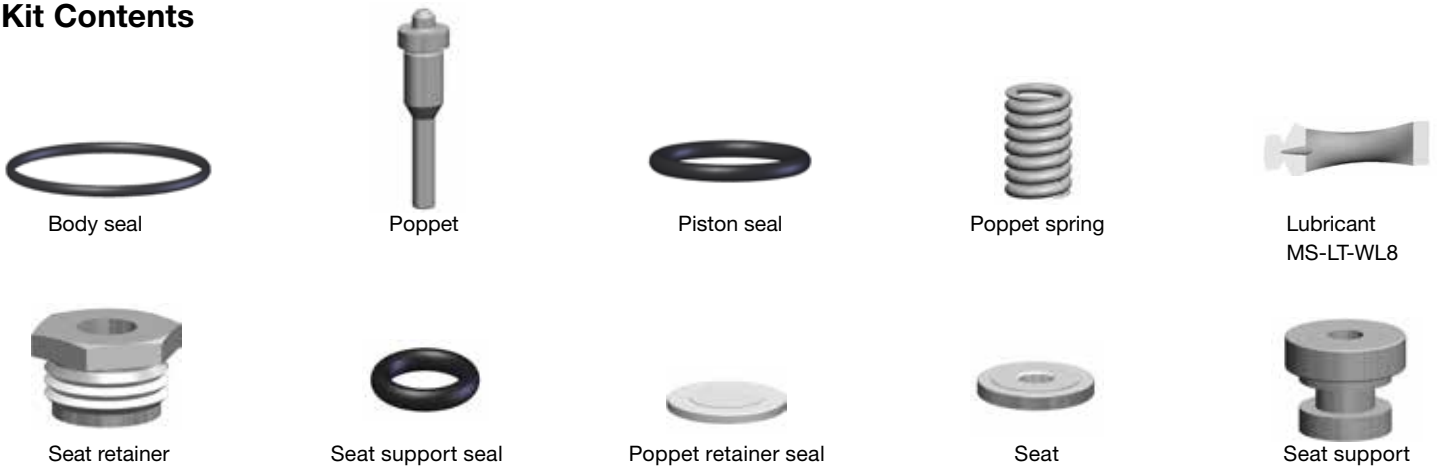


KHB Series Regulators Maintenance Instructions



Kit Contents



Tools Required

Tool	Size	Component
 Vise	-	Body
 Socket	5/8 in. or 16 mm	Seat retainer
 Crow's foot	3/4 in. or 19 mm	Vent assembly retainer nut
	1 5/8 in. or 41 mm	Body cap
 Open-ended wrench	3/4 in. or 19 mm	Vent assembly retainer nut
	1 5/8 in. or 41 mm	Body cap
 Torque wrench	Capable of 129 ft·lb (175 N·m)	Seat retainer, Body cap
 Retaining ring pliers	-	Knob handle retainer
Tool Kit		
 Vent assembly retainer nut	-	Poppet retainer
 Piston assembly bar	-	Piston

Symbols



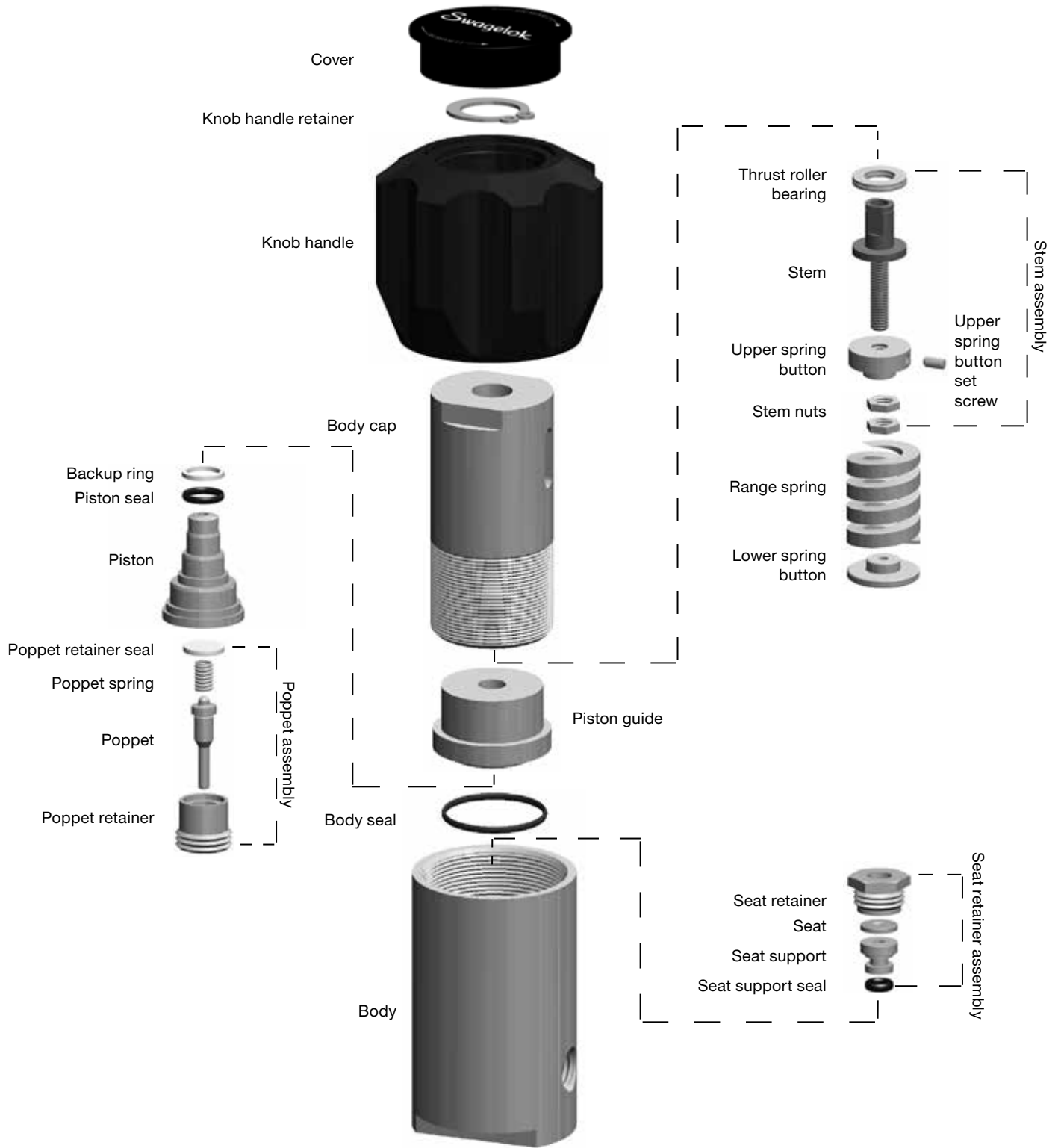
Discard



Lightly lubricate

NOTE: See *Pressure Regulators*, MS-02-230, for tool kit ordering information.

Exploded View



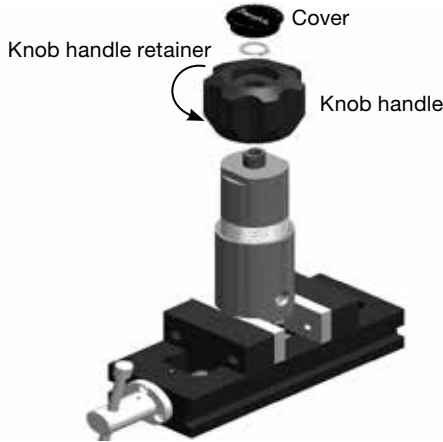
⚠ WARNING

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

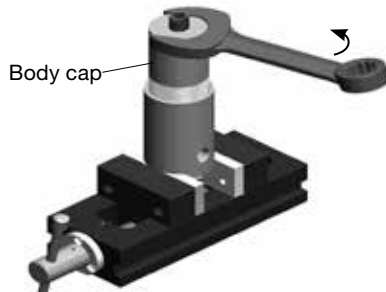
- depressurize system
- purge the system to remove any residual system media left in the regulator.

Disassembly

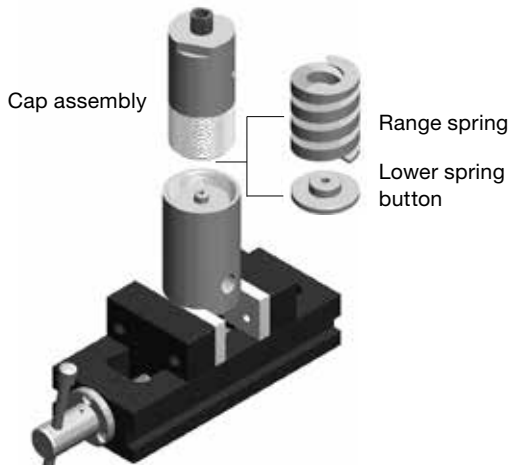
1. Place the regulator in a vise.
2. Turn the **knob handle** counterclockwise until it stops. Remove the **cover**, the **knob handle retainer** and the **knob handle** from the body.
Note: Use retaining ring pliers to remove the knob handle retainer.



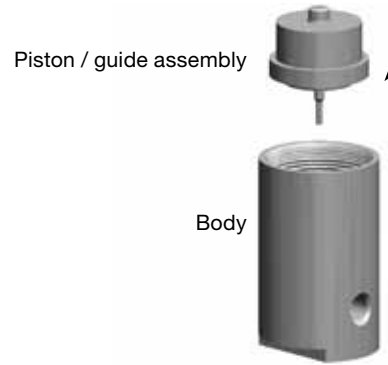
3. Loosen the **body cap**.



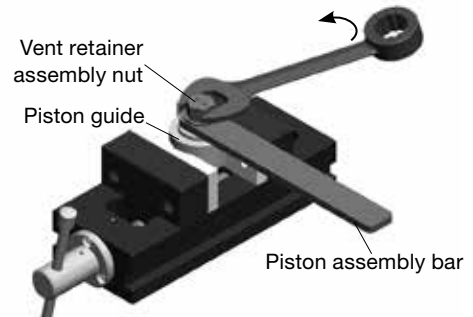
4. Remove the **cap assembly** from the **body**.
Note: The **range spring** and the **lower spring button** may fall from the cap assembly. Set aside for later use.



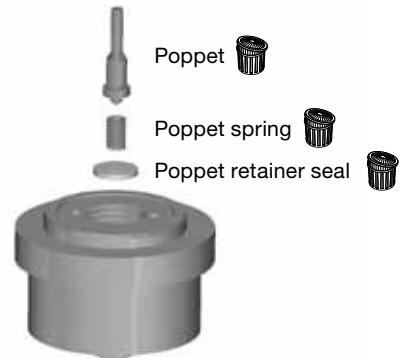
5. Remove the **piston / guide assembly** from the **body** by pinching the piston top with your fingers and rocking gently.



6. Lightly grip the piston guide in the vise and loosen the **poppet retainer** from the piston / guide assembly using the **piston assembly bar** and the **vent retainer assembly nut**. The piston assembly bar has to be held still.



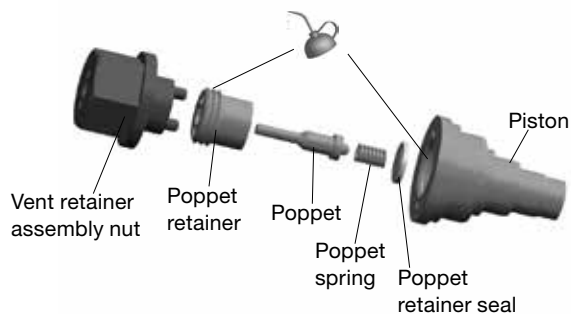
7. Remove the **poppet**, followed by the **poppet spring** and the **poppet retainer seal** from the piston / guide assembly.



8. Push the **piston** out of the **piston guide**.



15. Invert the **piston** and insert the **poppet retainer seal**, followed by the **poppet spring**, the **poppet** and the **poppet retainer**. Use the **vent retainer assembly nut** to tighten the poppet retainer finger-tight.



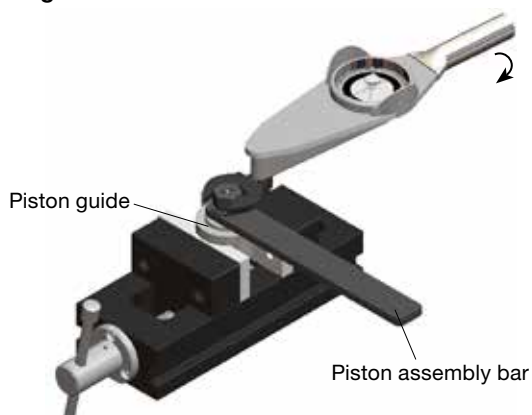
16. Insert the **backup ring** and the **piston seal** into the piston guide, and the **body seal** into the **body**.



17. Insert the **piston assembly** into the **piston guide**. Lightly grip the piston guide in a vise and tighten the poppet retainer to 7 ft-lb (10 N·m).

NOTICE

Do not force the piston assembly into the piston guide. Damage to the seals could result.



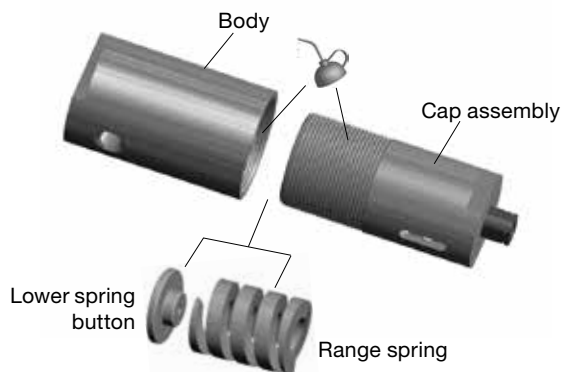
18. Insert the **piston / guide assembly** into the **body**. Lightly press down on the piston guide until it is fully seated.

NOTICE

Do not pinch the body seal. Damage could result.



19. Place the **range spring** and the **lower spring button** into the body cap. Then thread the **cap assembly** into the **body** in the inverted position.



20. Tighten the cap to 129 ft-lb (175 N·m).



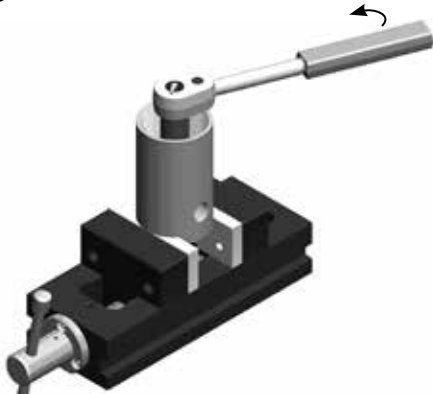
9. Remove the **piston seal** and the **backup ring** from the **piston guide**, and the **body seal** from the **body**.



10. Loosen and discard the **seat retainer assembly**.

NOTICE

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



11. Remove and discard **seat retainer assembly** from the **body**.

NOTICE

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

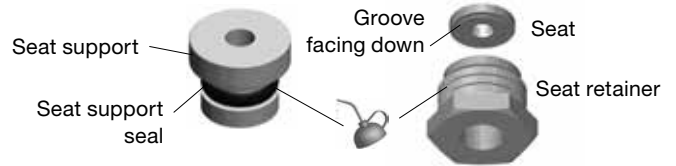


Reassembly

NOTICE

Ensure all components and tools are free of debris or damage. Leakage could result.

12. Insert the **seat** into the **seat retainer** with the groove towards the seat retainer. Press the **seat support seal** onto the **seat support** and insert the assembly into the seat retainer.



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

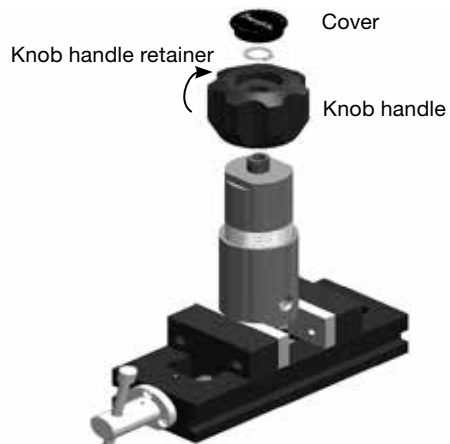


14. Tighten the **seat assembly** to 13 ft·lb (17.5 N·m).



21. Place the **knob handle** on the cap. Then insert the **knob handle retainer** and the **cover**.

Note: If necessary, turn the knob handle one or two turns clockwise to position it properly on the stem.



22. Test the regulator for proper operation.

For additional information, see www.swagelok.com.