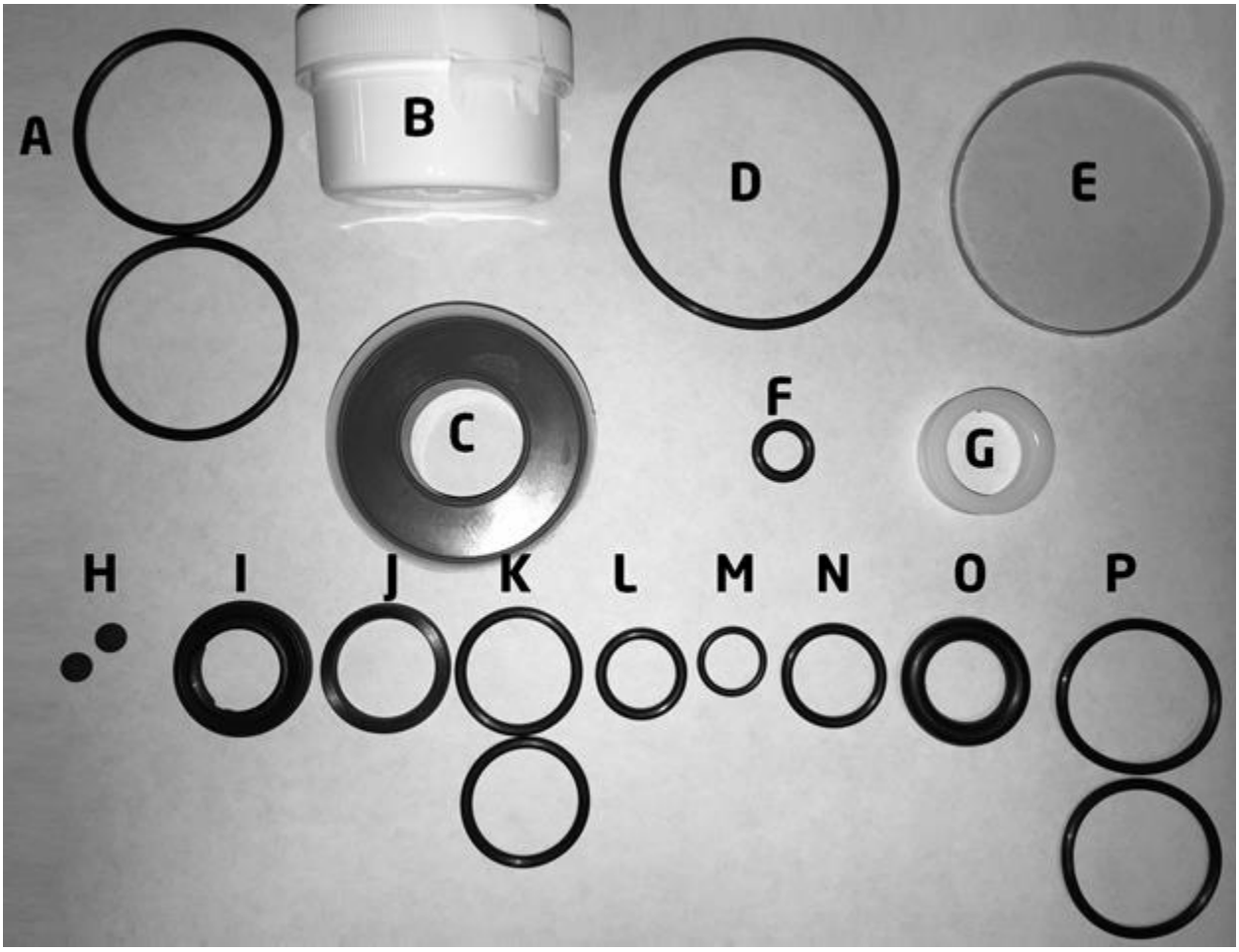
Tools Needed:

- 4.5mm (3/16”) hex key	-16mm wrench
- Small Screwdriver	- Adjustable wrench
-Needle nose pliers	-Clean working space
-5mm hex key	-small pick or flat blade screwdriver
-9/16” (14mm) wrench	-13mm socket wrench

Parts needed:

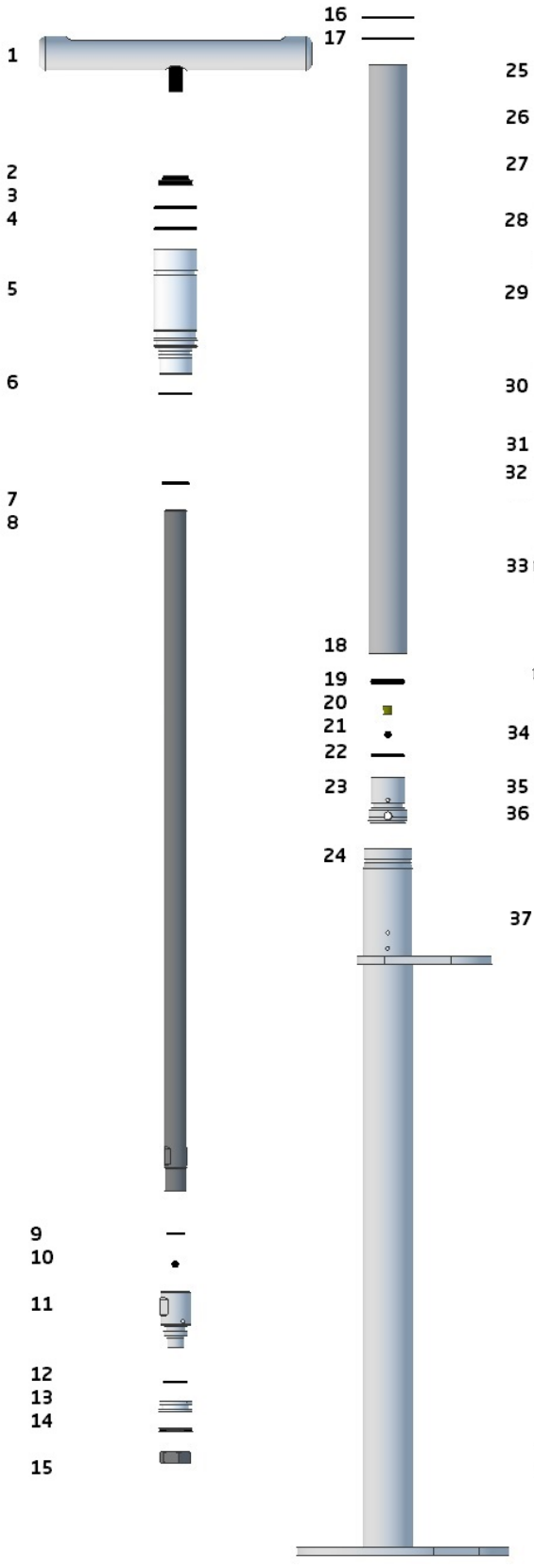
-Saris Infrastructure 141262 HS Outdoor gauge rebuild kit

141260 Rebuild Kit



A – Gauge Housing O-ring (qty. 2)
B – Pump grease
C – PTFE tape
D – Gauge cover O-ring
E –Gauge cover
F - Gauge O-ring
G – Piston wear ring
H – Check balls (Qty. 2)
I – Wiper seal
J – Piston seal
K – Cylinder O-ring (Qty. 2)
L – Piston O-ring
M – Rod O-ring
N – Upper bumper O-ring
O – Lower bumper O-ring
P – Bushing O-ring (Qty. 2)

Pump Part Overview



1 - Handle
2 - Wiper seal
3 – Bushing O-ring (Kit item ‘P’)
4 - Bushing O-ring (Kit item ‘P’)
5 - Bushing
6 – Cylinder O-ring (Kit item ‘K’)
7 – Upper bumper (Kit item ‘N’)
8 – Piston Rod
9 – Rod O-ring (Kit item ‘M’)
10 – Check ball (Kit item ‘H’)
11 – Piston housing
12 – Piston O-ring (Kit item ‘L’)
13 – Piston wear ring (Kit item ‘G’)
14 – Piston seal (Kit Item ‘J’)
15 – Piston Nut
16 – Gauge Housing O-ring (Kit item ‘A’)
17 – Gauge Housing O-ring (Kit item ‘A’)
18 – Cylinder
19 - Lower Bumper (Kit item ‘O’)
20 – Check plug
21 – Check ball (Kit item ‘H’)
22 – Cylinder O-ring (kit item ‘K’)
23 – Foot valve
24 – Pump Housing
25 – Gauge cover retaining ring
26 – Gauge cover (Kit item ‘E’)
27 – Gauge cover O-ring (Kit item ‘D’)
28 – Pressure gauge
29 – pressure gauge O-ring (Kit item ‘F’)
30 – Pressure relief valve
31 – Gauge Housing Bolt
32 – Gauge Housing Bolt
33 – Gauge Housing
34 – Long hose clip
35 – Long hose clip bolt
36 – Long hose clip bolt
37– Air hose assembly

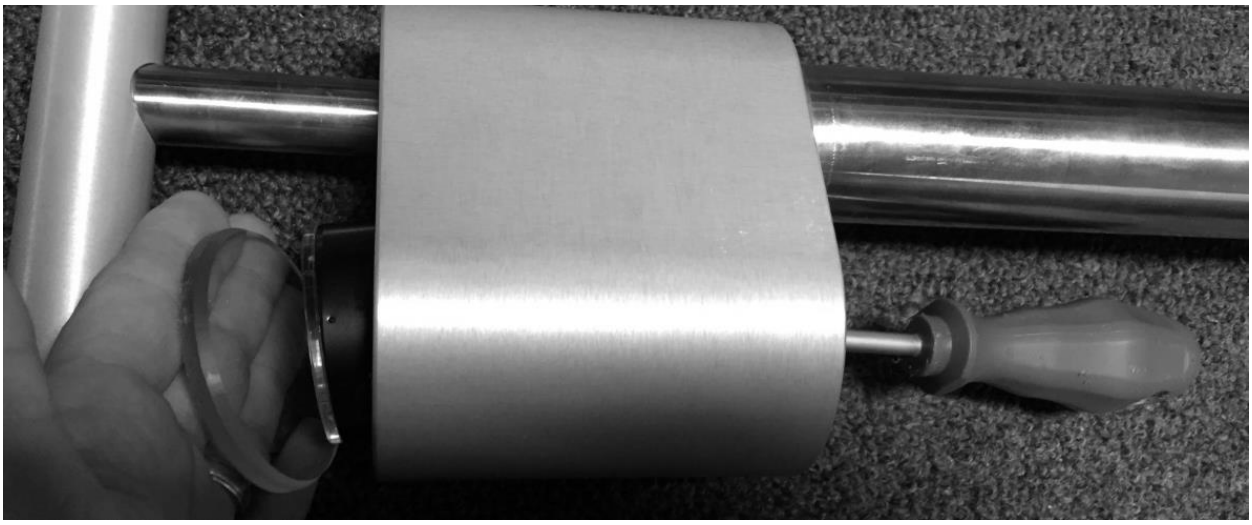
Steps:

1. With a small pick or flat blade screwdriver, remove the gauge cover retaining ring.

2. If you have a long air hose, remove the clip using a 5mm hex key.

3. Remove the air hose from the bottom of the gauge housing using a 9/16” (14mm) wrench.

4. Insert a hex key or screwdriver into the bottom of the gauge housing to remove the gauge cover and pressure gauge. You may need to lightly tap with a hammer.



5. Using a 13mm socket, remove the two gauge housing retaining bolts.

6. You can now remove the contents of the pump. First pull up on the gauge housing. Due to the O-rings on the housing, this may be tight and require some light taps with a plastic/rubber hammer. When that is loose, you can now stand on the pump housing flange and pull the handle out. Due to the O-rings on the bushing, this may also be tight.

7. Clean off grease and contaminants using a rag or parts washer.

8. Remove the Piston Rod from the Pump Cylinder.

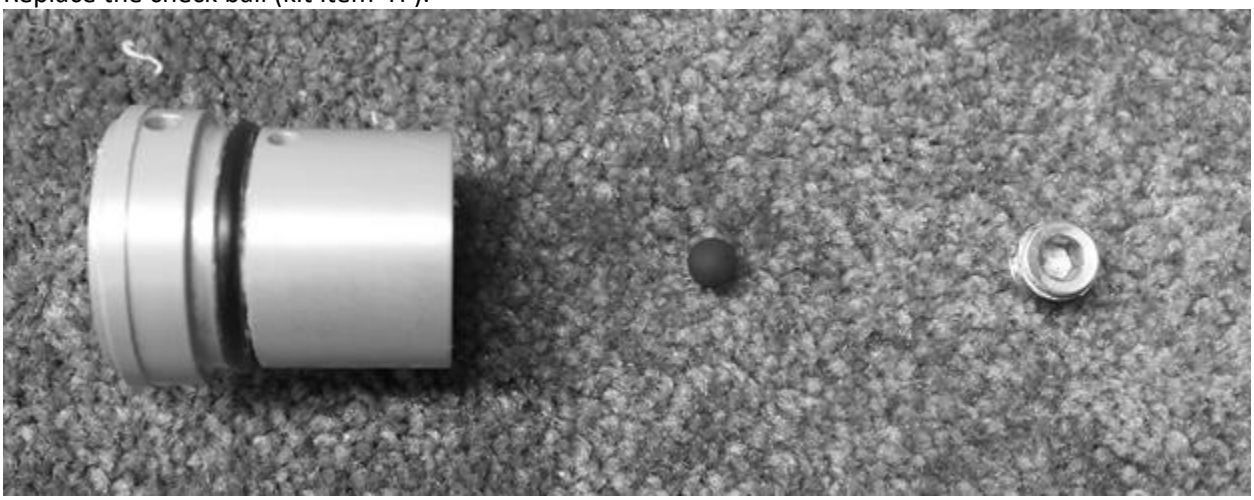
9. Clean off grease and contaminants using a rag or parts washer.

10. Remove the foot valve from the bottom of the cylinder by pulling. Clean the inside of the cylinder. Replace the bottom bumper that is inside cylinder (Kit item 'O').

11. Remove o-ring from Foot Valve and replace with O-ring (Kit Item 'K').

12. To replace the Check Ball, use a screwdriver and a 4.5mm (3/16”) Allen wrench to remove the plug from the Foot Valve. The screwdriver should fit in the bottom holes. Turn the brass plug counter-clockwise to remove.

13. When the brass plug is free, remove the Check Ball and clear the Foot Valve of any obstructions. Replace the check ball (kit Item ‘H’).



14. Apply PTFE tape (Kit Item ‘C’) to the brass plug and tighten in reverse order of step 7.

15. Remove the bottom piston nut using adjustable wrench and 16mm wrench. Remove the piston seals and wear ring.

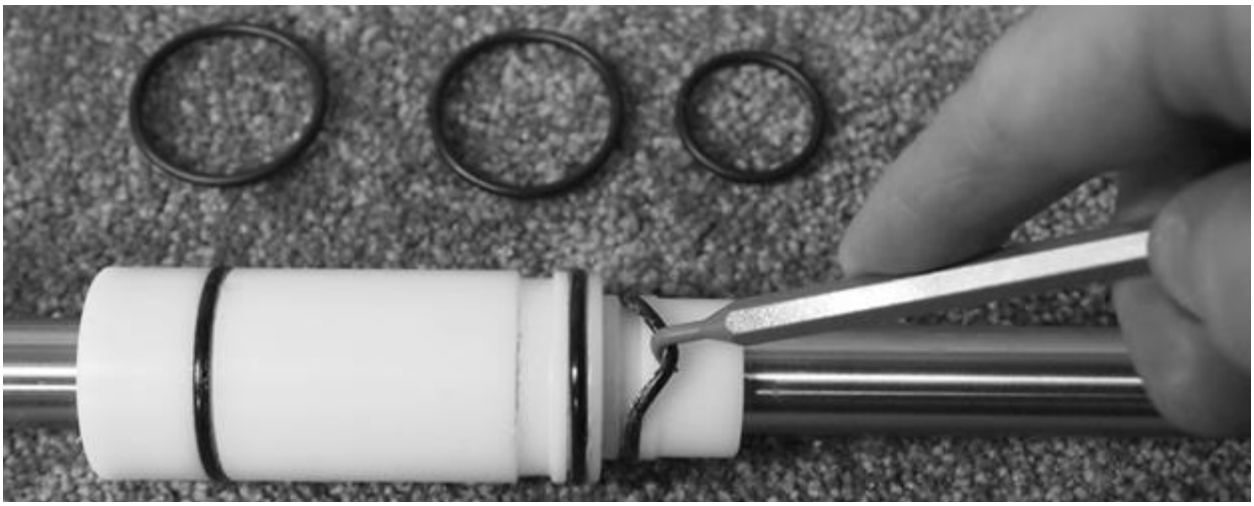
16. Remove piston using a 16mm wrench and an adjustable wrench.

17. Replace check ball (Kit Item ‘H’)and O-ring (Kit Item ‘M’)

18. Replace O-ring on piston (Kit Item ‘L’), piston seal (Kit Item ‘J’), and wear ring (Kit Item ‘G’). Note the piston seal sits, with the open end towards the bottom of the pump. Place bushing on rod. Do not forget to replace upper bumper (Kit Item ‘N’) Tighten Piston housing and Piston nut.

19. Remove rod wiper seal using a pliers. Be careful not to damage plastic. Replace wiper seal (Kit Item ‘I’). Be careful not to damage the seal.

20. Remove o-rings that are to be replaced on the bushing. Replace with new O-rings (Kit Item ‘P’ and ‘K’). Take care not to damage the o-rings on any material edges they may have to go over.



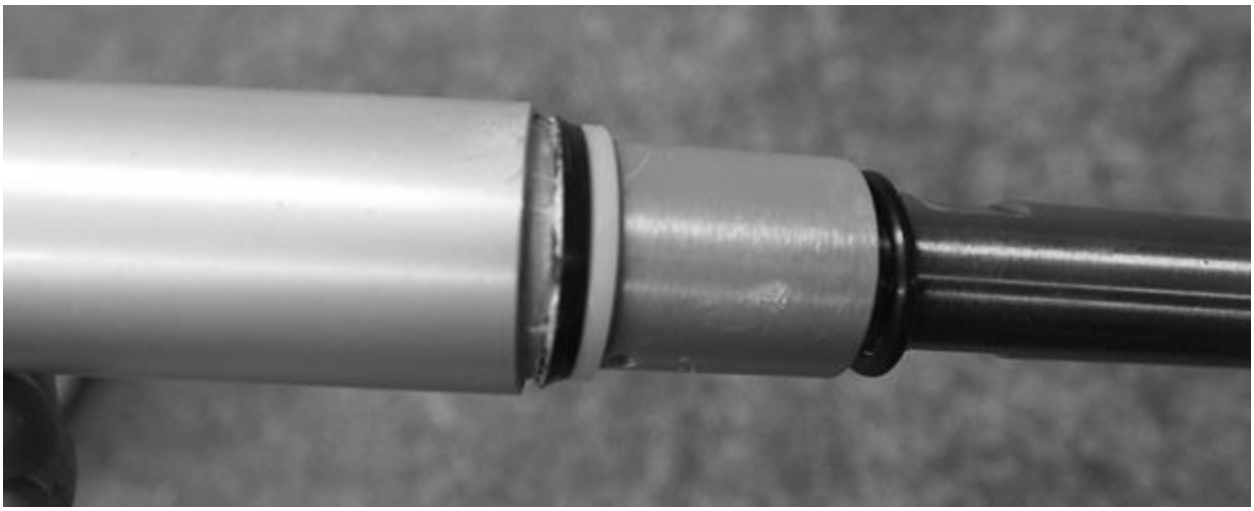
21. Remove and replace the gauge housing O-rings. (Kit item ‘A’)

22. Re-grease O-rings on Bushing. Place a thin layer of grease below the bushing on the Pump Rod.

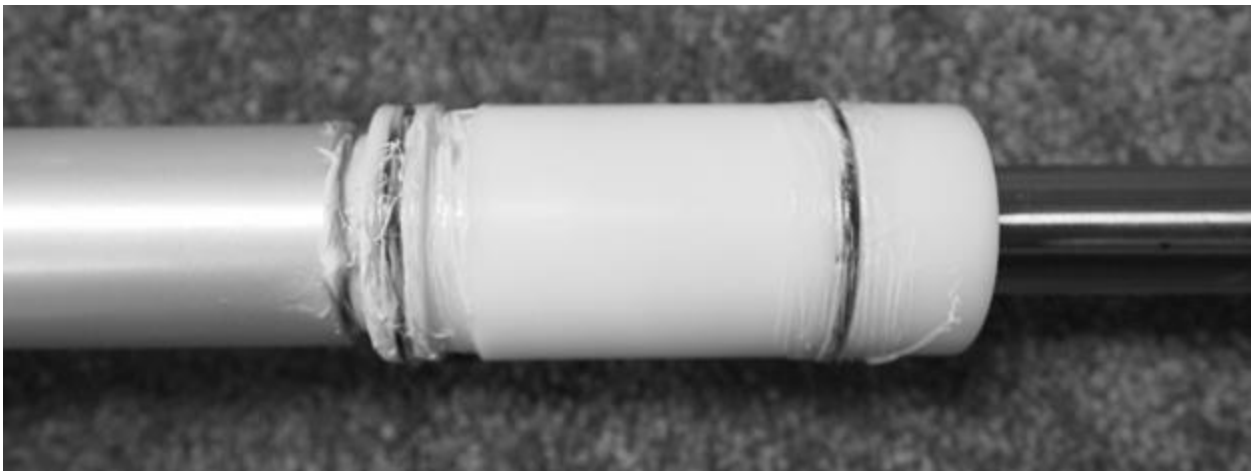
23. Regrease gauge housing O-rings.

24. Grease top of Pump Cylinder (Bottom Bumper should still be in the bottom of the Pump Tube).

25. Slide Piston and Pump Rod into Pump Tube. Start with piston at an angle, taking care not to damage the Rod Wiper Seal or force it to fold while entering the tube. It may help to gently guide the Rod Wiper Seal into the pump tube by using your finger nail or a soft plastic hook tool.



26. Press pump cylinder on to Bushing until it is snug on the last O-ring and it feels like it has “clicked” into place.

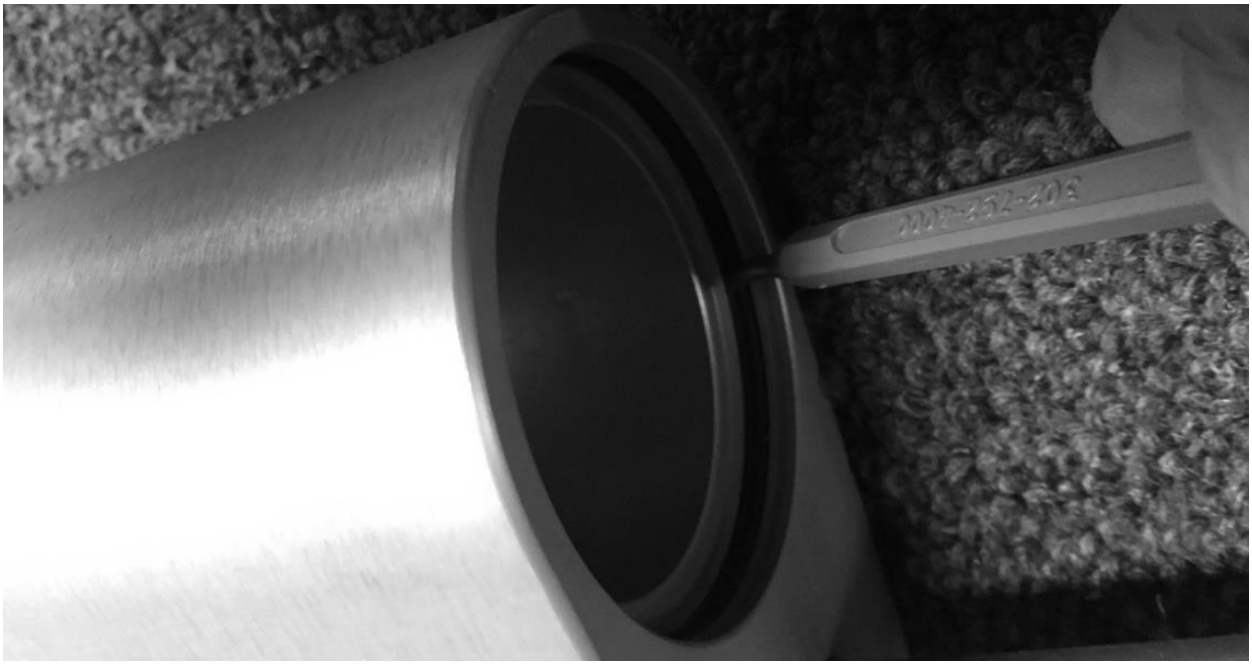


27. Re-grease O-ring on Foot Valve. Replace Foot Valve into bottom of Pump Tube.

28. Grease the inside of the top of the Pump Housing and return the entire pump contents in to the Pump Housing. First insert the cylinder and bushing into the main housing. Press the bushing snugly into the pump housing until the top of the bushing and pump housing are flush. Then install the gauge housing onto the housing being careful not to pinch any O-rings.

29. Using a 13mm socket, tighten the gauge housing bolts.

30. Remove and install gauge cover O-ring (Kit item ‘D’).



31. Remove and replace gauge O-ring (Kit item ‘F’)

32. Install gauge and gauge cover (Kit item ‘E’). Be sure to clock the gauge properly. The gauge cover’s taper should face the bottom.

33. Install gauge retaining ring. Ensure it is completely seated.

34. Apply thread sealing tape to air hose threads (Kit Item ‘C’) and reinstall pressure hose. If you have a pump with a long hose clip, install that now.

35. Test the pump by inflating a bike tire. Leave the pump connected to the pressurized bike tire and listen for leaks.