

KCP Series Regulators Maintenance Instructions



Kit Contents



Seat



Seat retainer



Poppet



Poppet spring



Piston seal



Piston guide seal
High pressure kits only
(over 250 psig
[17.2 bar])









Inlet Filter



Lubricant (with MSDS)

Tools Required

Tool	Size	Component
 Socket	5/16 in.	Seat retainer
 Crow's foot	1 1/4 in.	Body cap
 Open-ended wrench	1 1/4 in.	Body cap
 Torque wrench	Capable of 11.2 ft·lb (15.2 N·m, 1.6 m·kg)	Seat retainer
	Capable of 25 ft·lb (33.9 N·m, 3.5 m·kg)	Body cap
Swagelok Tools Available		
 Filter insertion tool	—	Inlet filter
 Filter pick tool	—	Inlet filter

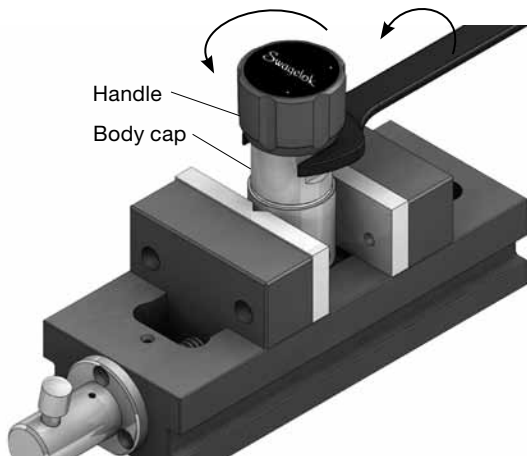
⚠ WARNING

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

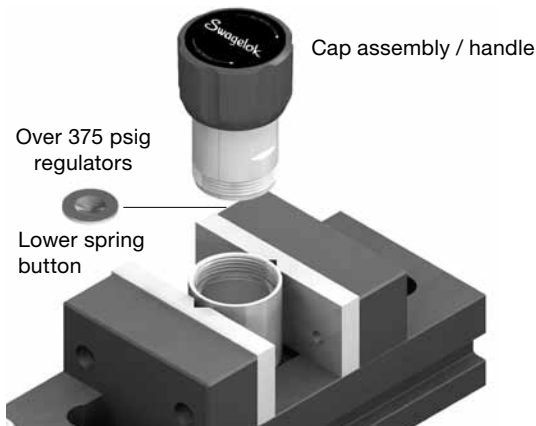
- depressurize system
- purge the system to remove any residual system media left in the regulator.

Disassembly

1. Place the regulator in a vise.
- Note: Take precautions to protect the body from being scratched by the vise.
2. Turn **handle** counterclockwise until it stops.
3. Loosen **body cap**.



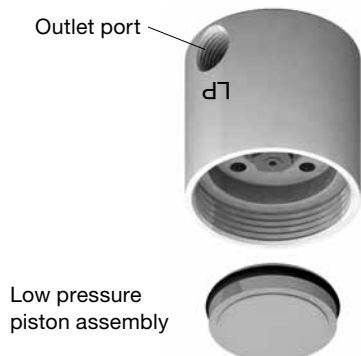
4. Remove **cap assembly** and **handle** as one piece and set aside for later use.



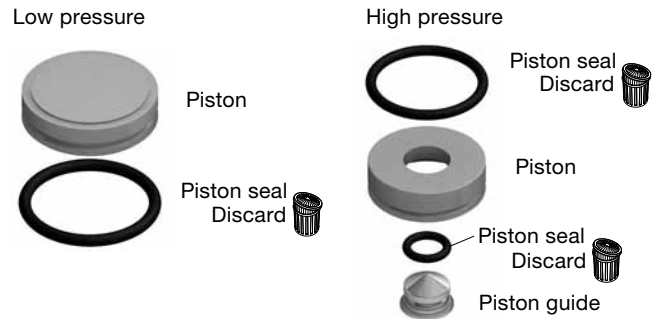
Note: In high-pressure regulators (over 375 psig [25.8 bar]), the **lower spring button** may fall from the cap assembly when lifted. Set aside for later use.

5. Turn body assembly upside down and remove **piston assembly** by applying low-pressure air to an **outlet port** marked 'LP'.

CAUTION
Applying pressure greater than 5 psig (0.34 bar) could cause personal injury or damage to the piston.

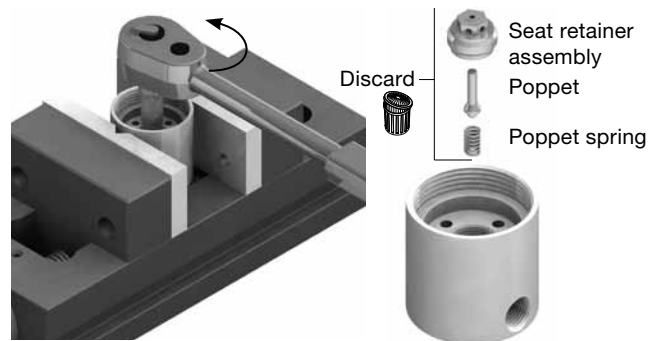


6. Remove the **piston seal(s)**. For high pressure regulators, also remove the **piston guide**.



7. Use socket wrench to remove **seat assembly**, **poppet**, and **poppet spring**.

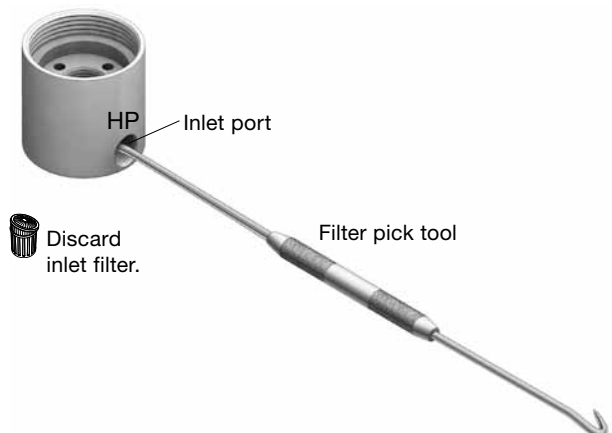
CAUTION
Be careful not to scratch the inside of the body. Leakage could result.



Note: If your regulator assembly is used on a Swagelok MPC substrate, proceed to step 9.

8. Remove the **inlet filter** from the **inlet port** (marked 'HP') using the **filter pick tool**. Discard old filter.

NOTICE
Be careful not to scratch the sides of the inlet port. Leakage could result.



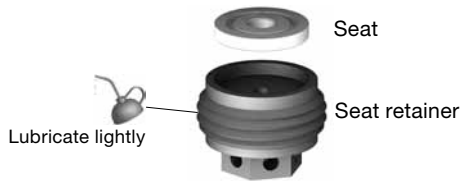
Discard inlet filter.

Reassembly

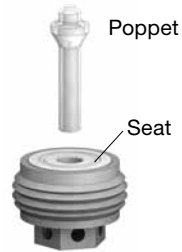
⚠ CAUTION

Ensure all components are free of debris or damage or leakage could result.

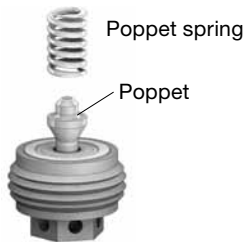
9. Fit the **seat** into the **seat retainer** until flush. Lightly lubricate the threads only.



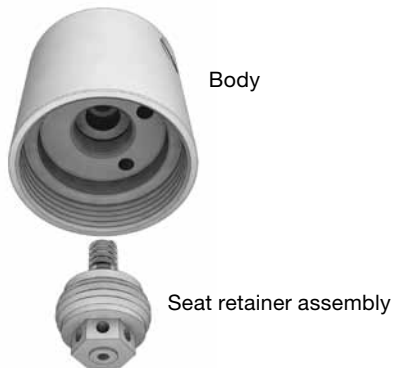
10. Place the **poppet** through the center of the **seat**.



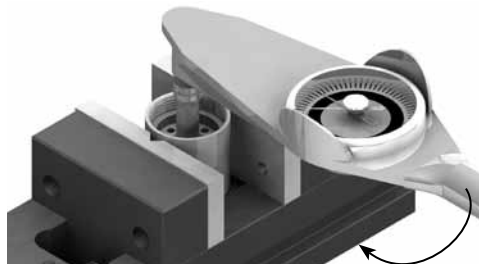
11. Place the **poppet spring** onto the exposed end of the **poppet**.



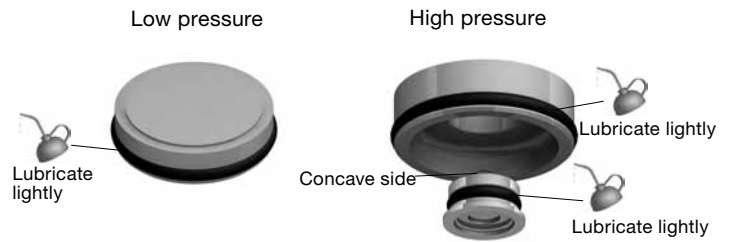
12. Keep the seat retainer assembly inverted with the poppet spring on the top and thread it into the body.



13. Tighten seat retainer to 11.2 ft·lb (15.2 N·m, 1.6 m·kg).



14. Lightly lubricate **piston seal(s)** and install onto **piston**. For the high pressure piston, press the second seal onto the piston guide from the concave side.



15. Press the **piston assembly** into the **body** until it seats against the seat retainer.

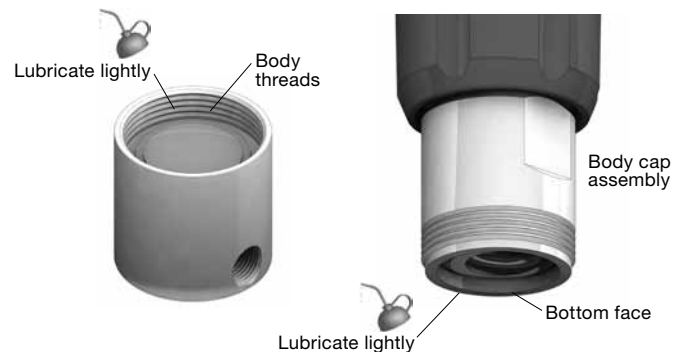
Note: Do not to damage the piston seals.



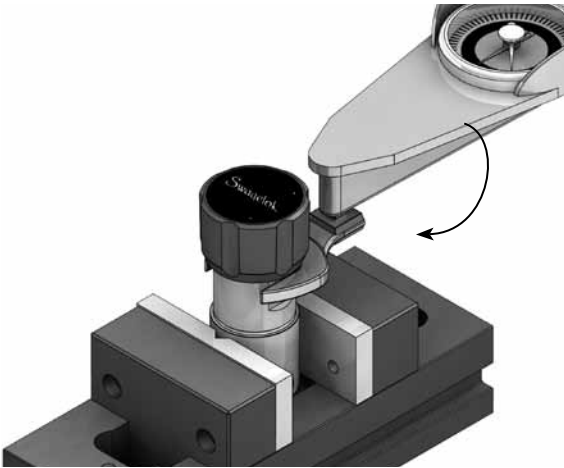
16. High pressure regulators only, put a small amount of lubricant in the the **dimple** of the **spring button** and place into the **body cap assembly**.



17. Lightly lubricate the **body threads** and the **bottom face** of the **body cap assembly**.



18. Thread body cap assembly onto body. Tighten to 25 ft·lb (33.9 N·m, 3.5 m·kg).

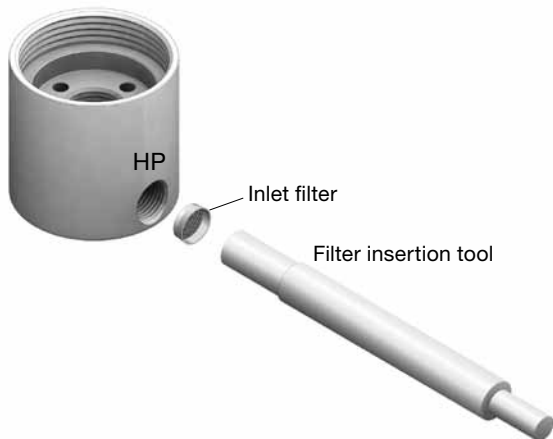


Note: If your regulator assembly is used on a Swagelok MPC substrate, proceed to step 20.

19. Insert **inlet filter** in the inlet port (marked 'HP') using the **filter insertion tool**.

NOTICE

Do not insert the inlet filter with a sharp tool. Damage to the filter could result.



20. Test and set the regulator for proper operation.

For additional information, see www.swagelok.com.