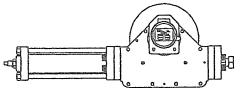


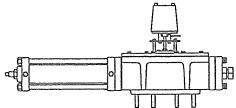
Model QT-10 Single Cylinder Actuator

Document No. 027-0029-1092

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This document replaces all previous editions.

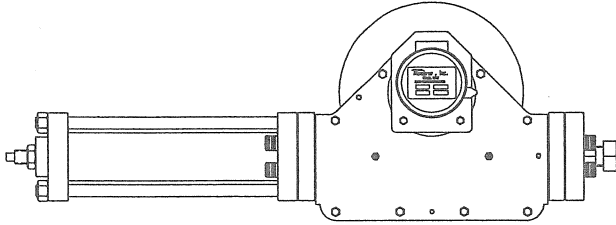


Contents

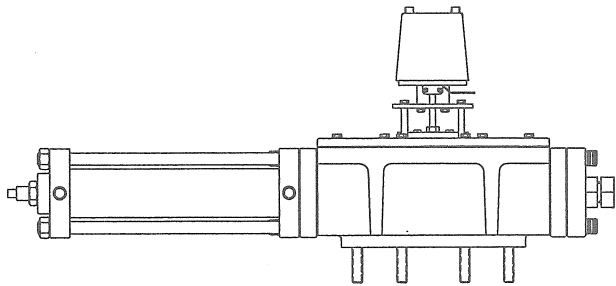
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Model QT-10 Single Cylinder Actuator

Description



Top view, QT-10.125 actuator with no options



Front side view, QT-10.125 actuator

The QT-10 actuator is a 90 degree rotational actuator designed to operate ball, plug and butterfly valves as well as other control devices such as dampeners, etc. in a modulating or on/off application with a high pressure hydraulic power supply or high pressure line gas.

This is an explanation of maintenance procedures for the QT-10 series actuator which is one of a series of Thunderco valve actuators.

Applications

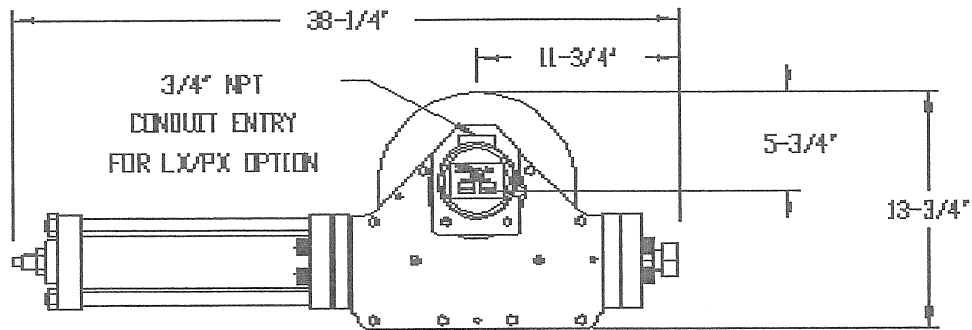
- High Pressure Gas Powered Actuation of ESD valves
- High Pressure Gas Powered Modulation of Quarter Turn Control Valves
- Model QT-Series Single Cylinder Actuators High Pressure Hydraulic Powered Actuation of ESD Valves
- High Pressure Hydraulic Powered Modulation of Quarter Turn Control Valves

A variety of actuator mounted and/or stand alone control options are available. See information concerning our gas powered G-4000 and G-5000

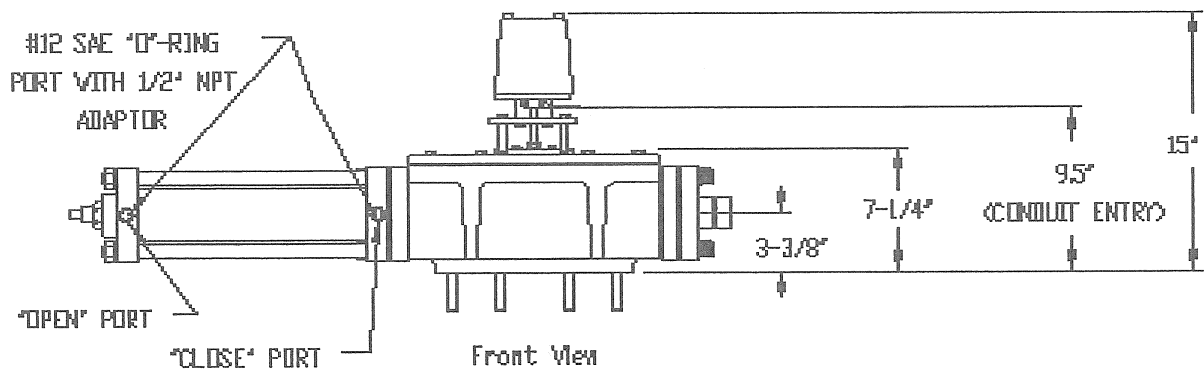
ESD Systems as well as our T-3000 and T-9000 Electro/Hydraulic Valve Control and Positioning Systems.

Model QT-10 Single Cylinder Actuator

Dimensions



Top View



Front View

Specifications

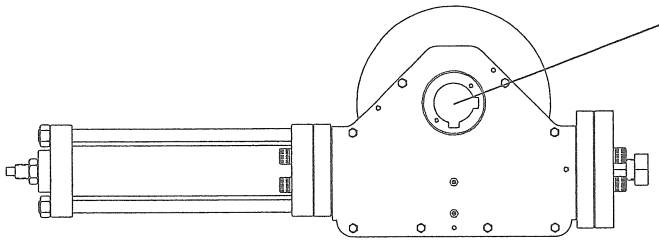
| | |
|-----------------------------|---|
| Maximum Operating Pressure: | 2000 PSI |
| Normal Operating Pressure: | Dependent on system design 400-600 psi typical for HPA-1500 based systems 800-1000 psi typical for HPA-3000 based systems |
| Maximum Torque: | 30,000 inch pounds (QT-10.125 @ 1500 psi) 75,000 inch pounds (QT-10.140 @ 1500 psi) |

Model QT-10 Single Cylinder Actuator

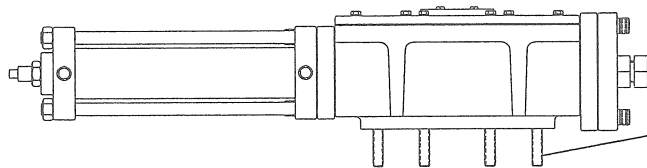
Mounting

Make sure that the actuator and valve are in the same position.

Keyway at 3 o'clock is for horizontal mounting in line with pipeline. Keyway at 6 o'clock is for vertical mounting or mounting across the pipeline.



Top view, QT-10 series actuator shown in open



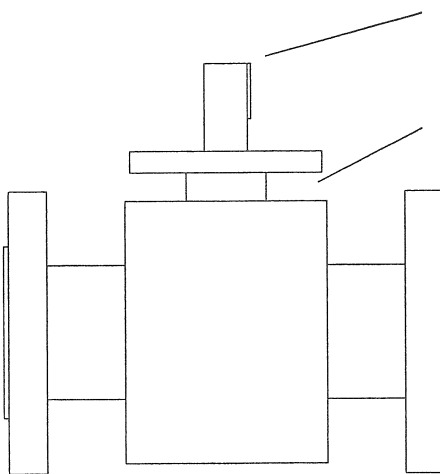
Side view, QT-10 series actuator

Install studs in operator, do not exceed 3/4" penetration with the early QT-10 Series actuator or gear head may jamb.

Install gasket or gasket sealer between the actuator and valve mounting flange.

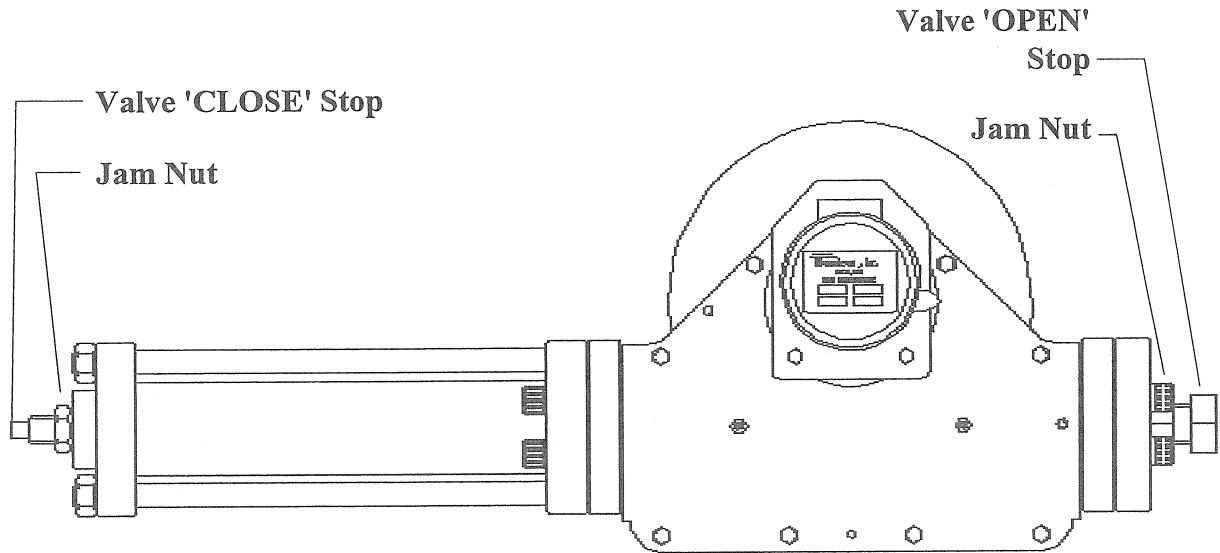
Grease the valve stem and slip the actuator over it.

Install and tighten nuts. Lock washers are recommended.



Model QT-10 Single Cylinder Actuator

Travel Stops



Top view, QT-10 Series actuator shown in open position

The travel stops are adjusted at our factory if actuator/valve assembly was provided by Thunderco.

Field adjustments can be done by loosening the corresponding jam nut and adjusting the appropriate stop screw until desired valve travel is achieved.

Always set actuator stops to impact prior to internal valve stops to eliminate possible valve stem damage.

The valve 'CLOSE' stop cannot be unscrewed completely from the outside however it can be screwed in too far. Do not screw in more than 1-1/2" from its fully out position or leakage may result around the sealing "o"-ring.

An extended valve 'CLOSE' and/or 'OPEN' stop is available if full valve travel is not desired. Ask Thunderco personnel for details.

Model QT-10 Single Cylinder Actuator

Trouble Shooting

| <u>Problem</u> | <u>Solution</u> |
|--|---|
| 1) Hydraulic fluid loss due to leaks from piston rod seals. | Refer to instruction for cylinder disassembly/assembly. |
| 2) Hydraulic fluid loss at end plate seals. | Follow instructions for cylinder disassembly/assembly. Coat end plate seals, item (19), with a thick grease to insure that the end plate "O"-rings seat against the polished cylinder walls. |
| 3) Apparent slop in scotch yoke mechanism upon operator lid removal. | Follow procedures for mainframe disassembly. Rotate bearing blocks, item (13), 90 degrees to renew bearing surface and inspect slots in torque arm, item (11), for wear. |
| 4) Non-operational. | Insure minimum supply pressure and correct operation of controls. Remove lid and inspect mainframe internal parts for wear or corrosion. On the QT-10 or QT-1510 if the mounting stud is screwed in more than 3/4" it may jam the internal mechanism. |

Recommended Tools

The following tools are recommended for complete actuator maintenance.

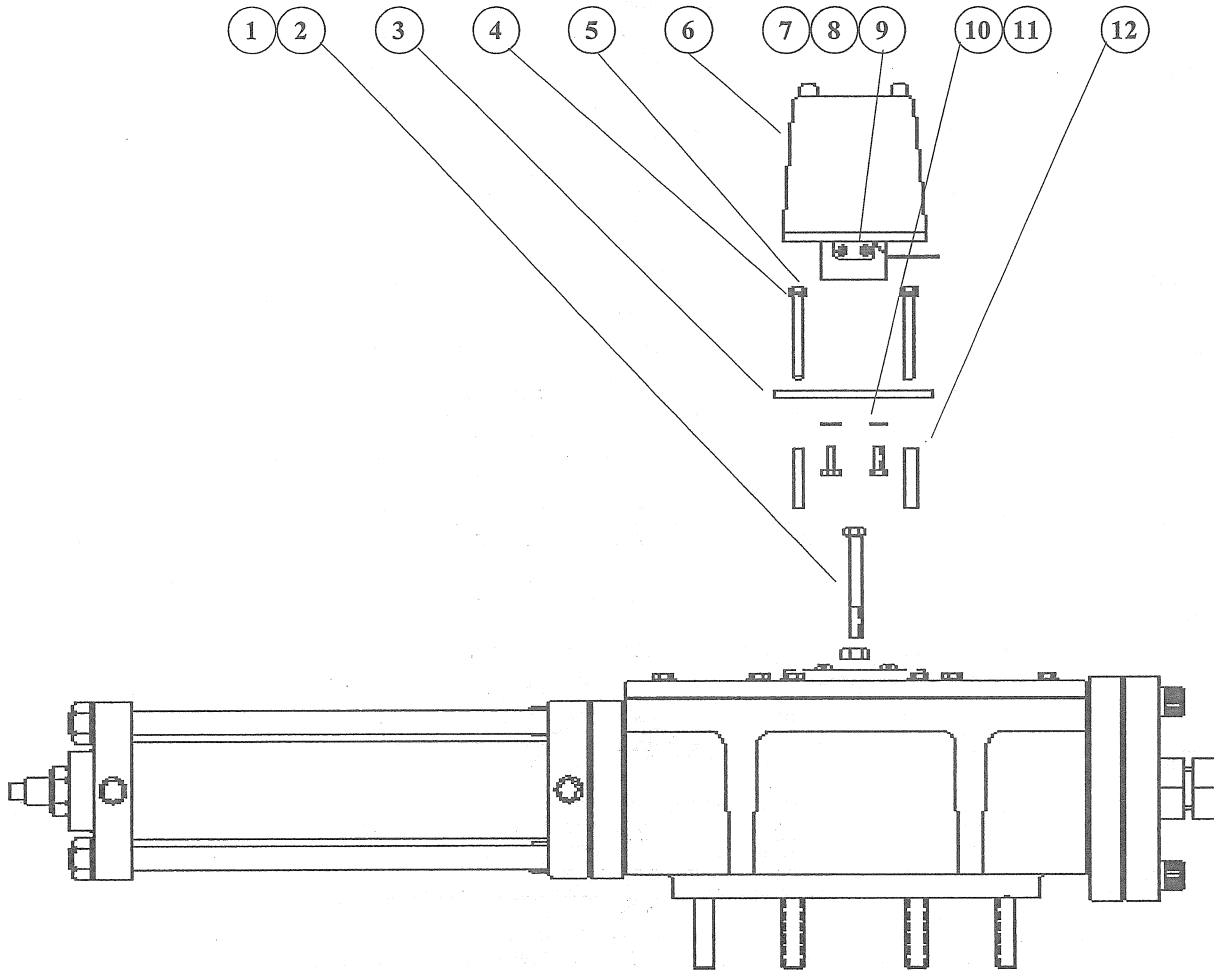
ratchet wrench with extension
pneumatic/electric impact wrench-optional
strap wrench
hammer and punch
channel lock pliers
1/4" blade screw driver
7/16" socket
9/16" socket
12" adjustable crescent wrench
1/2" socket
11/16" socket
1-1/8" deep socket
1/2" allen wrench
.047" dia. tip internal snap ring pliers
.070" dia. tip external snap ring pliers

Inspection and Renewal-Initial Conditions

- 1) Place valve in a closed to mid position.
- 2) Relieve all hydraulic/pneumatic lines attached to operator of any fluid pressure and plug cylinder ports to minimize fluid loss.

Model QT-10 Single Cylinder Actuator

Model PX/LX Removal



*Side view, QT-Series.1XX actuator shown with
Model PX/LX Transmitter/Limit Switch Pack Option*

- 1) Loosen flag clamp screws (8).
- 2) Remove screws (5) retaining Model PX/LX mounting plate (3). Note the orientation of the flag to the feedback screw (1) and remove mounting plate (3) and Model PX/LX from valve.

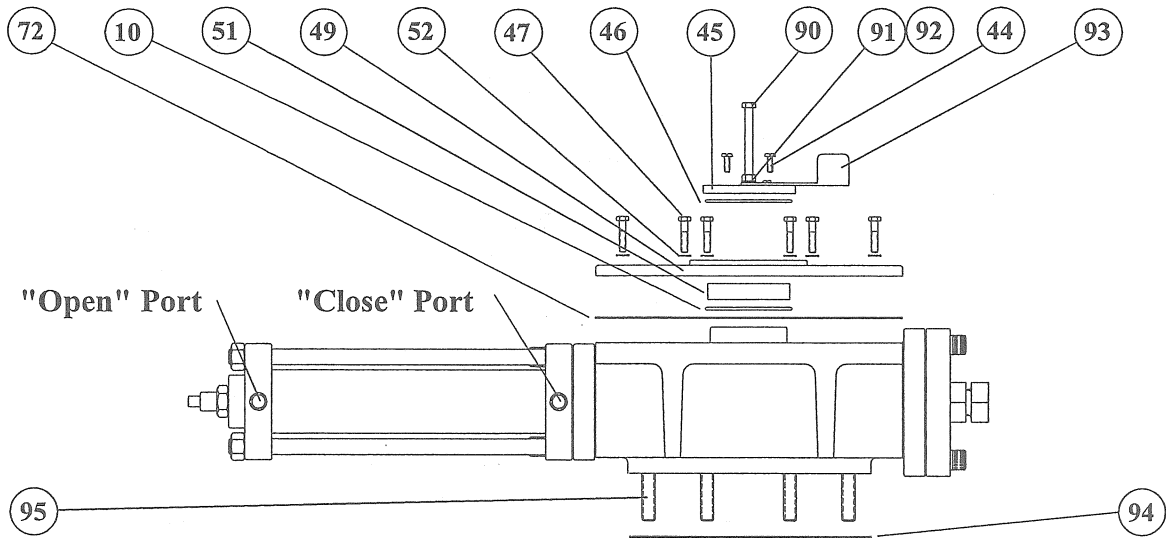
Model QT-10 Single Cylinder Actuator

Part List, PX/LX Adaptor Assembly

| Item | Qty | Part Number | Description |
|------|-----|----------------------|----------------------------------|
| BM | 1 | 020-0154-B-T | PX/LX to QT-10 Mounting Assembly |
| 1 | 1 | 200-6NCx2.12-SS-HCS | Screw, Hex Cap |
| 2 | 1 | 201-6NC-CP-HSN | Nut, Sealing |
| 3 | 1 | 005-0247-B-B | Plate, Mounting |
| 4 | 2 | 202-4-SS-ETW | Lock Washer, External Tooth |
| 5 | 4 | 200-4x2.8-SS-HCS | Screw, Hex Cap |
| 6 | 1 | 020-0123-C-T | Model PX-3 Position Transmitter |
| or | 1 | 092-0002-A-T | Model LX-1 Limit Switch Pack |
| 7 | 1 | 005-0056-A-B | Flag, Indicator |
| 8 | 2 | 200-#8-32x1.0-SS-SPH | Screw |
| 9 | 2 | 202-#8-SS-SRL | Lock Washer, External Tooth |
| 10 | 2 | 200-4x14-SS-HCS | Screw, Hex Cap |
| 11 | 2 | 202-4-SS-ETW | Lock Washer, External Tooth |
| 12 | 4 | 003-1.14-SS-STO | Standoff |

Model QT-10 Single Cylinder Actuator

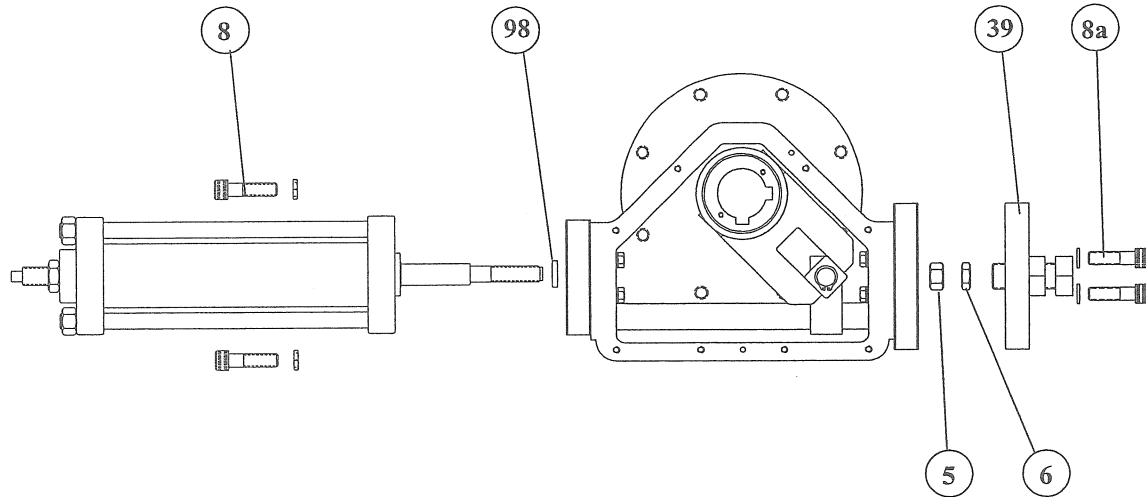
Lid Removal



*QT-10 Actuator, Exploded Side View
Refer to Gear Box Assembly Parts List*

- 1) Remove torque arm cover screws (44), torque arm cover (45) and its "o"-ring (46).
- 2) Remove lid screws (47) and lid (49) using jack up holes provided.

Cylinder Removal

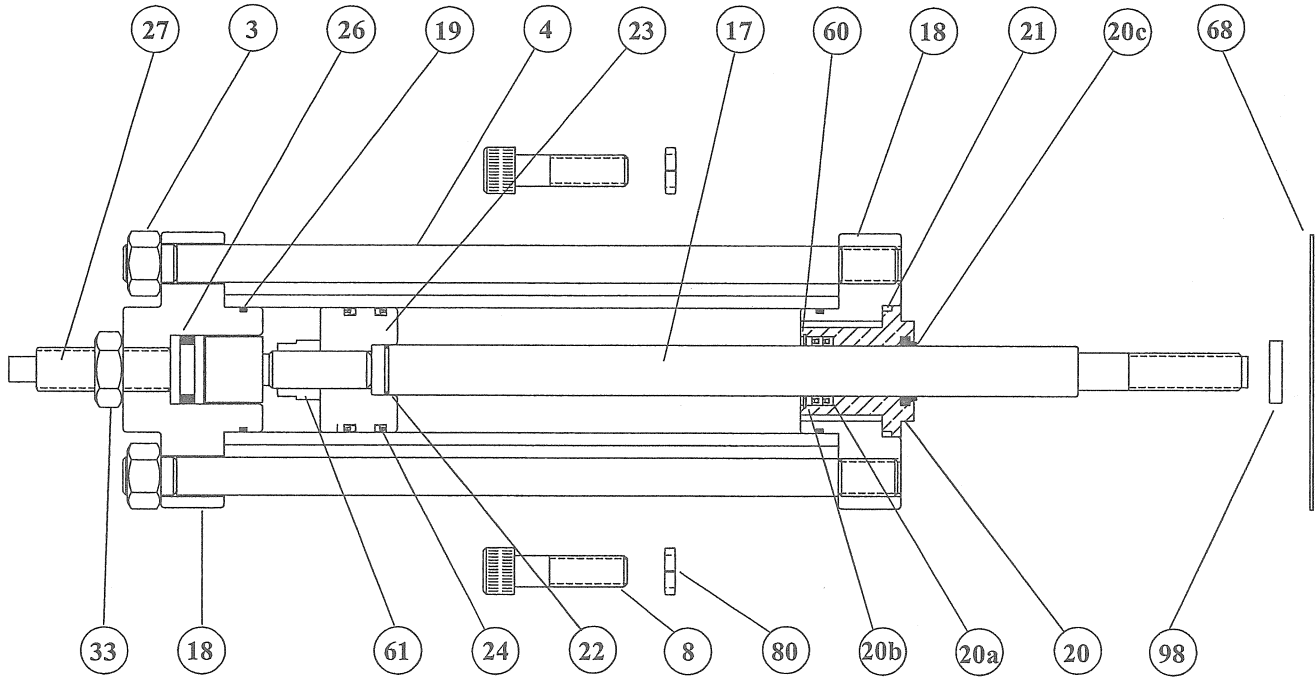


QT-10 Actuator, Exploded Top View

- 1) Place the valve in the closed or middle position if possible before this maintenance procedure is started.
- 2) On Model QT-1500s remove the HPA-1500 hydraulic unit from the actuator: See section on HPA-1500 for removal instructions and remove the "OPEN" stop assembly.
- 3) On Model QT-10s remove the four stop plate retaining screws, item 8a, and remove the actuator "open" stop, item 39, if present to expose the access hole. This is not required on Model QT-30/40s.
- 4) Using a deep socket or hammer and punch, remove the jam nut or set screws, item 6. If set screws are used be sure all are removed or piston rod thread damage may result.
- 5) Remove the piston rod retaining nut, item 5, using the same deep socket or hammer and punch. Some models may have a locknut in place of a jam and hex nut. If the piston rod has to be held to remove it use a strap wrench if available, be sure not to scar the surface in a critical sealing area and remove any burrs on the piston rod before cylinder reassembly.
- 6) Remove the four cylinder retaining screws, item 8, and withdraw entire cylinder.
- 7) Observe if spacing washers, item 98, are present and put aside for re-assembly.

Model QT-10 Single Cylinder Actuator

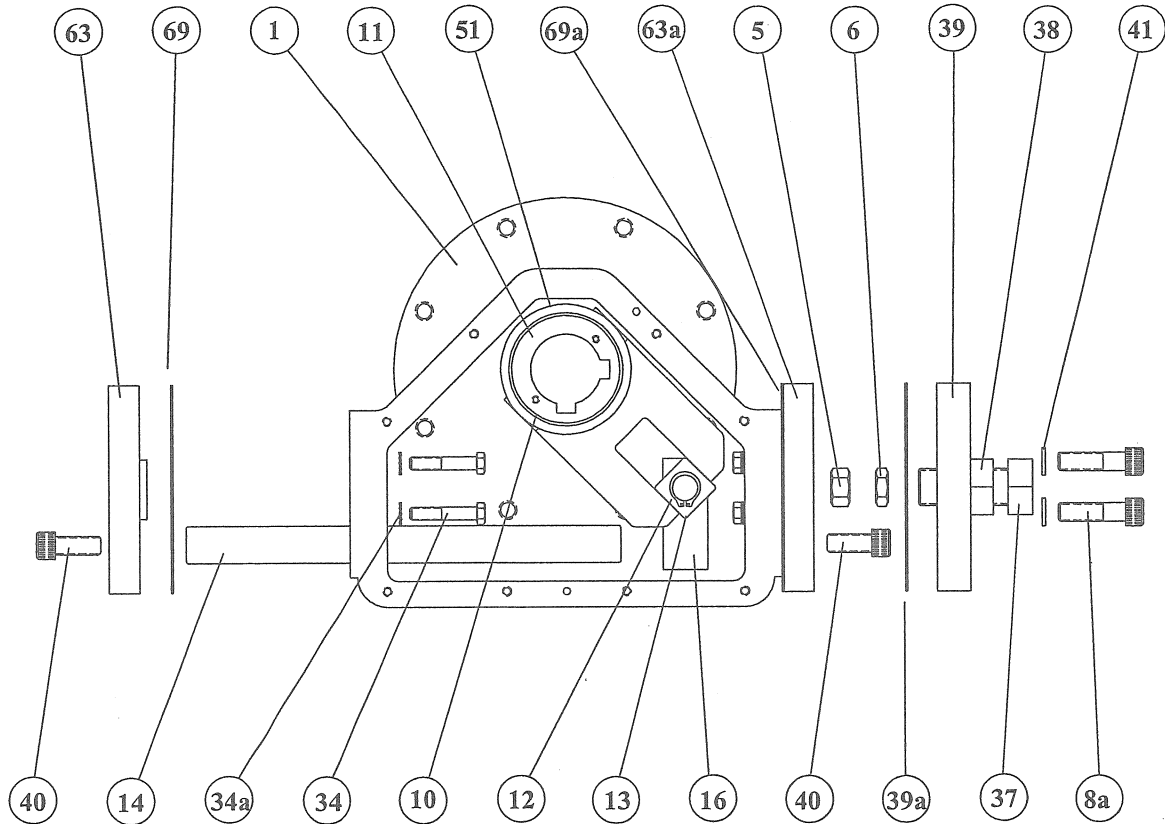
Assembly-Cylinder



QT-10 Cylinder, Exploded View

Model QT-10 Single Cylinder Actuator

Assembly-Gear Box



QT-10 Gear Box, Exploded View

Model QT-10 Single Cylinder Actuator

Parts List, Actuator Assembly

| ITEM | QTY | PART | NUMBER | DESCRIPTION |
|------|-----|-------------------------|-------------------------|--------------------------------------|
| BM | 1 | Model QT-10.125-E | Model QT-10.140-E | Assembly, QT-10.1XX & QT-1510.XX Act |
| 1 | 1 | 007-0020-E-B | 007-0020-E-B | Mainframe |
| 3 | 4 | 201-12NCxG8-ZP-HN | 201-12NCxG8-ZP-HN | Hex Nut |
| 4 | 4 | 030-0141-A-B | 030-0141-A-B | Tie Rod |
| 5 | 1 | 201-12NCxG8-ZP-HN | 201-12NCxG8-ZP-HN | Nut, Piston Rod Retaining |
| 6 | 1 | 201-12NC-CP-HJN | 201-12NC-CP-HJN | Jam Nut, Piston Rod Retaining |
| 8 | 4 | 200-10NCx2.4-BL-HSC | 200-10NCx2.4-BK-HSC | Screw, Hex Socket Cap |
| 8a | 4 | 200-10NCx2.4-BL-HSC | 200-10NCx2.4-BK-HSC | Screw, Hex Socket Cap |
| or | | 200-10NCx3.0xB7-ST | 200-10NCx3.0xB7-ST | Stud, HPA-1500 Mounting |
| **10 | 2 | 054-0241-90N-S | 054-0241-90N-S | Torque Arm Seal |
| or | | 054-0339-90N-S | 054-0339-90N-S | Torque Arm Seal |
| 11 | 1 | 007-0015-E-B | 007-0015-E-B | Torque Arm (dependent on valve type) |
| 12 | 2 | 046-5160.94-BK-ESR | 046-5160.94-BK-ESR | Snap Ring, Heavy Duty |
| 13 | 2 | 007-0021-A-B | 007-0021-A-B | Bearing Piece |
| 14 | 1 | 007-0005-B-B | 007-0005-B-B | Side Load Bar |
| 16 | 1 | 007-0014-B-C | 007-0014-B-C | Side Load Yoke |
| 17 | 1 | 030-0193-A-B | 030-0193-A-B | Piston Rod |
| 18 | 1 | 030-0118-C-B | 030-0172-A-B | Cylinder Stop End Plate |
| 18a | 1 | 030-0121-A-B | 030-0181-C-B | Cylinder Rod End Plate |
| *19 | 2 | 054-0141-70N-S | 054-240-70N-S | Cylinder End Plate Seal |
| 20 | 1 | 030-0192-A-B | 030-0192-A-B | Rod Bushing/Seal Cartridge |
| *20a | 2 | 053-18701000-P-S | 053-18701000-P-S | Rod Seal |
| *20b | 1 | 030-0158-A-A | 030-0158-A-A | Packing Washer |
| *20c | 1 | 057-D.1000-U-S | 057-D.1000-U-S | Wiper |
| *21 | 1 | 054-0229-70N-S | 054-229-70N-S | Rod Bushing/Seal Cartridge Seal |
| *22 | 1 | 054-0020-70N-S | 054-0020-70N-S | Piston to Rod Seal |
| 23 | 1 | 030-0120-C-B | 030-0171-C-B | Piston |
| *24 | 2 | 053-18702125-U-S | 053-18703625-U-S | Piston Seal |
| 25 | 1 | 030-0140-A-B | 030-0224-A-B | Cylinder Jug |
| *26 | 1 | 054-0318-70N-S | 054-318-70N-S | Piston Stop Seal |
| 27 | 1 | 030-0122-C-B | 030-0122-C-B | Piston Stop |
| 33 | 1 | 201-14NC-CD-HJN | 201-14NC-CD-HJN | Hex Jam Nut |
| 34 | 4 | 200-7NCx2.4xG8-HCS | 200-7NCx2.4xG8-HCS | Screw, Adapter Plate Retaining |
| 35 | 4 | 203-7-SS-ESW | 203-7-SS-ESW | Star Washer |
| 37 | 1 | 200-1.4NFx3.0xG8-CP-HCS | 200-1.4NFx3.0xG8-CP-HCS | Screw, G8 |
| 38 | 1 | 201-1.4NF-CP-HJN | 201-1.4NF-C-HJN | Jam Nut, Valve "Open" Stop Screw |
| 39 | 1 | 007-0137-A-B | 007-0137-A-B | Stop Plate (QT-10.1XX) |
| or | | 007-0149-A-B | 007-0149-A-B | Stop Plate (QT-1510.XX) |

Model QT-10 Single Cylinder Actuator

Parts List, Actuator Assembly (con't)

| ITEM | QTY | PART | NUMBER | DESCRIPTION |
|-------|--------|---------------------|------------------------|--|
| BM | 1 | Model QT-10.125-E | Model QT-10.140-E | Assembly, QT-10.1XX & QT-1510.XX Ac |
| **39a | 2 | 056-0008-B-B | 056-0008-B-B | Stop/Adapter Gasket (QT-10.1XX) |
| or | | 056-0013-B-B | 056-0013-B-B | Stop/Adapter Gasket (QT-1510.XX) |
| 40 | 2 | 200-10NCx1.8-BK-HSC | 200-10NCx1.8-BK-HSC | Screw, Side Load Bar |
| 41 | 4 | 203-10-CP-HCL | 203-10-CP-HCL | Washer, High Collar Lock |
| 44 | 2 | 200-#4NCx12-SS-OPH | 200-#4NCx12-SS-OPH | Screw, "O"-RING Pan Head |
| 45 | 1 | 007-0151-A-B | 007-0151-A-B | Torque Arm Cover |
| **46 | 1 | 056-0001-A-S | 056-0001-A-C | Torque Arm Cover Seal |
| or | 1 | 054-0241-90N-S | 054-0241-90B-S | Torque Arm Cover Seal |
| 47 | 8 | 200-5NCx1.4-SS-HCS | 200-#10NCx1.4-SS-HCS | Screw, Lid |
| 48 | 2 | 206-4x1.4-BK-DP | 206-4x1.4-BK-DP | Dowel Pin (Not Shown) |
| 49 | 1 | 007-0016-F-B | 007-0016-F-B | Lid |
| 51 | 2 | 058-0102-A-A | 058-0102-A-A | Journal Bearing |
| 52 | 8 | 203-5-SS-ESW | 203-5-SS-ESW | Star Washer |
| *60 | 1 | 046-5008.137-BK-ISR | 046-5008.137-BK-ISR | Snap Ring, Inverted |
| 61 | 1 | 201-12NC-NP-HLN | 201-12NC-NP-HLN | Flexlock Nut |
| 63 | 1 | 007-0136-A-B | 007-0138-A-B | Cyl/Stop Adaptor (Model QT-10.1XX) |
| 63a | 1 | 007-0136-A-B | 007-0136-A-B | Cyl/Stop Adaptor (Model QT-10.1XX) |
| or | | 007-0138-A-B | 007-0138-A-B | Cyl/Stop Adaptor (QT-1510.XX) |
| **68 | 1 | 056-0112-A | 056-0013-B-S | Cylinder/Adapter Gasket |
| **69 | 1 | 056-0008-A-S | 056-0013-B-S | Cyl/Stop Adaptor Gasket (Model QT-10.1 |
| **69a | 1 | 056-0008-A-S | 056-0008-B-S | Cyl/Stop Adaptor Gasket (Model QT-10.1 |
| or | 1 | 056-0013-A-S | 056-0013-B-S | Cyl/Stop Adaptor Gasket (Model QT-1510 |
| **72 | 1 | 056-0007-A-S | 056-0007-A-S | Lid Gasket |
| 80 | 4 | 203-10-CP-HCL | 203-10-CP-HCL | Washer, Hi-Collar Lock |
| 90 | 1 | 200-6NCx1.0-SS-HCS | 200-6NCx1.0-SS-HCS | Screw |
| or | 1 | 200-6NCx3.8-SS-HCS | 200-6NCx3.8-SS-HCS | Screw (PX/LX Option) |
| 91 | 1 | 201-6NC-CP-TSN | 201-6NC-CP-TSN | Nut |
| 93a | 1 | 005-0011-A-B | 005-0011-A-B | Position Indicator |
| 93b | 2 | 200-#10NFx8-SS-OPH | 200-#10NFx8-SS-OPH | Screw, "O"-RING Pan Head |
| 94 | 1 | --- | Varies with valve type | Actuator Mounting Gasket |
| 95 | varies | --- | Varies with valve type | Mounting Studs/Screws (Varies) |
| 96 | varies | --- | Varies with valve type | Mounting Nuts (Not Shown) |
| 97 | varies | --- | Varies with valve type | Mounting Lock Washer |
| 98 | 1 | 007-0141-A-A | 007-0141-A-A | Spacing Washer |
| * | 1 | 055-0104-E-SK | 055-0107-E-SK | Seal Kit, Cylinder (All * Items) |
| ** | 1 | 055-0111-E-SK | 055-0111-E-SK | Seal Kit, Gear Box (All ** Items) |

Model QT-10 Single Cylinder Actuator

Parts List, Actuator Assembly Upgrade

| Item | Qty | Part | Number | Description |
|-------|-----|-------------------------|-------------------------|---|
| BM | 1 | Upgrade Ass., QT-10.125 | Upgrade Ass., QT-10.140 | Upgrade Assembly, QT-10.1XX |
| 3 | 4 | 201-12NCxG8-ZP-HN | 201-12NCxG8-ZP-HN | Hex Nut |
| 5 | 1 | 201-12NCxG8-CP-HN | 201-12NCxG8-CP-HN | Nut, Piston Rod Retaining |
| 5a | 1 | 201-12NC-CP-HJN | 201-12NC-CP-HJN | Jam Nut, Piston Rod Retaining |
| 8 | 4 | 200-10NCx2.4-BK-HSC | 200-10NCx2.4-BK-HSC | Hex Socket Cap Screw |
| 8a | 4 | 200-10NCx2.4-BK-HSC | 200-10NCx2.4-BK-HSC | Screw, Stop Retaining |
| **10 | 2 | 054-0339-90N-S | 054-0339-90N-S | Torque Arm Seal |
| & | 2 | 054-0241-90N-S | 054-0241-90N-S | Torque Arm Seal |
| 11 | 1 | 007-0015-E-B | 007-0015-E-B | Torque Arm-Not Included (dependent on make & model, may be required if excess worn) |
| | | | | |
| 12 | 2 | 046-5160.94-BK-ESR | 046-5160.94-BK-ESR | Snap Ring, Heavy Duty |
| 13 | 2 | 007-0021-A-B | 007-0021-A-B | Bearing Piece |
| 14 | 1 | 007-0005-B-B | 007-0005-B-B | Side Load Bar |
| 16 | 1 | 007-0014-B-C | 007-0014-B-C | Side Load Yoke |
| 17 | 1 | 030-0193-A-B | 030-0193-A-B | Piston Rod |
| 18 | 1 | 030-0118-C-B | 030-0181-C-B | Cylinder Rod End Plate |
| *19 | 2 | 054-0141-70N-S | 054-0240-70N-S | Cylinder End Plate Seal |
| 20 | 1 | 030-0192-A-B | 030-0192-A-B | Rod Bushing/Seal Cartridge |
| *20a | 2 | 053-18701000-P-S | 053-18701000-P-S | Rod Seal |
| *20b | 1 | 030-0158-A-A | 030-0158-A-A | Packing Washer |
| *20c | 1 | 057-D.1000-U-S | 057-D.1000-U-S | Wiper |
| *21 | 1 | 054-0229-70N-S | 054-0229-70N-S | Rod Bushing/Seal Cartridge Seal |
| *22 | 1 | 054-0020-70N-S | 054-0020-70N-S | Piston to Rod Seal |
| 23 | 1 | 030-0120-C-B | 030-0171-C-B | Piston |
| *24 | 2 | 053-18702125-U-S | 053-18703625-U-S | Piston Seal |
| *26 | 1 | 054-0318-70N-S | 054-0318-70N-S | Piston Stop Seal |
| 34 | 8 | 200-7NCx2.4xG9-HCS | 200-7NCx2.4xG9-HCS | Screw, Hex Cap |
| 34a | 8 | 203-7-SS-ESW | 203-7-SS-ESW | Washer, External Star |
| 37 | 1 | 200-1.4NFx3.0xG8-CP-HCS | 200-1.4NFx3.0xG8-CP-HCS | Screw, Hex Cap |
| 38 | 1 | 201-1.4NF-CD-HJN | 201-1.4NF-CD-HJN | Jam Nut, Valve "Open" Stop Screw |
| 39 | 1 | 007-0137-A-B | 007-0137-A-B | Stop Plate |
| **39a | 2 | 056-0008-A-B | 056-0008-A-B | Stop / Adaptor Gasket |
| 40 | 2 | 200-10NCx1.8-BK-HSC | 200-10NCx1.8-BK-HSC | Screw, Side Load Bar |
| 41 | 4 | 203-10-CP-HCL | 203-10-CP-HCL | Washer, High Collar Lock |
| 44 | 2 | 200-#4NCx12-SS-OPH | 200-#4NCx12-SS-OPH | Screw, "O"-RING Pan Head |
| 45 | 1 | 007-0151-A-B | 007-0151-A-B | Torque Arm Cover |
| **46 | 1 | 056-0001-A-C | 056-0001-A-C | Torque Arm Cover Seal |
| & | 1 | 054-0241-90N-S | 054-0241-90N-S | Torque Arm Cover Seal |

Model QT-10 Single Cylinder Actuator

Parts List, Actuator Assembly Upgrade (con't)

| Item | Qty | Part | Number | Description |
|-------|-----|-------------------------|-------------------------|-----------------------------------|
| BM | 1 | Upgrade Ass., QT-10.125 | Upgrade Ass., QT-10.140 | Upgrade Assembly, QT-10.1XX |
| 47 | 8 | 200-5NCx1.4-SS-HCS | 200-5NCx1.4-SS-HCS | Screw, Hex Cap |
| 51 | 2 | 058-0102-A-B | 058-0102-A-B | Journal Bearing |
| 52 | 8 | 203-5-SS-ESW | 203-5-SS-ESW | Star Washer |
| *60 | 1 | 046-5008.137-BK-SR | 046-5008.137-BK-SR | Snap Ring, Inverted |
| 61 | 1 | 201-12NC-NP-HLN | 201-12NC-NP-HLN | Flexlock Nut |
| 63 | 1 | 007-0136-A-B | 007-0138-A-B | Cyl/Stop Adaptor |
| 63a | 1 | 007-0136-A-B | 007-0136-A-B | Cyl/Stop Adaptor |
| **68 | 1 | 056-0112-A-S | 056-0113-A-S | Cylinder/Adapter Gasket |
| **69 | 1 | 056-0008-A-S | 056-0013-A-B | Cyl/Stop Adapter Gasket |
| **69a | 1 | 056-0008-A-S | 056-0008-A-B | Cyl/Stop Adaptor Gasket |
| **72 | 1 | 056-0007-A-S | 056-0007-A-D | Lid Gasket |
| 80 | 4 | 203-10-CP-HCL | 203-10-CP-HCL | Washer, High Collar Lock |
| 98 | 1 | 007-0141-A-A | 007-0141-A-A | Spacing Washer (As Required) |
| * | 1 | 055-0104-E-SK | 055-0107-E-SK | Seal Kit, Cylinder (All * Items) |
| ** | 1 | 055-0111-E-SK | 055-0111-E-SK | Seal Kit, Gear Box (All ** Items) |

The above parts are included in the QT-10.1XX Upgrade Assembly. The QT-10 Upgrade Kit allows the end user to field rebuild a QT-10.1XX actuator and bring it up to the latest design series.

Model QT-10 Single Cylinder Actuator

Parts List, Actuator Assembly Partial Upgrade

| Item | Qty | Part Number | Part Number | Description |
|------|-----|------------------|------------------|--|
| | | Partial Upgrade | Partial Upgrade | Model |
| | | Ass., QT-10.125 | Ass., QT-10.140 | Notes |
| | | | | Starting Serial # |
| | | | | Bill of Material |
| 5 | 1 | 201-12NCxG8-CP | 201-12NCxG8-CP | Nut, Piston Rod |
| or | | 201-12NC-CP-HJN | 201-12NC-CP-HJN | Jam Nut, Piston Rod Retaining |
| 7 | 2 | | | Bearing Race |
| **10 | 2 | 054-0339-90N-S | 054-0339-90N-S | Torque Arm Seal |
| or | 0 | 054-0241-90N-S | 054-0241-90N-S | Torque Arm Seal |
| 11 | 1 | 007-0015-E-B | 007-0015-E-B | Torque Arm (dependent on valve make & model) |
| 13 | 2 | 007-0021-A-B | 007-0021-A-B | Bearing Piece |
| 16 | 1 | 007-0014-B-C | 007-0014-B-C | Side Load Yoke |
| | | | | piston rod for partial upgrade, QT-10.1 |
| *19 | 2 | 054-0141-70N-S | 054-0240-70N-S | "O"-Ring, Cylinder End Plate |
| *20a | 2 | 053-18701000-P-S | 053-18701000-P-S | Rod Seal |
| *21 | 1 | 054-0229-70N-S | 054-0229-70N-S | Rod Bushing/Seal Cartridge Seal |
| *22 | 1 | 054-0020-70N-S | 054-0020-70N-S | Piston to Rod Seal |
| *24 | 2 | 053-18702125-U-S | 053-18703625-U-S | Piston Seal |
| *26 | 1 | 054-0318-70N-S | 054-0318-70N-S | Piston Stop Seal (Series 2) |
| 27 | 1 | | | Piston Stop |
| *46 | 1 | 056-0001-A-C | 056-0001-A-C | Torque Arm Cover Seal |
| or | 1 | 054-0241-90N-S | 054-0241-90N-S | Torque Arm Cover Seal |
| 47 | 8 | 200-5NCx1.4-SS-F | 200-5NCx1.4-SS-F | Screw, Lid |
| 48 | 2 | | | Dowel Pin |
| 49 | 1 | | | Lid |
| **51 | 2 | 058-0102-A-B | 058-0102-A-B | Journal Bearing |
| 61 | 1 | 201-12NC-NP-HL | 201-12NC-NP-HL | Nut, Flexlock |
| 63 | 1 | 007-0136-A-B | 007-0138-A-B | Cyl/Stop Adaptor |
| 63a | 1 | 007-0136-A-B | 007-0136-A-B | Cyl/Stop Adaptor |
| or | 0 | | | Cyl/Stop Adaptor (QT-15XX.XX) |
| **72 | 1 | 056-0007-A-S | 056-0007-A-D | Lid Gasket/Sealer |
| 93a | 1 | | | Screw, "O"-RING Pan Head |
| 93b | 2 | | | Screw, "O"-RING Pan Head |
| SK | 1 | 055-0104-E-SK | 055-0107-E-SK | Cylinder Seal Kit (Includes * items) |
| SK | 1 | 055-0111-E-SK | 055-0111-E-SK | Actuator Seal Kit (Includes ** items) |

Model QT-10 Single Cylinder Actuator

Parts List, Actuator Assembly Partial Upgrade

| Item | Qty | Part Number | Description |
|------|-----|----------------|--|
| BM | 1 | 055-0131-A-SK | Seal Kit, QT-140 Universal Cylinder |
| 19 | 2 | 054-0240-70B | Cylinder to endpl. seal (back-up ring for pressures above 1000 psi.) |
| 20a | 1 | 053-18701625-P | Rod seal |
| or | 2 | 053-18701000-P | |
| 20c | 1 | 057-18701625-U | Rod wiper |
| or | 1 | 057-18701000-U | |
| 21 | 1 | 054-0230-70B | Rod bearing cart. seal (back-up ring for pressures above 1000 psi.) |
| or | 1 | 054-0229-70B | |
| 22 | 1 | 054-0220-70B | Piston to rod seal |
| or | 1 | 054-0020-70B | |
| 24 | 2 | 053-18703625-U | Piston ring seal |
| or | 2 | 053-25003500-U | Piston ring seal |
| 26 | 1 | 054-0322-70B | Piston stop seal |
| or | 1 | 054-0318-70B | |
| or | 1 | 054-0220-70B | Piston stop seal |
| 28 | 1 | 054-0230-70B | Piston stop housing seal |
| 68 | 1 | 056-0113 | Cylinder adaptor gasket |

Model QT-10 Single Cylinder Actuator

Notes