# Production Control Units, Inc.

2280 West Dorothy Lane, Dayton, Ohio 45439-1892
Phone (937) 299-5594 FAX: (937) 299-4843


Web: www.pcuinc.com

# SERVICE BULLETIN for Series 50 TQC Valved Couplers

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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

_____

_____

_____

_____

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

## GENERAL DESCRIPTION

These tough, compact, lightweight PCU couplers utilize heat-treated parts for interchangeability and long life 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 50 TQC is designed for easy installation onto the end of straight tubing. Slide the coupler onto the tubing until seated and push down on the mechanical lock (lever) to make a positive seal. A cam locking device grips uniformly 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 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) Open toggle lever (bail handle) fully before fitting over the tube.

3) Press TQC snugly onto the tube until you feel the resistance of the spring, making sure toggle lever is completely closed before applying pressure.

4) To remove, open toggle fully. Do not pull TQC. Allow pressure to blow out through integral valve of the TQC.

5) With toggle lever still fully open, push TQC lightly against the end of the tube. This will release it so it will lift off easily. If the TQC does not slip off the tube, it has not been properly released, so repeat release procedure.

## 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.

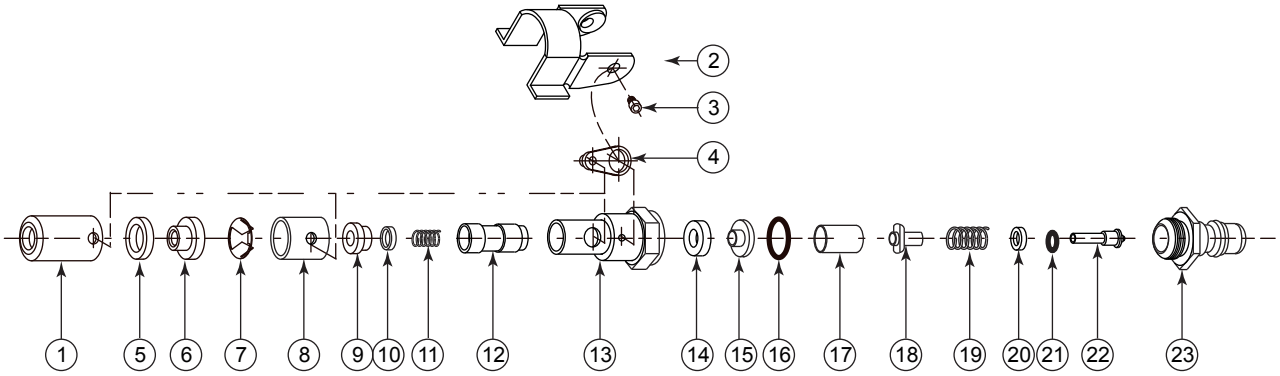
### SPECIFICATIONS

| | |
|---|---|
| Working Pressure | 25 microns to 500 PSIG |
| Proof Pressure | 4000 PSIG |
| Temperature Range | 0 to 250° F |
| Tube Engagement | 13/16 inches |
| Tube Out-of Roundness | 2% |

## NEOPRENE SEALS

### REPLACEMENT PARTS FOR "TQC" WITH SERIES 250 NIPPLE AS SHOWN

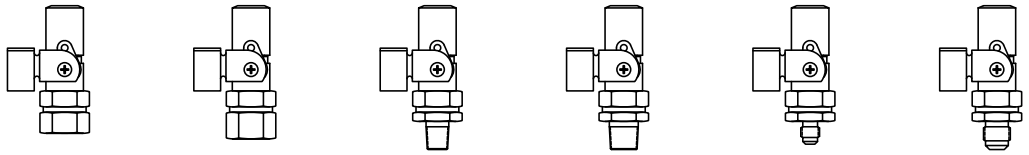
**Mates with our female Series 250 Two-Way Shutoff Valved Process Coupler featured in our Product Bulletin PB048.**



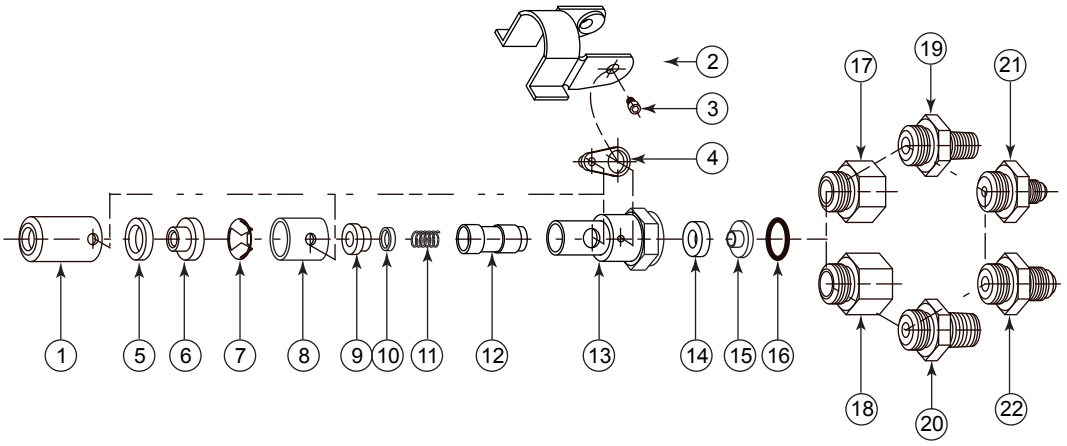

| NEOPRENE SEALS | | | | |
|---|---|---|---|---|
| **Stock Assemblies** | 3/16" Tube Size **50361** | 1/4" Tube Size **50461** | 5/16" Tube Size **50561** | 3/8" Tube Size **50661** |
| 1. Barrel | 57007 | | | |
| 2. Toggle Lever | 57005 | | | |
| 3. Screw (2 req'd) | 57002 | | | |
| 4. Link Arm (2 req'd) | 57003 | | | |
| 5. Spring Washer | 57006 | | | |
| 6. Collet Holder | 53004 | 54004 | 55004 | 56004 |
| 7. Collet | 53005 | 54005 | 55005 | 56005 |
| 8. Sleeve | 57004 | | | |
| 9. Collar | 53003 | 54003 | 55003 | 56003 |
| 10. QUAD RING Seal | 53002 | 54002 | 55002 | 56002 |
| 11. Spring | 53000 | 54000 | 55000 | 56000 |
| 12. Tube Socket | 53001 | 54001 | 55001 | 56001 |
| 13. Body | 57000 | | | |
| 14. Disc | 57008 | | | |
| 15. Washer | 57001 | | | |
| 16. End Cap O-ring | 61822 | | | |
| 17. Spacer | 61824 | | | |
| 18. Perch | 61825 | | | |
| 19. Valve Spring | 61804 | | | |
| 20. O-ring Retainer | 61840 | | | |
| 21. Valve O-ring | 61843 | | | |
| 22. Valve Stem | 61844 | | | |
| 23. Nipple Body | 61839 | | | |

# NEOPRENE SEALS

## SERIES 50 "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 |
|---|---|---|---|---|---|---|
| 3/16" OD | 50311 | 50351 | 50331 | 50381 | 50321 | 50341 |
| 1/4" OD | 50411 | 50451 | 50431 | 50481 | 50421 | 50441 |
| 5/16" OD | 50511 | 50551 | 50531 | 50581 | 50521 | 50541 |
| 3/8" OD | 50611 | 50651 | 50631 | 50681 | 50621 | 50641 |




**End Cap Adapters (See table below)**

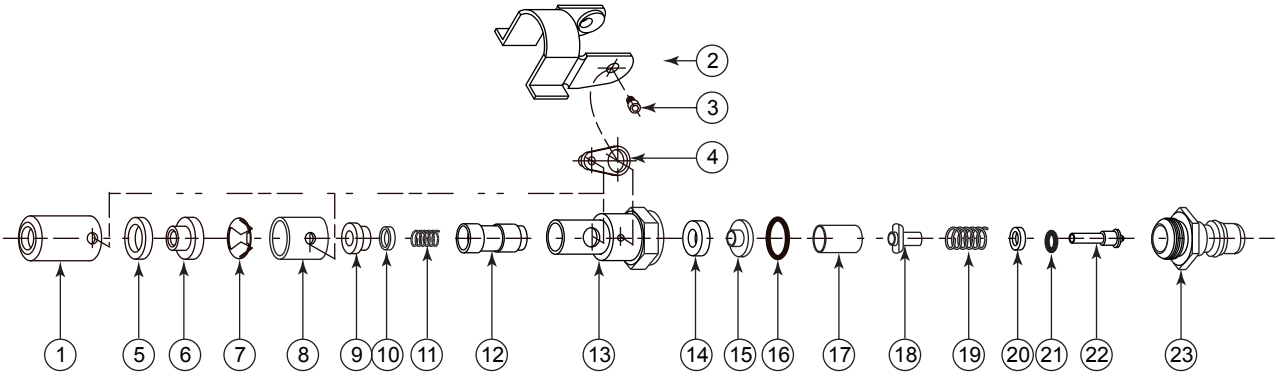
| NEOPRENE SEALS | Tube Size | | | |
|---|---|---|---|---|
| **Replacement Parts** | 3/16 | 1/4" | 5/16" | 3/8" |
| 1. Barrel | 57007 | | | |
| 2. Toggle Lever | 57005 | | | |
| 3. Screw (2 req'd) | 57002 | | | |
| 4. Link Arm (2 req'd) | 57003 | | | |
| 5. Spring Washer | 57006 | | | |
| 6. Collet Holder | 53004 | 54004 | 55004 | 56004 |
| 7. Collet | 53005 | 54005 | 55005 | 56005 |
| 8. Sleeve | 57004 | | | |
| 9. Collar | 53003 | 54003 | 55003 | 56003 |
| 10. QUAD RING Seal | 53002 | 54002 | 55002 | 56002 |
| 11. Spring | 53000 | 54000 | 55000 | 56000 |
| 12. Tube Socket | 53001 | 54001 | 55001 | 57001 |
| 13. Body | 57000 | | | |
| 14. Disc | 57008 | | | |
| 15. Washer | 57001 | | | |
| 16. End Cap O-ring | 61822 | | | |

| End Cap Adapters | |
|---|---|
| 17. 86014 - 1/4" FPT | 20. 57153 - 3/8" MPT |
| 18. 57152 - 3/8" FPT | 21. 57018 - 1/4" SAE FL |
| 19. 57017 - 1/4" MPT | 22. 57019 - 3/8" SAE FL |

## BUNA-N (NITRILE) SEALS

### REPLACEMENT PARTS FOR "TQC" WITH SERIES 250 NIPPLE AS SHOWN

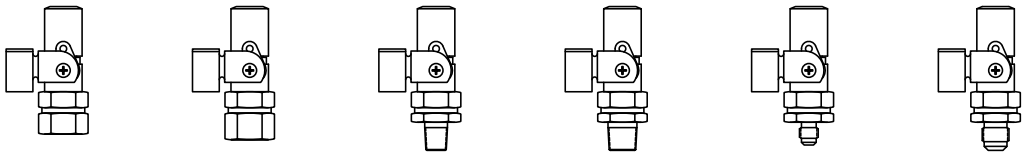
**Mates with our female Series 250 Two-Way Shutoff Valved Process Coupler featured in our Product Bulletin PB048.**



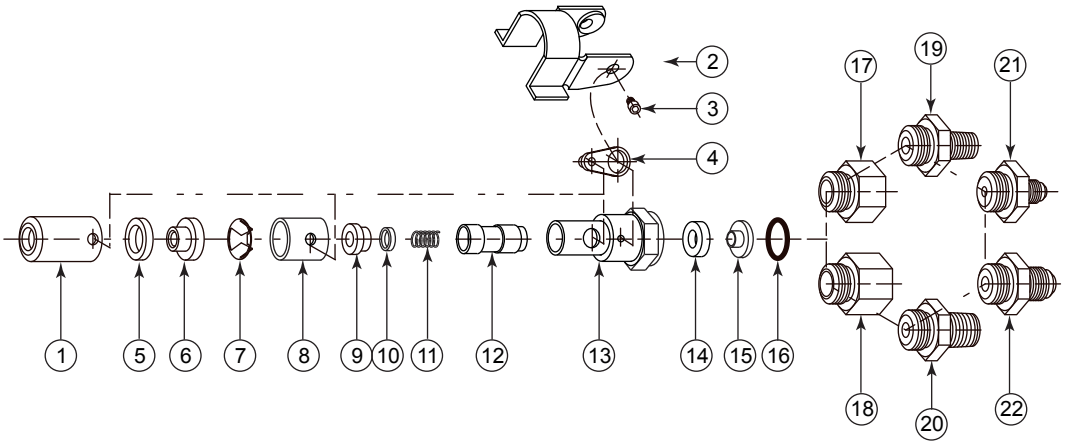

| BUNA-N (NITRILE) SEALS | | | | |
|---|---|---|---|---|
| **Stock Assemblies** | 3/16" Tube Size **50362** | 1/4" Tube Size **50462** | 5/16" Tube Size **50562** | 3/8" Tube Size **50662** |
| 1. Barrel | 57007 | | | |
| 2. Toggle Lever | 57005 | | | |
| 3. Screw (2 req'd) | 57002 | | | |
| 4. Link Arm (2 req'd) | 57003 | | | |
| 5. Spring Washer | 57006 | | | |
| 6. Collet Holder | 53004 | 54004 | 55004 | 56004 |
| 7. Collet | 53005 | 54005 | 55005 | 56005 |
| 8. Sleeve | 57004 | | | |
| 9. Collar | 53003 | 54003 | 55003 | 56003 |
| 10. QUAD RING Seal | 53008 | 54008 | 55008 | 56008 |
| 11. Spring | 53000 | 54000 | 55000 | 56000 |
| 12. Tube Socket | 53001 | 54001 | 55001 | 56001 |
| 13. Body | 57000 | | | |
| 14. Disc | 57011 | | | |
| 15. Washer | 57001 | | | |
| 16. End Cap O-ring | 61846 | | | |
| 17. Spacer | 61824 | | | |
| 18. Perch | 61825 | | | |
| 19. Valve Spring | 61804 | | | |
| 20. O-ring Retainer | 61840 | | | |
| 21. Valve O-ring | 61847 | | | |
| 22. Valve Stem | 61844 | | | |
| 23. Nipple Body | 61839 | | | |

# BUNA-N (NITRILE) SEALS

## SERIES 50 "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 |
|---|---|---|---|---|---|---|
| 3/16" OD | 50312 | 50352 | 50332 | 50382 | 50322 | 50342 |
| 1/4" OD | 50412 | 50452 | 50432 | 50482 | 50422 | 50442 |
| 5/16" OD | 50512 | 50552 | 50532 | 50582 | 50522 | 50542 |
| 3/8" OD | 50612 | 50652 | 50632 | 50682 | 50622 | 50642 |




**End Cap Adapters (See table below)**

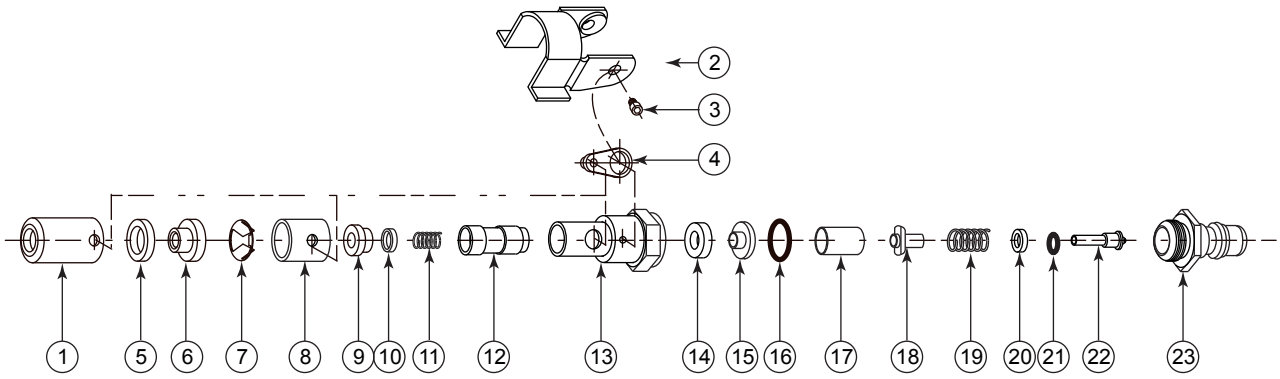
| BUNA-N (NITRILE) SEALS | Tube Size | | | |
|---|---|---|---|---|
| **Replacement Parts** | 3/16 | 1/4" | 5/16" | 3/8" |
| 1. Barrel | 57007 | | | |
| 2. Toggle Lever | 57005 | | | |
| 3. Screw (2 req'd) | 57002 | | | |
| 4. Link Arm (2 req'd) | 57003 | | | |
| 5. Spring Washer | 57006 | | | |
| 6. Collet Holder | 53004 | 54004 | 55004 | 56004 |
| 7. Collet | 53005 | 54005 | 55005 | 56005 |
| 8. Sleeve | 57004 | | | |
| 9. Collar | 53003 | 54003 | 55003 | 56003 |
| 10. QUAD RING Seal | 53008 | 54008 | 55008 | 56008 |
| 11. Spring | 53000 | 54000 | 55000 | 56000 |
| 12. Tube Socket | 53001 | 54001 | 55001 | 57001 |
| 13. Body | 57000 | | | |
| 14. Disc | 57011 | | | |
| 15. Washer | 57001 | | | |
| 16. End Cap O-ring | 61846 | | | |

| End Cap Adapters | |
|---|---|
| 17. 86014 - 1/4" FPT | 20. 57153 - 3/8" MPT |
| 18. 57152 - 3/8" FPT | 21. 57018 - 1/4" SAE FL |
| 19. 57017 - 1/4" MPT | 22. 57019 - 3/8" SAE FL |

## FLUOROCARBON SEALS

### REPLACEMENT PARTS FOR "TQC" WITH SERIES 250 NIPPLE AS SHOWN

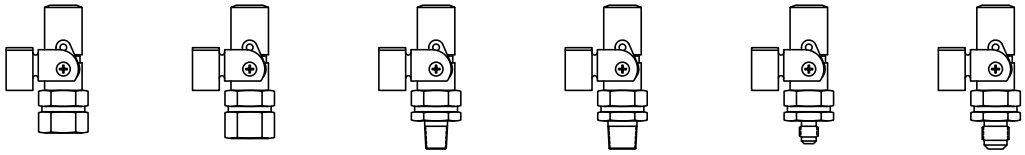
**Mates with our female Series 250 Two-Way Shutoff Valved Process Coupler featured in our Product Bulletin PB048.**



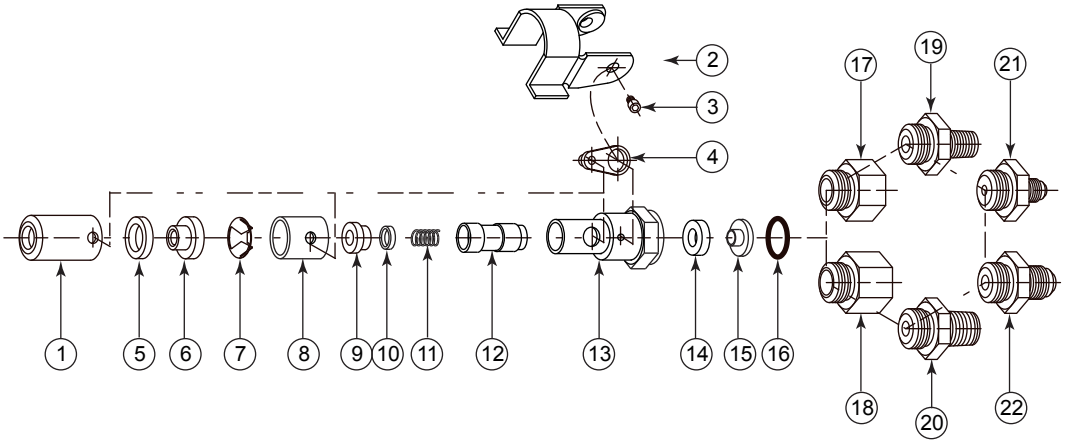

| FLUOROCARBON SEALS | | | | |
|---|---|---|---|---|
| **Stock Assemblies** | 3/16" Tube Size **50363** | 1/4" Tube Size **50463** | 5/16" Tube Size **50563** | 3/8" Tube Size **50663** |
| 1. Barrel | 57007 | | | |
| 2. Toggle Lever | 57005 | | | |
| 3. Screw (2 req'd) | 57002 | | | |
| 4. Link Arm (2 req'd) | 57003 | | | |
| 5. Spring Washer | 57006 | | | |
| 6. Collet Holder | 53004 | 54004 | 55004 | 56004 |
| 7. Collet | 53005 | 54005 | 55005 | 56005 |
| 8. Sleeve | 57004 | | | |
| 9. Collar | 53003 | 54003 | 55003 | 56003 |
| 10. QUAD RING Seal | 53006 | 54006 | 55006 | 56006 |
| 11. Spring | 53000 | 54000 | 55000 | 56000 |
| 12. Tube Socket | 53001 | 54001 | 55001 | 56001 |
| 13. Body | 57000 | | | |
| 14. Disc | 57020 | | | |
| 15. Washer | 57001 | | | |
| 16. End Cap O-ring | 61852 | | | |
| 17. Spacer | 61824 | | | |
| 18. Perch | 61825 | | | |
| 19. Valve Spring | 61804 | | | |
| 20. O-ring Retainer | 61840 | | | |
| 21. Valve O-ring | 61853 | | | |
| 22. Valve Stem | 61844 | | | |
| 23. Nipple Body | 61839 | | | |

# FLUOROCARBON SEALS

## SERIES 50 "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 |
|---|---|---|---|---|---|---|
| 3/16" OD | 50313 | 50353 | 50333 | 50383 | 50323 | 50343 |
| 1/4" OD | 50413 | 50453 | 50433 | 50483 | 50423 | 50443 |
| 5/16" OD | 50513 | 50553 | 50533 | 50583 | 50523 | 50543 |
| 3/8" OD | 50613 | 50653 | 50633 | 50683 | 50623 | 50643 |




**End Cap Adapters (See table below)**

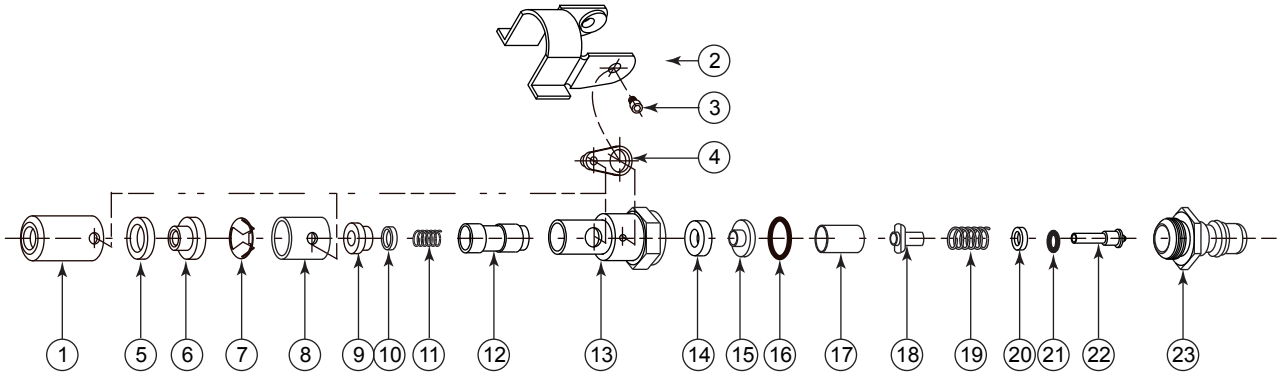
| FLUOROCARBON SEALS | Tube Size | | | |
|---|---|---|---|---|
| **Replacement Parts** | 3/16 | 1/4" | 5/16" | 3/8" |
| 1. Barrel | 57007 | | | |
| 2. Toggle Lever | 57005 | | | |
| 3. Screw (2 req'd) | 57002 | | | |
| 4. Link Arm (2 req'd) | 57003 | | | |
| 5. Spring Washer | 57006 | | | |
| 6. Collet Holder | 53004 | 54004 | 55004 | 56004 |
| 7. Collet | 53005 | 54005 | 55005 | 56005 |
| 8. Sleeve | 57004 | | | |
| 9. Collar | 53003 | 54003 | 55003 | 56003 |
| 10. QUAD RING Seal | 53006 | 54006 | 55006 | 56006 |
| 11. Spring | 53000 | 54000 | 55000 | 56000 |
| 12. Tube Socket | 53001 | 54001 | 55001 | 57001 |
| 13. Body | 57000 | | | |
| 14. Disc | 57020 | | | |
| 15. Washer | 57001 | | | |
| 16. End Cap O-ring | 61852 | | | |

| End Cap Adapters | |
|---|---|
| 17. 86014 - 1/4" FPT | 20. 57153 - 3/8" MPT |
| 18. 57152 - 3/8" FPT | 21. 57018 - 1/4" SAE FL |
| 19. 57017 - 1/4" MPT | 22. 57019 - 3/8" SAE FL |

## EPDM SEALS

### REPLACEMENT PARTS FOR "TQC" WITH SERIES 250 NIPPLE AS SHOWN

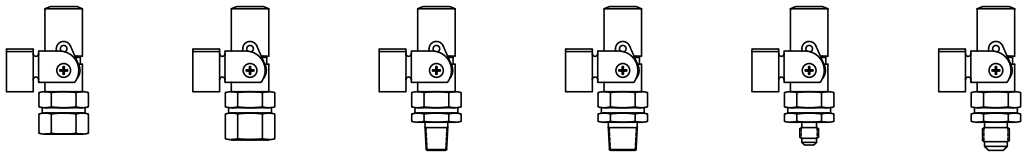
**Mates with our female Series 250 Two-Way Shutoff Valved Process Coupler featured in our Product Bulletin PB048.**



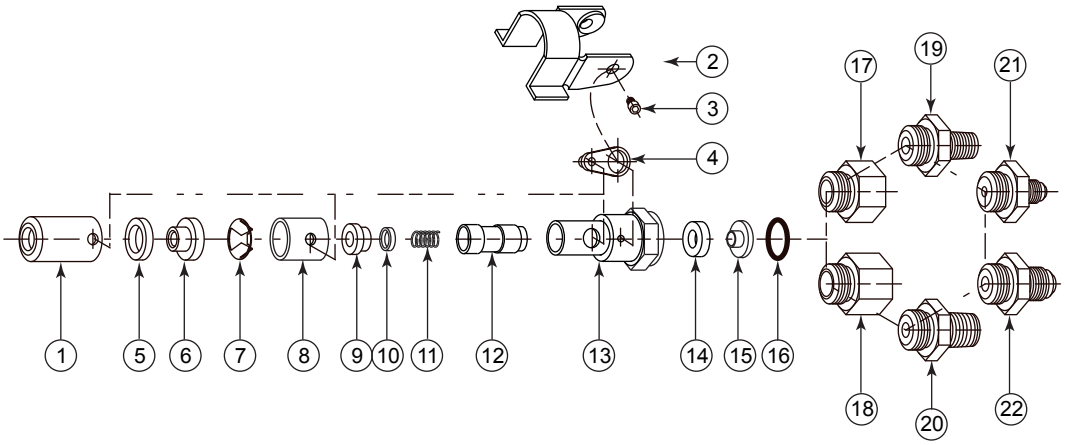

| EPDM SEALS | | | | |
|---|---|---|---|---|
| **Stock Assemblies** | 3/16" Tube Size **50366** | 1/4" Tube Size **50466** | 5/16" Tube Size **50566** | 3/8" Tube Size **50666** |
| 1. Barrel | 57007 | | | |
| 2. Toggle Lever | 57005 | | | |
| 3. Screw (2 req'd) | 57002 | | | |
| 4. Link Arm (2 req'd) | 57003 | | | |
| 5. Spring Washer | 57006 | | | |
| 6. Collet Holder | 53004 | 54004 | 55004 | 56004 |
| 7. Collet | 53005 | 54005 | 55005 | 56005 |
| 8. Sleeve | 57004 | | | |
| 9. Collar | 53003 | 54003 | 55003 | 56003 |
| 10. QUAD RING Seal | 53007 | 54007 | 55007 | 56007 |
| 11. Spring | 53000 | 54000 | 55000 | 56000 |
| 12. Tube Socket | 53001 | 54001 | 55001 | 56001 |
| 13. Body | 57000 | | | |
| 14. Disc | 57075 | | | |
| 15. Washer | 57001 | | | |
| 16. End Cap O-ring | 61871 | | | |
| 17. Spacer | 61824 | | | |
| 18. Perch | 61825 | | | |
| 19. Valve Spring | 61804 | | | |
| 20. O-ring Retainer | 61840 | | | |
| 21. Valve O-ring | 61873 | | | |
| 22. Valve Stem | 61844 | | | |
| 23. Nipple Body | 61839 | | | |

# EPDM SEALS

## SERIES 50 "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 |
|---|---|---|---|---|---|---|
| 3/16" OD | 50316 | 50356 | 50336 | 50386 | 50326 | 50346 |
| 1/4" OD | 50416 | 50456 | 50436 | 50486 | 50426 | 50446 |
| 5/16" OD | 50516 | 50556 | 50536 | 50586 | 50526 | 50546 |
| 3/8" OD | 50616 | 50656 | 50636 | 50686 | 50626 | 50646 |




**End Cap Adapters (See table below)**

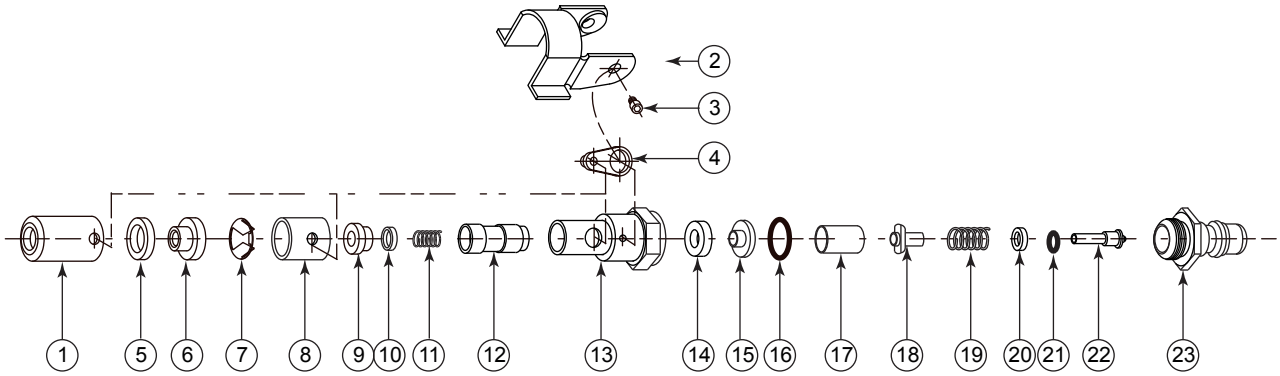
| EPDM SEALS | Tube Size | | | |
|---|---|---|---|---|
| **Replacement Parts** | 3/16 | 1/4" | 5/16" | 3/8" |
| 1. Barrel | 57007 | | | |
| 2. Toggle Lever | 57005 | | | |
| 3. Screw (2 req'd) | 57002 | | | |
| 4. Link Arm (2 req'd) | 57003 | | | |
| 5. Spring Washer | 57006 | | | |
| 6. Collet Holder | 53004 | 54004 | 55004 | 56004 |
| 7. Collet | 53005 | 54005 | 55005 | 56005 |
| 8. Sleeve | 57004 | | | |
| 9. Collar | 53003 | 54003 | 55003 | 56003 |
| 10. QUAD RING Seal | 53007 | 54007 | 55007 | 56007 |
| 11. Spring | 53000 | 54000 | 55000 | 56000 |
| 12. Tube Socket | 53001 | 54001 | 55001 | 57001 |
| 13. Body | 57000 | | | |
| 14. Disc | 57075 | | | |
| 15. Washer | 57001 | | | |
| 16. End Cap O-ring | 61871 | | | |

| End Cap Adapters | |
|---|---|
| 17. 86014 - 1/4" FPT | 20. 57153 - 3/8" MPT |
| 18. 57152 - 3/8" FPT | 21. 57018 - 1/4" SAE FL |
| 19. 57017 - 1/4" MPT | 22. 57019 - 3/8" SAE FL |

## HFC-134a SEALS

### REPLACEMENT PARTS FOR "TQC" WITH SERIES 250 NIPPLE AS SHOWN

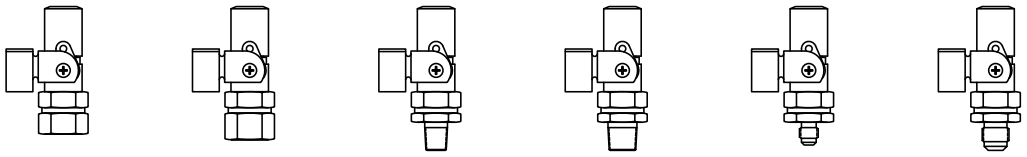
**Mates with our female Series 250 Two-Way Shutoff Valved Process Coupler featured in our Product Bulletin PB048.**



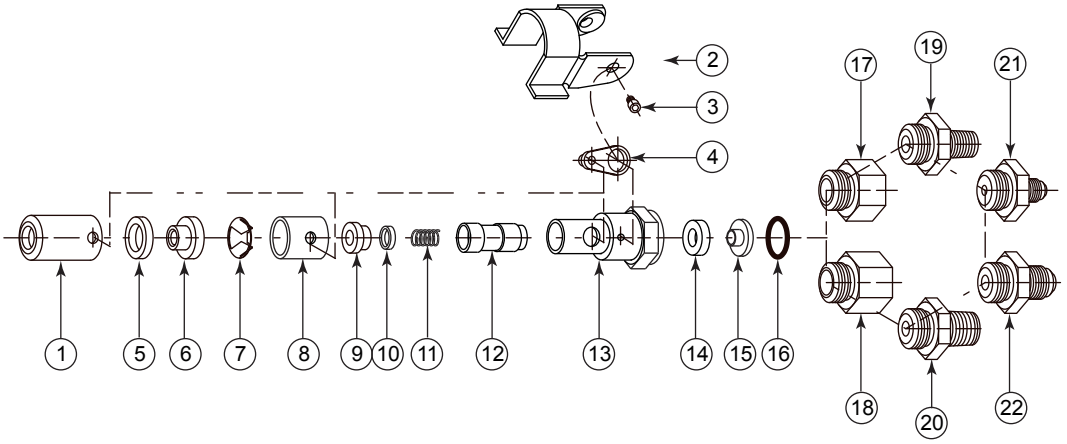

| HFC-134a SEALS | | | | |
|---|---|---|---|---|
| **Stock Assemblies** | 3/16" Tube Size **50367** | 1/4" Tube Size **50467** | 5/16" Tube Size **50567** | 3/8" Tube Size **50667** |
| 1. Barrel | 57007 | | | |
| 2. Toggle Lever | 57005 | | | |
| 3. Screw (2 req'd) | 57002 | | | |
| 4. Link Arm (2 req'd) | 57003 | | | |
| 5. Spring Washer | 57006 | | | |
| 6. Collet Holder | 53004 | 54004 | 55004 | 56004 |
| 7. Collet | 53005 | 54005 | 55005 | 56005 |
| 8. Sleeve | 57004 | | | |
| 9. Collar | 53003 | 54003 | 55003 | 56003 |
| 10. QUAD RING Seal | 53008 | 54008 | 55008 | 56008 |
| 11. Spring | 53000 | 54000 | 55000 | 56000 |
| 12. Tube Socket | 53001 | 54001 | 55001 | 56001 |
| 13. Body | 57000 | | | |
| 14. Disc | 57134 | | | |
| 15. Washer | 57001 | | | |
| 16. End Cap O-ring | 61879 | | | |
| 17. Spacer | 61824 | | | |
| 18. Perch | 61825 | | | |
| 19. Valve Spring | 61804 | | | |
| 20. O-ring Retainer | 61840 | | | |
| 21. Valve O-ring | 61880 | | | |
| 22. Valve Stem | 61844 | | | |
| 23. Nipple Body | 61839 | | | |

## HFC-134a SEALS

## SERIES 50 "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 |
|---|---|---|---|---|---|---|
| 3/16" OD | 50317 | 50357 | 50337 | 50387 | 50327 | 50347 |
| 1/4" OD | 50417 | 50457 | 50437 | 50487 | 50427 | 50447 |
| 5/16" OD | 50517 | 50557 | 50537 | 50587 | 50527 | 50547 |
| 3/8" OD | 50617 | 50657 | 50637 | 50687 | 50627 | 50647 |




**End Cap Adapters (See table below)**

| HFC-134a SEALS | Tube Size | | | |
|---|---|---|---|---|
| **Replacement Parts** | 3/16 | 1/4" | 5/16" | 3/8" |
| 1. Barrel | 57007 | | | |
| 2. Toggle Lever | 57005 | | | |
| 3. Screw (2 req'd) | 57002 | | | |
| 4. Link Arm (2 req'd) | 57003 | | | |
| 5. Spring Washer | 57006 | | | |
| 6. Collet Holder | 53004 | 54004 | 55004 | 56004 |
| 7. Collet | 53005 | 54005 | 55005 | 56005 |
| 8. Sleeve | 57004 | | | |
| 9. Collar | 53003 | 54003 | 55003 | 56003 |
| 10. QUAD RING Seal | 53008 | 54008 | 55008 | 56008 |
| 11. Spring | 53000 | 54000 | 55000 | 56000 |
| 12. Tube Socket | 53001 | 54001 | 55001 | 57001 |
| 13. Body | 57000 | | | |
| 14. Disc | 57134 | | | |
| 15. Washer | 57001 | | | |
| 16. End Cap O-ring | 61879 | | | |

| End Cap Adapters | |
|---|---|
| 17. 86014 - 1/4" FPT | 20. 57153 - 3/8" MPT |
| 18. 57152 - 3/8" FPT | 21. 57018 - 1/4" SAE FL |
| 19. 57017 - 1/4" MPT | 22. 57019 - 3/8" SAE FL |

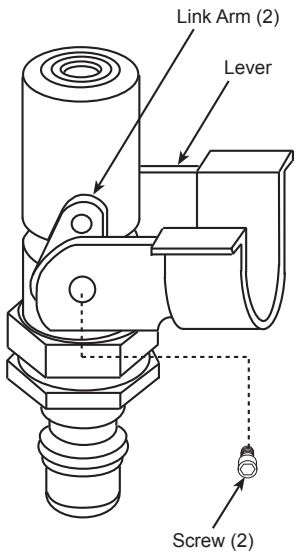



**Figure 1**

## STORAGE

When the “TQC” is not in use, it should be stored with the toggle lever in the open position, with the lever 90 degrees from the coupler body. If the coupler is stored with the toggle lever in the closed position, pressure is applied to the QUAD-RING* seal, squeezing it out into the tube channel of the coupler. If this condition is allowed to exist for any length of time, the QUAD-RING tends to remain in its expanded condition for some length of time after the pressure has been removed. A tube being inserted into the coupler under these conditions will damage the QUAD-RING as the tube is forced past it.

**INITIAL DISASSEMBLY** – Complete Unit
No special tools are required.

Set toggle lever 90 degrees from the body of coupler. Using proper wrench, remove screws on each side. After removal of both screws, grasp toggle lever and pull out from coupler body so that both toggle lever and link arms are extending out 90 degrees from the body. Grasp body of coupler with one hand, so pressure can be applied to link arms with thumb and forefinger, moving link arms with thumb and forefinger, moving link arms in toward each other. Grasp toggle lever with other hand thumb lying between lever aims. Spring arm out until the button on disengages from 7/16” diameter hole in link arm. Repeat procedure with other link arm. After toggle lever has been removed, grasp link arms and pull out to disengage link arm pins from assembly. Remove link arms and set aside.

**SUBASSEMBLY “A”**

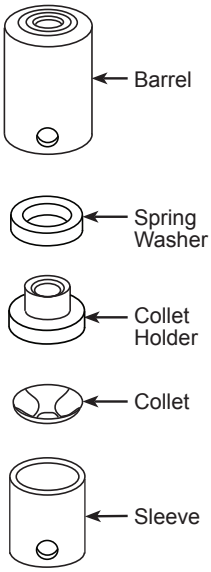



**Figure 2**

**SUBASSEMBLY “B”**

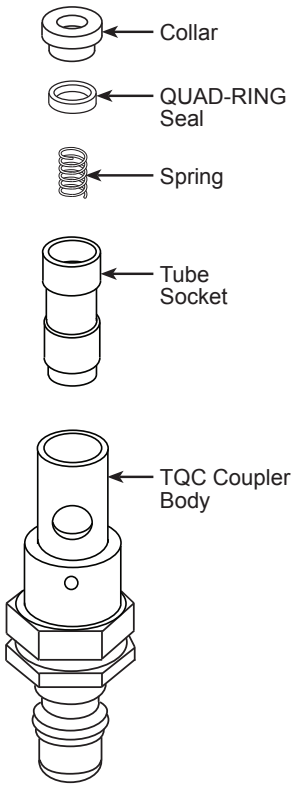



**Figure 3**

**DISASSEMBLY** – SUBASSEMBLY "A"

Hold the assembly in one hand with small diameter end up. Using a 3/8” diameter x 3” long piece of CRS, or equivalent, push pilot of collet holder. Shove all parts out large diameter end of barrel. A visual inspection for excessive wear can now be made of parts especially the spring washer and collet. The condition of these two parts is critical because excessive wear can cause coupler malfunction. They should be replaced if there is any doubt as to their functioning capabilities.

**REASSEMBLY** – SUBASSEMBLY "A"

Set sleeve onto a flat surface with link pinholes down as shown in Figure 2. Place collet on top of sleeve with bevel down. Place collet holder over collet so that OD of collet pilots into collet holder. Next, place washer over small end on collet holder and slide barrel down over previously positioned parts until small end on collet holder slides through hole in end of barrel. Grasp unit at bottom so that parts do not disassemble and turn open end up. Make certain link aim pin holes are aligned in barrel and sleeve. Set aside.

**DISASSEMBLY** – SUBASSEMBLY “B”

Hold coupler body with small end down and shake or jar subassembly “B” free. In doing this, the collar may fall free of the unit. The two parts of this assembly which could cause a malfunction are the QUAD-RING seal and spring. To remove the QUAD-RING seal from tube socket, use a sharp pointed tool to pry the QUAD-RING up and out of the tube socket, being careful not to damage the QUAD-RING in the process. To remove the spring from the tube socket, insert a small tool 1/16” diameter x 2" long through small end of tube socket at an angle to engage a coil in the spring. Shove out until spring disengages from tube socket.

**REASSEMBLY** – SUBASSEMBLY “B”

Set spring onto assembly tool. Holding tube socket in one hand, insert spring into tube socket until spring seats against bottom of tube socket NOTE: When replacing spring in tube socket, care should be taken to ensure large end of spring is inserted first. Otherwise, unit will not function property. Next place the QUAD-RING in the tube socket. Use collar to seat the QUAD-RING to the shoulder in tube socket. Remove the collar to ascertain that the QUAD-RING is seated to the shoulder and is not twisted in any way. Replace collar in the tube socket Set aside - collar end up.

**SUBASSEMBLY "C"**

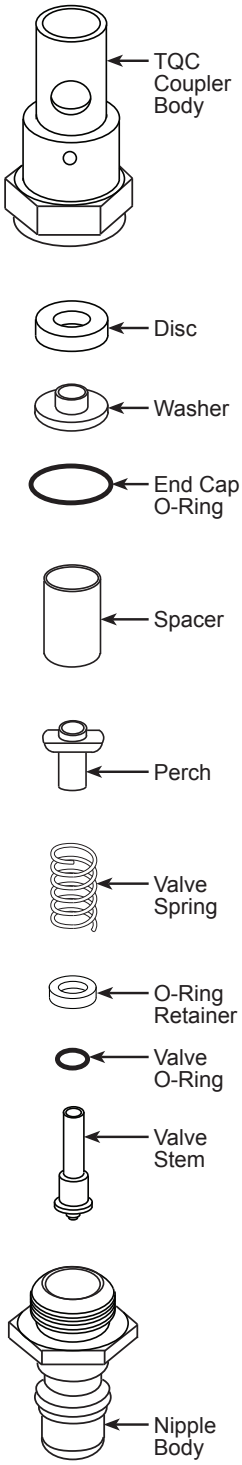



**Figure 4**

**DISASSEMBLY** – SUBASSEMBLY "C"

To disassemble Subassembly "C" place nipple body in a vise, clamping on the 1" hex. Use a 1" open-end (or equivalent) on 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 with the assembly in a position. With the nipple body end slanted slightly downward, remove nipple body from coupler body. Set nipple body aside. Turn coupler body so that the threaded end is down. Jar or shake disc and washer free from coupler body. Replace disc if damaged. Set coupler body aside (after disc and washer have been replaced in coupler body), threaded end up. Now pick up the nipple body with its related parts. Holding it with the threaded end up, remove spacer and set aside. Tilt nipple body down and slide out valve assembly. Check. Remove perch, spring, O-ring retainer, and valve O-ring (Item 21) from valve stem. Check O-ring for cuts, nicks or deformation and replace if necessary. Also check end cap O-ring (Item 16) at bottom of thread on nipple body and replace if damaged.

**REASSEMBLY** – SUBASSEMBLY "C"

After parts have been inspected, pick up valve stem in one hand and slide valve O-ring (Item 21) over stem and upon 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 valve 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 spacer and slide it down into the nipple body until it comes in contact with the shoulders of the perch. Pick up the coupler body with its previously assembled parts (taking care not to dislodge parts) and screw the coupler to the nipple body. Set home with wrench, using approximately 35 to 40 foot lbs torque. Set aside.

**SUBASSEMBLY "A"**

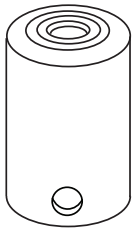


**Figure 5**

**SUBASSEMBLY "B"-"C"**

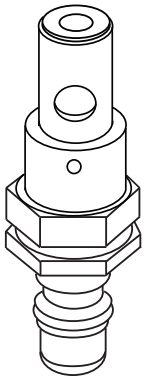


**Figure 6**

**FINAL ASSEMBLY** – Complete Unit

Taking subassembly "C" in one hand, pick up subassembly "B" and insert it (tube socket first) into the small end of the coupler body. Slide subassembly "A* over the coupler body, open end first. Rotate subassembly "A* until the link arm pin holes line up with holes in coupler body. Next, insert the link arm pins into holes until the link arms seat against body of barrel. Position link arms so they extend about 90 degrees from body, holding unit with barrel end up. Press in on the link arms so they move in toward each other. Pick up the toggle lever with the other hand, holding it open side up. Slide it over link arms until the buttons snap into the 7/16" diameter holes in link arms. (To do this, it may be necessary to spring out the arms on the toggle lever.) Next, shove toggle lever and link arms up toward the hex on coupler body until the holes in the lever line up with tapped holes in coupler body. Insert both screws in place and tighten with wrench. (For ease of alignment of screw holes, toggle lever should be set at approximately 90 degrees angle from of body.) This completes assembly.

**FINAL ASSEMBLY**

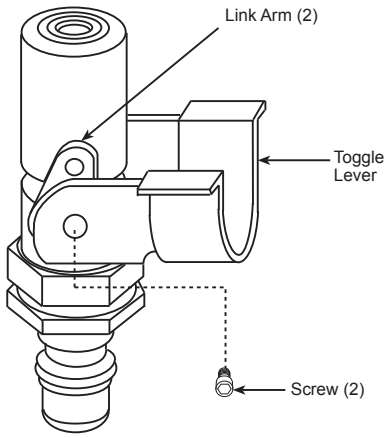



**Figure 7**

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