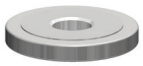
KSV Series Regulators
Maintenance Instructions

Kit Contents

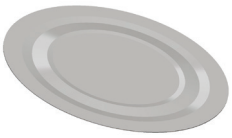

Seat

Poppet spring

Poppet

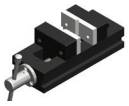
Seat retainer

Lubricant
MS-LT-WL8


Diaphragm

Kits for pressure control ranges higher than 0 to 100 psig (0 to 6.8 bar) contain two diaphragms.

Tools Required

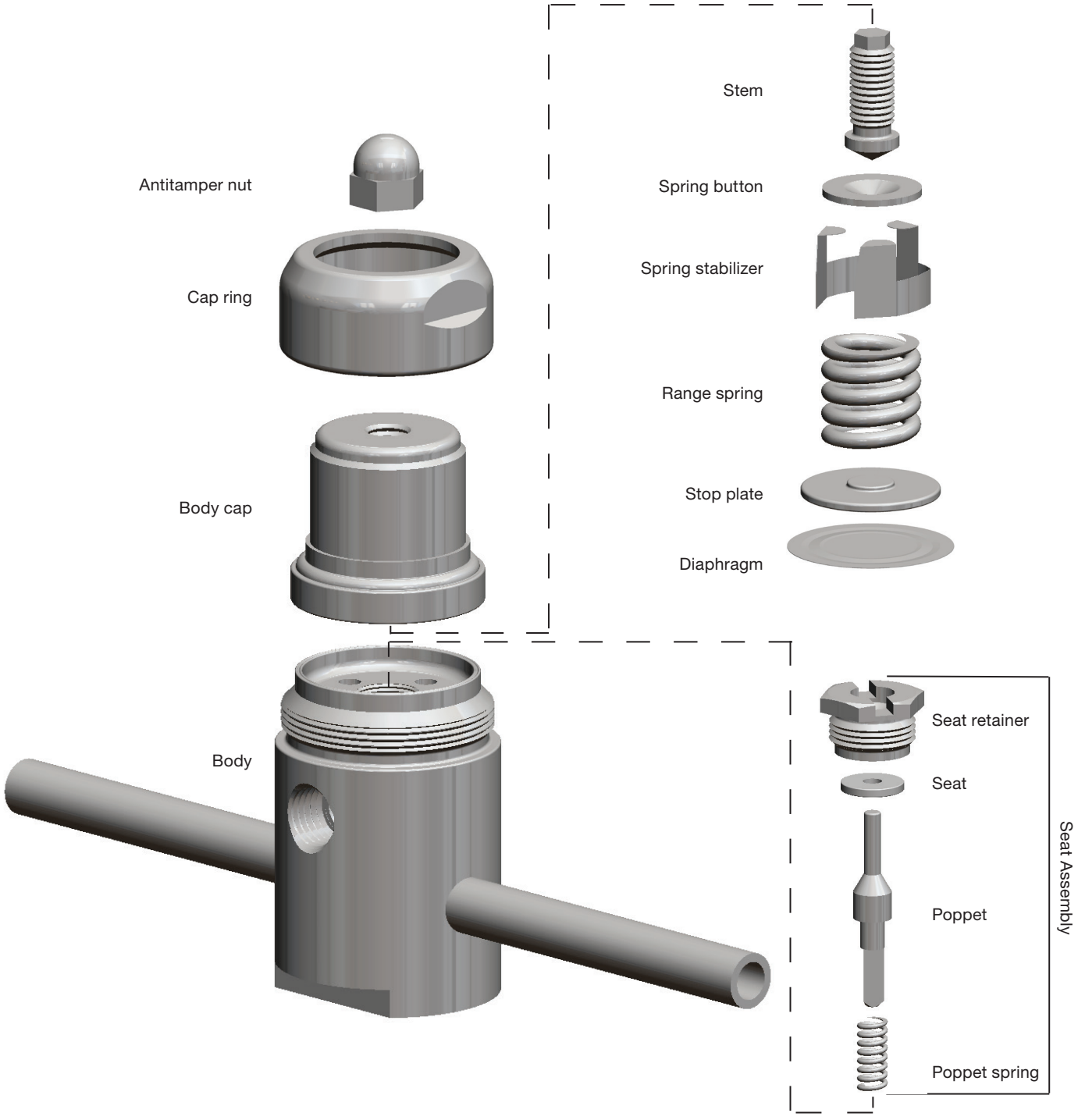
Tool	Size	Component
Vise 	-	Body
Socket	5/8 in. or 16 mm	Seat retainer
	11/16 in. or 17 mm	Antitamper nut
Open end wrench	9/32 in. or 7 mm	Stem
	2 in. or 50 mm	Cap ring
Crow's foot	2 in. or 50 mm	Cap ring
Torque wrench	Capable of 166 ft·lb (225 N·m, 23 m·kg)	Seat retainer, Cap ring

Symbols

Discard

Lightly lubricate

Exploded View



Note: Regulators with pressure control ranges higher than 0 to 100 psig (0 to 6.8 bar) contain two diaphragms.

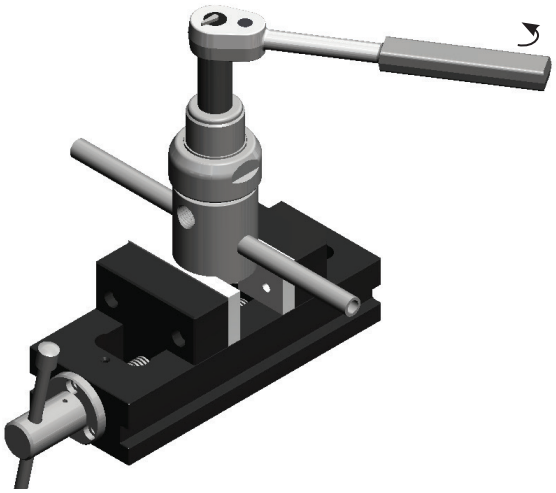
⚠WARNING

Before removing a regulator from the system for service, you must

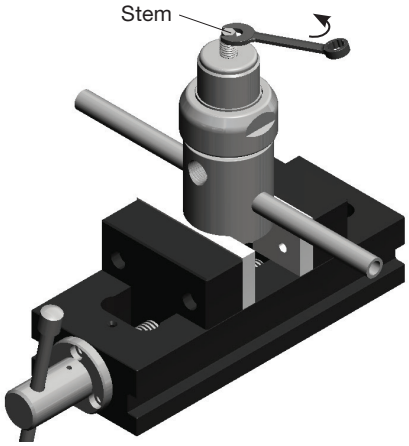
- **depressurize system**
- **purge the system to remove any residual system media left in the regulator**.

Disassembly

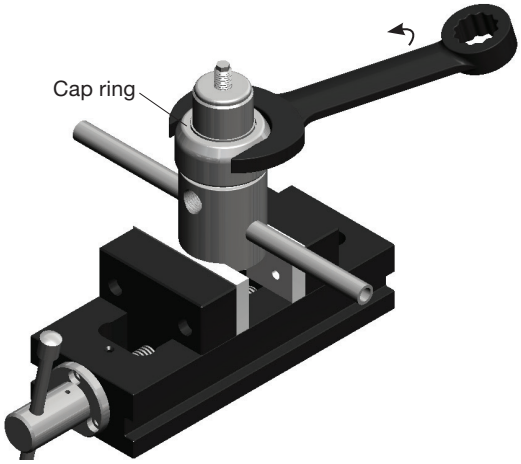
1. Place the regulator in a vise.
2. Loosen and remove the **antitamper nut**.



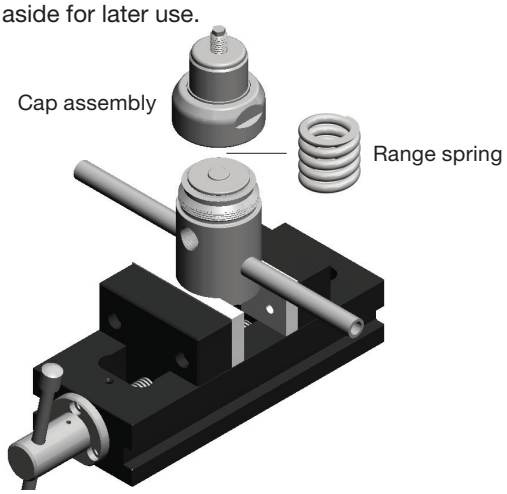
3. Turn the **stem** counter clockwise until it stops.



4. Loosen the **cap ring**.



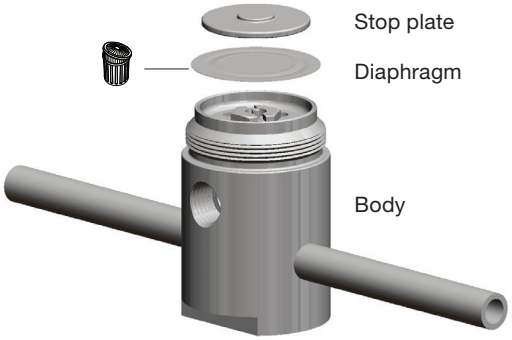
5. Remove the **cap assembly** from the body.
   Note: The **range spring** may fall from the **cap assembly**. Set aside for later use.



6. Remove the **diaphragm** and the **stop plate**. Set aside the stop plate for later use.

NOTICE

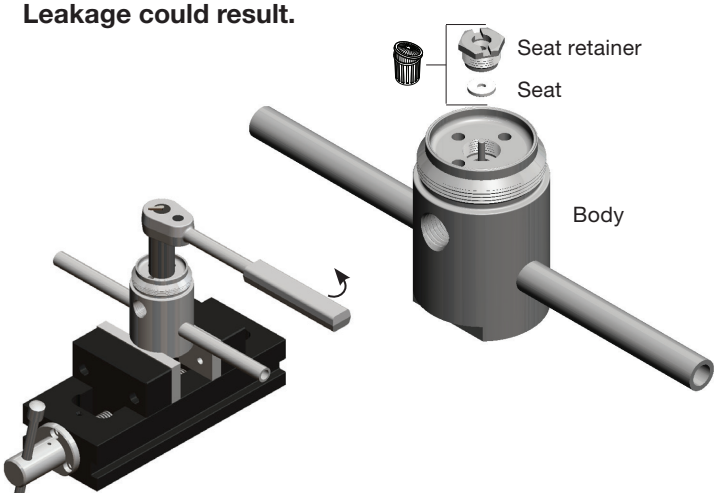
Do not damage the diaphragm sealing face on the body. Leakage could result.



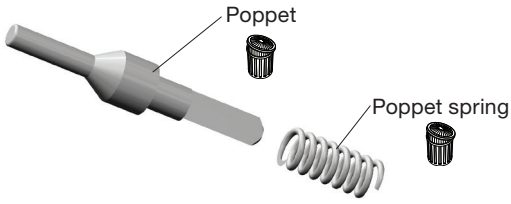
7. Loosen and remove the **assembly**. Discard the seat and seat retainer.

NOTICE

Be careful not to scratch the inside of the body. Leakage could result.



8. Invert the body, and remove the **poppet** and the **poppet spring.**

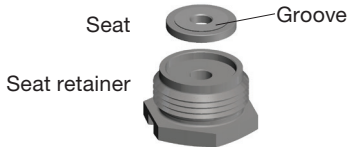


Reassembly

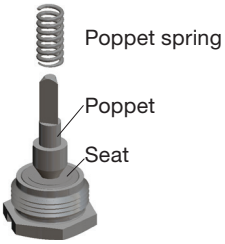
NOTICE

Ensure all parts and tools are free of debris or damage.

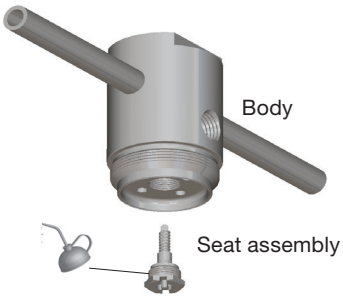
9. Insert the **seat** into the **seat retainer** with the groove away from the seat retainer.



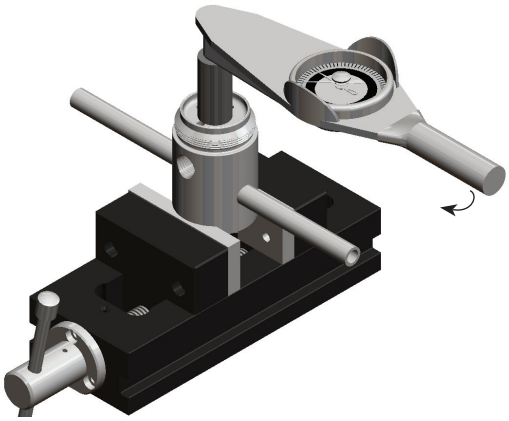
10. Place the **poppet** through the **seat**. Then place the **poppet spring** onto the exposed end of the poppet.



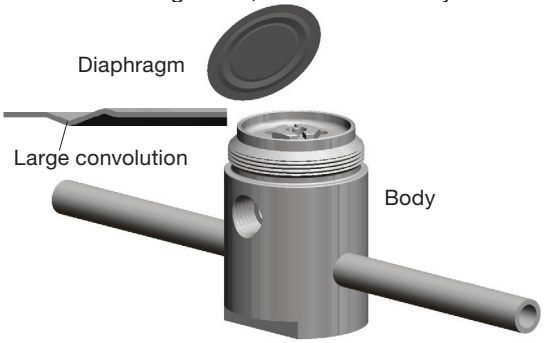
11. Invert the **body** and thread the **seat assembly** into the body.



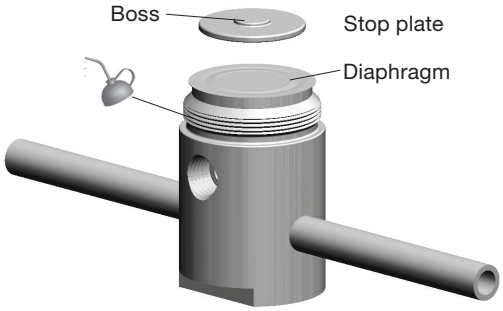
12. Tighten the **seat assembly** to 13 lb·ft (17.5 N·m, 1.8 m·kg).



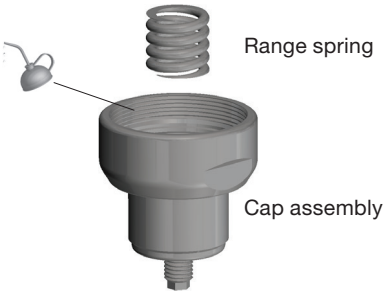
13. Install the **diaphragm** on the **body** with the large convolution facing down, towards the body.



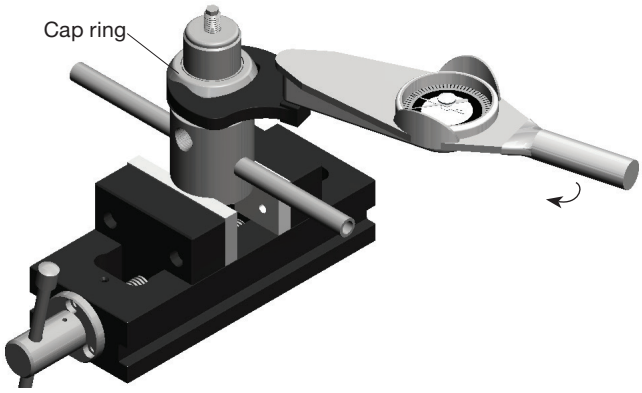
14. Install the **stop plate** onto the **diaphragm** with the **boss** on the stop plate facing up, away from the diaphragm.



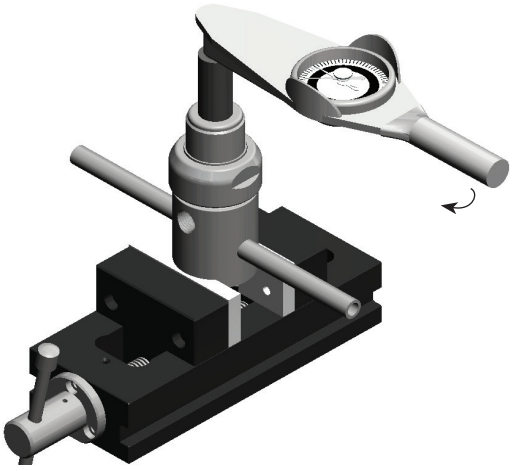
15. Reinsert the **range spring** into the **cap assembly**.



16. Thread the cap assembly onto the body and tighten the **cap ring** to 166 ft·lb (225 N·m, 23 m·kg).



17. Test the regulator for proper operation.
18. After the set outlet pressure is reached, thread the antitamper nut onto the stem. Tighten to 13.0 ft·lb (17.5 N·m, 1.8 m·kg).



*For additional information, see **swagelok.com**.*

Swagelok — TM Swagelok Company
© 2010-2026 Swagelok Company
MS-CRD-0144 RevB, September 2026