



TH404 with TPRD



TH404 without TPRD

TH400 Series

Cylinder Valves

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.

Oasis recommends that all service technicians should watch the Product Servicing Video before attempting to service this part.

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Instruction Manual

Warning!

High pressure gas and gas equipment can cause serious harm to both infrastructure 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:



Foot Protection



Hearing Protection



Safety Helmets



Hand Protection



Safety Glasses

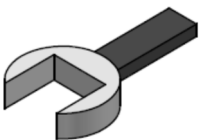


Ensure the system is clean of debris, vented and isolated before any installation or servicing work is carried out.

Attention!

Oasis TH404 Series Ball Valves are intended for use with gaseous Hydrogen.

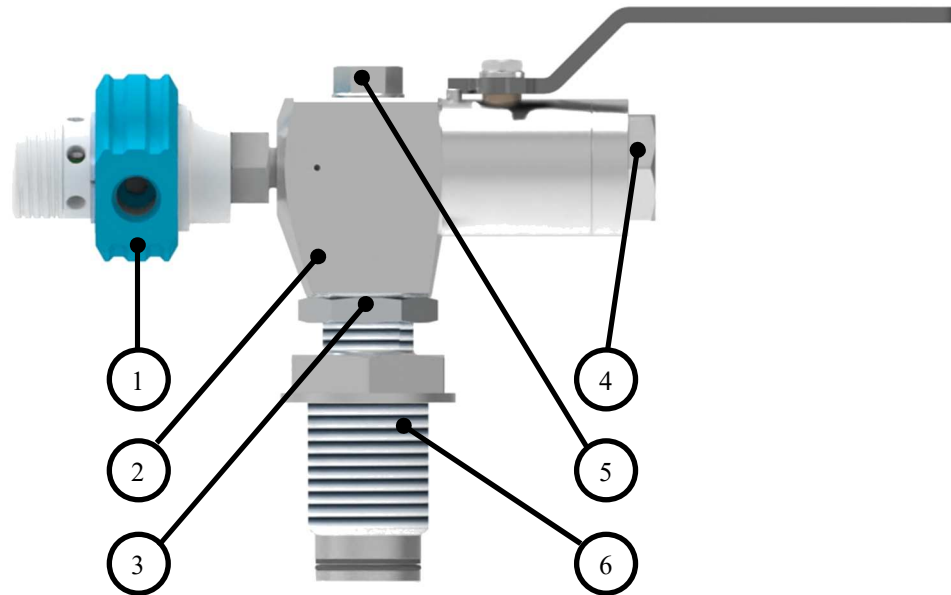
Tools Required



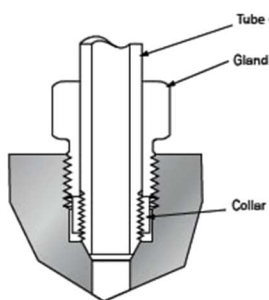
Spanners
(Wrenches)
Recommended spanner sizes on page 4



Spray bottle
(Snoop or soapy water)



- 1 PRD
- 2 Valve Body
- 3 Locking Nut
- 4 End Cap (SAE or Medium Pressure Connection)
- 5 Plug / Commissioning Plug
- 6 Cylinder Adaptor

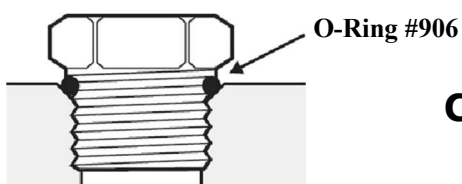


Medium Pressure Connections

Ensure a gap of two to three threads between the collar and the start of the sealing surface.

FOLLOW MEDIUM PRESSURE FITTING RECOMMENDATIONS

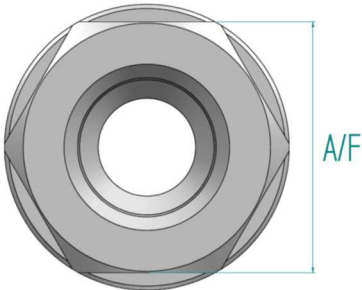
SAE Connections



Check and lubricate O-ring before installation.

FOLLOW MANUFACTURER TORQUE SPECS

Recommended Spanners



End Caps:
Medium Pressure= 1-5/16"
SAE = 1-5/16"

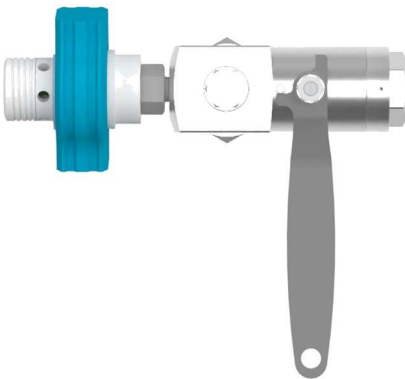
Plug = 19mm

PRD connection = 27mm

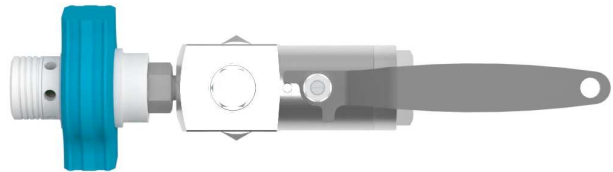
Cylinder adaptor = 48mm

Locking Nut = 1-1/2" - 38mm

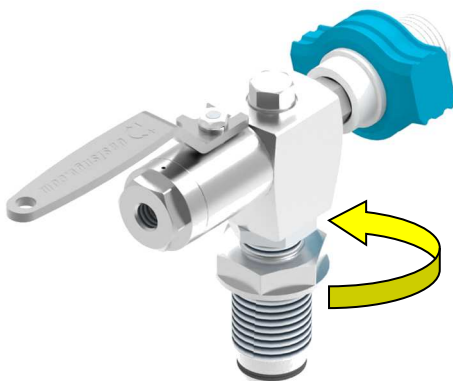
1. Closed



2. Opened



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

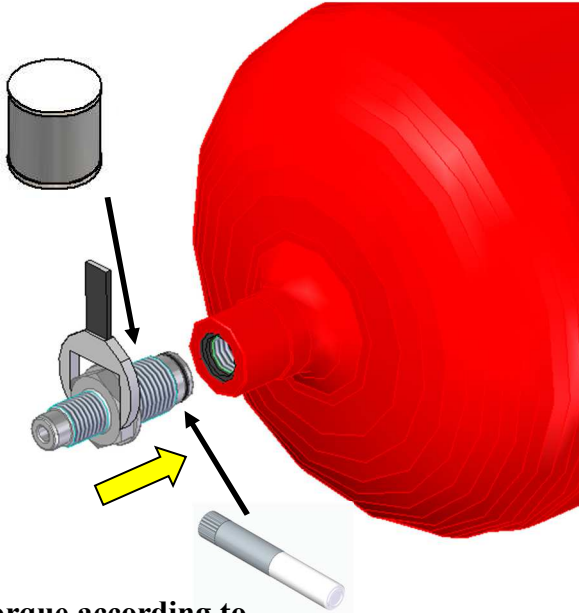


Attention!

**Cylinder adaptor is adjustable
for easy installation and alignment.**

**MAX 1 Turn
from full insertion**

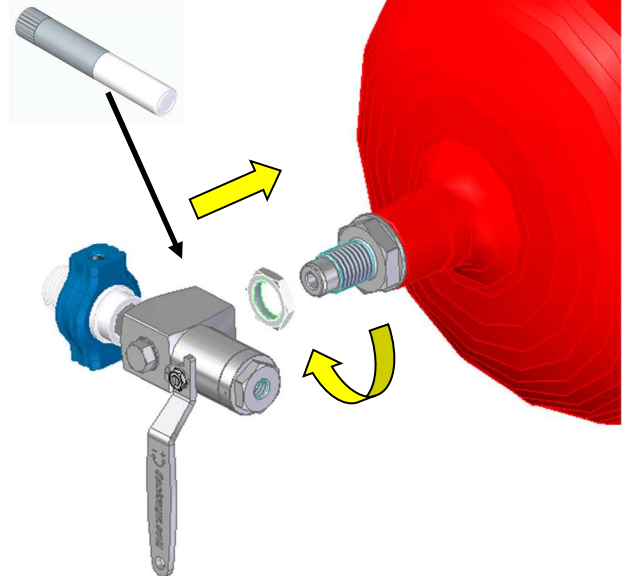
1. Apply Anti-seize to the Adaptor Thread and Lube O-Rings



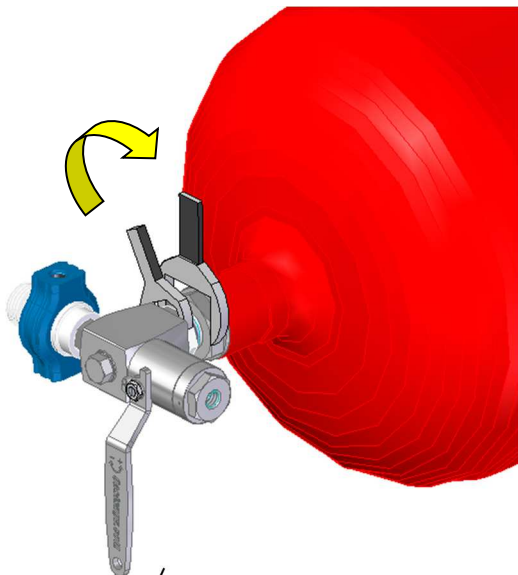
**Torque according to
Cylinder manufacturer Spec.**

2. Install valve on Cylinder adaptor.
Align valve by unwinding no more than one turn from full insertion.

Lube Inner O-Rings

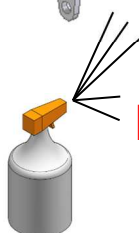
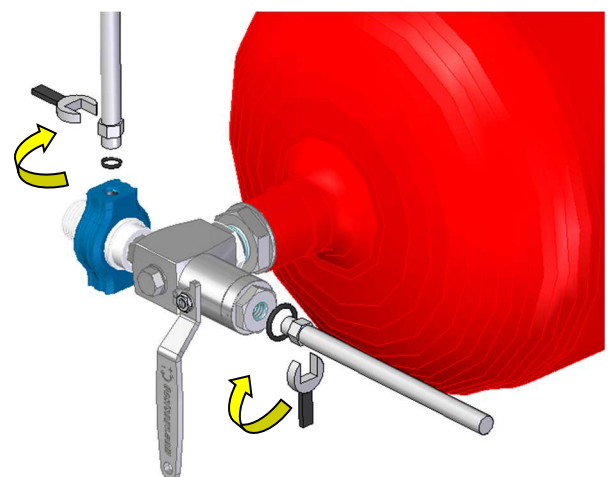


3. Using 2 wrenches, Torque lock nut to 50Nm.



4. Install Main pipe
SAE end cap: Lube O-ring *
Medium Pressure End Cap *
PRD Vent Pipe: Lube O-Ring *

*: Torque fittings to manufacturer's instructions

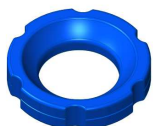


**LEAK TEST ALL CONECTIONS ON
FIRST USE USING SNOOP**

Service Kit Parts

The service kit includes 1 extra #025 O-ring and 1 extra #025 backup ring. The rest of the service kit must be used.

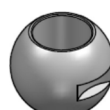
2 x Seats



1 x Stem



1 x Ball



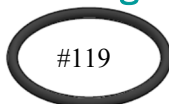
1 x Plug O-Ring



1 x Gland



1 x Inner Body
O-ring



1 x Cap O-ring



2 x Cylinder
Adapter O-Ring



1 x Krytox GPL 103



1 x Inner Body
Back-up Ring



1 x Cap
Back-up Ring

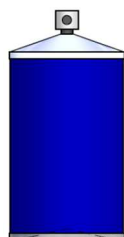


2 x Cylinder
Adapter Backup Ring

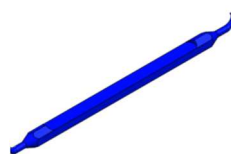


It is recommended to work on a clean environment to successfully service the valve.

Tools Required



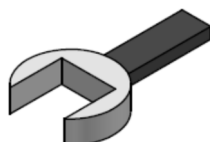
Cleaner (Warm Soapy
Water or Similar)



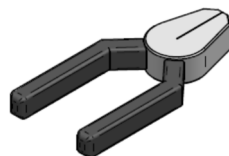
Pick Tool
Part Number:
TOOL-PICK
(Sold separately)



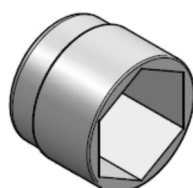
Anti Seize Grease
(Krytox GPL-205)
For All Threads



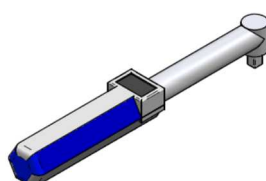
Spanner
(Wrenches)



Pliers

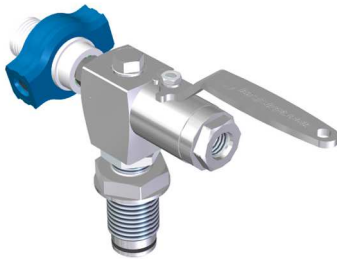


Sockets



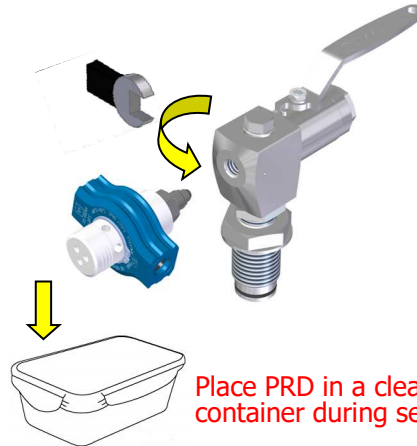
Torque Wrench

1. Trapped Pressure Release



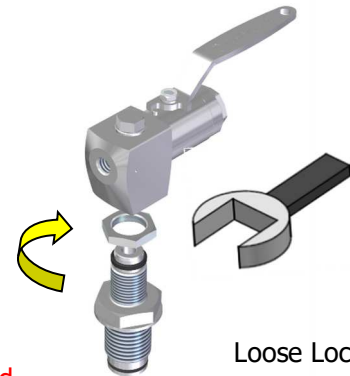
Open and close valve to ensure all trapped gas is released.

2. Remove PRD



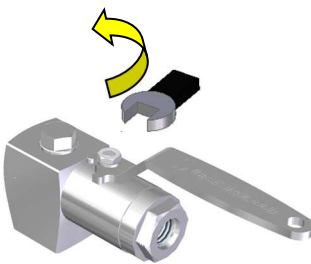
Place PRD in a clean sealed container during servicing.

3. Remove Valve Adaptor

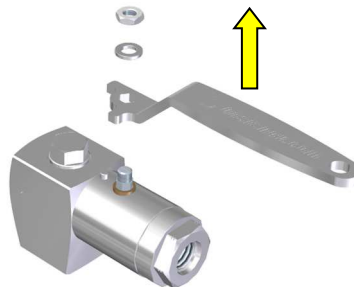


Loose Locking Nut

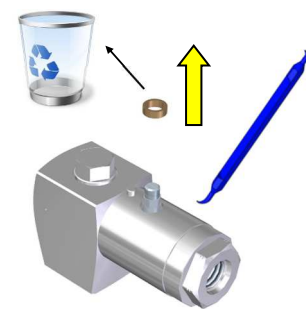
4. Unscrew Stem Nut.



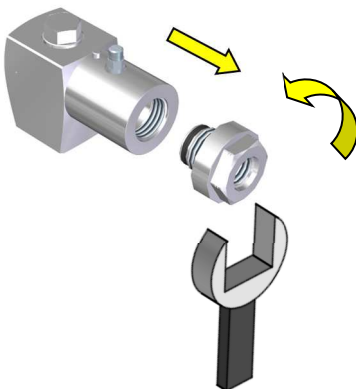
5. Remove Handle.



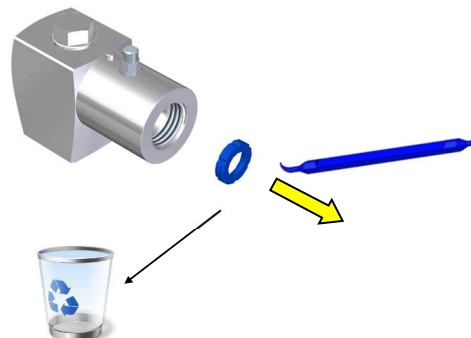
6. Remove and Discard Gland



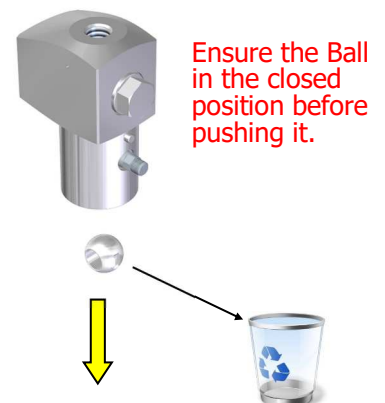
7. Remove End Cap.



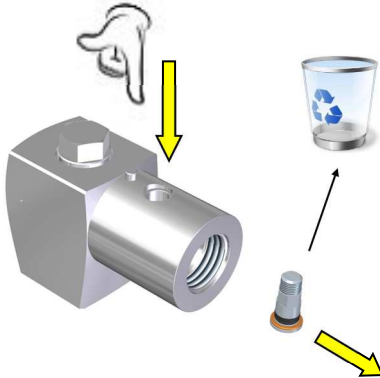
8. Remove and Discard Seat.



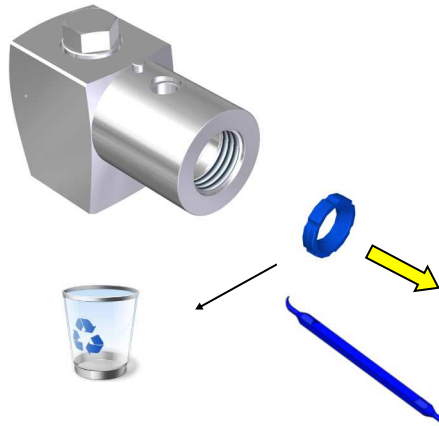
9. Remove and discard ball.



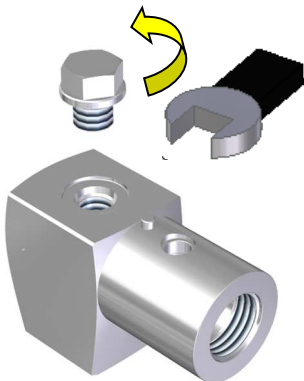
10. Remove and Discard Stem



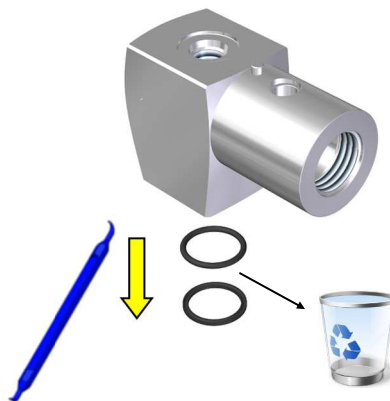
11. Remove and Discard 2nd Seat.



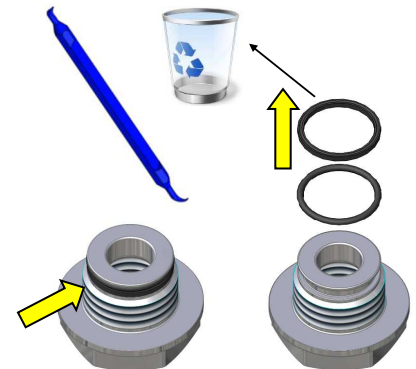
12. Remove Plug



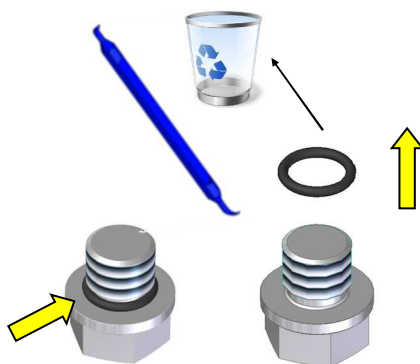
13. Remove and Discard Body Inner O-Rings



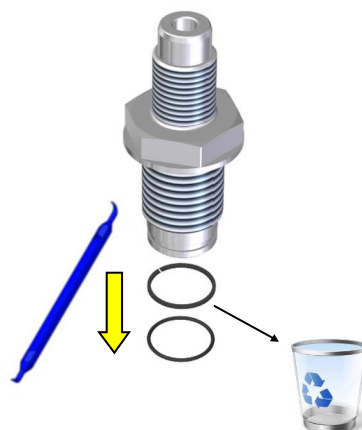
14. Remove and Discard End Cap O-rings



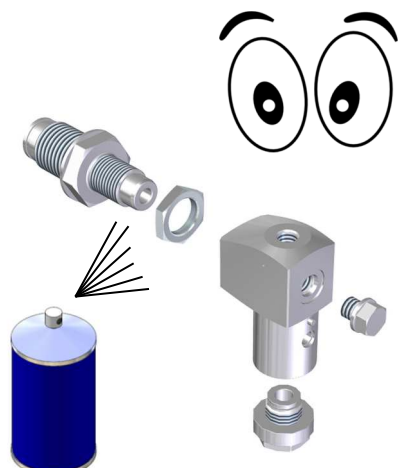
15. Remove and Discard Plug O-Ring



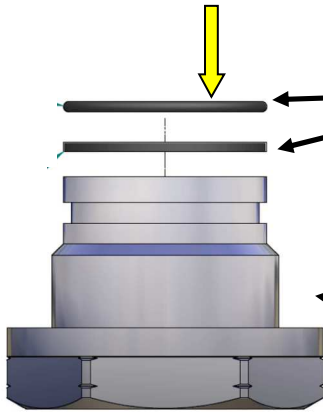
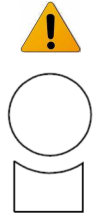
16. Remove and Discard Cylinder Adaptor O-Rings



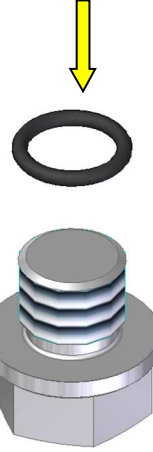
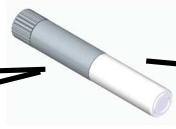
17. Clean and Visually Inspect all Parts for Damage.



1. Apply Krytox GPL 103 to end cap O-rings

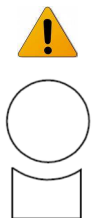
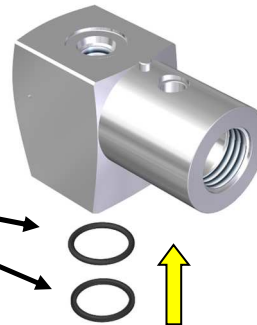
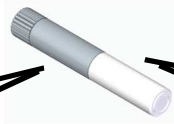
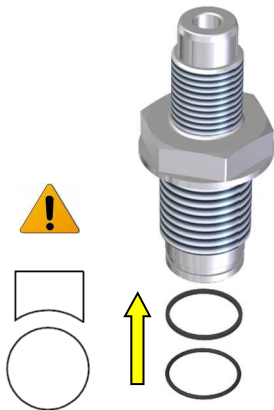


2. Apply Krytox GPL 103 to plug O-rings and fit to plug

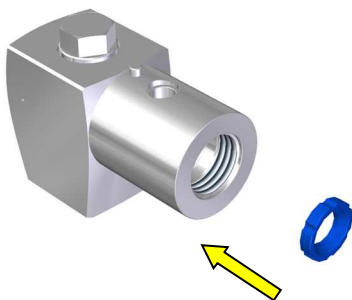


3. Apply Krytox GPL 103 to cylinder adaptor O-Rings

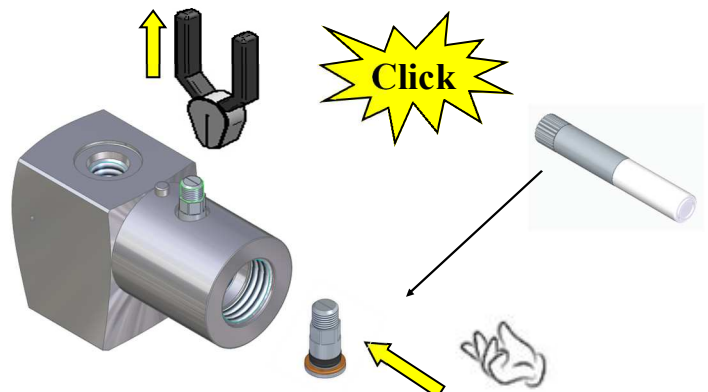
4. Apply Krytox GPL 103 to inner body O-Rings



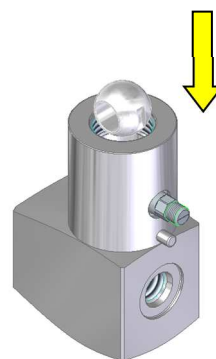
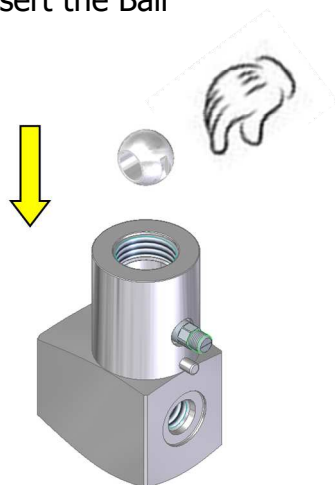
5. Install First New Seat



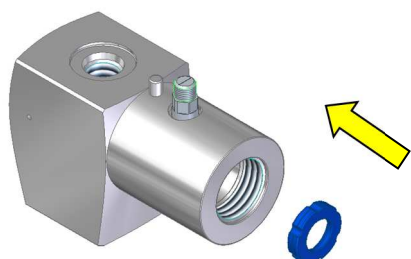
6. Apply grease to stem O-ring and insert stem assembly.



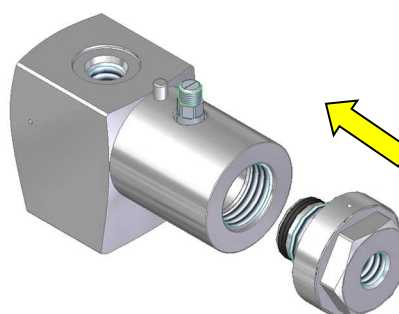
7. Insert the Ball



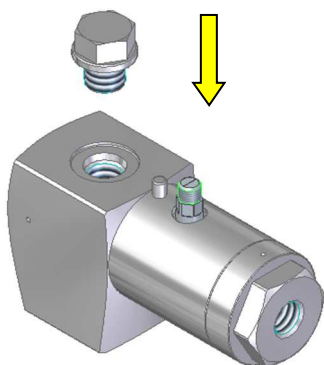
8. Install the New Second Seat



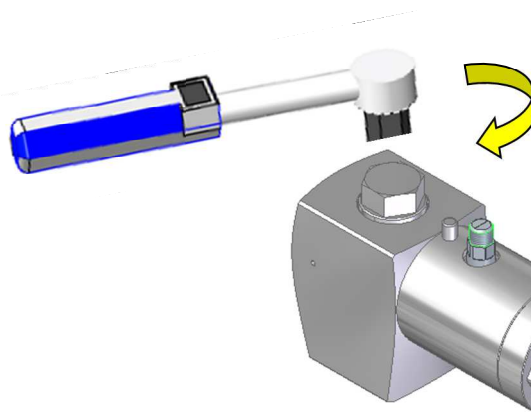
9. Apply Grease to Inner Body O-Rings and fit to Body



10. Install Plug

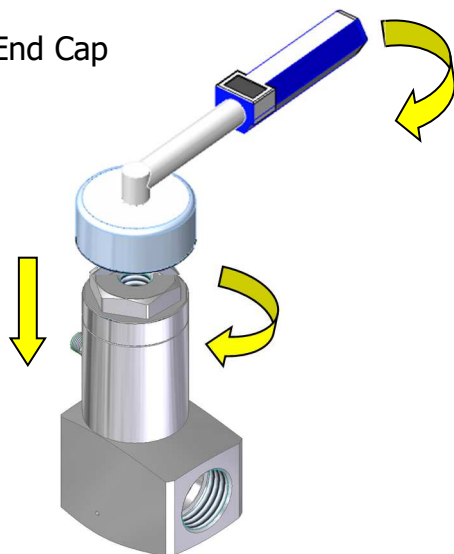


11. Torque the Plug



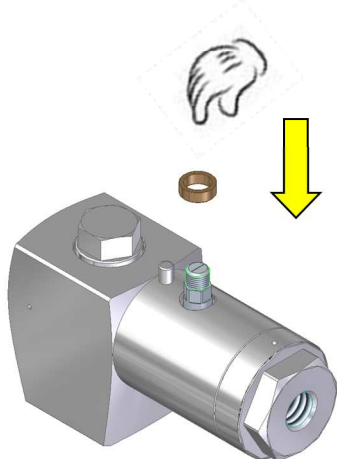
**Plug Torque:
45Nm**

12. Torque End Cap

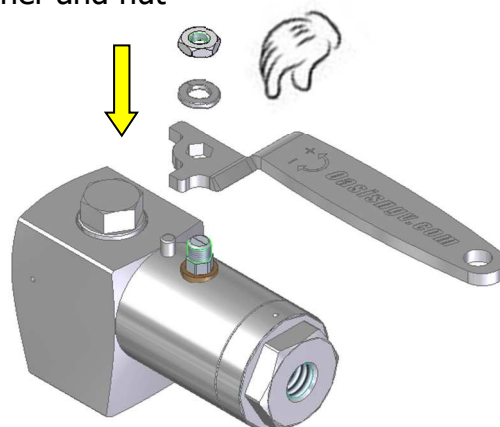


End Cap Torque: 60Nm

13. Install the Gland



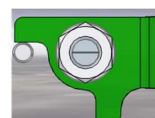
14. Place the handle onto the stem and install the washer and nut



Observe handle alignment

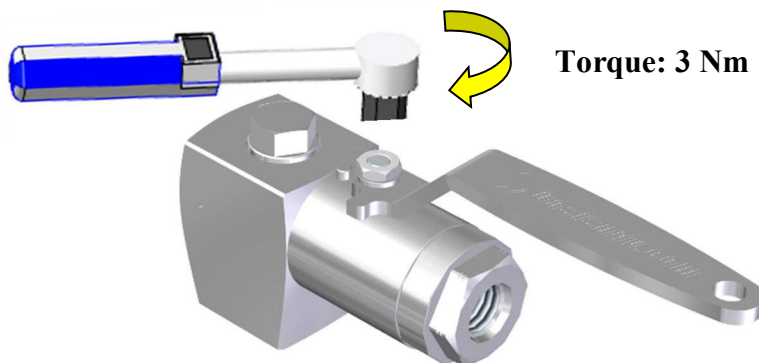


45° Handle



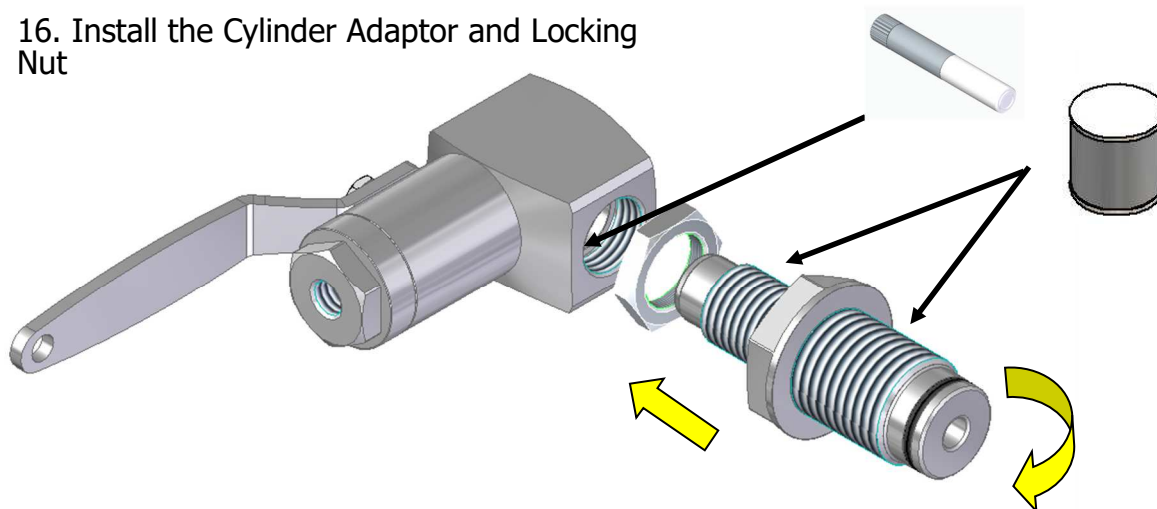
Straight Handle

15. Tighten Stem nut

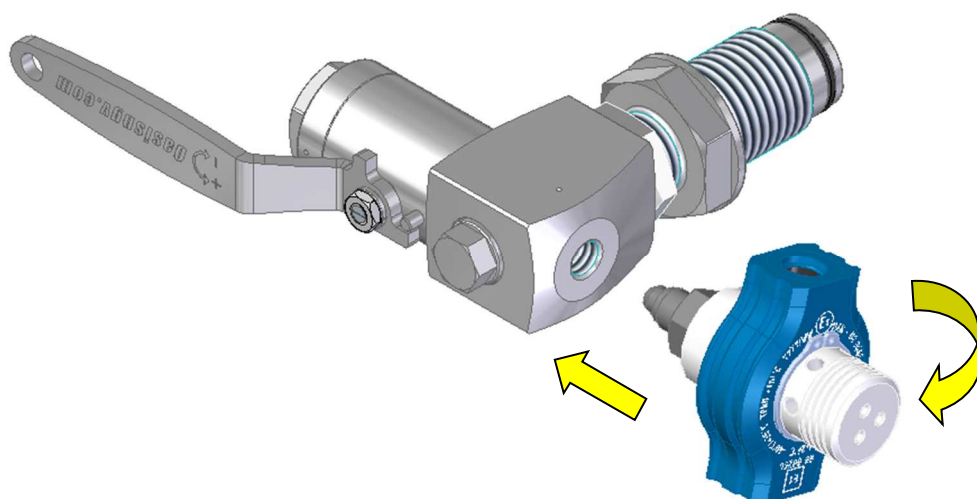


Torque: 3 Nm

16. Install the Cylinder Adaptor and Locking Nut



17. Install PRD



Torque PRD fitting to manufacturer's instructions

18. Servicing Complete. Re-install as per the Instruction on Page 5.



NOTES: