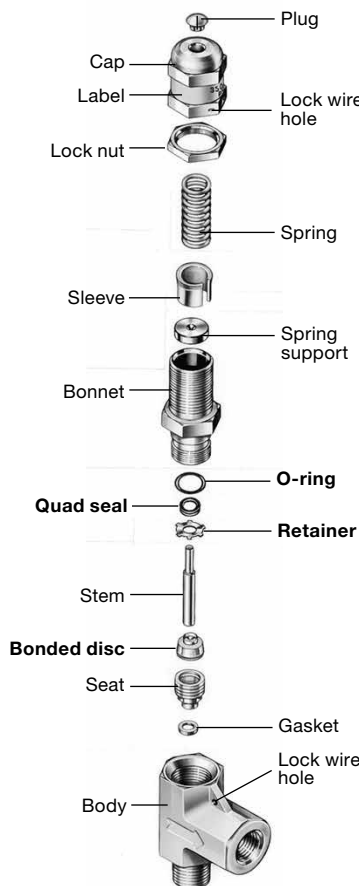




RL3 Series Externally Adjustable Relief Valves Maintenance Instructions

RL3 Series Exploded View



Seal kit contents are in **bold**.
The spring kit contains only a spring.

Tools Required

Tool	Size	Component
Open-end wrench	3/4 in. Thin head (3/16 in. max)	Lock nut
	3/4 in.	Cap
	7/8 in.	Body wrench pad
Crow's foot	3/4 in. Thin head (3/16 in. max)	Lock nut
	3/4 in.	Bonnet
Torque wrench, capable of:	600 in.-lb (67.8 N-m)	Bonnet
	100 in.-lb (11.3 N-m)	Lock nut
Pic	n/a	O-rings

Definition of Symbols



Discard



Lubricate with system compatible lubricant

WARNING
Before removing any installed valve, you must

- depressurize the system
- cycle the valve
- purge the valve

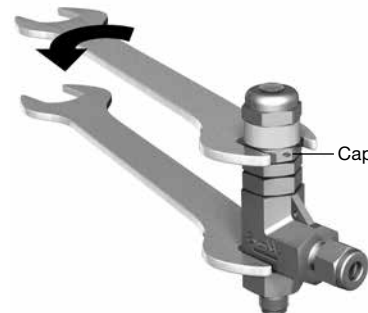
WARNING
Residual material may be left in the valve and system.

CAUTION
Do not scratch any sealing surfaces while following these instructions. Valve performance could be affected.

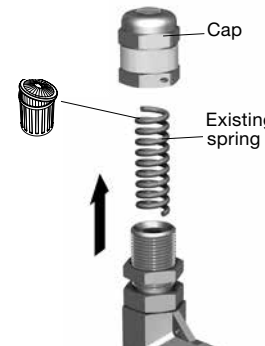
Maintenance

1. Remove the valve from the system.

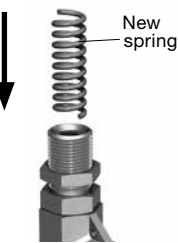
Spring Replacement Instructions
2. If replacing the contents of the seal kit only, proceed to step 8.
3. Loosen the **cap**.



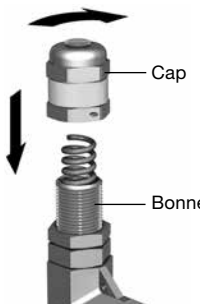
4. Remove the **cap** and the **spring**.



5. Insert the **new spring**.



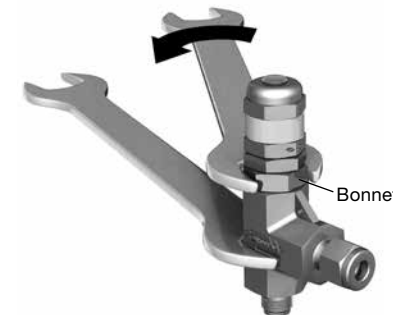
6. Thread the **cap** onto the **bonnet** 9 turns.



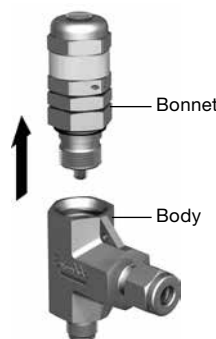
7. If replacing the spring only, proceed to **Adjusting the Set Pressure**.

Seal Kit Replacement Instructions

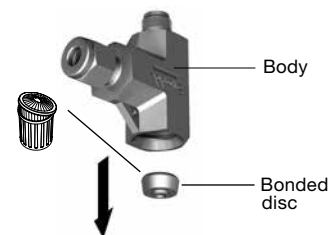
8. Loosen the **bonnet**.



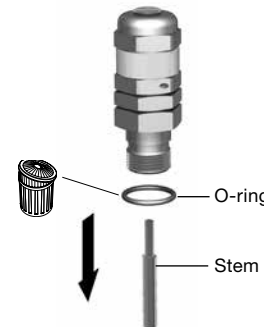
9. Remove the **bonnet** from the **body**.



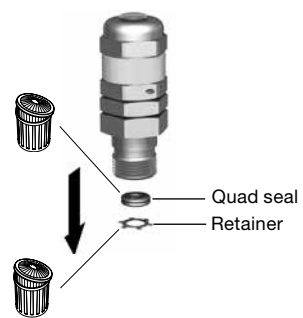
10. Remove the **bonded disc** from the **body**.



11. Remove the **stem** and **O-ring**.

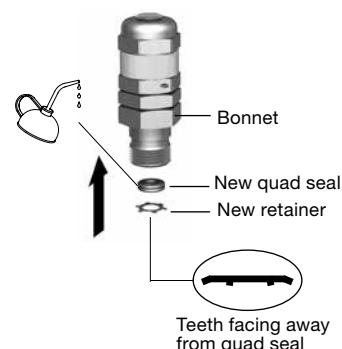


12. Remove the **quad seal** and **retainer**.

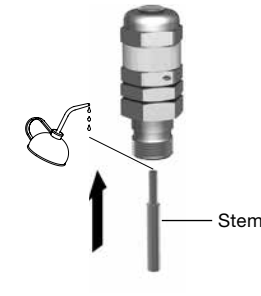


13. Clean all components.

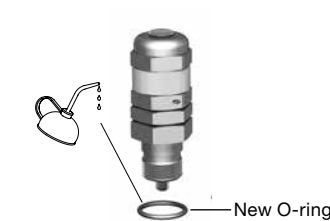
14. Press new **quad seal** and **retainer** into the **bonnet**.



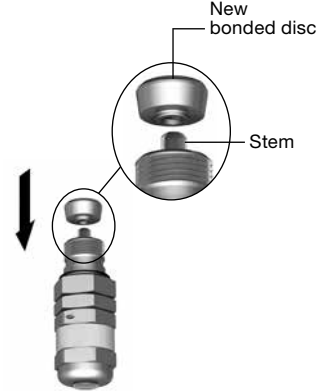
15. Lubricate the tip of the **stem** and insert the stem into the bonnet.



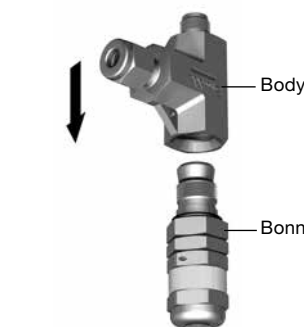
16. Place the new **O-ring** on the bonnet.



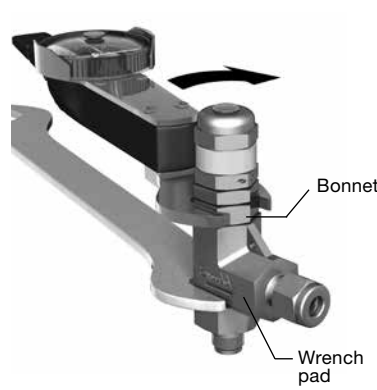
17. Place the **new bonded disc** on the **stem**.



18. Thread the **body** onto the **bonnet**.



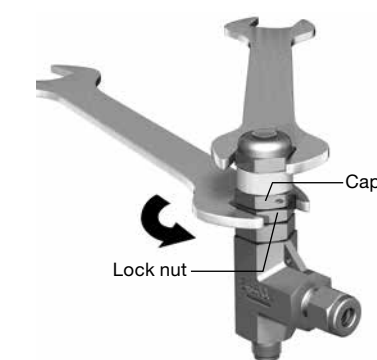
19. Grip the valve on the wrench pad and tighten the **bonnet** to 600 in.-lb (67.8 N-m).



Adjusting the Set Pressure

Note: Adjust the set pressure **before** installing the valve in the system.

1. Tighten the **lock nut** against the **cap**.



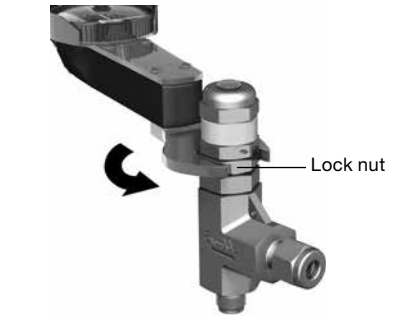
2. Test for set pressure.

3. To adjust set pressure, relieve system pressure and loosen **lock nut**.

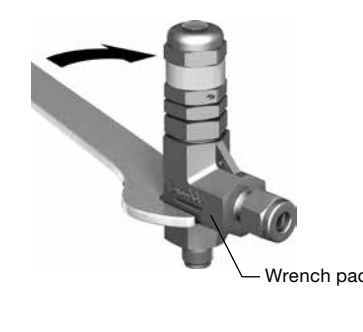
- To **increase** set pressure, turn **cap clockwise**.
- To **decrease** set pressure, turn **cap counterclockwise**.

4. Repeat steps 1 through 3 to obtain desired set pressure.

5. Tighten the **lock nut** to 100 in.-lb (11.3 N-m).



6. Install valve in system. Grip valve on **wrench pad** during installation.





**RL3 Series Externally Adjustable Relief Valves
Manual Override Handle Conversion Instructions**



Kit contents



Definition of Symbols

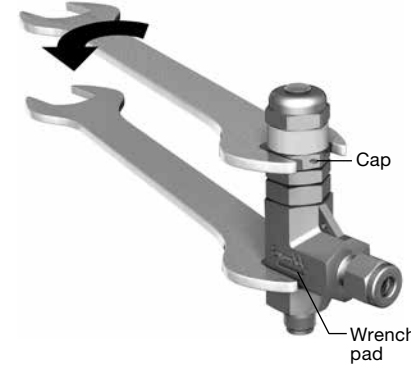


Tools Required

Tool	Size	Component
Open-end wrench	3/4 in. Thin head (3/16 in. max)	Lock nut
	3/4 in.	Cap
Hex bit socket	5/64 in.	Set screw
Torque wrench, capable of:	10 in.-lb (1.1 N-m)	Set screw
Pic	n/a	Sleeve

- WARNING**
Before servicing any installed valve, you must
 - depressurize system
 - cycle valve
 - purge the valve
- WARNING**
Residual material may be left in the valve and system.
- CAUTION**
Do not scratch any sealing surfaces while following these instructions. Valve performance could be affected.

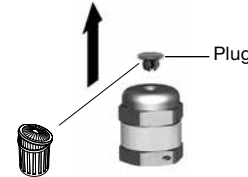
1. Grip the valve on the **wrench pad** and loosen the **cap**.



2. Remove the **cap** and **spring**.



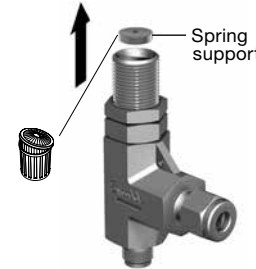
3. Remove the **plug** from the cap.



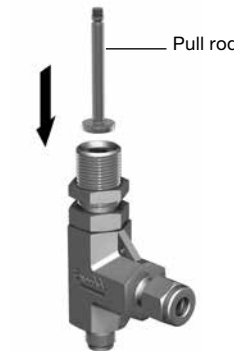
4. Use a pic to remove the **sleeve**.



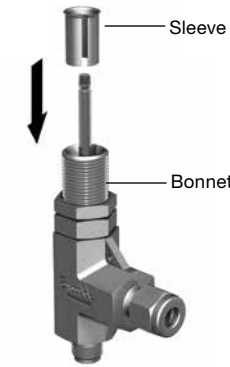
5. Remove the **spring support**.



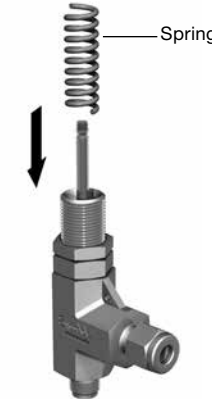
6. Insert the **pull rod**.



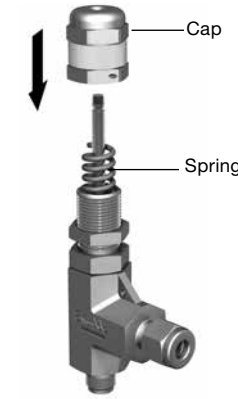
7. Compress the **sleeve** to reinstall it into the **bonnet**.



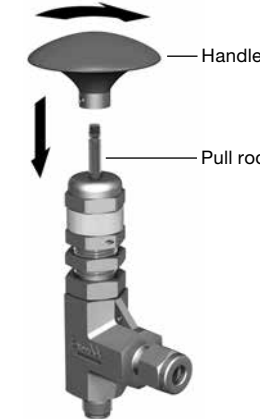
8. Reinstall the **spring**.



9. Rest the **cap** on the **spring**.



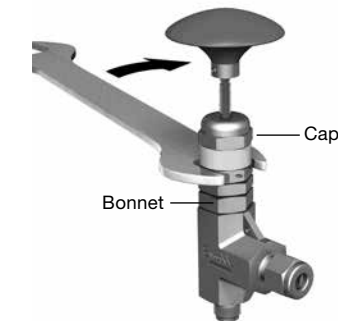
10. Thread the **handle** onto the **pull rod**.



11. Tighten the **set screw** to 10 in.-lb (1.1 N-m).



12. Thread the **cap** onto the **bonnet** 9 full turns.



13. To adjust set pressure, see **Adjusting the Set Pressure**.

- Swagelok proportional relief valves should never be used as code safety relief valves.
- Some system applications require relief valves to meet specific safety codes. The system designer and user must determine when such codes apply and whether these relief valves conform to them.
- Swagelok proportional relief valves are not "Safety Accessories" as defined in the Pressure Equipment Directive 2014/68/EU:

Translations available on www.swagelok.com