KCY Series Regulators
Maintenance Instructions

This instruction covers the maintenance procedure for KCY series regulators. The KCY is a two-stage regulator which reduces high pressure to low pressure using two stages.

Kit Contents


Diaphragm


Seat retainer


Seat


Poppet damper


Poppet


Poppet spring


Lubricant
MS-LT-WL8


Inlet filter

Symbols


Discard

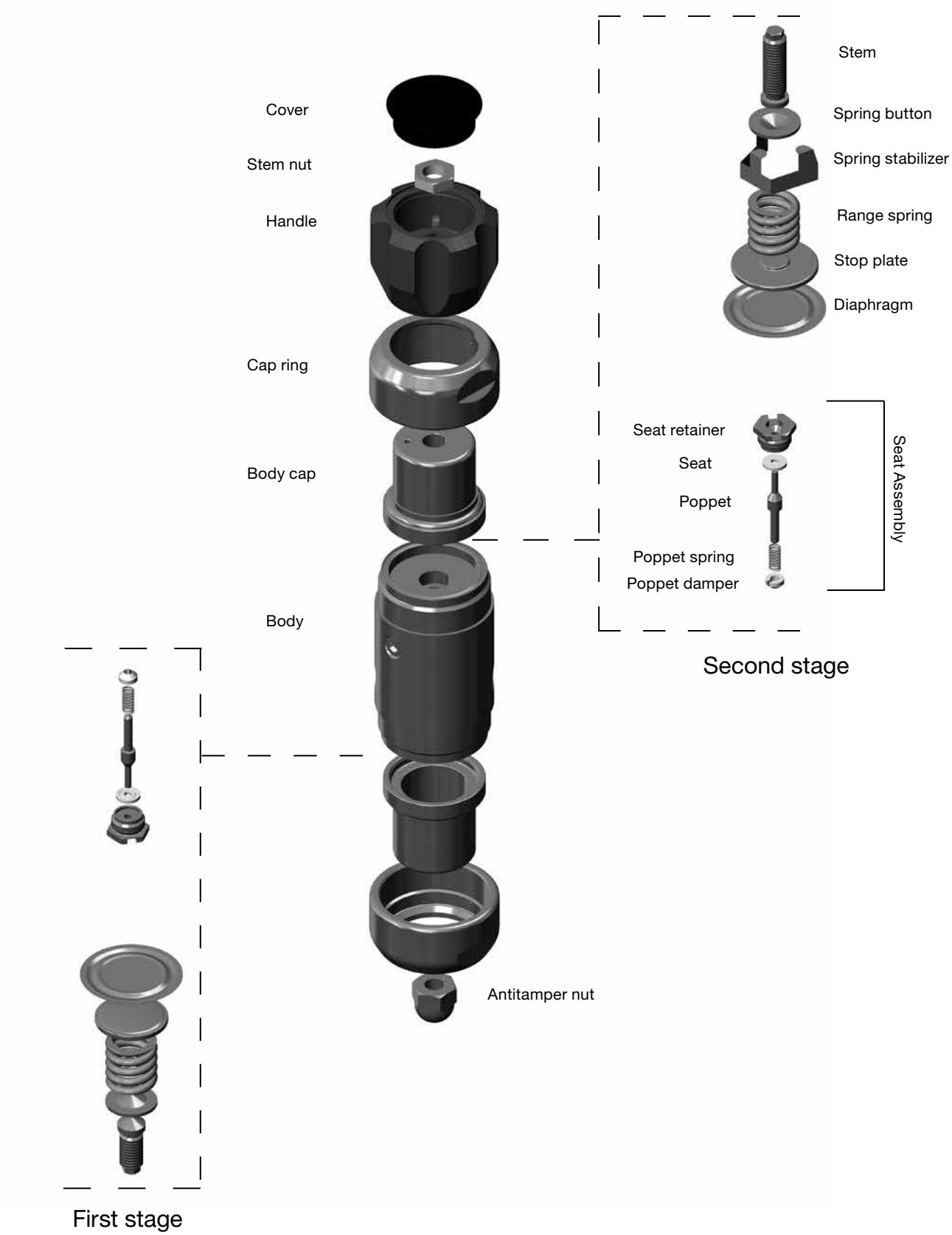

Lightly lubricate

Tools Required

Tool	Size	Component
Vise 	-	Body
Socket 	11/16 in. or 17 mm	Stem nut, Antitamper nut
	5/8 in. or 16 mm	Seat retainer
Crow's Foot 	2 in. or 50 mm	Cap ring
Open-ended wrench 	2 in. or 50 mm	Cap ring
Torque wrench 	Capable of 130 ft·lb (175 N·m, 17.8 m·kg)	Seat retainer, Cap ring
Swagelok Tools Available		
Body clamp tools 	-	Body
Filter insertion tool 	-	Inlet filter
Filter pick tool 	-	Inlet filter

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

Exploded View



⚠ WARNING

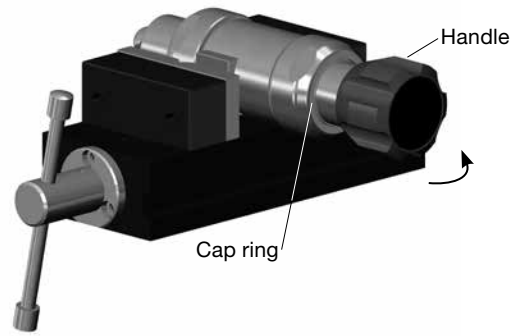
Before removing a regulator from the system for service, you must

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

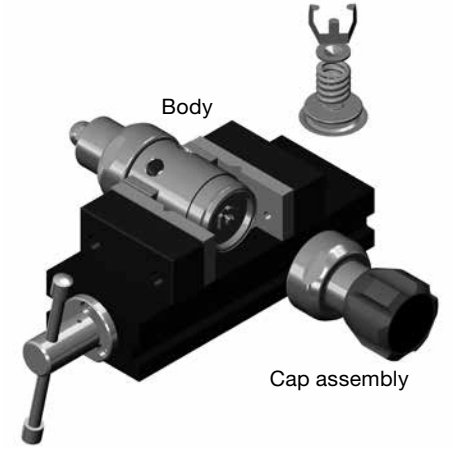
Disassembly

Note: Prior to disassembly remove any gauges and filters. Also clean all tape from threads.

1. Place the regulator in a vise using the body clamp tools.
2. Turn the **handle** counterclockwise until it stops.
   Note: If using an antitamper nut, remove it from the body. Then turn the stem counter clockwise until it stops.
3. Loosen the **cap ring**.



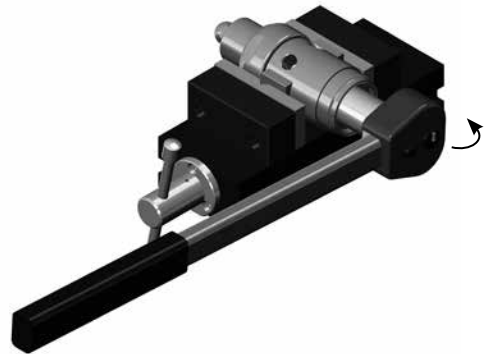
4. Remove the **first- or second-stage cap assembly** and handle as one piece and set aside for later use.
   Note: Disassemble the selected stage cap assembly per steps 5-7. Then repeat for other stage assembly.
   Note: The **range spring** and the **spring button** may fall from the **cap assembly**. Set aside for later use.



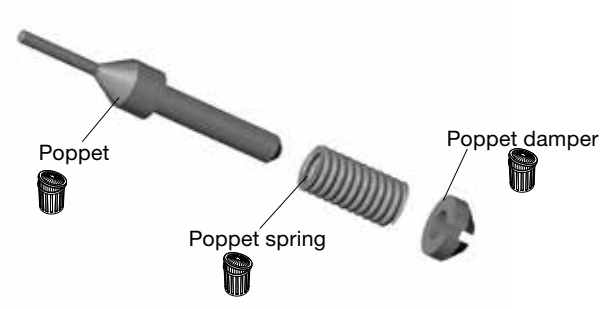
5. Loosen and remove the **seat assembly**. Discard the **seat** and **seat retainer**.

NOTICE

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



6. Invert the body and remove the **poppet**, the **poppet spring**, and the **poppet damper.**



7. Repeat the disassembly for the opposite stage.

NOTICE

The first stage always has an antitamper nut and is the closest to the body ports.

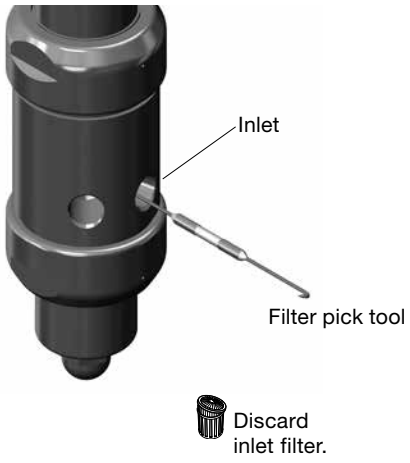
NOTICE

Do not mix stage components as they may differ.

8 Remove the **inlet filter** from the **inlet** of the body using the **filter pick tool**. Discard old filter.

NOTICE

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



Reassembly

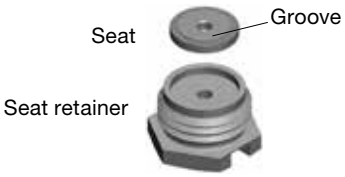
NOTICE

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

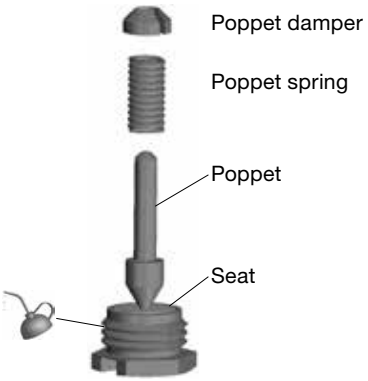
NOTICE

Replacement kits are marked first or second stage. Do not mix the components.

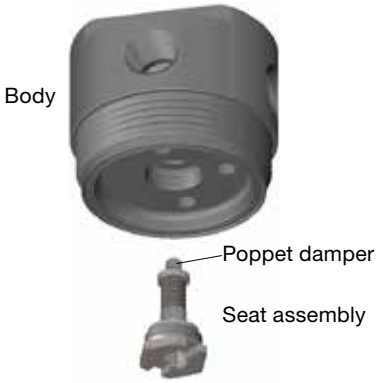
9. Insert the **seat** into the **seat retainer** with the groove facing away from the seat retainer.



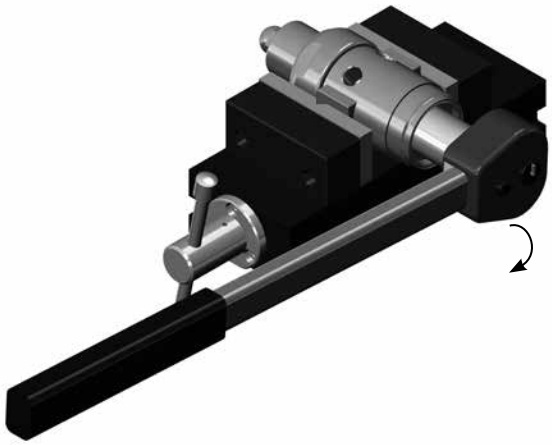
10. Place the **poppet** through the **seat**. Place the **poppet spring** and the **poppet damper** onto the exposed end of the poppet.



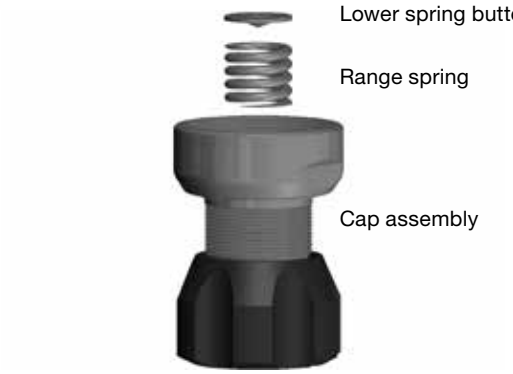
11. Invert the **body** and thread the **seat assembly** into the body.



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



13. Insert the **spring button** into the cap **assembly** with the point towards the **range spring** if necessary.
14. Place the first- or second- stage cap assembly onto the body and thread the cap ring onto the body.

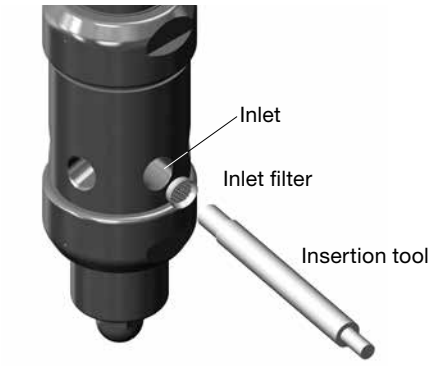


15. Tighten the **cap ring** to 130 ft·lb (175 N·m, 17.8 m·kg).

16. Repeat the reassembly for the opposite stage.
17. Set the first stage stem three (3) turns from the point resistance is initially felt.
18. Insert the **inlet filter** in the **inlet** using the **filter insertion tool**.

NOTICE

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



19. Test the regulator for proper operation.
20. If using an antitamper nut, thread the antitamper nut onto the stem after the set outlet pressure is reached. Tighten the nut to 13.0 ft·lb (17.5 N·m, 1.8 m·kg).

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

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