



Parts Manual

Model 50D Turn-A-Load

Serial Number 50D-TAL-155

cascade[®]
corporation

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To Order Parts call: 888-227-2233, Fax: 888-329-0234

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Internet: www.cascorp.com

Safety Decals



| REF | QTY | PART NO. | DESCRIPTION |
|-----|-----|----------|--------------------|
| 1 | 2 | 665595 | No Hand Hold Decal |
| 2 | 2 | 679150 | No Step Decal |

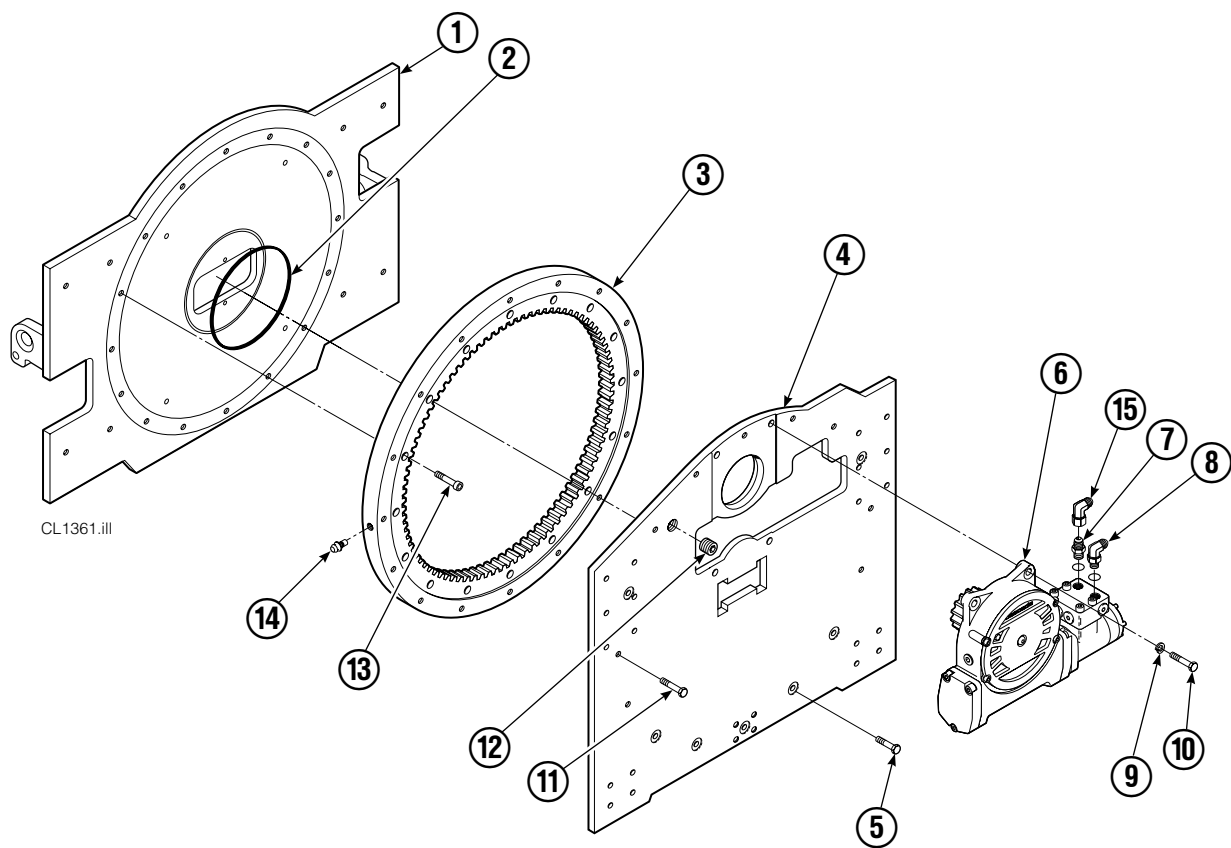


Publications



| PART NO. | DESCRIPTION |
|----------|---------------------------------|
| 672362 | Service Manual |
| 672903 | Operators Guide |
| 672361 | Installation Instructions |
| 680664 | Servicing Cascade Cylinders-VHS |
| 679929 | Tool Catalog |
| 673964 | Literature Index Order Form |

Rotator Group



| 50D | | | |
|-----|-----|----------|-----------------------------------|
| REF | QTY | PART NO. | DESCRIPTION |
| | | 399828 | Rotator Group |
| 1 | 1 | 399827 | Faceplate |
| 2 | 1 | 670931 | Seal |
| 3 | 1 | 672828 | Bearing Assembly |
| 4 | 1 | 687229 | Baseplate |
| 5 | 7 | 643538 | Capscrew, 1/2 NC x 1.50 GR8 |
| 6 | 1 | 795491 | Drive Group ▲ |
| 7 | 1 | 601377 | Fitting, 8-8 |
| 8 | 1 | 601250 | Fitting, 8-8 |
| 9 | 4 | 6290 | Lockwasher, 1/2 in. ID |
| 10 | 4 | 661742 | Capscrew, 1/2 NC x 1.25 GR5 |
| 11 | 9 | 643539 | Capscrew, 1/2 NC x 1.75 GR8 |
| 12 | 1 | 6605 | Plug |
| 13 | 16 | 4505 | Capscrew, 1/2 NC x 1.25 |
| 14 | 1 | 7401 | Grease Fitting |
| 15 | 1 | 605761 | Fitting, 8-8 |
| | | 672481 | Bearing Service Kit, Items 3 & 13 |

▲ See Drive Group page for parts breakdown.

Reference: Common Parts Group 680700, SK-5649, SK-5343.

Drive Group



| REF | QTY | PART NO. | DESCRIPTION | REF | QTY | PART NO. | DESCRIPTION |
|-----|-----|----------|---------------------------------|-----|-----|----------|-------------------------------------|
| | | 795491 | Drive Group with 2.8 c.i. Motor | 19 | 1 | 206392 | Drive Motor – 2.8 c.i. ▼ |
| 1 | 6 | 769570 | Capscrew, M12 x 25 | 20 | 4 | 4468 | Capscrew, 3/8 NC x .75 GR8 |
| 2 | 1 | 676855 | Cover | 21 | 1 | 670580 | Bearing |
| 3 | ● | 674513 | Shim – .005" (blue) | 22 | 1 | 675609 | Worm Gear |
| 4 | ● | 670574 | Shim – .010" (brown) | 23 | 1 | 670581 | Bearing |
| 5 | ● | 671757 | Shim – .015" (pink) | 24 | 1 | 7214 | Snap Ring |
| 6 | ● | 671758 | Shim – .020" (yellow) | 25 | 1 | 643423 | O-Ring |
| 7 | 2 | 670579 | Bearing | 26 | 1 | 775552 | Cover |
| 8 | 1 | 670582 | Key | 27 | 1 | 783609 | Seal |
| 9 | 1 | 670506 | Pinion | 28 | 1 | 783608 | Capscrew, M12 x 16 |
| 10 | 1 | 775551 | Housing | 29 | 4 | 200882 | Capscrew, M8 x 20 |
| 11 | 1 | 686465 | Gasket | 30 | 1 | 644010 | Relief Fitting |
| 12 | 1 | 675608 | Worm | 31 | 1 | 604510 | Fitting, 6 |
| 13 | 1 | 775553 | Adapter | 32 | 1 | 656300 | Gear Box Lube – 48 oz. |
| 14 | 2 | 2705 | O-Ring | 33 | 1 | 668184 | Sealant |
| 15 | 1 | 670549 | Check Valve ▲ | | | 670578 | Shim Service Kit (items 3-6,25,33) |
| 16 | 4 | 6444 | Lockwasher | | | 675637 | Bearing Service Kit (items 21 & 33) |
| 17 | 4 | 607059 | Capscrew, 5/16 NC x 1.75 GR8 | | | 675638 | Bearing Service Kit (items 3-7,25) |
| 18 | 1 | 670575 | Gasket | | | 685227 | Motor Kit-4.5 (items 4,14,18) |

- Quantity as required.
- ▲ See Check Valve page for parts breakdown.
- ▼ See Drive Motor page for parts breakdown.

Drive Motor



| REF | QTY | PART NO. | DESCRIPTION |
|-----|-----|----------|----------------------------|
| | | 206392 | Drive Motor |
| 1 | 1 | 675478 | Shaft |
| 2 | 1 | 675477 | Drive |
| 3 | 1 | 675479 | Spacer Plate |
| ■ 4 | 1 | 675480 | Gerotor Set (101-1768-007) |
| ■ 4 | 1 | 685075 | Gerotor Set (101-1768-009) |
| 5 | 1 | 675482 | End Cap |
| ● 6 | 1 | 206405 | Service Kit |
| ■ 7 | 1 | 685089 | Flange (101-1768-007) |
| ■ 7 | 1 | 685090 | Flange (101-1768-009) |

Cascade provides service replacement parts for the listed parts only. Due to cost, if others parts need replacement, the complete drive motor should be replaced.

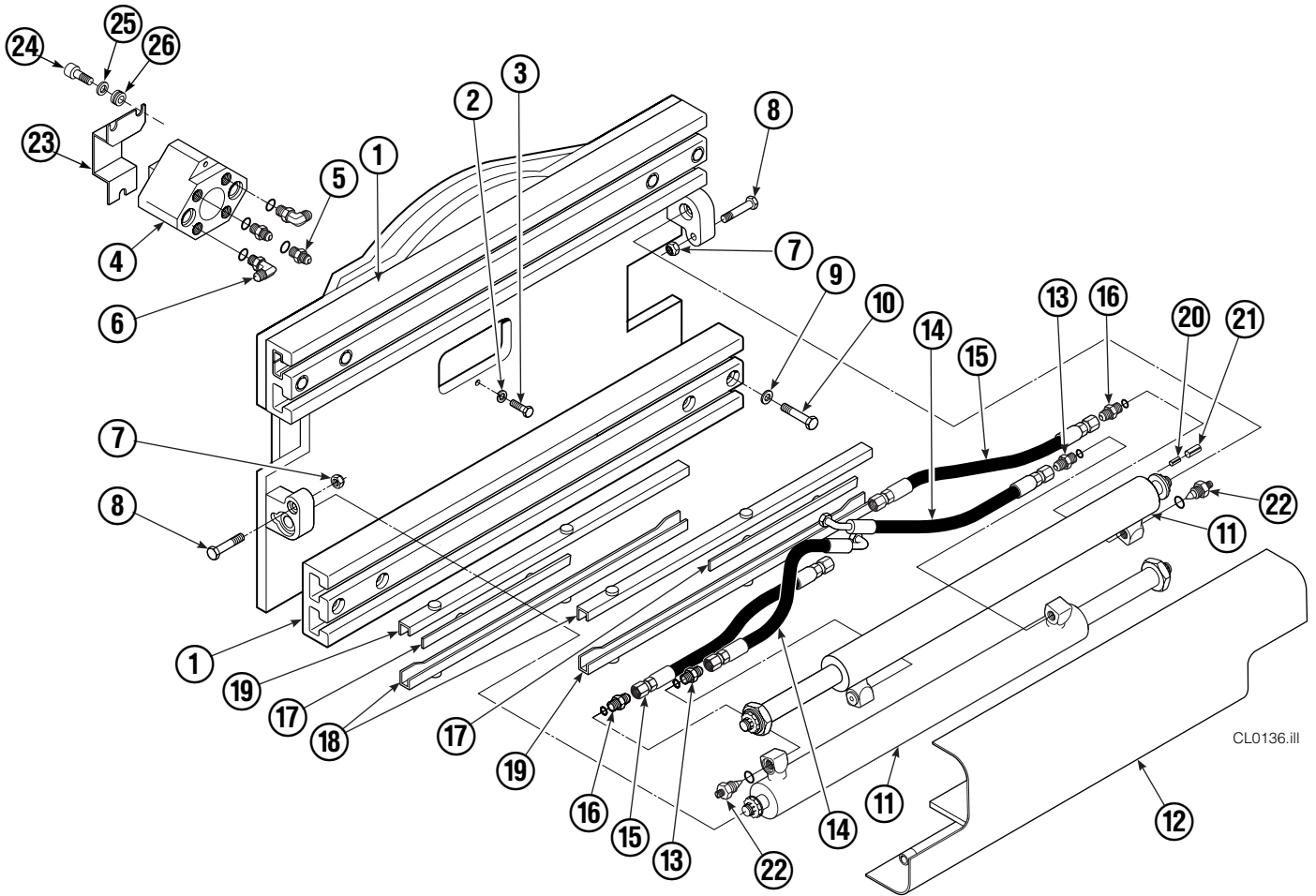
- See Nameplate under valve for correct part number of Gerotor Set and Flange.
- Compatible with water glycol based hydraulic fluids.

Check Valve



| REF | QTY | PART NO. | DESCRIPTION |
|-----|-----|----------|----------------------|
| | | 670549 | Check Valve Assembly |
| 1 | 2 | 609453 | Fitting, 10 |
| 2 | 2 | 670552 | Spring |
| 3 | 2 | 670551 | Guide |
| 4 | 2 | 7020 | Ball |
| 5 | 2 | 602580 | Fitting, 8 |
| 6 | 2 | 673989 | Spring |
| 7 | 1 | 670550 | Body |
| 8 | 1 | 670553 | Spool |

Frame Group



CL0136.iii

| 50D | | | | | | | |
|-----|-----|----------|-------------------------|-----|-----|----------|------------------------|
| REF | QTY | PART NO. | DESCRIPTION | REF | QTY | PART NO. | DESCRIPTION |
| | | 687284 | Frame Group | 14 | 2 | 631443 | Hose |
| 1 | 2 | 674167 | Frame | 15 | 2 | 678027 | Hose |
| 2 | 2 | 686119 | Lockwasher, M8 | 16 | 2 | 686369 | Fitting |
| 3 | 2 | 765352 | Capscrew, M8 x 30 | 17 | 4 | 667663 | Bearing |
| 4 | 1 | 686420 | Revolving Connection ■ | 18 | 4 | 668904 | Bearing |
| 5 | 2 | 604511 | Fitting, 6-6 | 19 | 4 | 668905 | Bearing |
| 6 | 2 | 601676 | Fitting, 6-6 | 20 | 2 | 7882 | Roll Pin - Inner |
| 7 | 2 | 665707 | Nut, 1/2 in. ID | 21 | 2 | 7961 | Roll Pin - Outer |
| 8 | 2 | 3660 | Capscrew, 1/2 NC x 2.50 | 22 | 2 | 667609 | Restrictor Cartridge ● |
| 9 | 8 | 667225 | Washer, 5/8 in. ID | 23 | 1 | 209067 | End Block Bracket |
| 10 | 8 | 667644 | Capscrew, 5/8 NC x 3.25 | 24 | 3 | 665992 | Shoulder Bolt |
| 11 | 2 | 667666 | Cylinder ▲ | 25 | 3 | 209021 | Washer, M10 |
| 12 | 1 | 667664 | Bumper | 26 | 3 | 208765 | Grommet |
| 13 | 2 | 611288 | Fitting, 6-8 | | | | |

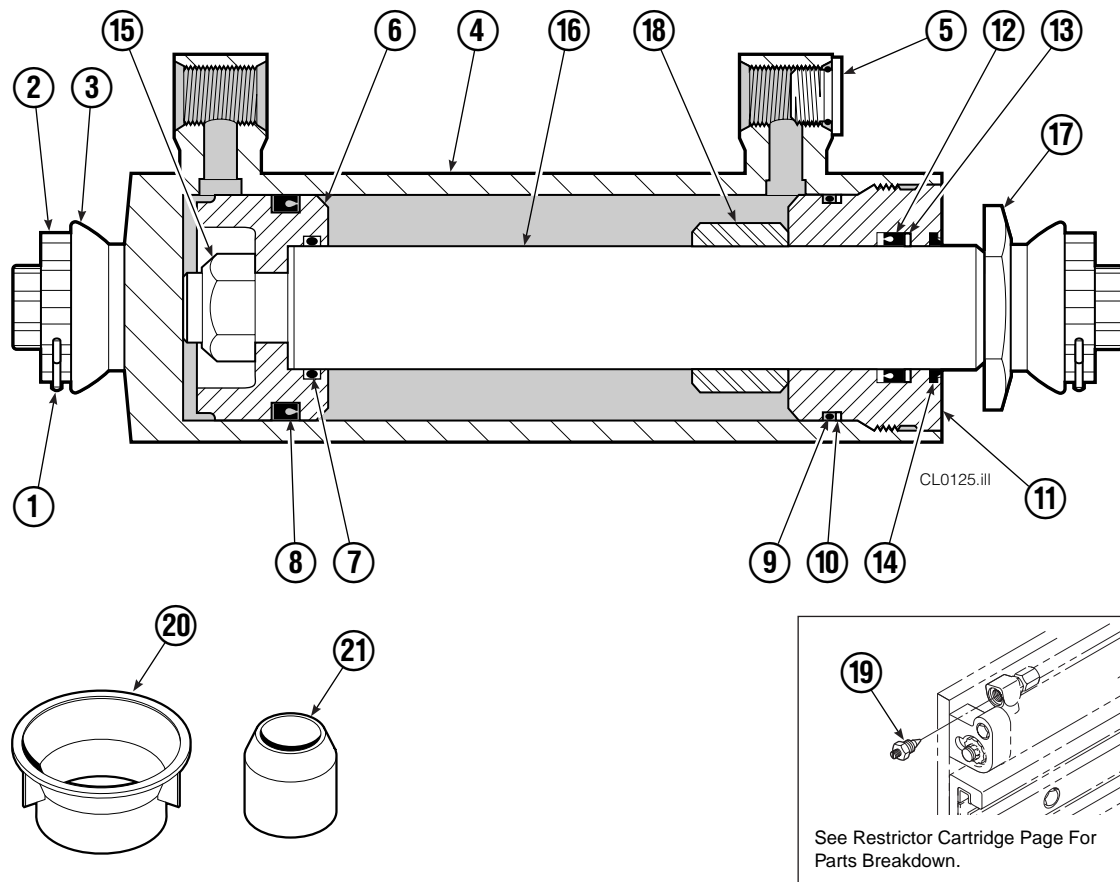
■ See Revolving Connection page for parts breakdown.

▲ See Cylinder page for parts breakdown.

● See Restrictor Cartridge page for parts breakdown.

Reference: SK-5659.

Cylinder



See Restrictor Cartridge Page For Parts Breakdown.

| 50D | | | |
|-----|-----|----------|-------------------------|
| REF | QTY | PART NO. | DESCRIPTION |
| | | 667666 | Cylinder Assembly |
| 1 | 2 | 6511 | Cotter Pin ■ |
| 2 | 2 | 667667 | Nut Retainer ■ |
| 3 | 2 | 667668 | Nut ■ |
| 4 | 1 | 553760 | Shell |
| 5 | 1 | 602580 | Fitting |
| 6 | 1 | 558402 | Piston |
| 7 | 1 | 2722 | O-Ring ▲ |
| 8 | 1 | 557376 | Seal ▲ |
| 9 | 1 | 2791 | O-Ring ▲ |
| 10 | 1 | 615134 | Back-Up Ring ▲ |
| 11 | 1 | 667675 | Retainer |
| 12 | 1 | 662451 | Seal ▲ |
| 13 | 1 | 638246 | Nylon Ring ▲ |
| 14 | 1 | 564930 | Wiper ▲ |
| 15 | 1 | 561012 | Nut |
| 16 | 1 | 667670 | Rod |
| 17 | 1 | 667676 | Washer |
| 18 | 1 | — | Spacer |
| 19 | 1 | 667609 | Restrictor Cartridge ● |
| 20 | 1 | 671049 | Seal Loader, Piston ▲ |
| 21 | 1 | 671052 | Seal Loader, Retainer ▲ |
| | | 667723 | Service Kit |

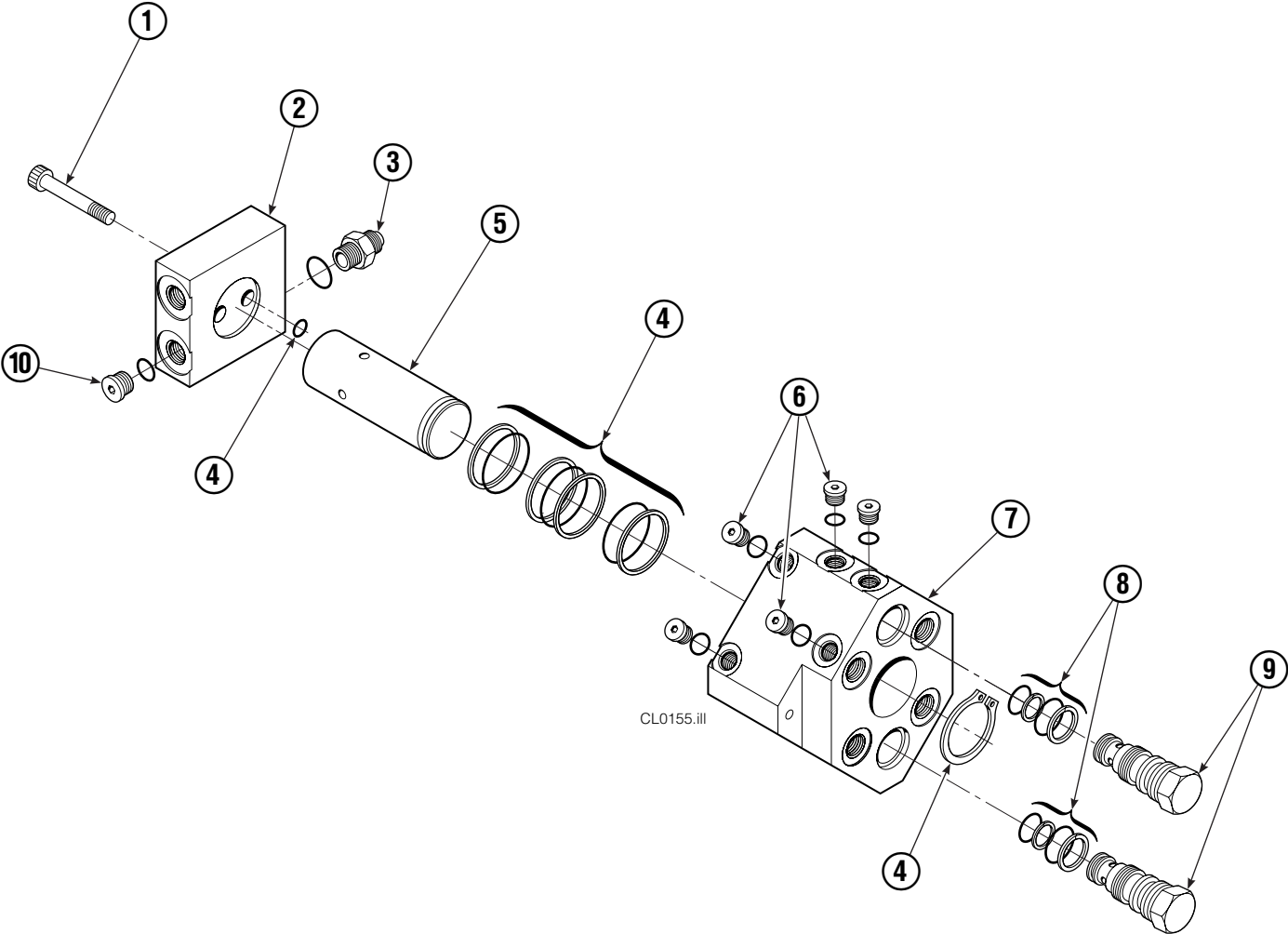
▲ Included in Service Kit 667723.

■ Included in Nut Service Kit 668925.

● Not included in Cylinder Assembly.

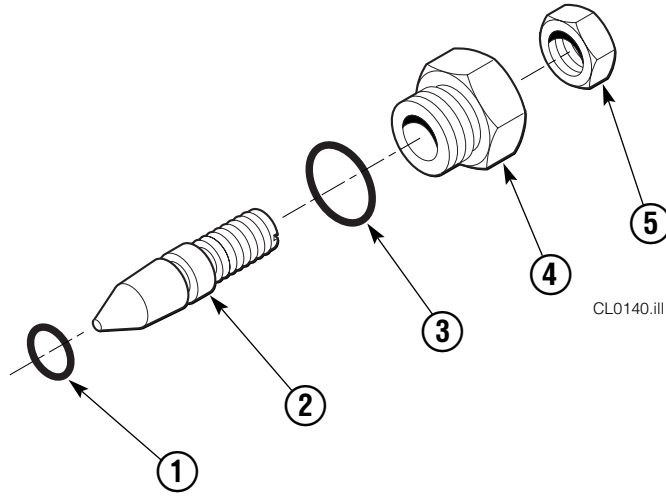
Reference: S-7666.

Revolving Connection



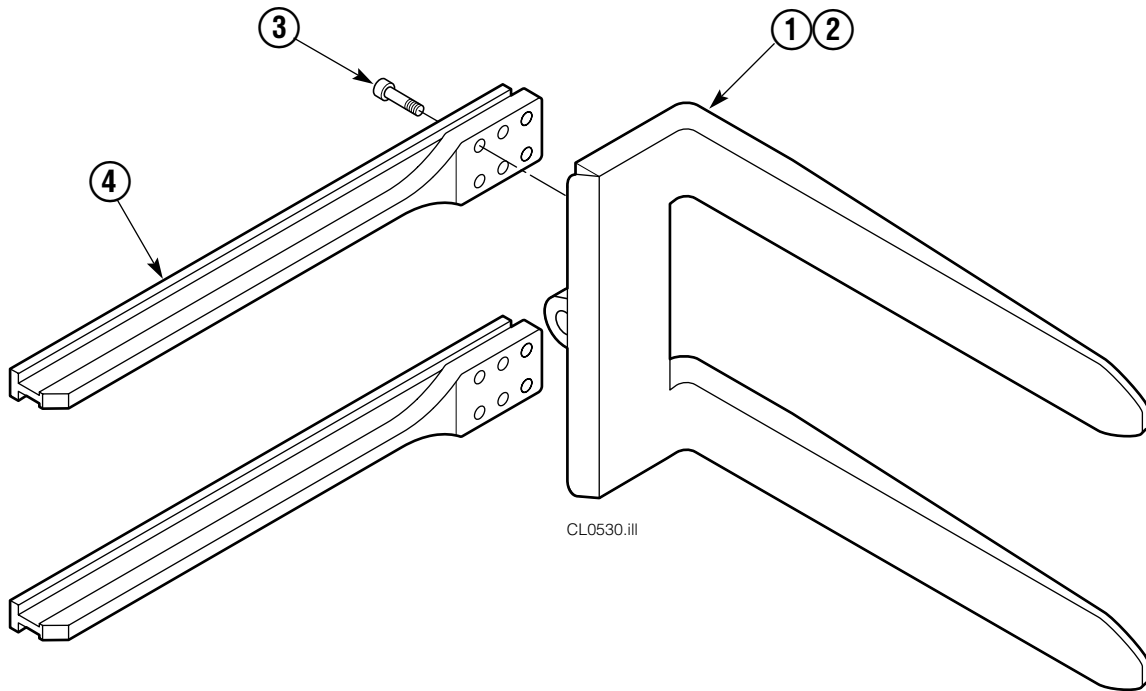
| 35D/50D | | | |
|----------------|-----|----------|--------------------------------|
| REF | QTY | PART NO. | DESCRIPTION |
| | | 686420 | Revolving Connection |
| 1 | 2 | 768795 | Capscrew, M8 x 1,25 x 30 x 8.8 |
| 2 | 1 | 686421 | End Block |
| 3 | 2 | 604511 | Fitting, 6-6 |
| 4 | 1 | 687237 | Service Kit |
| 5 | 1 | 686422 | Shaft |
| 6 | 5 | 663694 | Fitting, 3 |
| 7 | 1 | 686423 | Body |
| 8 | 2 | 667516 | Check Valve Service Kit |
| 9 | 2 | 678376 | Check Valve |
| 10 | 2 | 604510 | Fitting, 6 |


Restrictor Cartridge



| REF | QTY | PART NO. | DESCRIPTION |
|-----|-----|----------|----------------------|
| | | 667609 | Restrictor Cartridge |
| 1 | 1 | 2701 | O-Ring |
| 2 | 1 | 667611 | Plunger |
| 3 | 1 | 2841 | O-Ring |
| 4 | 1 | 667610 | Plug - Special |
| 5 | 1 | 5716 | Jam Nut |

Arm Group



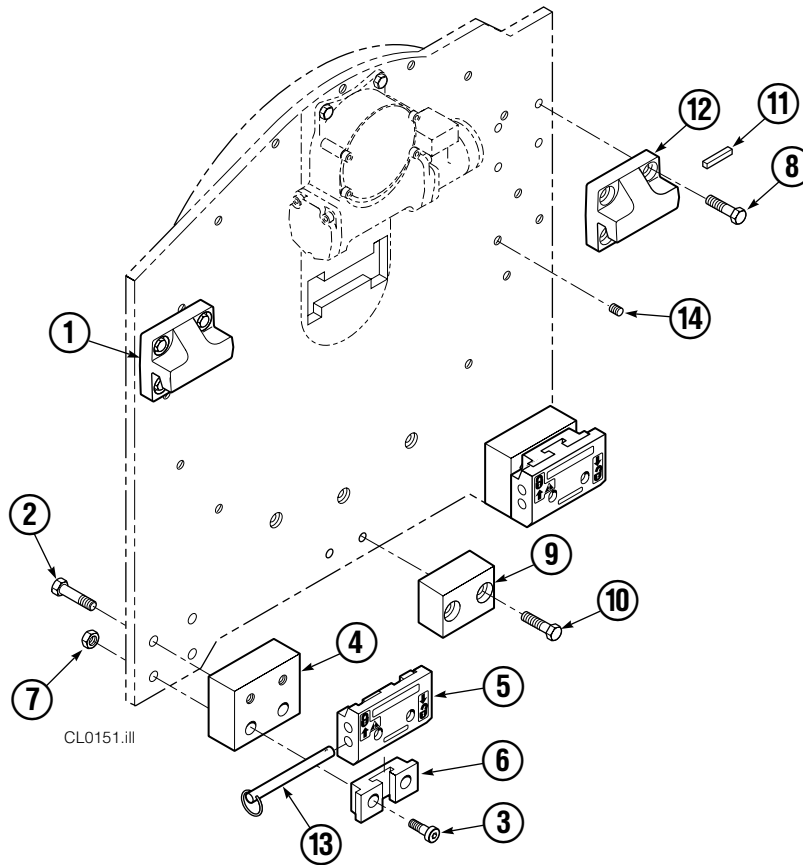
| ARM CAPSCREW EXTENSION TOOL | | |
|---|--------|--------|
| Required for proper torquing of capscrews | | |
|  | 35-50D | 667699 |

| 50D | | | |
|-----|-----|----------|-------------|
| REF | QTY | PART NO. | DESCRIPTION |
| | | 392055 | Arm Group ▲ |
| 1 | 1 | 392054 | Arm – LH |
| 2 | 1 | 392054 | Arm – RH |
| 2 | 24 | 676105 | Capscrew |
| 3 | 4 | 667700 | Arm Bar |

▲ Includes items 1, 2 & 3 only.

Reference: S-7867, 7839

Mounting Group



| Class III, 0° | | | |
|---------------|-----|----------|-------------------------|
| REF | QTY | PART NO. | DESCRIPTION |
| | | 680688 | Mounting Group |
| 1 | 1 | 670527 | Upper Hook - LH |
| 2 | 4 | 641284 | Capscrew, 5/8 NC x 2.25 |
| 3 | 4 | 607096 | Capscrew, 5/8 NC x 5.00 |
| 4 | 2 | 682068 | Spacer |
| 5 | 2 | 675957 | Lower Hook |
| 6 | 2 | 675958 | Guide |
| 7 | 4 | 676281 | Nut, 5/8 |
| 8 | 8 | 667369 | Capscrew, 5/8 NC x 1.25 |
| 9 | 1 | 682067 | Center Spacer |
| 10 | 2 | 677828 | Capscrew, 1/2 NC x 1.00 |
| 11 | 1 | 669344 | Stop Kit |
| 12 | 1 | 670528 | Upper Hook - RH |
| 13 | 2 | 678832 | Pin |
| 14 | 2 | 631385 | Plug, 5/8 |

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