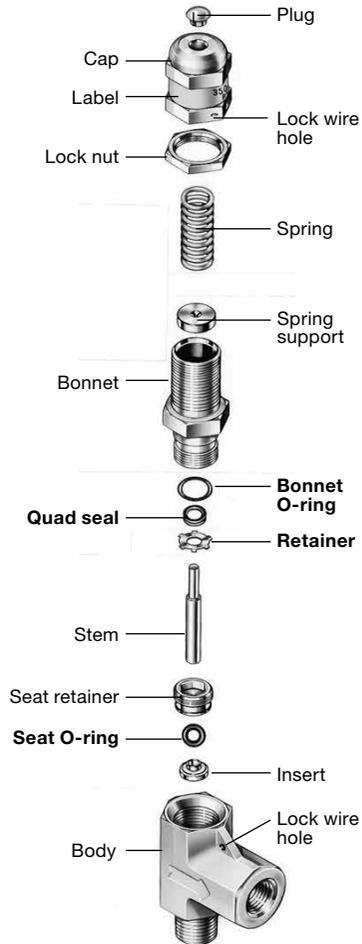




R3A Series Externally Adjustable Relief Valves

Maintenance Instructions

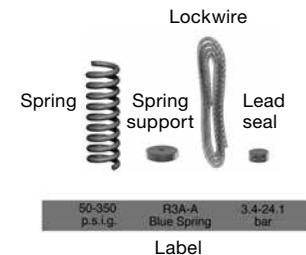
R3A Series Exploded View



Tools Required

Tool	Size	Part
Open-end wrench	3/4 in. Thin head (3/16 in. max)	Lock nut
	3/4 in.	Cap
Crow's foot	3/4 in. Thin head (3/16 in. max)	Lock nut
	5/64 in.	Handle set screw
Hex bit socket	5/64 in.	Handle set screw
Torque wrench, capable of:	10 in.-lb (1.1 N-m)	Set screw
	100 in.-lb (11.3 N-m)	Lock nut
Pic	n/a	O-rings

Spring Kit



- 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.

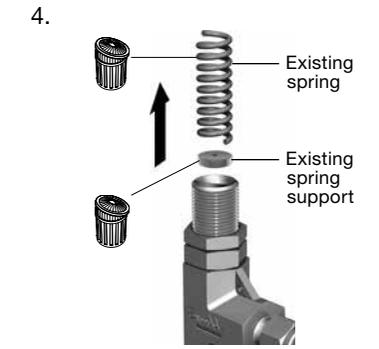
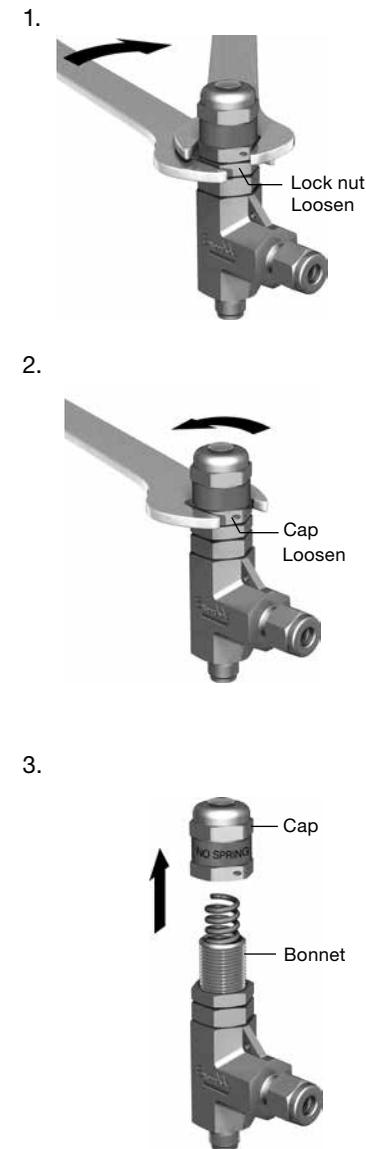
Definition of Symbols



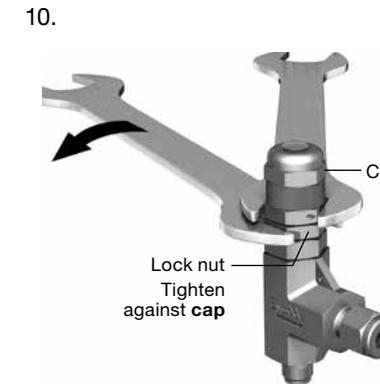
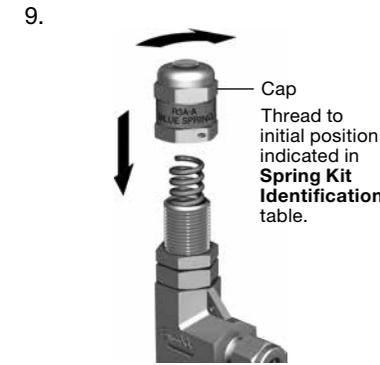
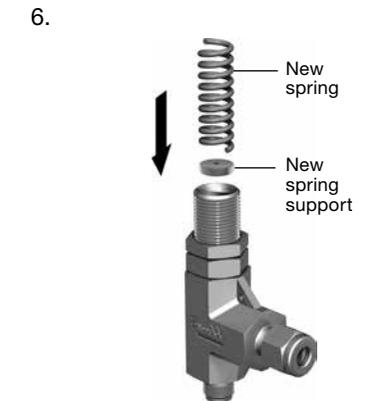
Spring Kit Identification

Spring Designator and Color	Set Pressure Range psig (bar)	Initial Cap Position (number of turns)
Spring Kit Basic Ordering Number: 177-R3A-K1-		
A Blue	50 to 350 (3.4 to 24.1)	9
B Yellow	350 to 750 (24.1 to 51.7)	8.5
C Purple	750 to 1500 (51.7 to 103)	9
D Orange	1500 to 2250 (103 to 155)	6
E Brown	2250 to 3000 (155 to 206)	6
F White	3000 to 4000 (206 to 275)	6
G Red	4000 to 5000 (275 to 344)	6
H Green	5000 to 6000 (344 to 413)	6

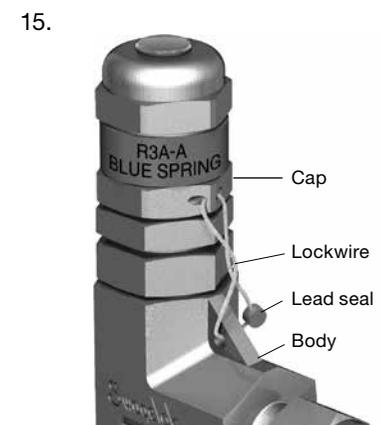
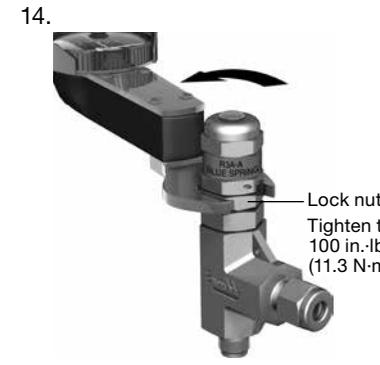
Spring Installation



5. Make sure all components are clean.



11. Test for set pressure.
12. To adjust set pressure, relieve system pressure and loosen **lock nut**.
- To increase set pressure, tighten **cap** as needed.
 - To decrease set pressure, loosen **cap** as needed.
13. Repeat steps 10 through 12 as necessary to obtain desired set pressure.

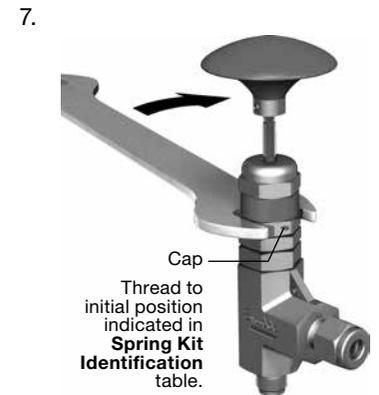
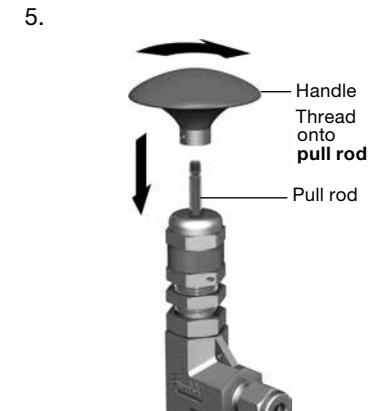
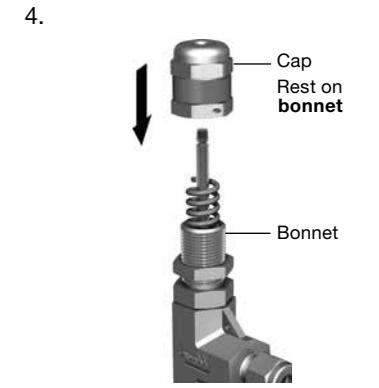
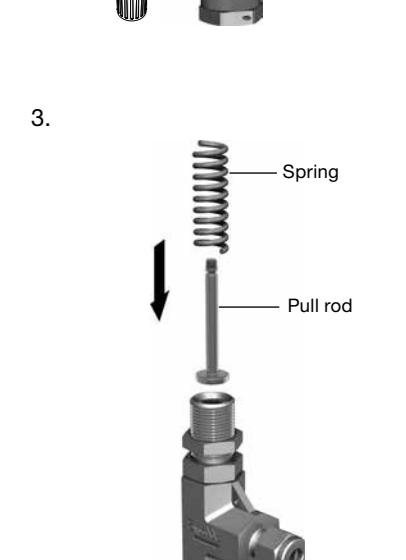
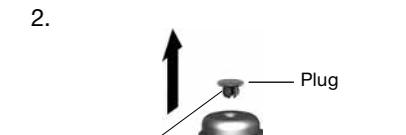


Manual Override Conversion

Manual Override Kit



1. Follow steps 1 through 4 in the Spring Installation section. Springs A, B, or C can be reused in step 3.



8. To adjust set pressure, see steps 10 through 13 in the Spring Installation section.



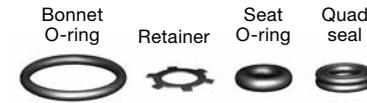
R3A Series Externally Adjustable Relief Valves

Maintenance Instructions

Tools Required

Tool	Size	Part
Open-end wrench	3/4 in. Thin head (3/16 in. max)	Lock nut
	3/4 in.	Cap, Bonnet nut
	7/8 in.	Body wrench pad
Crow's foot	3/4 in.	Bonnet nut
Hex wrench	5/16 in.	Seat retainer
Hex bit socket	5/16 in.	Seat retainer
Torque wrench, capable of:	250 in.-lb (28.2 N·m)	Seat retainer
	600 in.-lb (67.8 N·m)	Bonnet nut
Pic	n/a	O-rings

Seal Kit



WARNING
Before removing any installed valve, you must

- depressurize system
- cycle valve
- purge 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.

Definition of Symbols



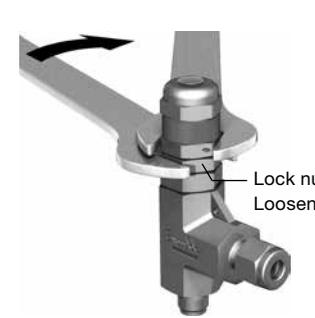
Discard



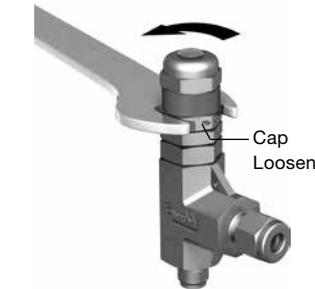
Lubricate
With system compatible lubricant

Seal Replacement

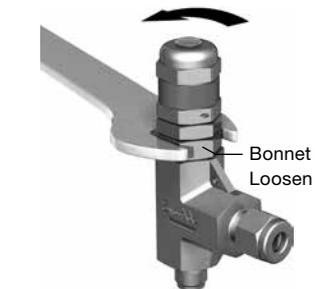
1. Remove valve from system.



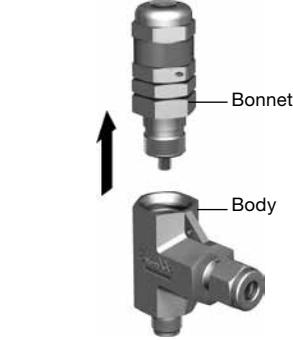
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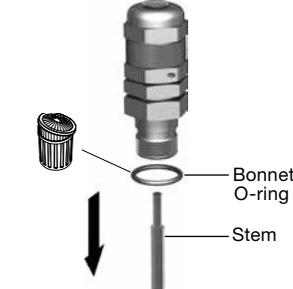
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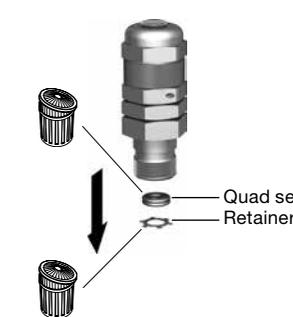
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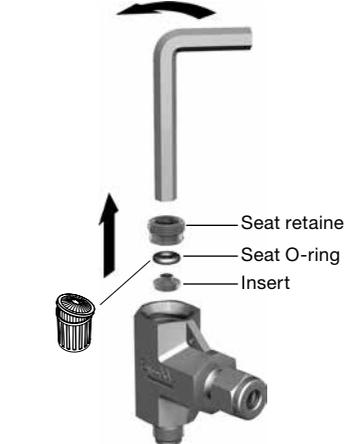
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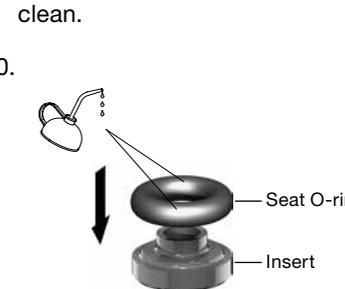
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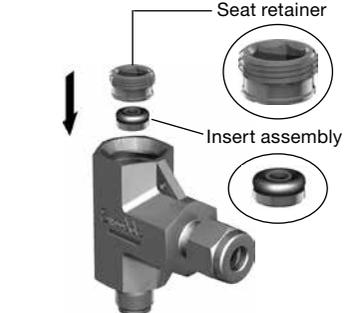
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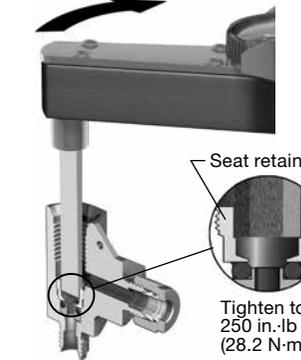
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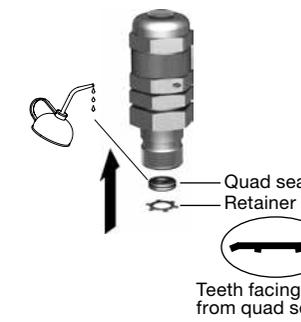
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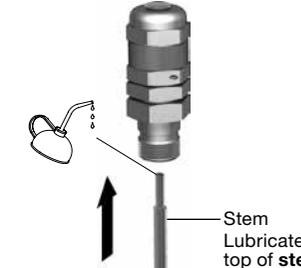
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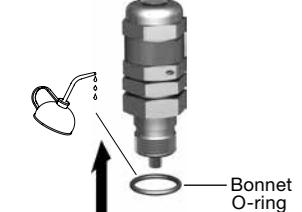
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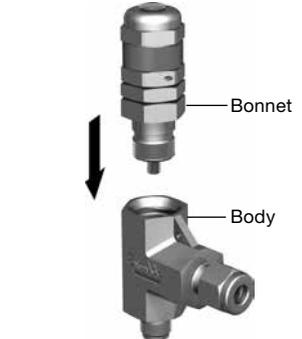
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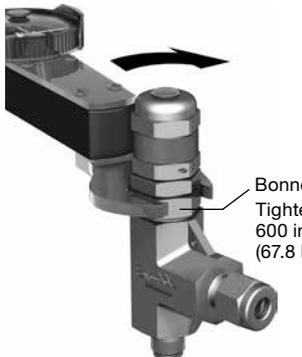
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16.

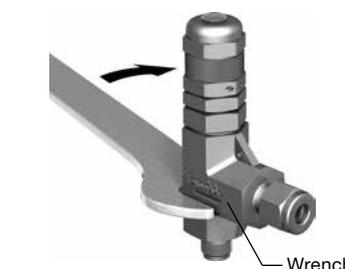


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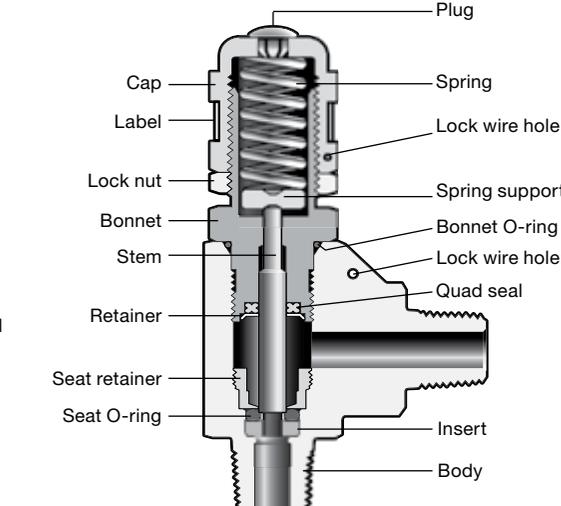


18. To adjust set pressure, see steps 10 through 13 in the Spring Installation section.

19. Install valve in system. Grip valve on wrench pad during installation.



R3A Series Cutaway



WARNING
Swagelok proportional relief valves should never be used as code safety relief valves.

WARNING
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.

WARNING
Swagelok proportional relief valves are not "Safety Accessories" as defined in the Pressure Equipment Directive 2014/68/EU.