



# Production Control Units, Inc.

2280 West Dorothy Lane, Dayton, Ohio 45439-1892

Phone (937) 299-5594 FAX: (937) 299-4843

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## SERVICE BULLETIN for Series 91 EasyLoc™ TQC Tube Quick Connect



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# Production Control Units, Inc.-Coupler Products

2280 West Dorothy Lane, Dayton, Ohio 45439-1892 USA - Phone (937) 299-5594 - FAX: (937) 299-4843  
PCU Web Site: www.pcuinc.com - E-mail: couplers@pcuinc.com

## Coupler Application Data Inquiry

Company \_\_\_\_\_ Phone # \_\_\_\_\_

Contact \_\_\_\_\_ Fax # \_\_\_\_\_

Address \_\_\_\_\_ E-mail \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Country \_\_\_\_\_ Zip \_\_\_\_\_

Type & brand name for current coupler \_\_\_\_\_

Customer product manufactured \_\_\_\_\_

### Type of coupler required

Size and type of tube or port to be sealed \_\_\_\_\_

Straight  Swaged  Expanded  Other \_\_\_\_\_

Length of tube or port available for coupler \_\_\_\_\_

Quantity required \_\_\_\_\_

Delivery due date \_\_\_\_\_

### How will the coupler be used?

Refrigerant processing

What type of refrigerant? (HFC-134a, HP62, R-22, etc.) \_\_\_\_\_

Oil processing

What type of oil (Mineral, Polyol Ester, PAG, etc.) \_\_\_\_\_ (Attach MSDS)

Leak Burst testing

Maximum pressure & type of test media? (Air, Helium, etc.) \_\_\_\_\_

Vacuum

What level of vacuum needs to be achieved? \_\_\_\_\_

What Oil be present during vacuum pump down? \_\_\_\_\_

If "yes", what type of oil? \_\_\_\_\_

### Additional process information

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Along with your request for quote, please provide (1) copy of print showing area to be sealed, and (3) quality sample parts.

NOTE: The Data Inquiry form is available in pdf format on our web site at  
[www.PCUInc.com](http://www.PCUInc.com)



**GENERAL DESCRIPTION**

These tough, compact, lightweight PCU couplers utilize heat-treated parts and hard anodized aluminum for interchangeability and long life, black oxide and nickel finishes resist corrosion. They provide a large, unrestricted flow rate for a variety of production uses while minimizing process material loss during coupling/uncoupling.

The Production Control Units Series 91 EasyLoc™ is designed for easy installation onto the end of straight tubing. Slide the coupler onto the tubing until seated and pull the sleeve back to make a positive, leak-free seal. To release, simply push the sleeve forward. The field-proven camlocking device grips uniformly - firmly but gently - without damage to steel, copper, brass, or plastic tubing.

**COUPLER FEATURES**

**SAFE:** Built in valve automatically vents system pressure before the connector can be removed from the tube for operator safety. Blow-off or loss of seal connection by accidental bumping is eliminated.

**FLEXIBLE:** Internal parts are quickly interchangeable allowing the same connector body to fit all four tube sizes.

**MANY APPLICATIONS:** Seal compounds can be easily changed for many uses with oils, refrigerants, water, air, vacuum, helium, etc...

The standard PCU couplers in this bulletin are assembled with neoprene seals and O-rings. We recommend the neoprene compound for use with compressed air, R-12, R-22, R-404a, R-407, R-410a, and HFC-134a refrigerants (when not being used simultaneously with lubricants). When oils are being used, please contact our Coupler/Tooling team for help in selection of the correct elastomer for your particular application.

**OPERATION PROCEDURE**

All TQC couplers are made to slip freely onto and off your process tube and will function well if the following procedures are followed:

- 1) Use the TQC size that fits your tubing.
- 2) Slide locking sleeve forward completely before fitting over the tube.
- 3) Press TQC snugly onto the tube until you feel the resistance of the spring, pull the locking sleeve back until it stops against the retaining ring before applying pressure.
- 4) To remove, pushing locking sleeve forward completely. Do not pull TQC. Allow pressure to blow out through integral valve of the TQC.
- 5) Once the pressure is relieved for the system. The EasyLoc™ TQC will easily slide off the tube.

**MAINTENANCE INSTRUCTIONS**

Coupler life is dependent upon a regular scheduled maintenance program. The application and its risk potential should determine frequency. PCU cannot determine a maintenance schedule due to the many factors involved: temperature, proper size selection, fluid compatibility, pressure, mechanical loads, user responsibility. User must establish a maintenance program based on previous service life. There are several factors that must be included when setting up a maintenance program: visual inspection for cracked, defective parts and excessively worn components; dirt or particle buildup in seal and clamping areas; thorough cleaning and proper lubrication; replace worn out and defective seals.

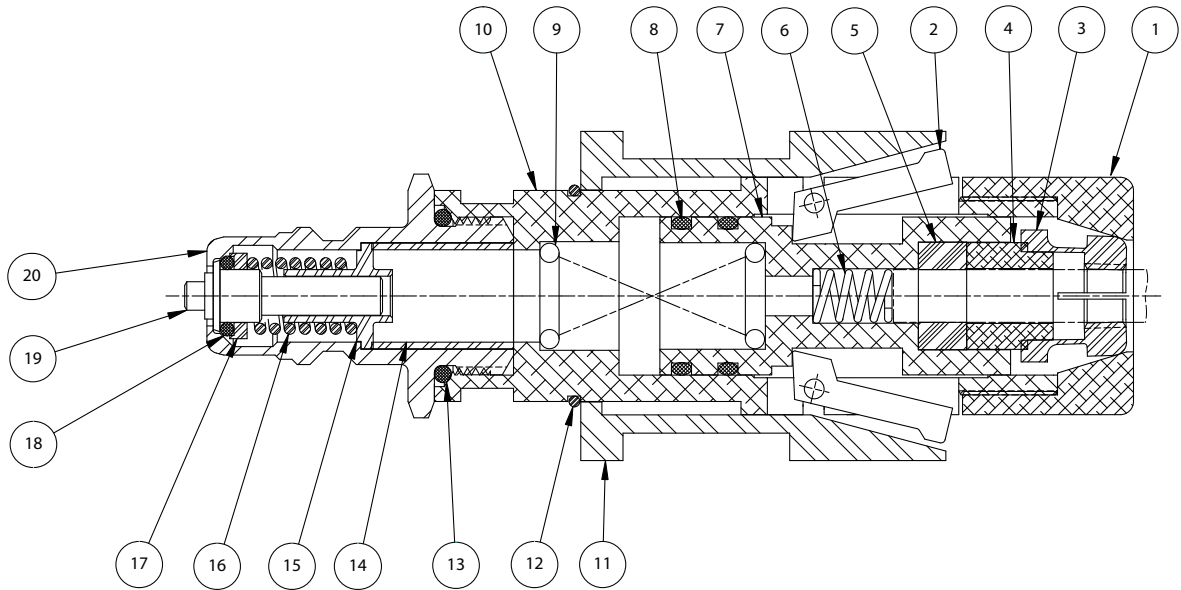
**SPECIFICATIONS**

Working Pressure .....	25 microns to 500 PSIG
Proof Pressure.....	4000 PSIG
Temperature Range.....	0 to 250° F
Tube Engagement .....	1.125 inches
Tube Out-of Roundness .....	2%

**NEOPRENE SEALS**

**REPLACEMENT PARTS FOR "TQC" WITH SERIES 250 TWO-WAY SHUTOFF VALVE NIPPLE**

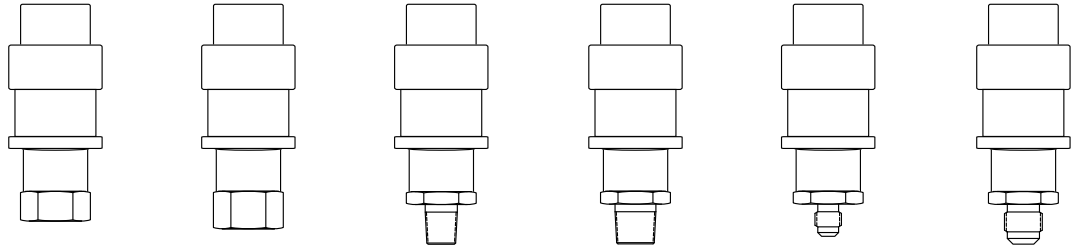
Mates with our female Series 250 Two-Way Shutoff Valved Process Coupler featured in our Product Bulletin PB006.



REPLACEMENT PARTS FOR EASYLOC™ "TQC" WITH SERIES 250 NIPPLE AS SHOWN			
Stock Assemblies <b>NEOPRENE SEALS</b>	1/4" Tube Size <b>91461</b>	5/16" Tube Size <b>91561</b>	3/8" Tube Size <b>91661</b>
1. Retaining Nut	97010		
2. Lever Assembly (2 Req'd)	97009		
3. Collet	94009	95009	96009
4. Collar	94011	95011	96011
5. Tube Seal	94012	95012	96012
6. Spring	94000	95000	96000
7. Tube Socket	94001	95001	96001
8. O-Ring (2 Req'd)	97005		
9. Clamp Spring	97003		
10. Body	97000		
11. Sleeve	97004		
12. Retaining Ring	97002		
13. End Cap O-Ring	61822		
14. Spacer	61824		
15. Perch	61825		
16. Valve Spring	61804		
17. O-Ring Retainer	61840		
18. Valve O-Ring	61843		
19. Valve Stem	61844		
20. Nipple Body	61839		

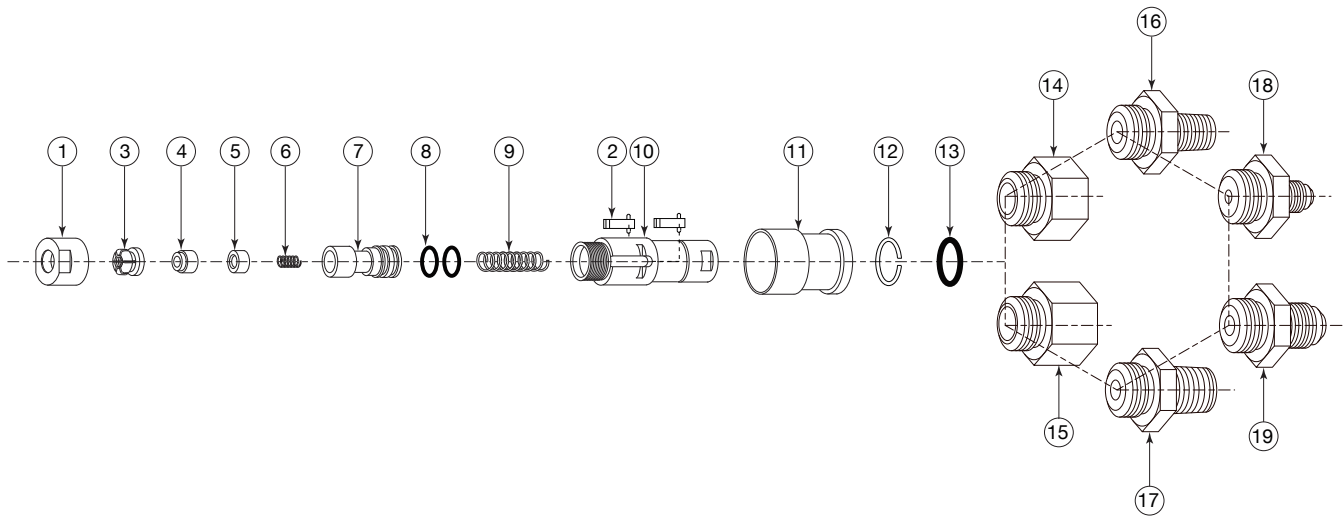
**NEOPRENE SEALS**

**SERIES 91 EASYLOC™ "TQC" WITH ALTERNATE END CAP ADAPTERS**



FOR USE ON TUBE WITH	1/4" FPT ADAPTER	3/8" FPT ADAPTER	1/4" MPT ADAPTER	3/8" MPT ADAPTER	1/4" SAE FLARE ADAPTER	3/8" SAE FLARE ADAPTER
1/4" OD	91411	91451	91431	91481	91421	91441
5/16" OD	91511	91551	91531	91581	91521	91541
3/8" OD	91611	91651	91631	91681	91621	91641

**SERIES 91 EASYLOC™ "TQC" REPLACEMENT PARTS NEOPRENE SEALS**



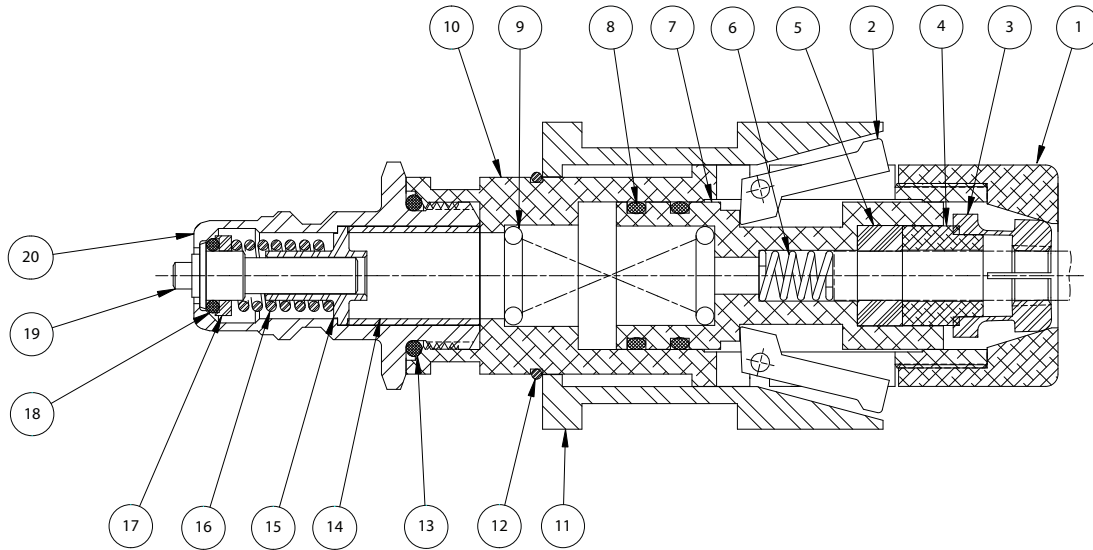
<b>NEOPRENE SEALS</b>	<b>Tube Size</b>		
<b>Replacement Parts</b>	1/4"	5/16"	3/8"
1. Retaining Nut	97010		
2. Lever Assembly (2 Req'd)	97009		
3. Collet	94009	95009	96009
4. Collar	94011	95011	96011
5. Tube Seal	94012	95012	96012
6. Spring	94000	95000	96000
7. Tube Socket	94001	95001	96001
8. O-Ring (2 Req'd)	97005		
9. Clamp Spring	97003		
10. Body	97000		
11. Sleeve	97004		
12. Retaining Ring	97002		
13. End Cap O-Ring	61822		

<b>End Cap Adapters</b>		
14. 57016 - 1/4" FPT	17. 57153 - 3/8" MPT	
15. 57152 - 3/8" FPT	18. 57018 - 1/4" SAE FL	
16. 57017 - 1/4" MPT	19. 57019 - 3/8" SAE FL	

**BUNA-N (NITRILE) SEALS**

**REPLACEMENT PARTS FOR "TQC" WITH SERIES 250 TWO-WAY SHUTOFF VALVE NIPPLE**

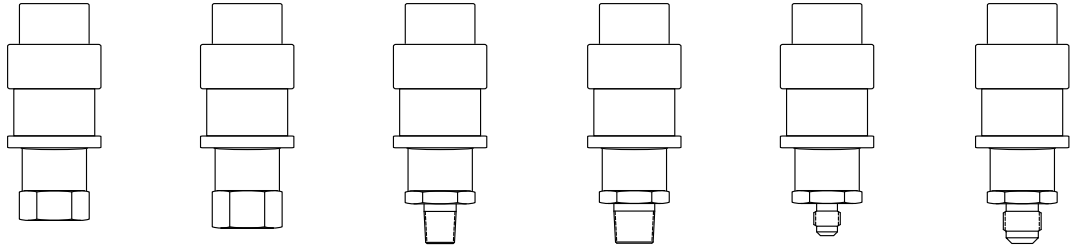
Mates with our female Series 250 Two-Way Shutoff Valved Process Coupler featured in our Product Bulletin PB006.



REPLACEMENT PARTS FOR EASYLOC™ "TQC" WITH SERIES 250 NIPPLE AS SHOWN			
Stock Assemblies BUNA-N (NITRILE) SEALS	1/4" Tube Size <b>91462</b>	5/16" Tube Size <b>91562</b>	3/8" Tube Size <b>91662</b>
1. Retaining Nut	97010		
2. Lever Assembly (2 Req'd)	97009		
3. Collet	94009	95009	96009
4. Collar	94011	95011	96011
5. Tube Seal	94008	95008	96008
6. Spring	94000	95000	96000
7. Tube Socket	94001	95001	96001
8. O-Ring (2 Req'd)	97008		
9. Clamp Spring	97003		
10. Body	97000		
11. Sleeve	97004		
12. Retaining Ring	97002		
13. End Cap O-Ring	61846		
14. Spacer	61824		
15. Perch	61825		
16. Valve Spring	61804		
17. O-Ring Retainer	61840		
18. Valve O-Ring	61847		
19. Valve Stem	61844		
20. Nipple Body	61839		

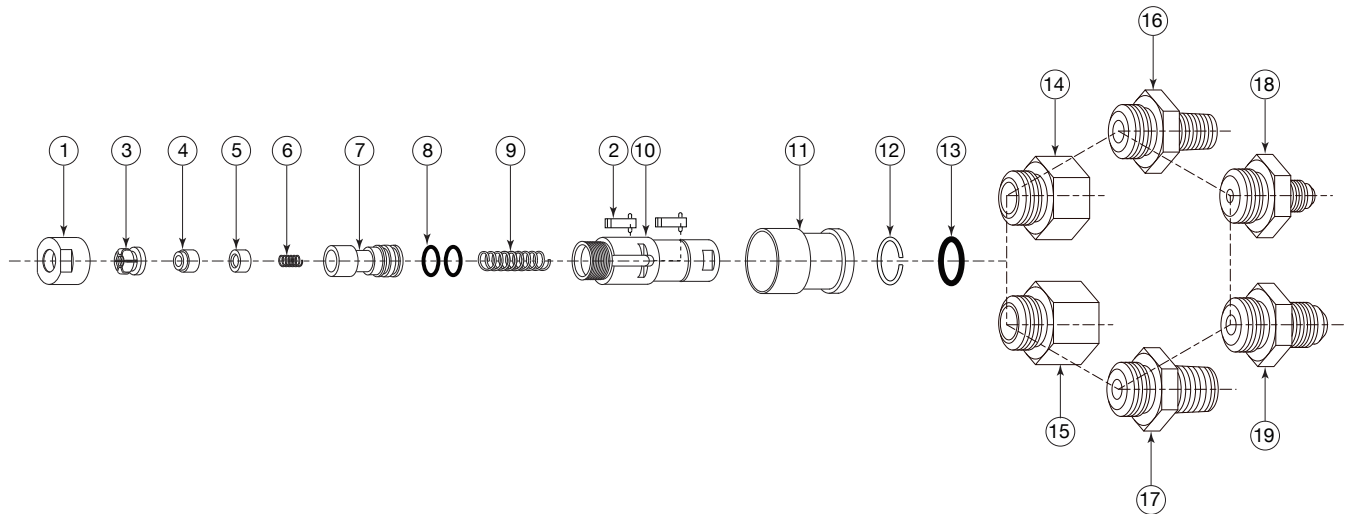
**BUNA-N (NITRILE) SEALS**

**SERIES 91 EASYLOC™ "TQC" WITH ALTERNATE END CAP ADAPTERS**



FOR USE ON TUBE WITH	1/4" FPT ADAPTER	3/8" FPT ADAPTER	1/4" MPT ADAPTER	3/8" MPT ADAPTER	1/4" SAE FLARE ADAPTER	3/8" SAE FLARE ADAPTER
1/4" OD	91412	91452	91432	91482	91422	91442
5/16" OD	91512	91552	91532	91582	91522	91542
3/8" OD	91612	91652	91632	91682	91622	91642

**SERIES 91 EASYLOC™ "TQC" REPLACEMENT PARTS BUNA-N (NITRILE) SEALS**



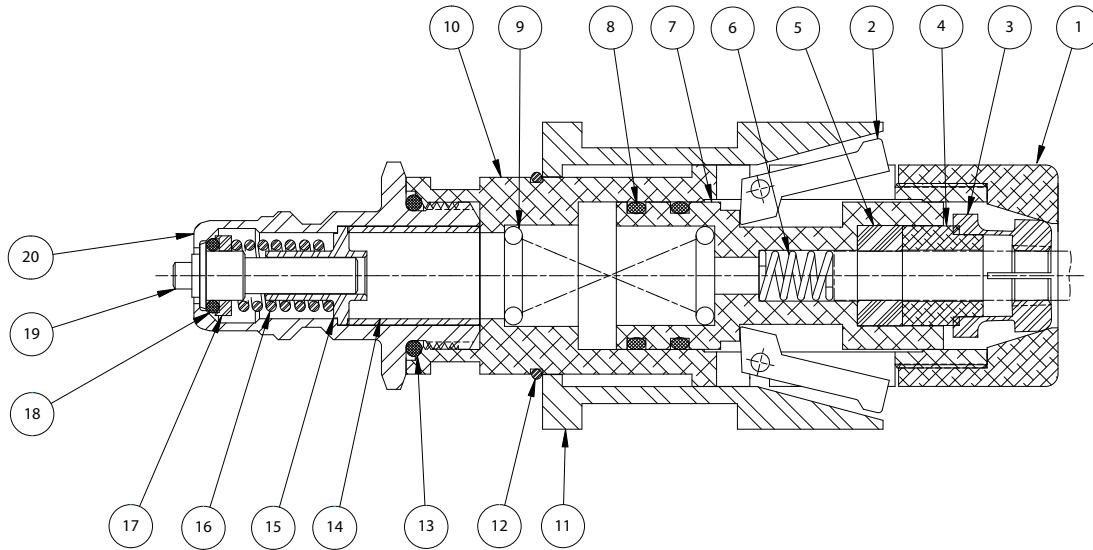
BUNA-N (NITRILE) SEALS	Tube Size		
	1/4"	5/16"	3/8"
<b>Replacement Parts</b>			
1. Retaining Nut	97010		
2. Lever Assembly (2 Req'd)	97009		
3. Collet	94009	95009	96009
4. Collar	94011	95011	96011
5. Tube Seal	94008	95008	96008
6. Spring	94000	95000	96000
7. Tube Socket	94001	95001	96001
8. O-Ring (2 Req'd)	97008		
9. Clamp Spring	97003		
10. Body	97000		
11. Sleeve	97004		
12. Retaining Ring	97002		
13. End Cap O-Ring	61846		

End Cap Adapters	
14. 57016 - 1/4" FPT	17. 57153 - 3/8" MPT
15. 57152 - 3/8" FPT	18. 57018 - 1/4" SAE FL
16. 57017 - 1/4" MPT	19. 57019 - 3/8" SAE FL

**FLUOROCARBON SEALS**

**REPLACEMENT PARTS FOR "TQC" WITH SERIES 250 TWO-WAY SHUTOFF VALVE NIPPLE**

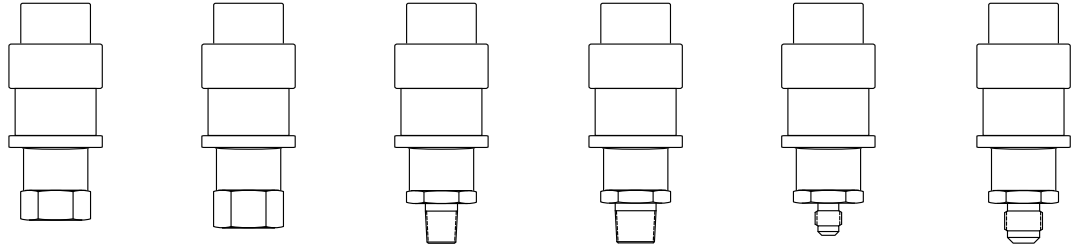
Mates with our female Series 250 Two-Way Shutoff Valved Process Coupler featured in our Product Bulletin PB006.



REPLACEMENT PARTS FOR EASYLOC™ "TQC" WITH SERIES 250 NIPPLE AS SHOWN			
Stock Assemblies <b>FLUOROCARBON SEALS</b>	1/4" Tube Size <b>91463</b>	5/16" Tube Size <b>91563</b>	3/8" Tube Size <b>91663</b>
1. Retaining Nut	97010		
2. Lever Assembly (2 Req'd)	97009		
3. Collet	94009	95009	96009
4. Collar	94011	95011	96011
5. Tube Seal	94020	95020	96020
6. Spring	94000	95000	96000
7. Tube Socket	94001	95001	96001
8. O-Ring (2 Req'd)	OR016-FLC		
9. Clamp Spring	97003		
10. Body	97000		
11. Sleeve	97004		
12. Retaining Ring	97002		
13. End Cap O-Ring	61852		
14. Spacer	61824		
15. Perch	61825		
16. Valve Spring	61804		
17. O-Ring Retainer	61840		
18. Valve O-Ring	61853		
19. Valve Stem	61844		
20. Nipple Body	61839		

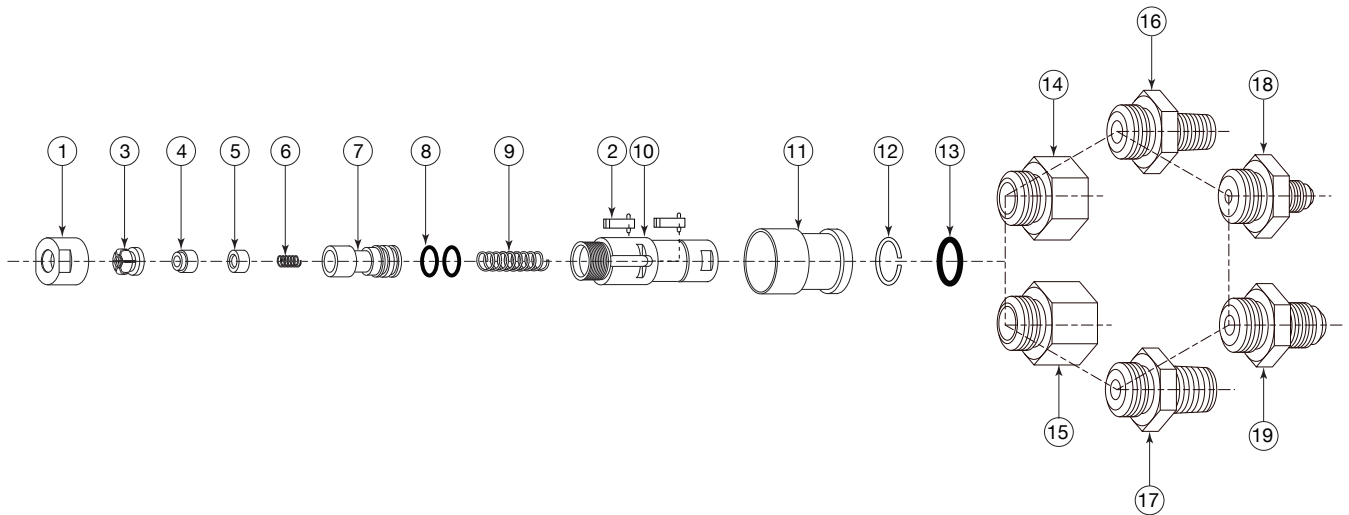
**FLUOROCARBON SEALS**

**SERIES 91 EASYLOC™ "TQC" WITH ALTERNATE END CAP ADAPTERS**



FOR USE ON TUBE WITH	1/4" FPT ADAPTER	3/8" FPT ADAPTER	1/4" MPT ADAPTER	3/8" MPT ADAPTER	1/4" SAE FLARE ADAPTER	3/8" SAE FLARE ADAPTER
1/4" OD	91413	91453	91433	91483	91423	91443
5/16" OD	91513	91553	91533	91583	91523	91543
3/8" OD	91613	91653	91633	91683	91623	91643

**SERIES 91 EASYLOC™ "TQC" REPLACEMENT PARTS FLUOROCARBON SEALS**



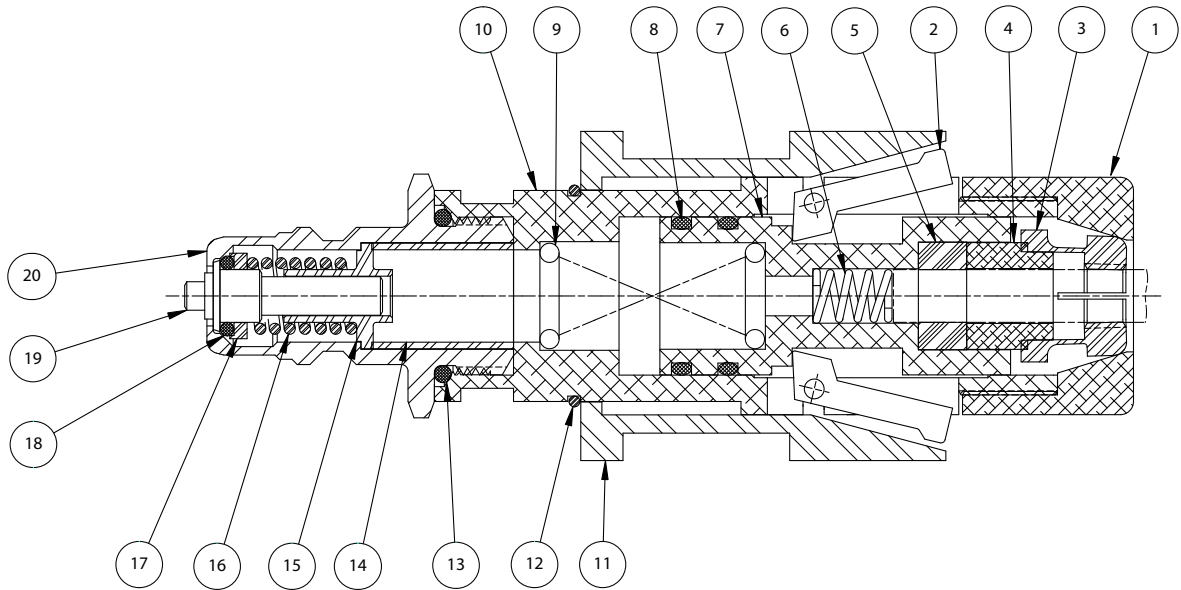
<b>FLUOROCARBON SEALS</b>	<b>Tube Size</b>		
<b>Replacement Parts</b>	1/4"	5/16"	3/8"
1. Retaining Nut	97010		
2. Lever Assembly (2 Req'd)	97009		
3. Collet	94009	95009	96009
4. Collar	94011	95011	96011
5. Tube Seal	94020	95020	96020
6. Spring	94000	95000	96000
7. Tube Socket	94001	95001	96001
8. O-Ring (2 Req'd)	OR016-FLC		
9. Clamp Spring	97003		
10. Body	97000		
11. Sleeve	97004		
12. Retaining Ring	97002		
13. End Cap O-Ring	61852		

<b>End Cap Adapters</b>		
14. 57016 - 1/4" FPT	17. 57153 - 3/8" MPT	
15. 57152 - 3/8" FPT	18. 57018 - 1/4" SAE FL	
16. 57017 - 1/4" MPT	19. 57019 - 3/8" SAE FL	

**EPDM SEALS**

**REPLACEMENT PARTS FOR "TQC" WITH SERIES 250 TWO-WAY SHUTOFF VALVE NIPPLE**

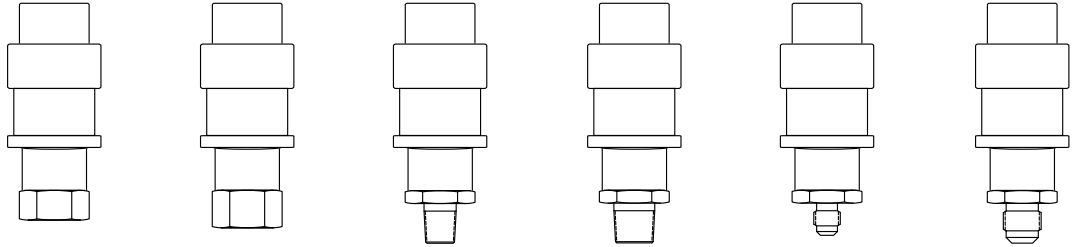
Mates with our female Series 250 Two-Way Shutoff Valved Process Coupler featured in our Product Bulletin PB006.



REPLACEMENT PARTS FOR EASYLOC™ "TQC" WITH SERIES 250 NIPPLE AS SHOWN			
Stock Assemblies EPDM SEALS	1/4" Tube Size 91466	5/16" Tube Size 91566	3/8" Tube Size 91666
1. Retaining Nut	97010		
2. Lever Assembly (2 Req'd)	97009		
3. Collet	94009	95009	96009
4. Collar	94011	95011	96011
5. Tube Seal	94010	95010	96010
6. Spring	94000	95000	96000
7. Tube Socket	94001	95001	96001
8. O-Ring (2 Req'd)	OR016-3407		
9. Clamp Spring	97003		
10. Body	97000		
11. Sleeve	97004		
12. Retaining Ring	97002		
13. End Cap O-Ring	61871		
14. Spacer	61824		
15. Perch	61825		
16. Valve Spring	61804		
17. O-Ring Retainer	61840		
18. Valve O-Ring	61873		
19. Valve Stem	61844		
20. Nipple Body	61839		

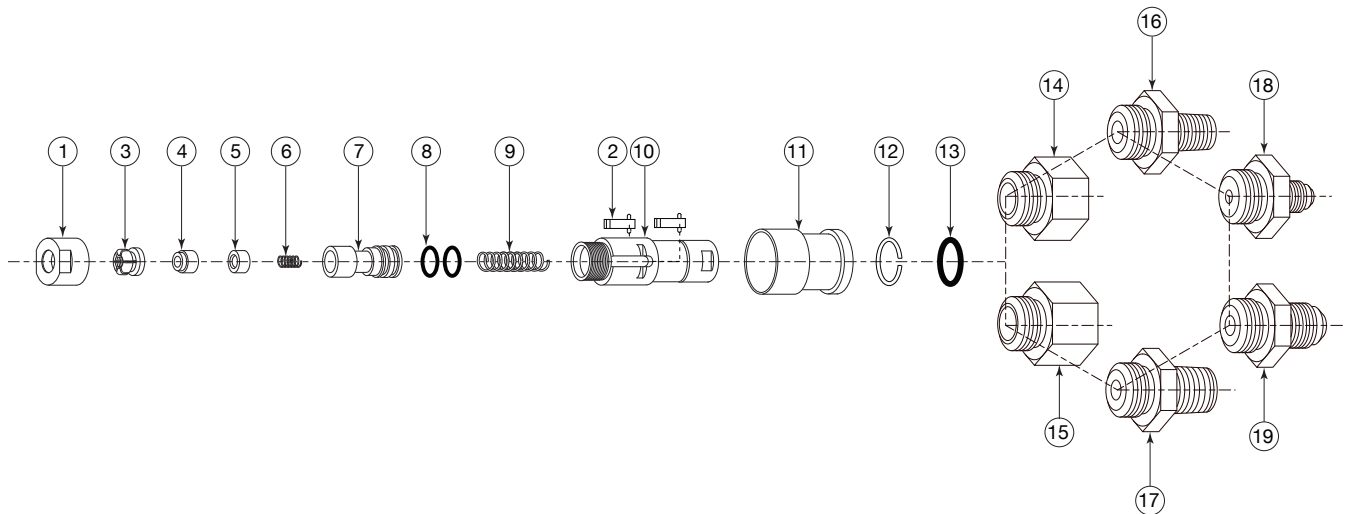
**EPDM SEALS**

**SERIES 91 EASYLOC™ "TQC" WITH ALTERNATE END CAP ADAPTERS**



FOR USE ON TUBE WITH	1/4" FPT ADAPTER	3/8" FPT ADAPTER	1/4" MPT ADAPTER	3/8" MPT ADAPTER	1/4" SAE FLARE ADAPTER	3/8" SAE FLARE ADAPTER
1/4" OD	91416	91456	91436	91486	91426	91446
5/16" OD	91516	91556	91536	91586	91526	91546
3/8" OD	91616	91656	91636	91686	91626	91646

**SERIES 91 EASYLOC™ "TQC" REPLACEMENT PARTS EPDM SEALS**



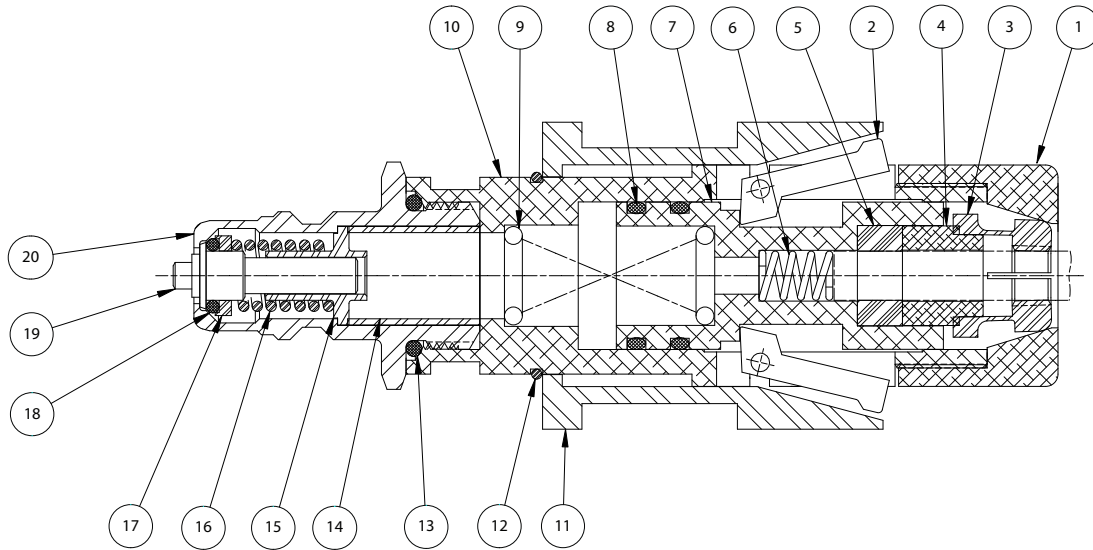
EPDM SEALS	Tube Size		
	1/4"	5/16"	3/8"
<b>Replacement Parts</b>			
1. Retaining Nut	97010		
2. Lever Assembly (2 Req'd)	97009		
3. Collet	94009	95009	96009
4. Collar	94011	95011	96011
5. Tube Seal	94010	95010	96010
6. Spring	94000	95000	96000
7. Tube Socket	94001	95001	96001
8. O-Ring (2 Req'd)	OR016-3407		
9. Clamp Spring	97003		
10. Body	97000		
11. Sleeve	97004		
12. Retaining Ring	97002		
13. End Cap O-Ring	61871		

End Cap Adapters	
14. 57016 - 1/4" FPT	17. 57153 - 3/8" MPT
15. 57152 - 3/8" FPT	18. 57018 - 1/4" SAE FL
16. 57017 - 1/4" MPT	19. 57019 - 3/8" SAE FL

**HFC-134a REFRIGERANT SEALS**

**REPLACEMENT PARTS FOR "TQC" WITH SERIES 250 TWO-WAY SHUTOFF VALVE NIPPLE**

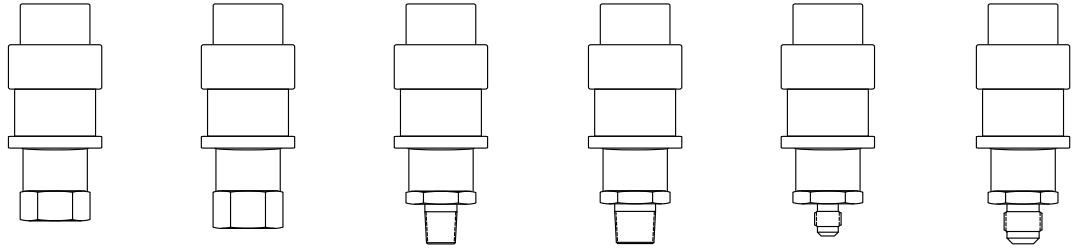
Mates with our female Series 250 Two-Way Shutoff Valved Process Coupler featured in our Product Bulletin PB006.



REPLACEMENT PARTS FOR EASYLOC™ "TQC" WITH SERIES 250 NIPPLE AS SHOWN			
Stock Assemblies HFC-134a REFRIGERANT SEALS	1/4" Tube Size <b>91467</b>	5/16" Tube Size <b>91567</b>	3/8" Tube Size <b>91667</b>
1. Retaining Nut	97010		
2. Lever Assembly (2 Req'd)	97009		
3. Collet	94009	95009	96009
4. Collar	94011	95011	96011
5. Tube Seal	94013	95013	96013
6. Spring	94000	95000	96000
7. Tube Socket	94001	95001	96001
8. O-Ring (2 Req'd)	97013		
9. Clamp Spring	97003		
10. Body	97000		
11. Sleeve	97004		
12. Retaining Ring	97002		
13. End Cap O-Ring	61879		
14. Spacer	61824		
15. Perch	61825		
16. Valve Spring	61804		
17. O-Ring Retainer	61840		
18. Valve O-Ring	61880		
19. Valve Stem	61844		
20. Nipple Body	61839		

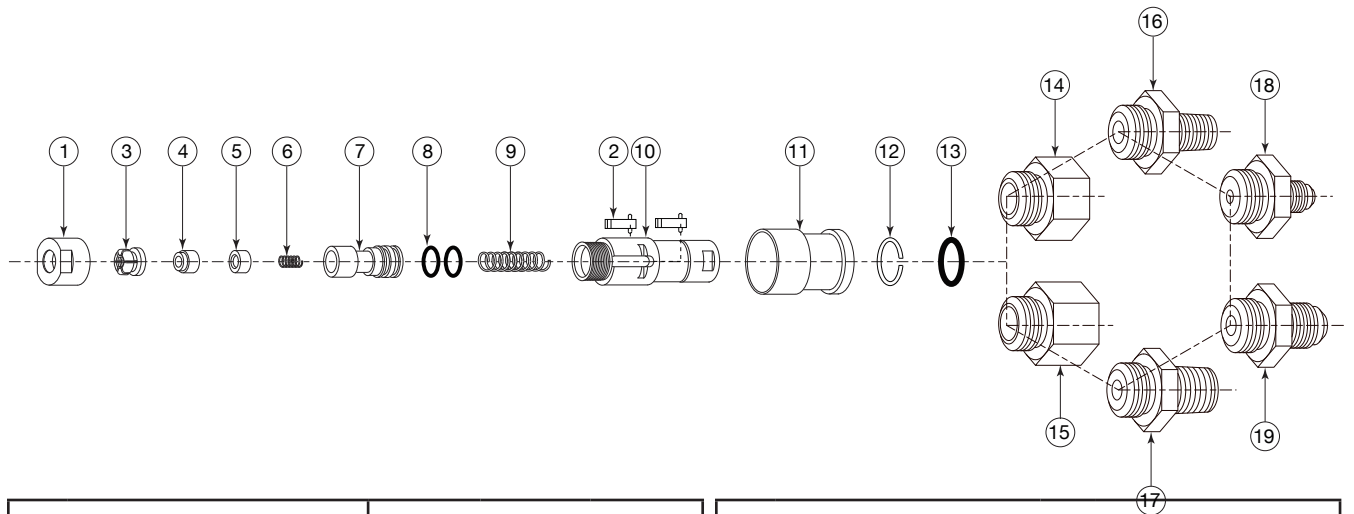
**HFC-134a REFRIGERANT SEALS**

**SERIES 91 EASYLOC™ "TQC" WITH ALTERNATE END CAP ADAPTERS**



FOR USE ON TUBE WITH	1/4" FPT ADAPTER	3/8" FPT ADAPTER	1/4" MPT ADAPTER	3/8" MPT ADAPTER	1/4" SAE FLARE ADAPTER	3/8" SAE FLARE ADAPTER
1/4" OD	91417	91457	91437	91487	91427	91447
5/16" OD	91517	91557	91537	91587	91527	91547
3/8" OD	91617	91657	91637	91687	91627	91647

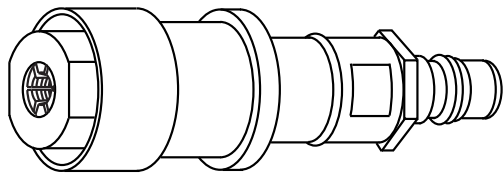
**SERIES 91 EASYLOC™ "TQC" REPLACEMENT PARTS HFC-134a REFRIGERANT SEALS**



HFC-134a REFRIGERANT SEALS	Tube Size		
	1/4"	5/16"	3/8"
<b>Replacement Parts</b>			
1. Retaining Nut	97010		
2. Lever Assembly (2 Req'd)	97009		
3. Collet	94009	95009	96009
4. Collar	94011	95011	96011
5. Tube Seal	94013	95013	96013
6. Spring	94000	95000	96000
7. Tube Socket	94001	95001	96001
8. O-Ring (2 Req'd)	97013		
9. Clamp Spring	97003		
10. Body	97000		
11. Sleeve	97004		
12. Retaining Ring	97002		
13. End Cap O-Ring	61879		

End Cap Adapters	
14. 57016 - 1/4" FPT	17. 57153 - 3/8" MPT
15. 57152 - 3/8" FPT	18. 57018 - 1/4" SAE FL
16. 57017 - 1/4" MPT	19. 57019 - 3/8" SAE FL

**DISASSEMBLY & REASSEMBLY INSTRUCTIONS**



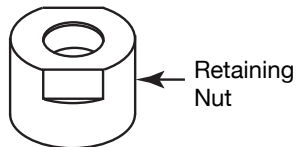
**STORAGE**

When the EasyLoc™ "TQC" is not in use, it should be stored with the locking sleeve in the unlocked (forward) position as shown. If the coupler is stored with the locking sleeve in the closed (back) position, pressure is applied to the tube seal, squeezing it out into the tube channel of the coupler. If this condition is allowed to exist for any length of time, the tube seal tends to remain in its expanded condition for some period of time after the locking pressure has been removed. A tube being inserted into the coupler under these conditions will damage the tube seal as the tube is forced past it.

**TUBE SEAL REPLACEMENT**

No special tools are required although we do recommend using a short piece of tube (approx. 3" long) to aid in reassembling the retaining nut to the coupler body.

To replace the tube seal, slide sleeve back. Using a 1" wrench on flats, loosen the retaining nut until it can be turned by hand. Holding the assembly, remove the retaining nut for the coupler body. Set retaining nut aside, threaded end up. Next, remove the collet and the collar from the tube socket. Set aside. Using a sharp pointed tool, pry the tube seal from the tube socket being careful not to damage the tube socket. Place a new seal in the tube socket and seat against the shoulder using the collar. Remove collar to check for proper placement of the seal then place the collar and the collet in their proper position in the tube socket. Pick up the retaining nut and screw it partially on the coupler body. Insert a short piece of tube (3" long x the proper diameter for the coupler) through the retaining nut and collet. Tighten the retaining nut onto the coupler body with a wrench. Slide the sleeve forward and remove the tube.



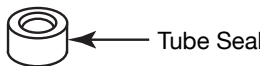
Retaining Nut



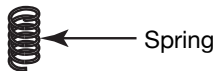
Collet



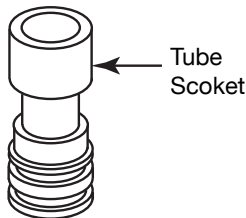
Collar



Tube Seal



Spring



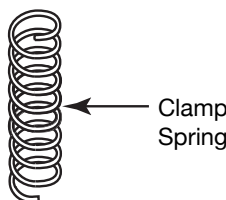
Tube Socket



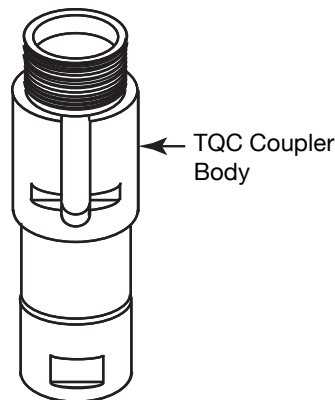
O-Ring



O-Ring



Clamp Spring



TQC Coupler Body

**DISASSEMBLY**

Place nipple body in a vice, clamping on the 1" hex. Use a wrench on the 7/8" wrench flats on the coupler body. Loosen until the coupler body can be turned by hand. Remove the assembly from the vise. Hold coupler body in one hand and nipple body in the other in a near-horizontal position. With the nipple body end slanted slightly downward, remove the nipple body and its contents from the coupler body. Set the nipple assembly aside.

Slide sleeve forward on the coupler assembly. Using a pointed tool, remove the retaining ring from its groove and slide it off the end of the coupler body. Carefully slide the sleeve toward the back of the coupler body being careful not to lose the two levers as you slide the sleeve past them. Remove sleeve and levers and set aside.

Using two wrenches, loosen the retaining nut from the coupler body until the retaining nut can be turned by hand. Remove the retaining nut from the coupler body and set aside. Remove the collet and the collar from the tube socket and set aside. A visual inspection for excessive wear can now be made of these parts especially the collet. The condition of this part is critical because excessive wear can cause coupler malfunction. It should be replaced if there is any doubt as to its functioning capabilities.

Remove the tube seal from the tube socket, using a sharp pointed tool to pry the tube seal up and out of the tube socket, being careful not to damage the tube seal in the process. To remove the tube socket from the coupler body, insert a 1/4" diameter x 4" long (approx.) piece of CRS, or equivalent, through the hole in the internally threaded end of the coupler body, through the inside diameter of the clamp spring, pushing on the back side of the tube socket. Push until the tube socket can be removed from the coupler body. The clamp spring can be removed at this point and set aside. To remove the small spring inside the tube socket, insert a small tool 1/16" diameter x 2" long through the end of the tube socket that has O-rings around it at an angle to engage a coil in the spring. Shove out until the spring disengages from the tube socket. Remove the O-rings from the tube socket.

Pick up the nipple body with its related parts and holding it threaded end up, remove the spacer and set aside. Tilt the nipple body down and slide the valve assembly out. Remove the perch, spring, O-ring retainer, and valve O-ring from the valve stem. Visually inspect each part. Check the O-ring for cuts, nicks, or deformation and replace if necessary. Also, check the end cap O-ring at the bottom of the threads on the nipple body and replace if damaged.

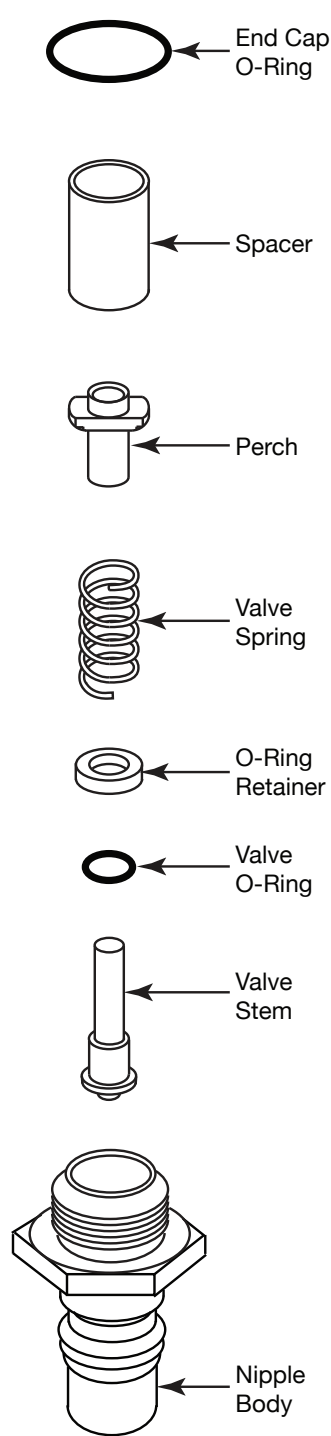
**REASSEMBLY**

After parts have been inspected, pick-up the valve stem in one hand and slide the valve O-ring over the stem and upon the shouldered portion of the valve stem. Next, position the O-ring retainer behind the O-ring, making certain that the cupped portion of the O-ring retainer is next to the O-ring. Slide the valve spring over the valve stem until it comes in contact with the O-ring retainer. Slide the perch onto the valved stem, with its long end over the stem. Pick-up the nipple body, holding it with the threaded end down, and slide the valve assembly up into the nipple body, valve stem first. As the valve assembly is slid into the nipple body, tilt the nipple body until the threaded end is pointing up to allow the valve assembly to drop into place. Holding the nipple body in that position, pick-up the spacer and slide it down into the nipple body until it comes in contact with the shoulders of the perch. Set assembly aside.

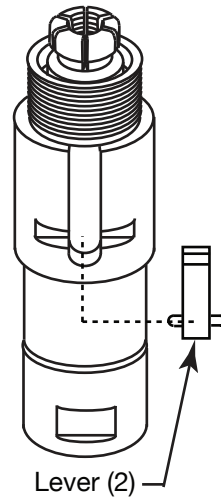
To reassemble the coupler, set small spring onto assembly tool. Holding tube socket with grooved end down, insert spring into tube socket until spring seats against bottom of tube socket.

**NOTE:** When placing spring in tube socket, care should be taken to ensure large end of spring is inserted first. Otherwise, unit will not function properly.

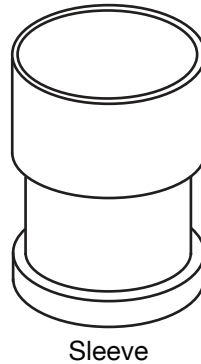
Replace the two O-rings on the tube socket using plenty of lubricant. (Be sure the lubricant is compatible with the media being processed through the coupler.) Insert the clamp spring into the O-ring end of the tube socket. Guide the tube socket and clamp spring into the coupler body, spring end first. Check the opposite end of the coupler body to determine if the spring is seated properly in the spring pocket. If not, insert a pointed tool through this end of the coupler body and reposition the spring. Next place the tube seal in the tube socket. Remove the collar to ascertain that the tube seal is seated. Replace collar in the tube socket. Place the collet in its



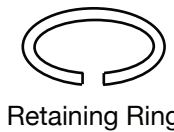
Retaining Nut



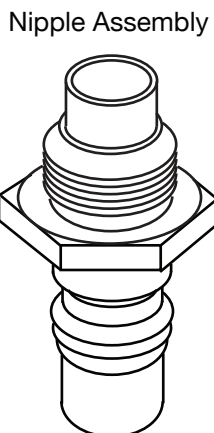
Lever (2)



Sleeve

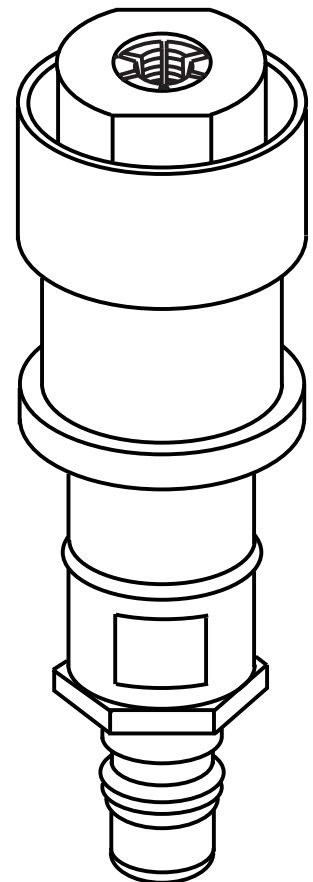


Retaining Ring



Nipple Assembly

proper position on the collar. Pick-up the retaining nut and screw it partially onto the coupler body. Insert a short piece of tube (3" long x the proper diameter for the coupler) through the retaining nut and collet. Tighten the retaining nut onto the coupler body with a wrench. (The tube will become locked in position in the coupler; it can be removed once the sleeve is pushed forward.) Insert the levers into the slots in the side of the coupler body; hold in place as you slide the sleeve, large diameter first onto the coupler body. Push the sleeve completely forward; remove the tube from the coupler assembly. Slide the retaining ring into its position on the coupler body. Insert the nipple assembly, spacer end first, into the coupler body and screw together. Set home with a wrench, using approximately 35 to 40 foot lbs. torque. This completes reassembly.



**FINAL ASSEMBLY**



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