TM900 Series
Trailer Load/Unload Manifold
Instruction Manual

⚠ WARNING

Failure to follow these instructions or to properly install and maintain this equipment could result in gas leakage, fire or explosion causing property damage and personal injury or death.

Oasis products must be installed, operated and maintained by trained and competent personnel in accordance with all applicable local codes, rules and regulations in addition to the Oasis Instructions.

Oasis Engineering Ltd. will not be held liable in such circumstances where installation, operation and maintenance procedures were performed by incompetent personnel resulting in improper assembly, unsafe operation, equipment damage or personal injury.

This device is a pressure accessory and must not be connected directly to pressurized storage tanks or cylinders and must not be used as a primary safety device. Compliance with the UN ADRs is mandatory for pressure systems when this device is fitted to pressure systems for transportable pressure vessels and used for the carriage of dangerous goods by road.

Prior to operation, the TM900 Trailer Load / Unload Manifold is to be securely mounted to avoid impact damage. Mounting of the device must utilize the three mounting holes provided on the body of the manifold.

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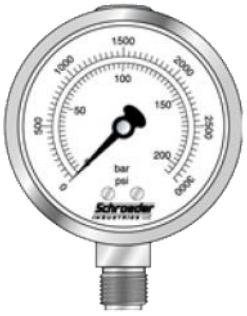
Instruction Manual

Warning!

High pressure gas and gas equipment can cause serious harm to both infra-structure and personnel if safety precautions are not followed.

Oasis recommends considering the use of the following PPE when working with high pressure along with any other site specific health and safety requirements:



Ensure the system is clean of debris, vented and isolated before any installation or servicing work is carried out.

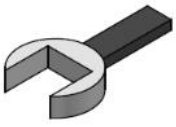
Attention!

Oasis 900 series trailer manifold valves are intended for use with gaseous Hydrogen, CNG, Helium, Biogas or Nitrogen.

Tools Required

Anaerobic Thread Sealant with PTFE (Optional)
- Loctite 567
- Swagelok SWAK
- Hernon Dripstop 940
- Gasoila FasSeal-ATS
- Or Similar

Anti Seize Grease
- Swagelok Silver Goop
- Omega 99
- or similar



Spanner (Wrenches)

Allen Key
- 6mm

Yellow, Gas Rated, PTFE Thread Tape
- AW TITASEAL
- McMaster-Carr High-Density Thread Sealant Tape
- Blue-Monster gas-guard
- Or Similar

Spray bottle (Snoop or suitable equivalent)

Silicone Grease
- Rocol MX22
- Or similar)
For all O-rings

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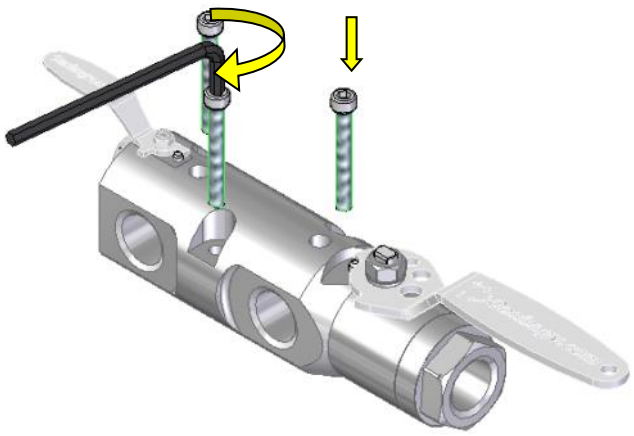
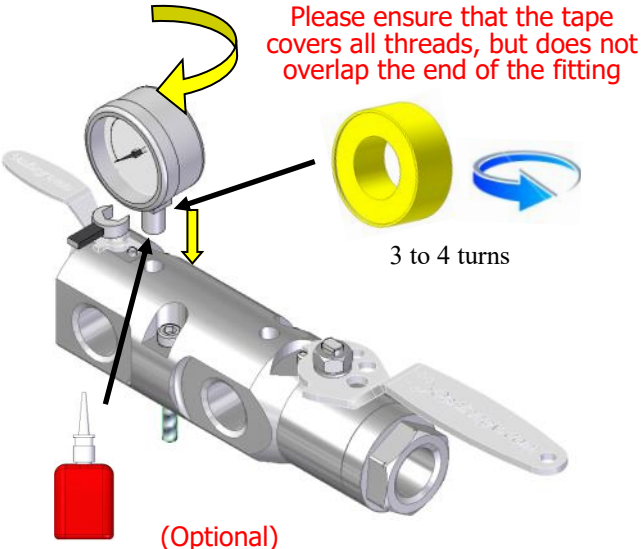
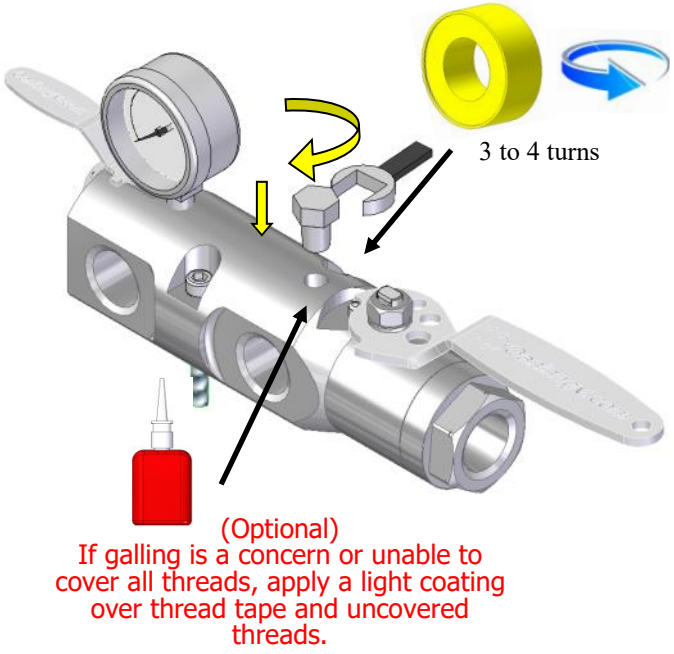
1. Mount the manifold in position using the three mounting holes.



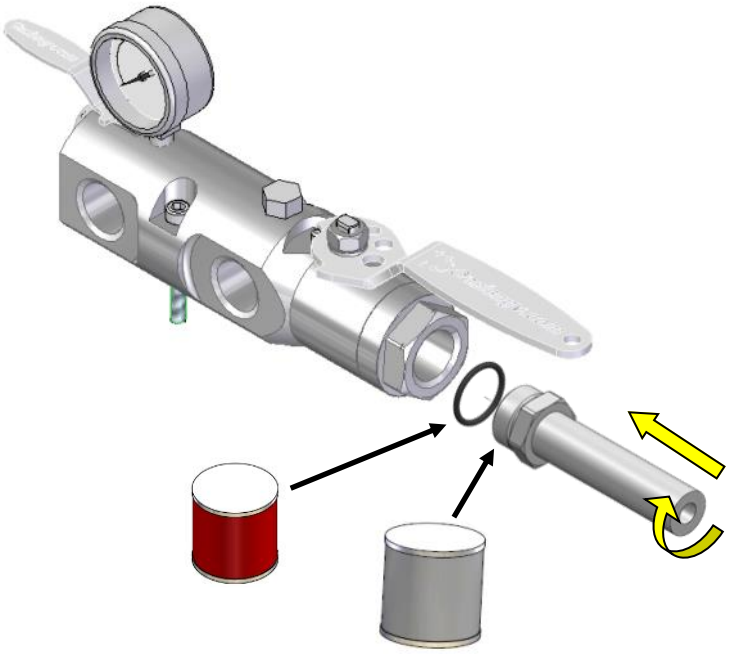
2. Tighten in the pressure gauge or pressure transducer, if not being used plug hole. Hand tight before apply two full turns with wrench



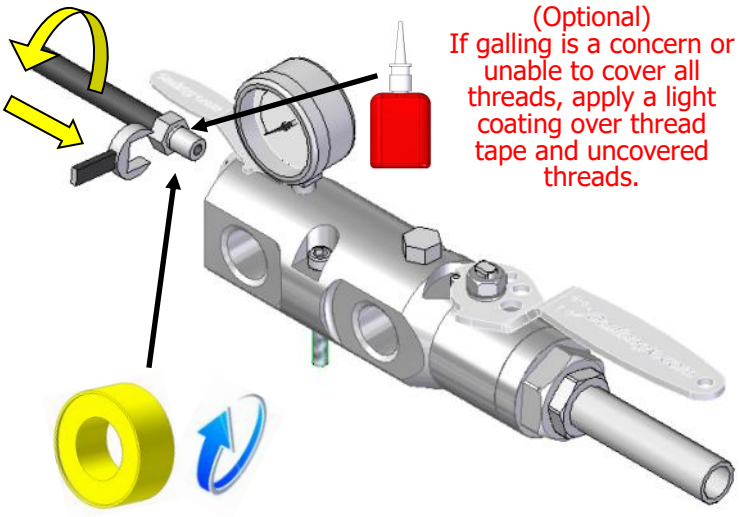
3. Plug spare port if a second gauge is not used. Hand tight before apply two full turns with wrench.



4. On the first fitting, apply never seize to thread and Silicone grease to the O-ring. Install the O-ring on the fitting if not re-installed, Screw the fitting into the body and torque to the fitting suppliers recommended tightening torque.



5. Apply thread tape and thread sealant to male NPT thread. Hand tight in the vent line before apply two full turns with wrench.

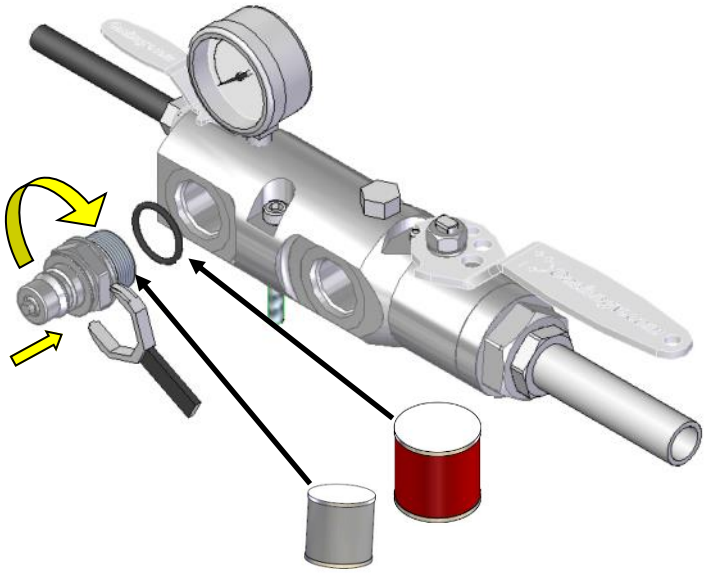


(Optional)
If galling is a concern or unable to cover all threads, apply a light coating over thread tape and uncovered threads.

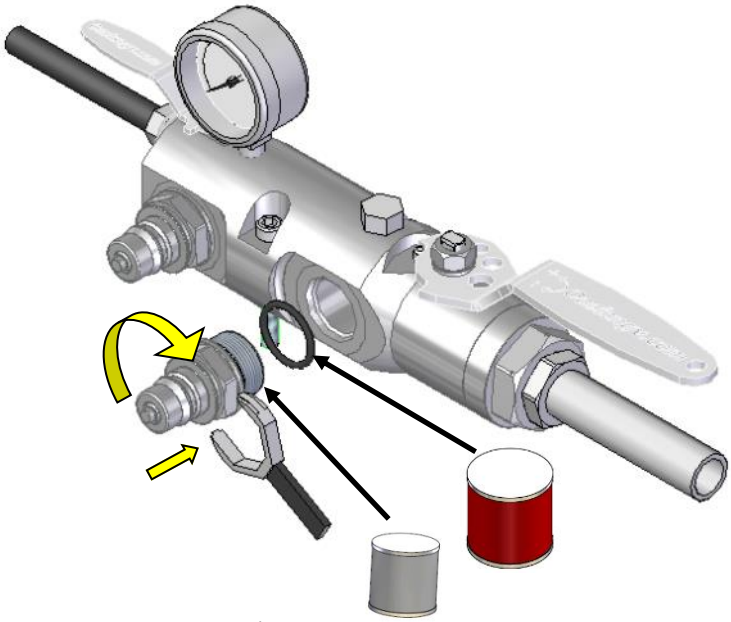
3 to 4 turns

Please ensure that the tape covers all threads, but does not overlap the end of the fitting

6. Mount the first manifold coupler. Apply never seize to thread and silicone grease to the O-ring. Install the O-ring on the fitting if not pre-installed, Screw the fitting into the body and torque to the fitting suppliers recommended tightening torque.



7. Mount the second manifold coupler. Apply never seize to thread and silicone grease to the O-ring. Install the O-ring on the fitting if not pre-installed, Screw the fitting into the body and torque to the fitting suppliers recommended tightening torque.



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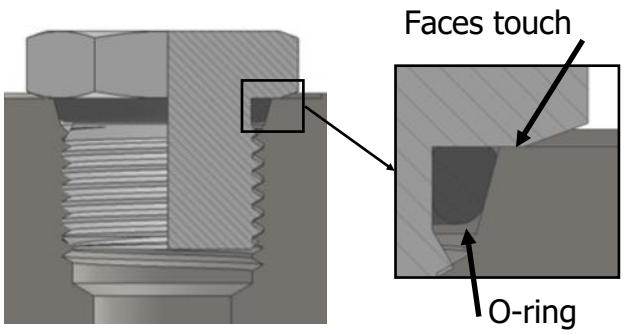
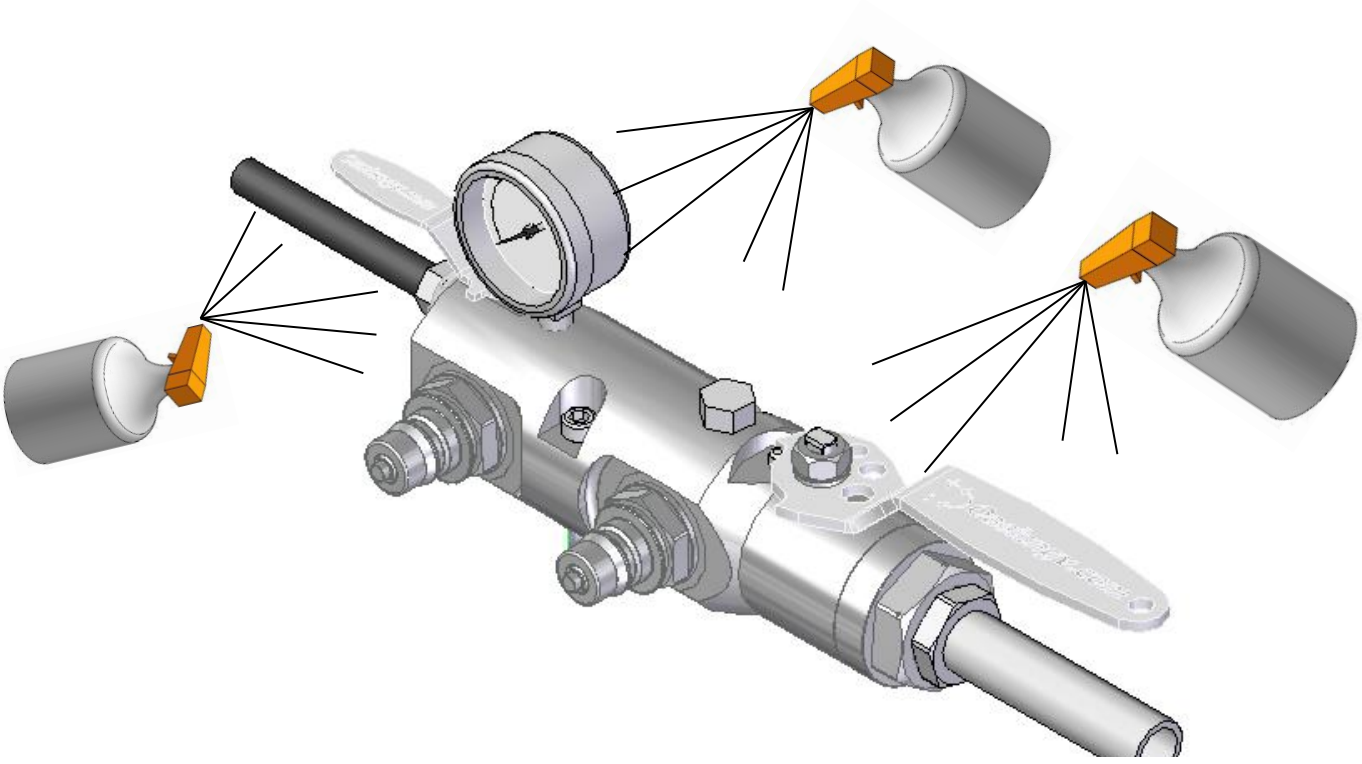
8. Correctly tightened SAE port fittings should bottom out on the port face and the O-ring should neatly fill the void creating the seal.



9. Test for leakage using snoop or soapy water and installation is complete.



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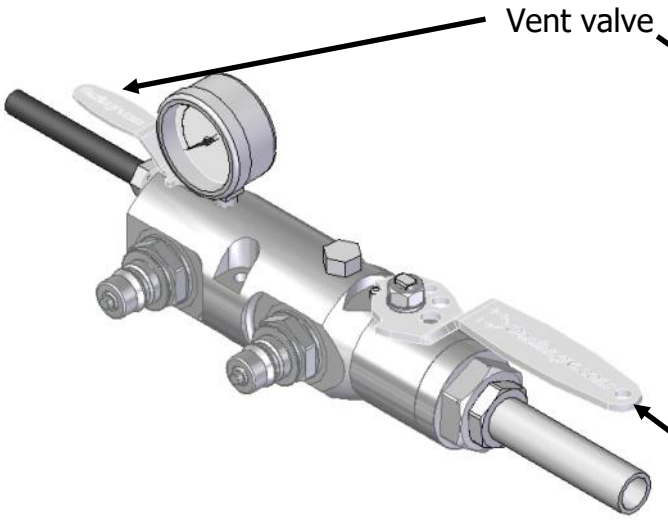
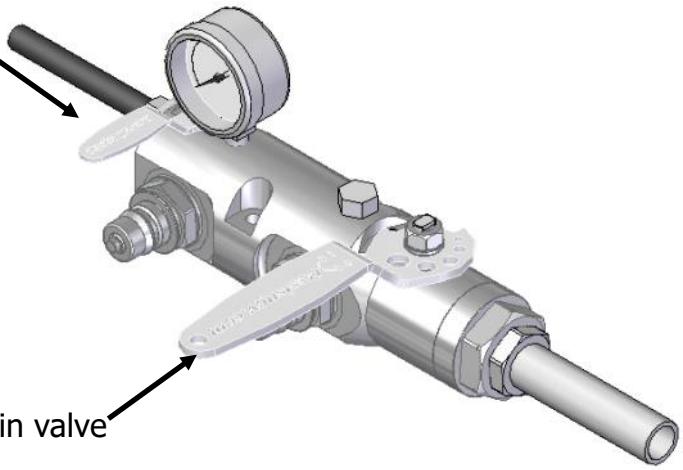
1. Vent valve and main valve in the open position

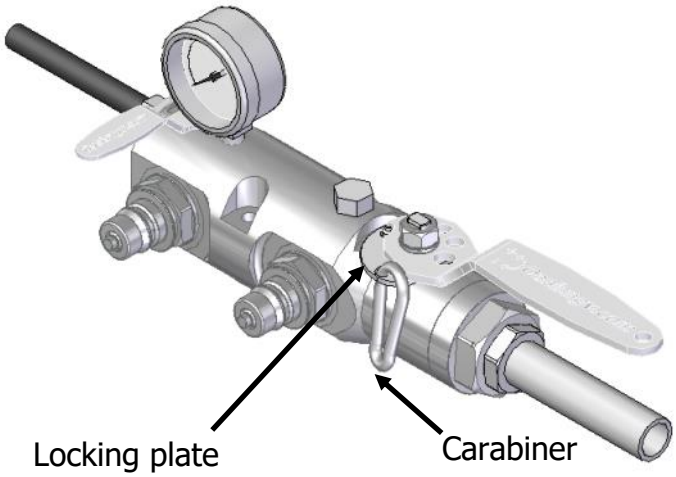


2. Vent valve and main valve in the closed position

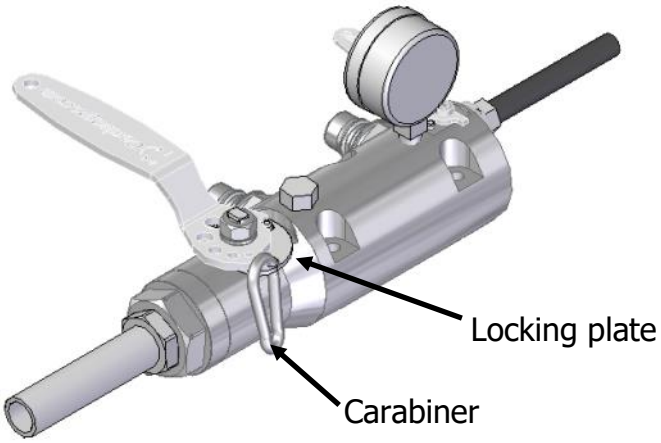


Important: Actuate valves 4 times before use to ensure initial sealing.

Optional - Main Valve Lock-plate & Carabiner In Open Position



Optional - Main valve Lock-plate & Carabiner In Closed Position



The carabiner is placed through the available hole on the locking plate when the handle is in the desired position. Movement of the handle is prevented until carabiner is removed. This option is for the main valve only.

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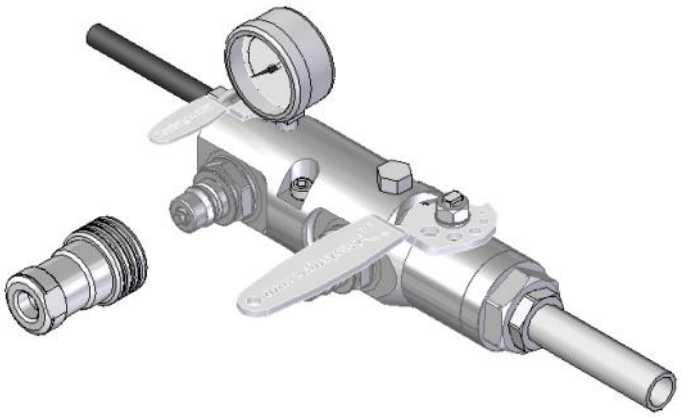
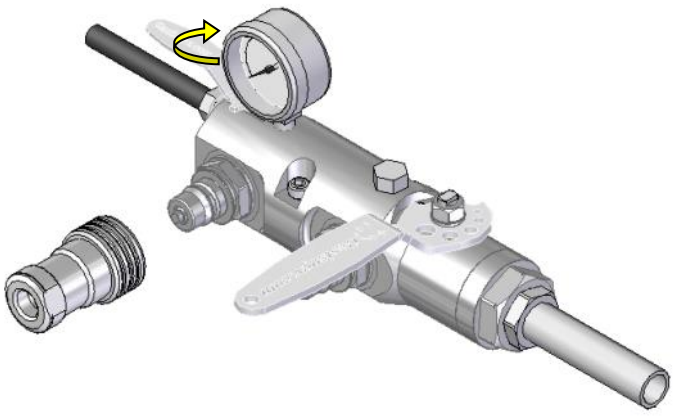
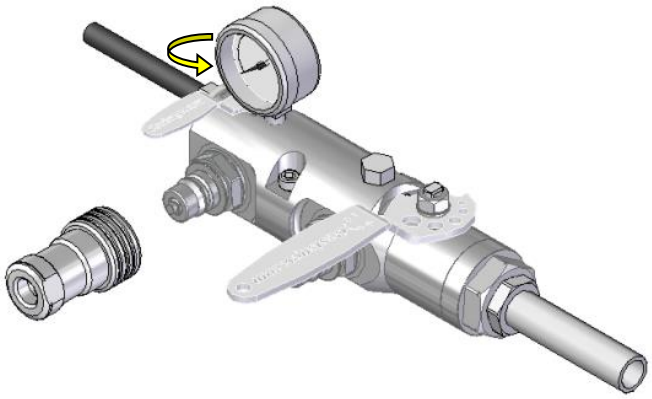
1. Ready the system for connection. Both valves should be in the closed position.



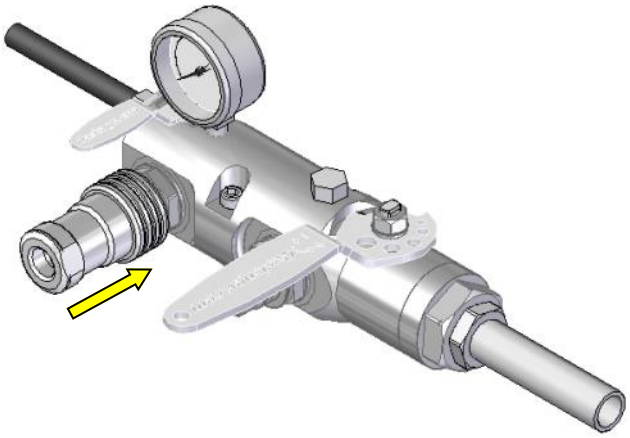
2. Open the vent valve.



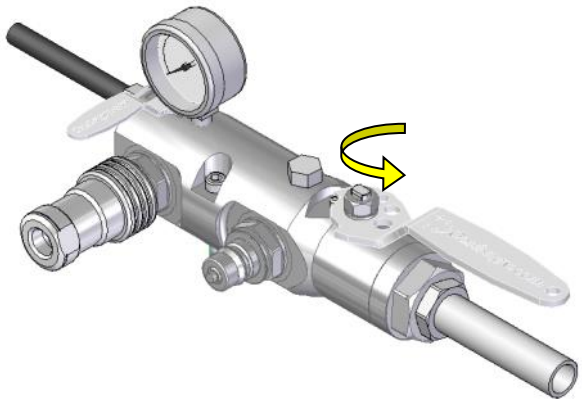
3. Close the vent valve.



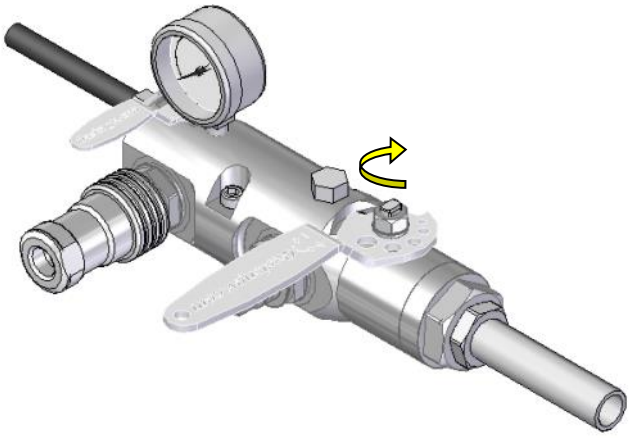
4. Connect the coupler, make sure it is correctly located.



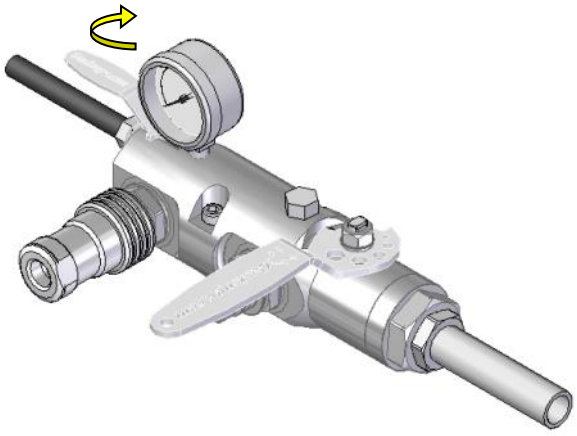
5. Open the main valve to begin gas flow.



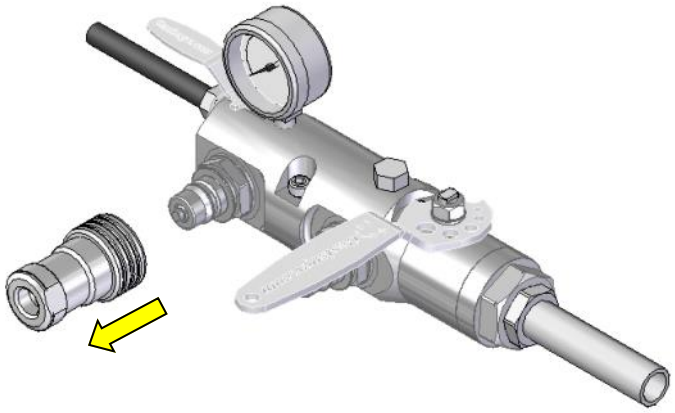
6. Close the main valve when gas transfer is complete.



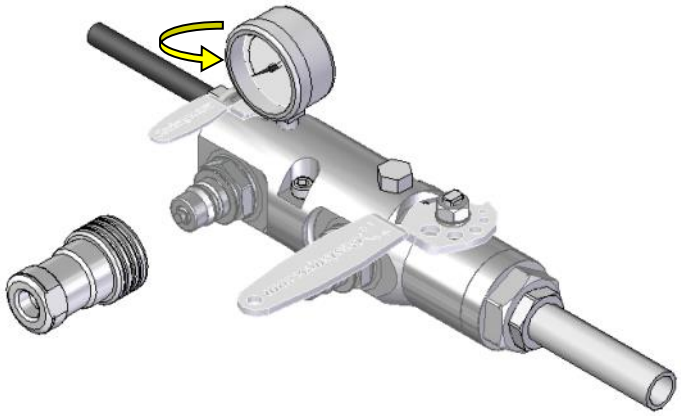
7. Open the vent valve to release the pressure in the system.



8. Disconnect the coupler when the system is depressurized.



9. Close the vent valve, and the gas transfer is complete.



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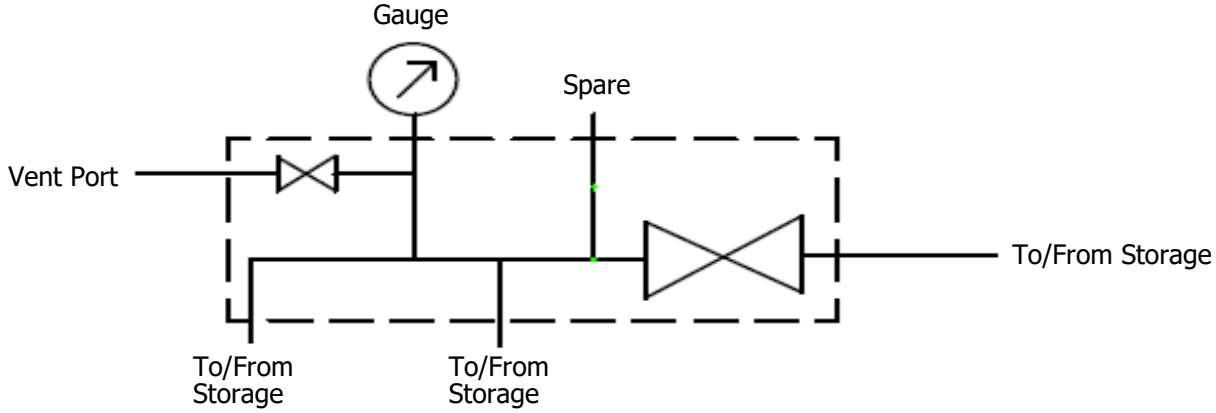

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Service Kit Parts

Vent valve components

2 x Seats

1 x Ball

1 x Stem

1 x Gland

1 x Cap O-ring

1 x Silicone

Main valve components

2 x Seats

1 x Ball

1 x Stem

1 x Gland

1 x Cap O-ring

3 x SAE Port O-rings

(916)

1 x Cap Backup O-ring

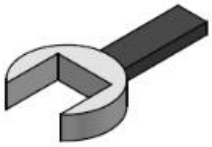
The Complete Oasis Seal Kit must be used

Tools Required

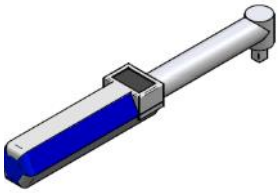
Cleaner (Warm Soapy Water or Similar)

Pick Tool
Part Number:
TOOL-PICK
(Sold separately)

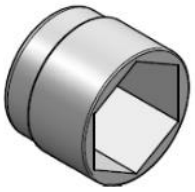
Anti Seize Grease
(Loctite 771 or Similar)
For All Threads



Spanner
(Wrenches)



Torque Wrench



Sockets

Oasis Plastic Tool
Part Number:
TOOL-BVASSY
(Sold separately)

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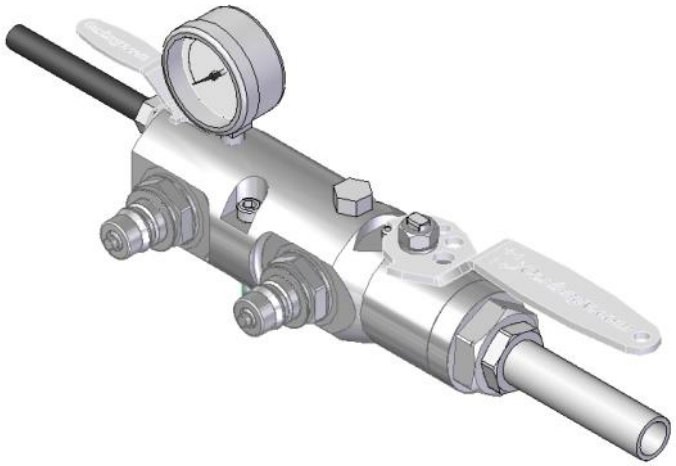
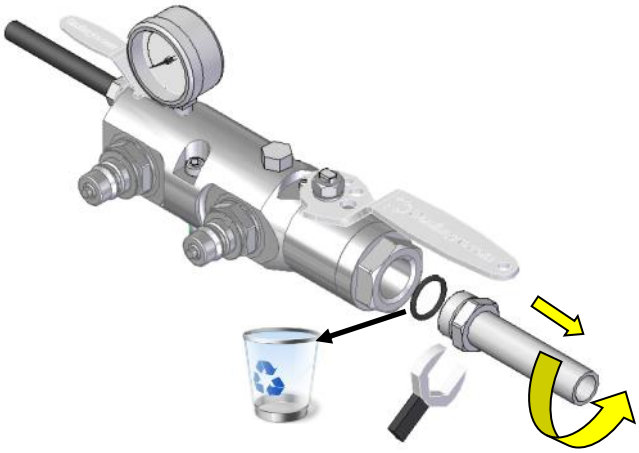
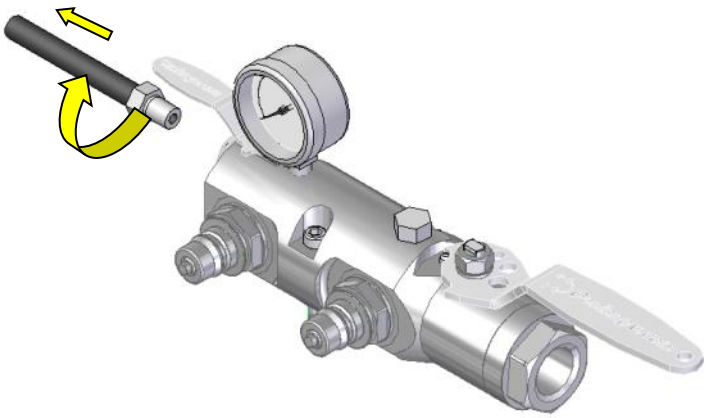
1. Remove all system pressure and ensure manifold is vented.



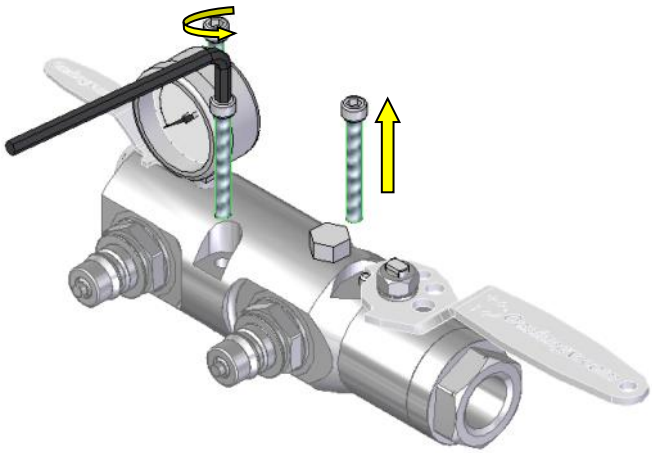
2. Remove main fuel line and discard O-ring.



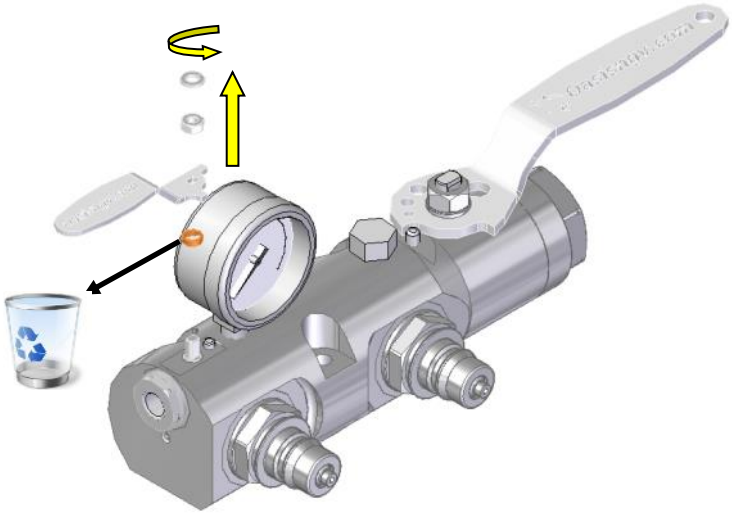
3. Remove vent line.



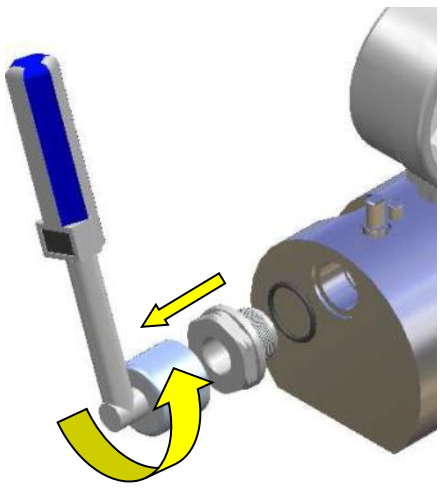
4. Remove manifold mounts and move the manifold to a clean table to service.



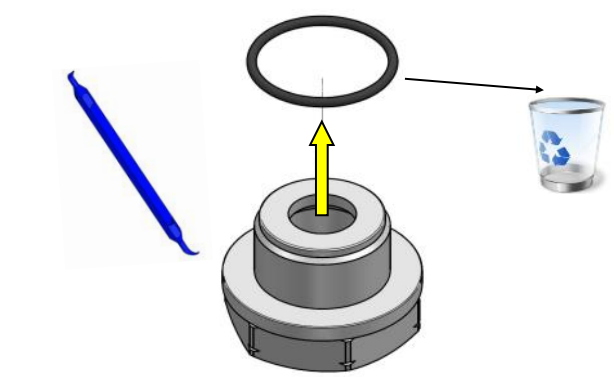
5. Remove vent handle and discard the gland.



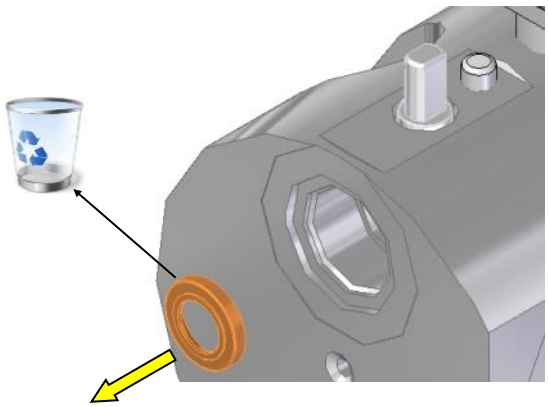
6. Remove vent valve end cap.



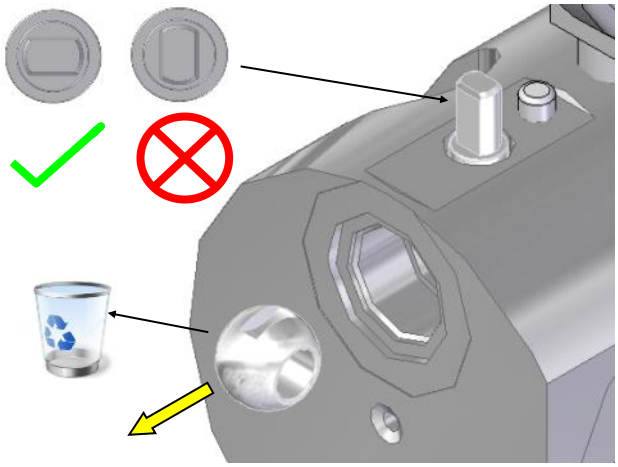
7. Remove Cap O-ring and discard.



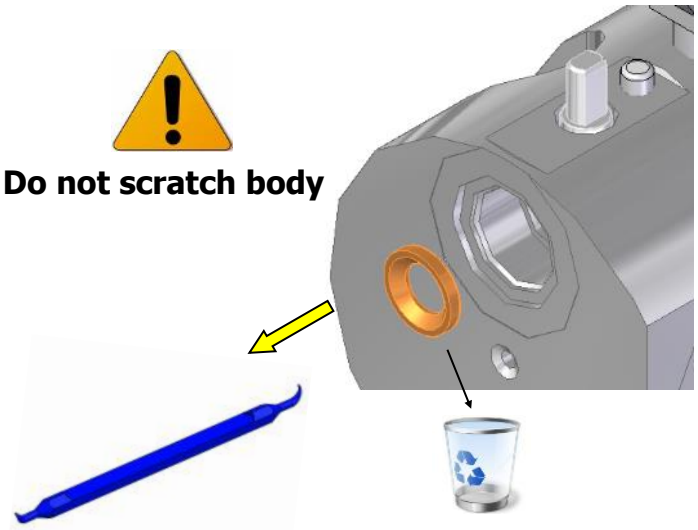
8. Remove first seat and discard.



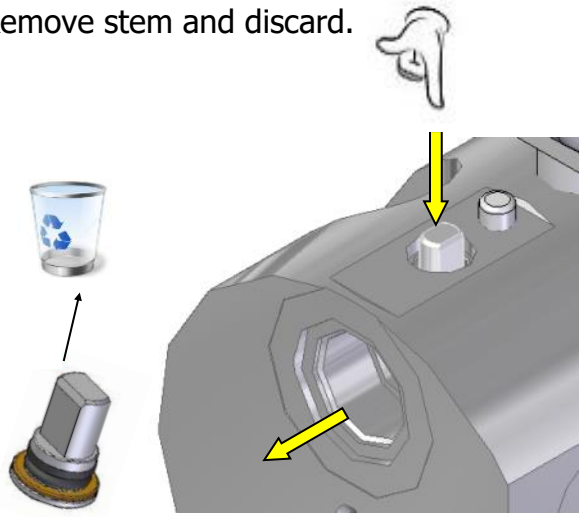
9. Remove the ball and discard.



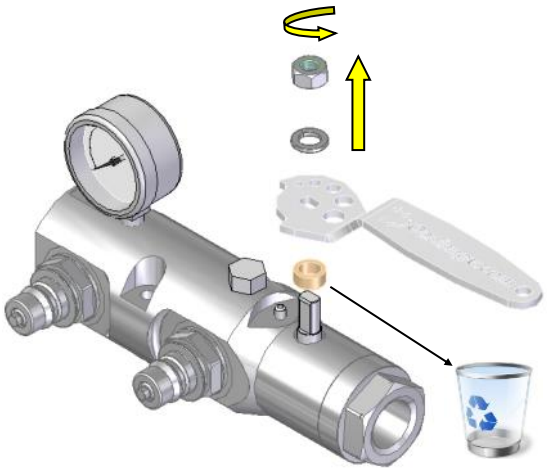
10. Remove the second seat and discard.



11. Remove stem and discard.



12. Remove the main valve handle and discard the gland.



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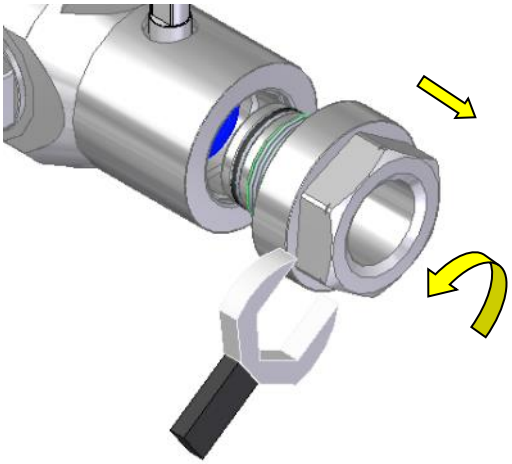
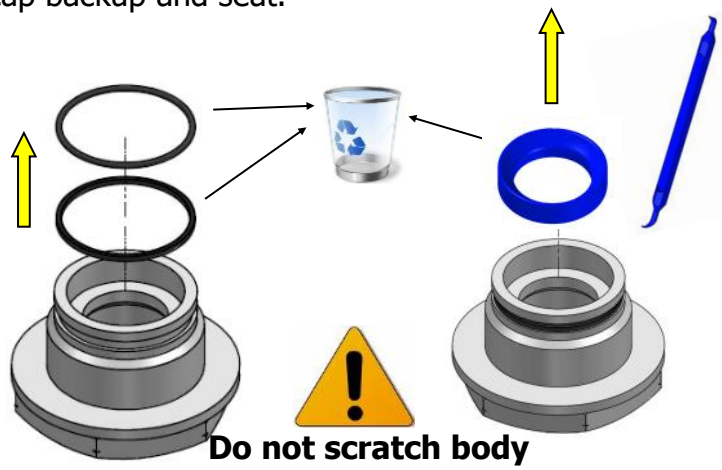
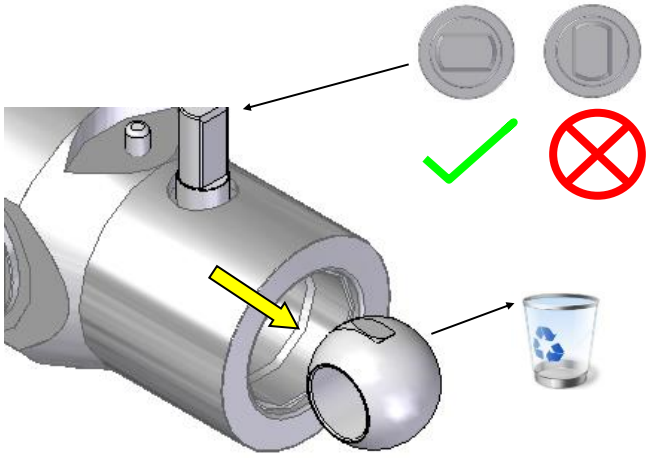
13. Remove the main valve end cap.



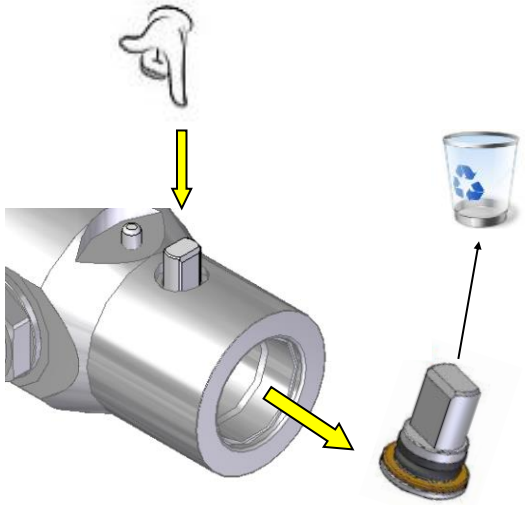
14. Remove and discard the end cap O-ring, end cap backup and seat.



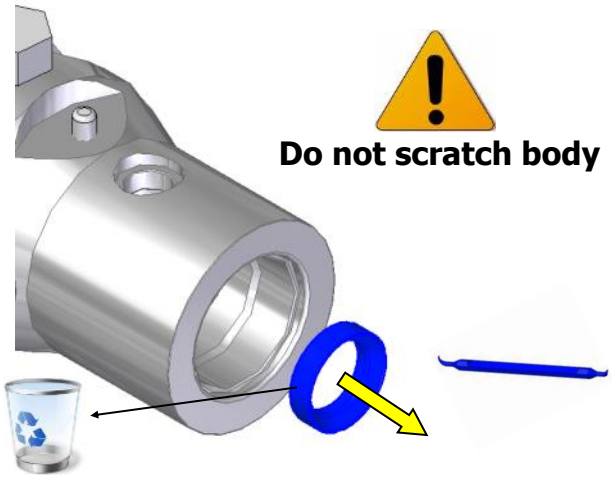
15. Remove the ball and discard.



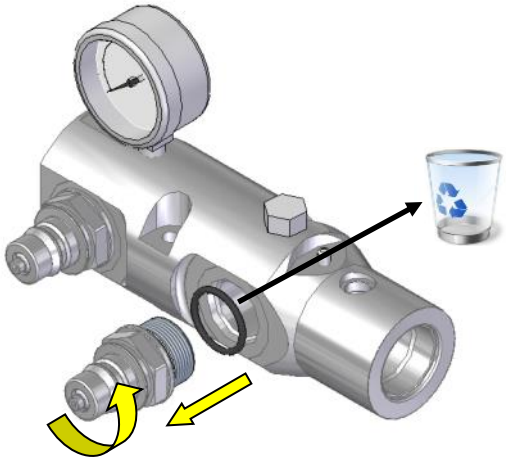
16. Remove the stem and discard.



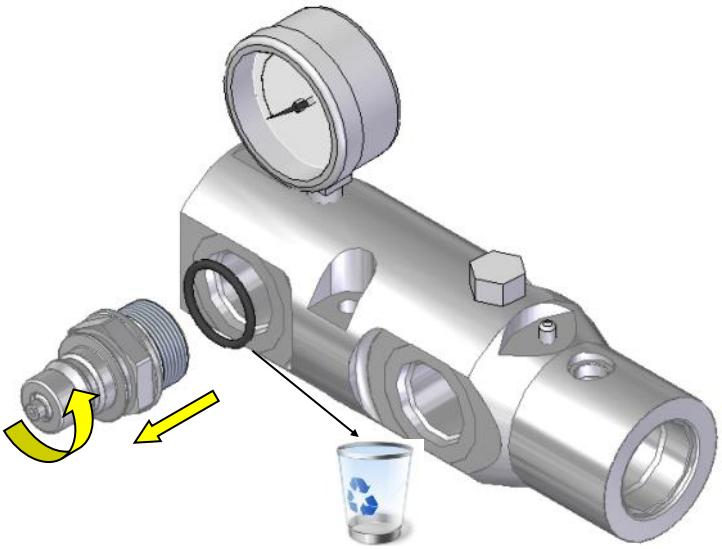
17. Remove the back seat and discard.



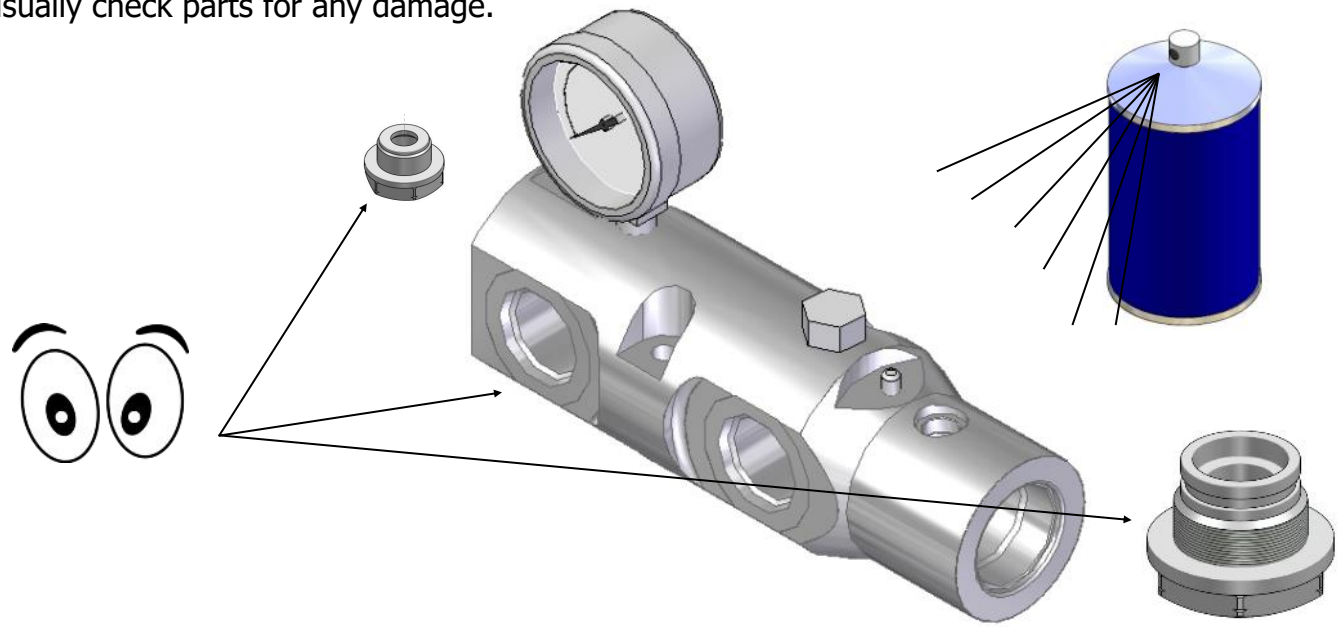
18. Remove the coupler connection and discard O-ring.



19. Remove the coupler and discard O-ring.



20. Clean body and end caps.
Visually check parts for any damage.



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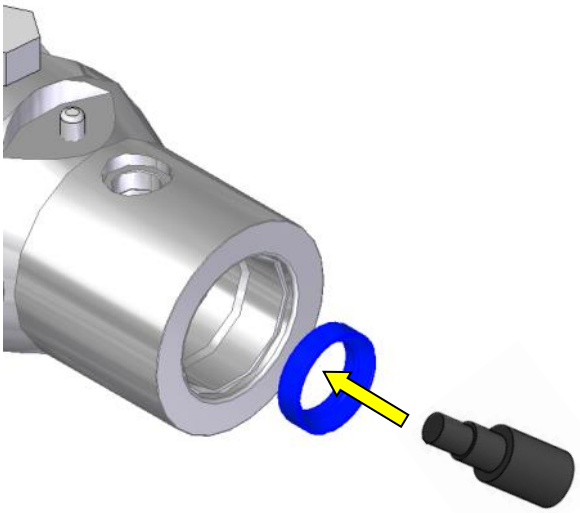
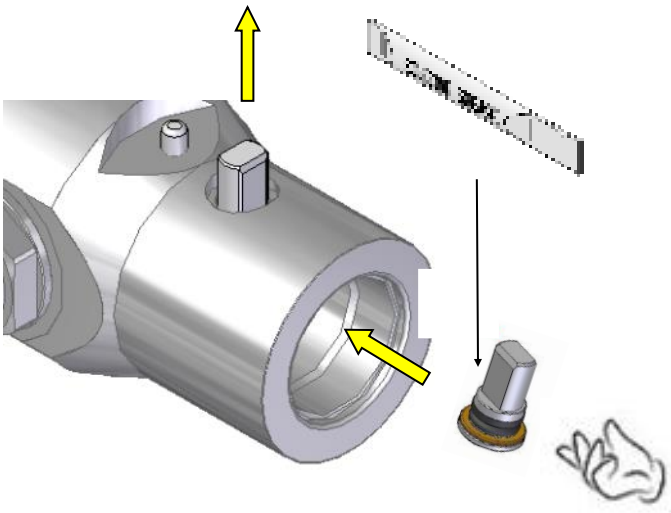
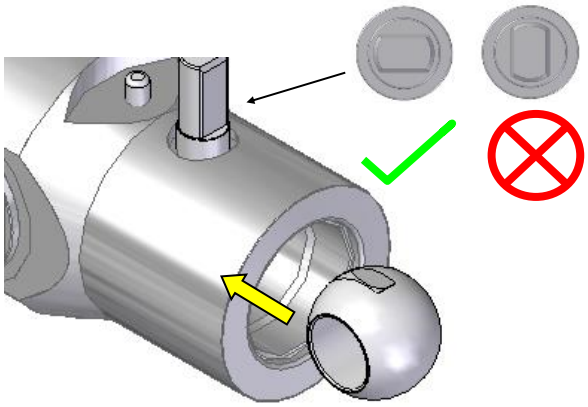
1. Insert the first seat.



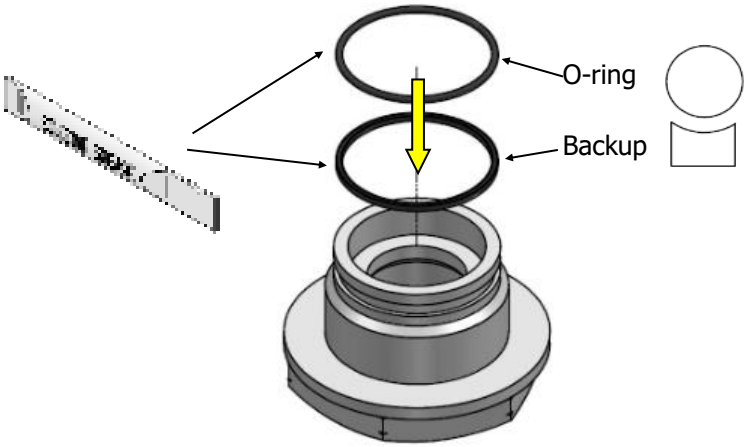
2. Apply grease to the stem O-ring. Insert the stem.



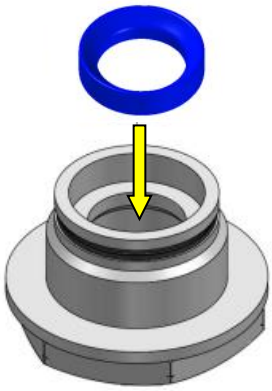
3. Insert the ball.



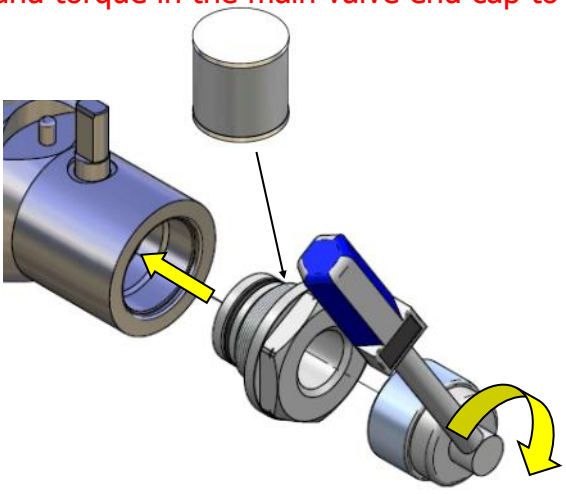
4. Assemble new O-ring and backup on the cap.



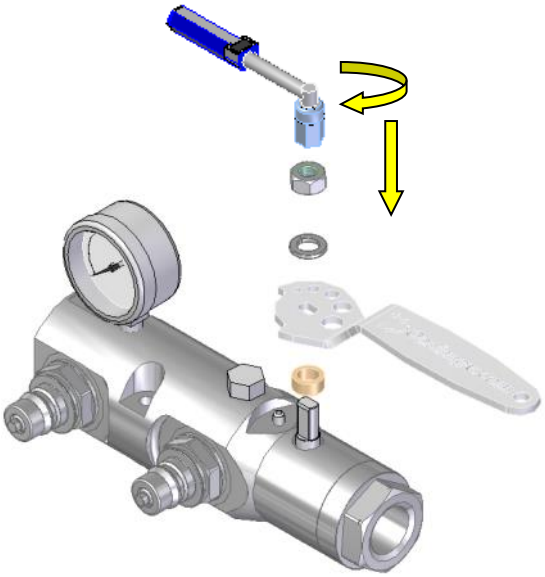
5. Insert the second seat into the end cap.



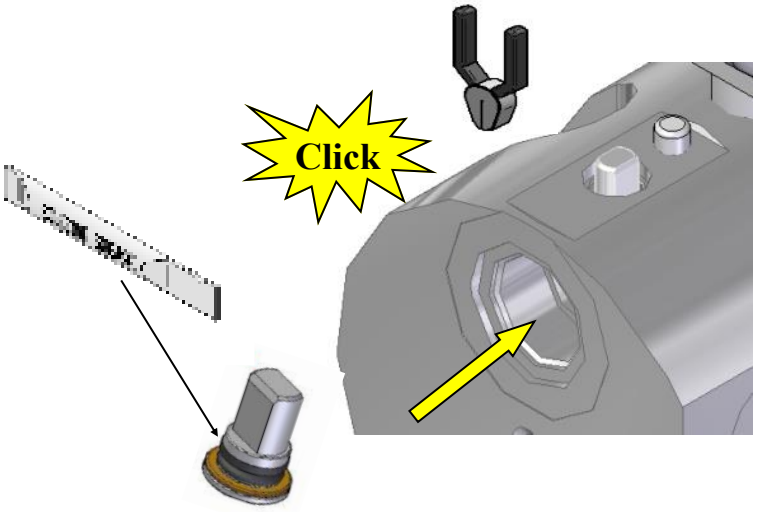
6. Apply anti-seize to the main valve end cap thread and torque in the main valve end cap to 160Nm.



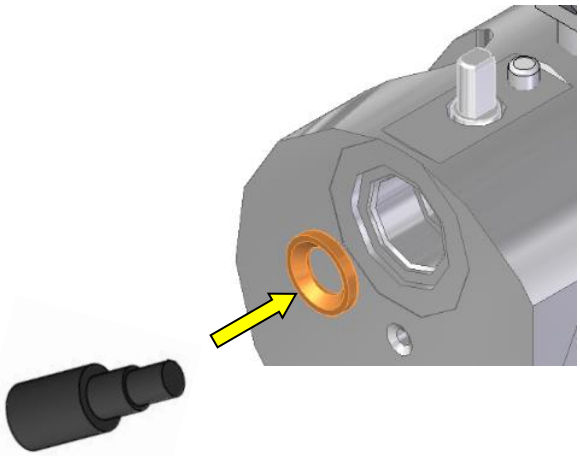
7. Torque the main valve handle to 6Nm.



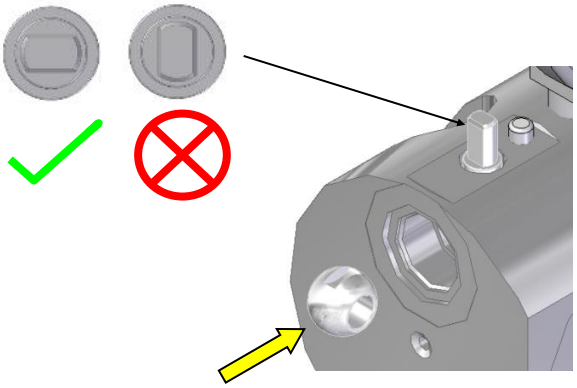
8. Apply grease to vent valve stem O-ring then insert the vent valve stem.



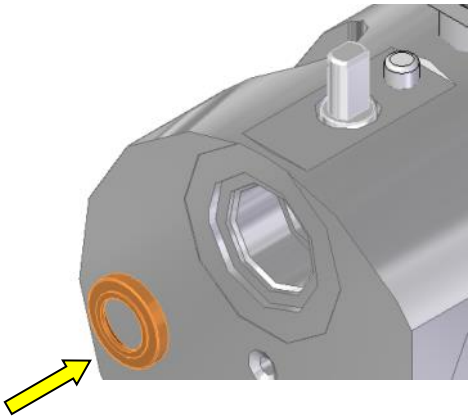
9. Insert first seat.



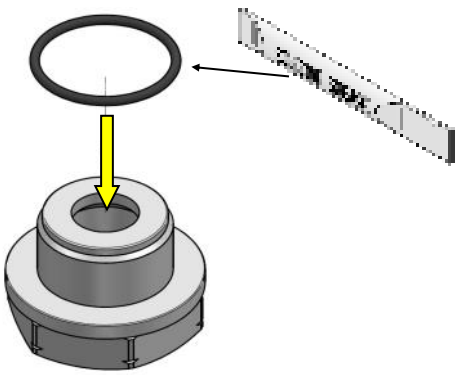
10. Insert the ball.



11. Insert second seat.



12. Assemble the new O-ring on the vent end cap and apply grease to the O-ring.



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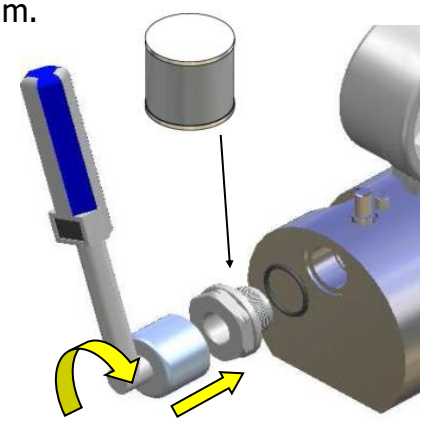
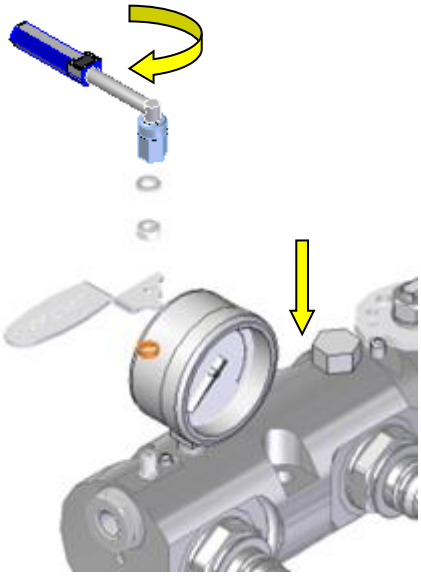
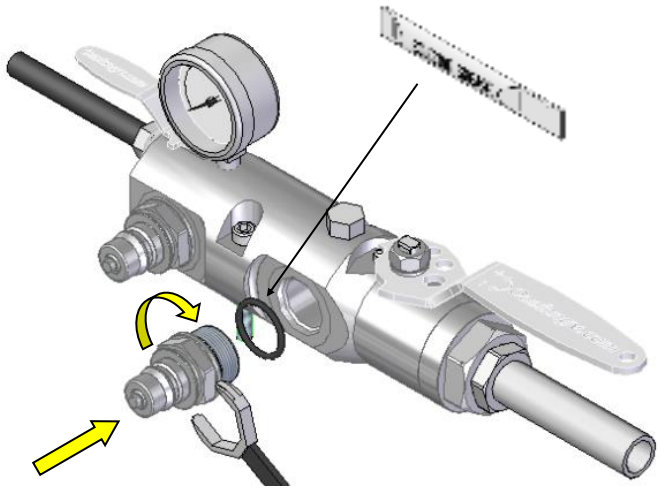
13. Apply anti-seize to the ball valve end cap thread and torque the ball valve end cap to 35Nm.



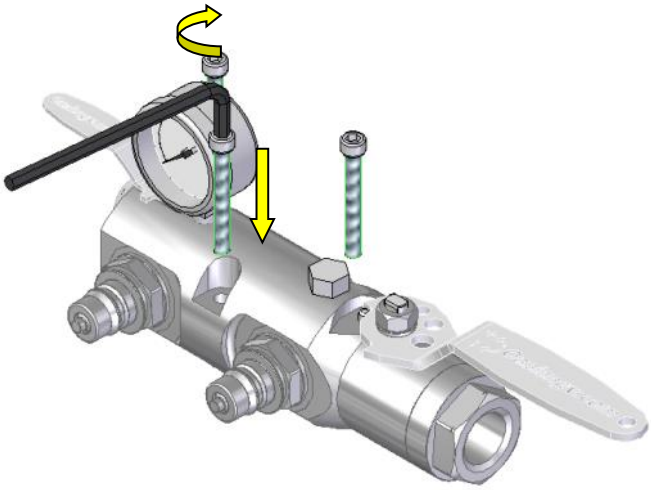
14. Torque the vent valve handle nut to 3Nm.



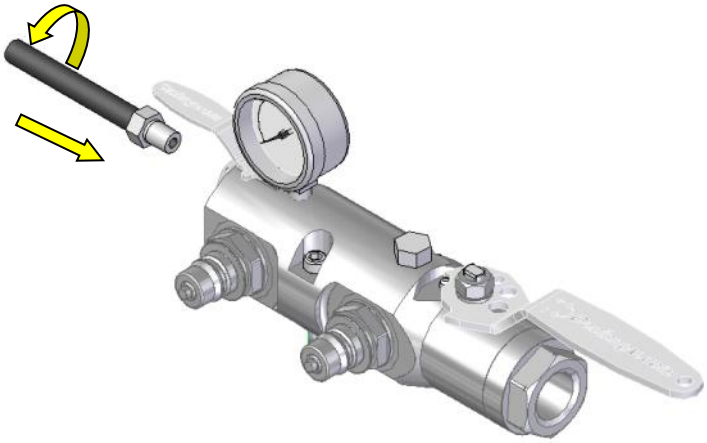
15. Install the coupler connections with new greased O-rings.



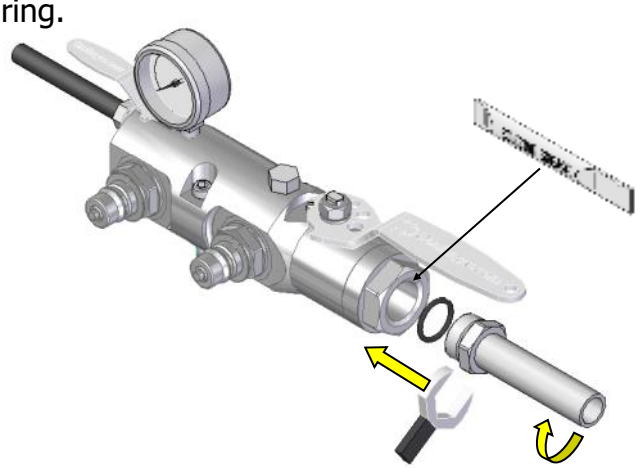
16. Remount the manifold in the original location.



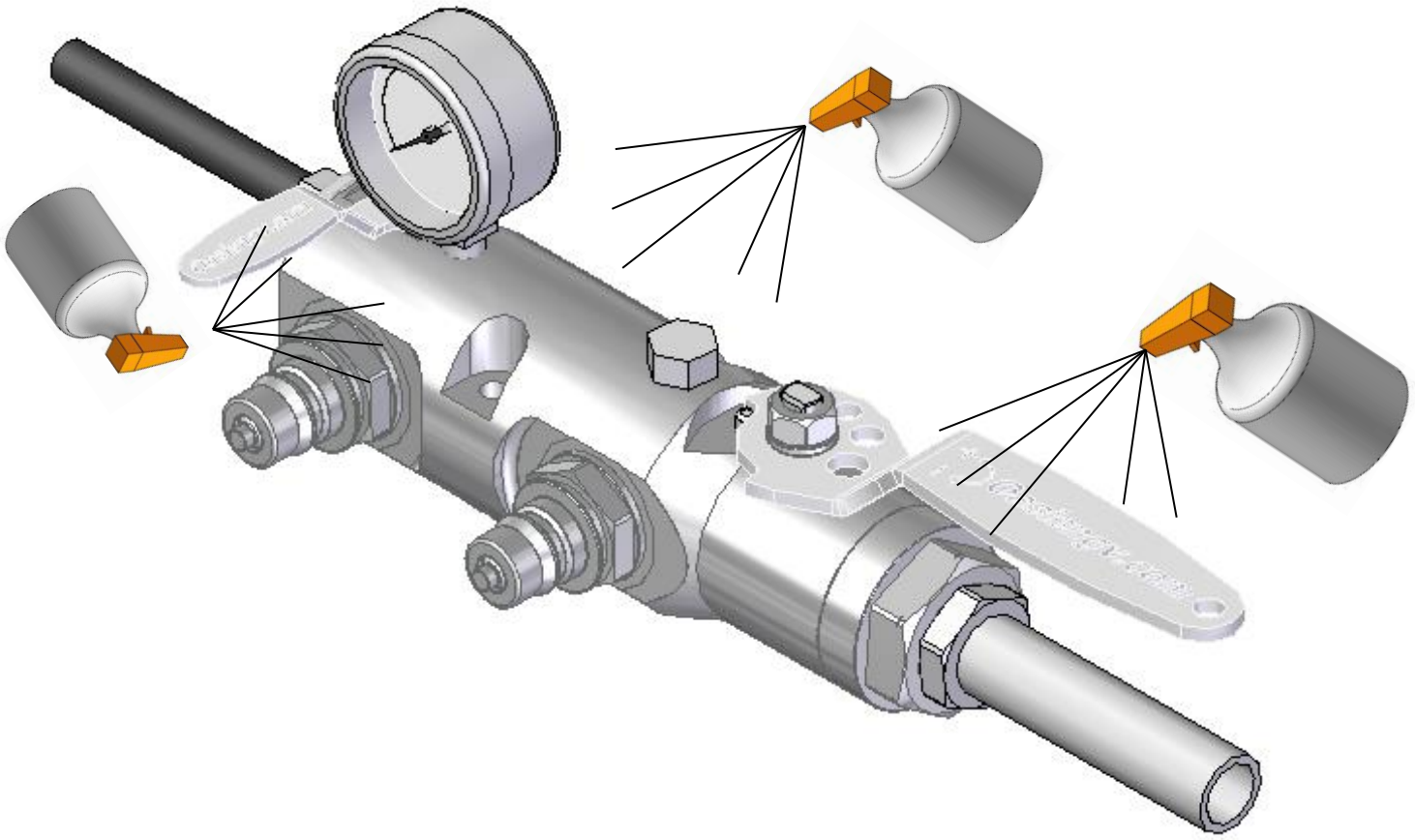
17. Re-connect the vent line.



18. Re-connect the main line with new greased O-ring.



19. Test the system for leaks using either snoop or soapy and the service is complete.



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