



# Parts Manual

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Model Bulk Box Handler

Serial Number 35D-BBH-123

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**cascade**<sup>®</sup>  
**corporation**

**For Technical Assistance call:** 800-227-2233, Fax: 888-329-8207

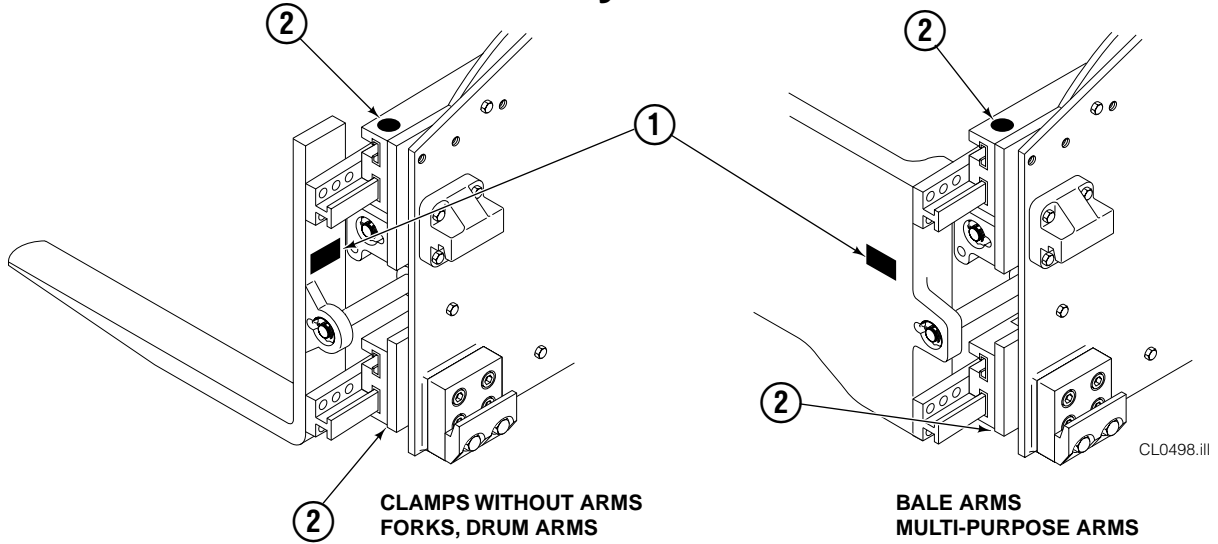
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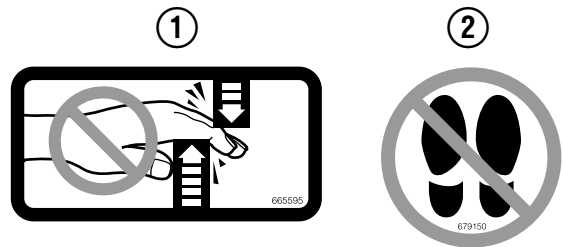
**Write:** Cascade Corporation, P.O. Box 20187, Portland, OR 97220

**Internet:** [www.cascorp.com](http://www.cascorp.com)

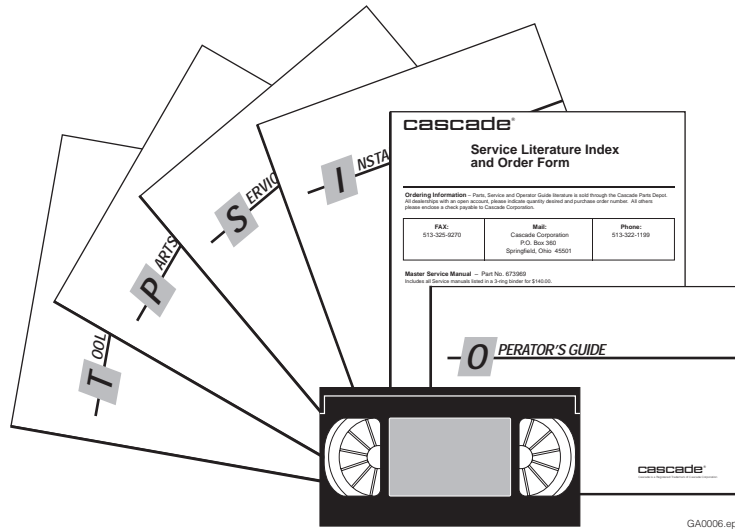
# Safety Decals



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

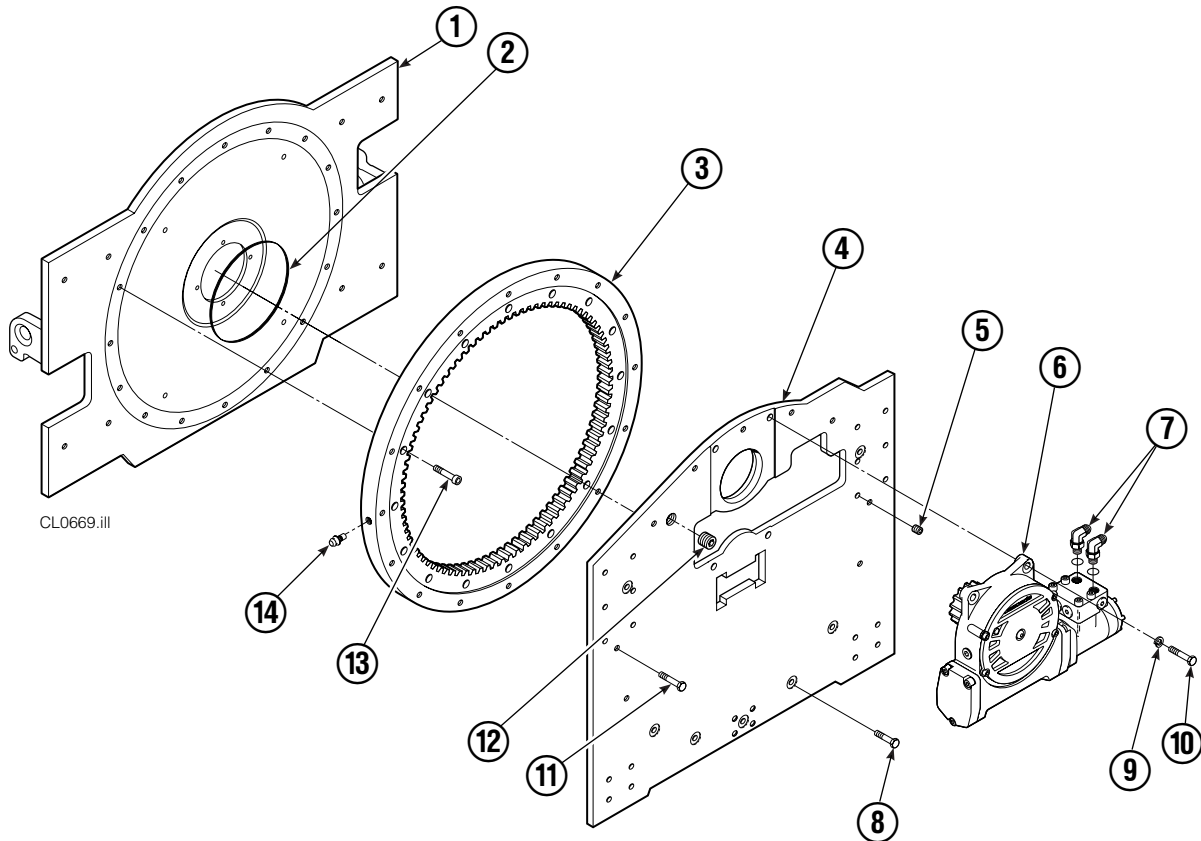


# Publications



| 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



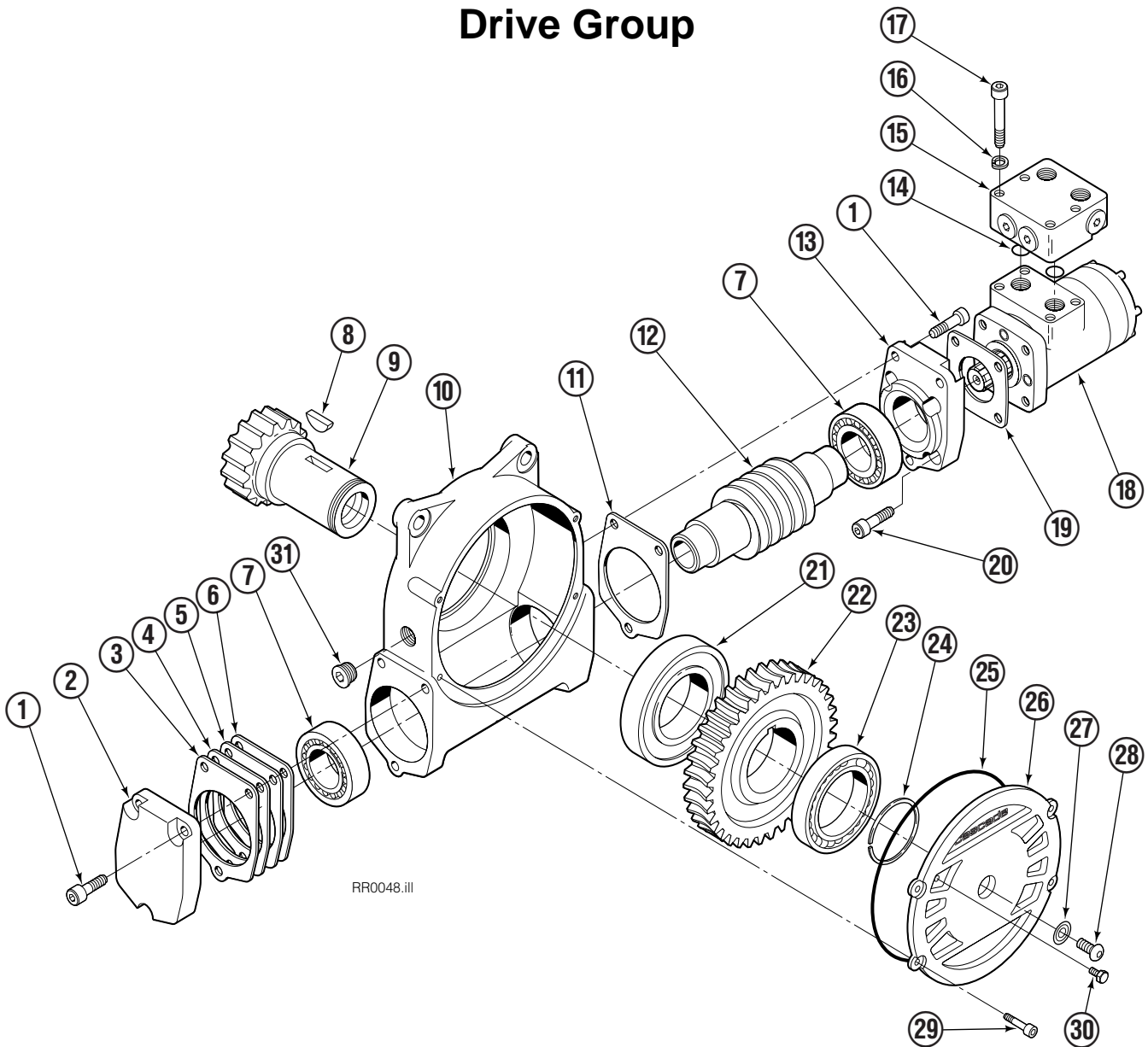
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| 35D |     |          |                             |
|-----|-----|----------|-----------------------------|
| REF | QTY | PART NO. | DESCRIPTION                 |
|     |     | 353083   | Rotator Group               |
| 1   | 1   | 353084   | Faceplate                   |
| 2   | 1   | 670931   | Seal                        |
| 3   | 1   | 672828   | Bearing Assembly            |
| 4   | 1   | 687229   | Baseplate                   |
| 5   | 6   | 631385   | Plug                        |
| 6   | 1   | 675628   | Drive Group ▲               |
| 7   | 2   | 611303   | Fitting                     |
| 8   | 7   | 643538   | Capscrew, 1/2 NC x 1.50 GR8 |
| 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                    |
| 14  | 1   | 7401     | Grease Fitting              |
|     |     | 672481   | Bearing Service Kit         |

▲ See Drive Group page for parts breakdown.

Reference: Common Parts Group 680700, SK-5346, SK-5649.

# Drive Group



| REF | QTY | PART NO. | DESCRIPTION                  | REF | QTY | PART NO. | DESCRIPTION                          |
|-----|-----|----------|------------------------------|-----|-----|----------|--------------------------------------|
|     |     | 675628   | Drive Group                  | 19  | 1   | 670575   | Gasket                               |
| 1   | 6   | 607071   | Capscrew, 7/16 NC x 1.0 GR8  | 20  | 4   | 4468     | Capscrew, 3/8 NC x .75 GR8           |
| 2   | 1   | 676855   | Cover                        | 21  | 1   | 670580   | Bearing                              |
| 3   | ●   | 675627   | Shim - .005"                 | 22  | 1   | 675609   | Worm Gear                            |
| 4   | ●   | 670574   | Shim - .010"                 | 23  | 1   | 670581   | Bearing                              |
| 5   | ●   | 671757   | Shim - .015"                 | 24  | 1   | 7214     | Snap Ring                            |
| 6   | ●   | 671758   | Shim - .020"                 | 25  | 1   | 643423   | O-Ring                               |
| 7   | 2   | 670579   | Bearing                      | 26  | 1   | 670567   | Cover                                |
| 8   | 1   | 670582   | Key                          | 27  | 1   | 603680   | Seal                                 |
| 9   | 1   | 670506   | Pinion                       | 28  | 1   | 4874     | Capscrew, 3/8 NC x .50 GR8           |
| 10  | 1   | 670565   | Housing                      | 29  | 4   | 671535   | Capscrew, 5/16 NC x .75              |
| 11  | 1   | 686465   | Gasket                       | 30  | 1   | 644010   | Relief Fitting                       |
| 12  | 1   | 675608   | Worm                         | 31  | 1   | 604510   | Fitting, 6                           |
| 13  | 1   | 670570   | Adaptor                      | 32  | 1   | 656300   | Gear Box Lube - 48 oz. (not shown)   |
| 14  | 2   | 2705     | O-Ring                       | 33  | 1   | 668184   | Sealant (not shown)                  |
| 15  | 1   | 670549   | Check Valve ★                |     |     | 670578   | Shim Service Kit (items 3-6, 11, 33) |
| 16  | 4   | 6444     | Lockwasher                   |     |     | 675637   | Shim Service Kit (items 21, 33)      |
| 17  | 4   | 607059   | Capscrew, 5/16 NC x 1.75 GR8 |     |     | 675638   | Shim Service Kit (items 3-7)         |
| 18  | 1   | 206392   | Drive Motor ▲                |     |     | 206394   | Motor Kit (items 11,14,18,19,20,33)  |

● Quantity as required.

★ See Check Valve page for parts breakdown.

▲ See Drive Motor page for parts breakdown.

Common Parts - 675627

# 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.

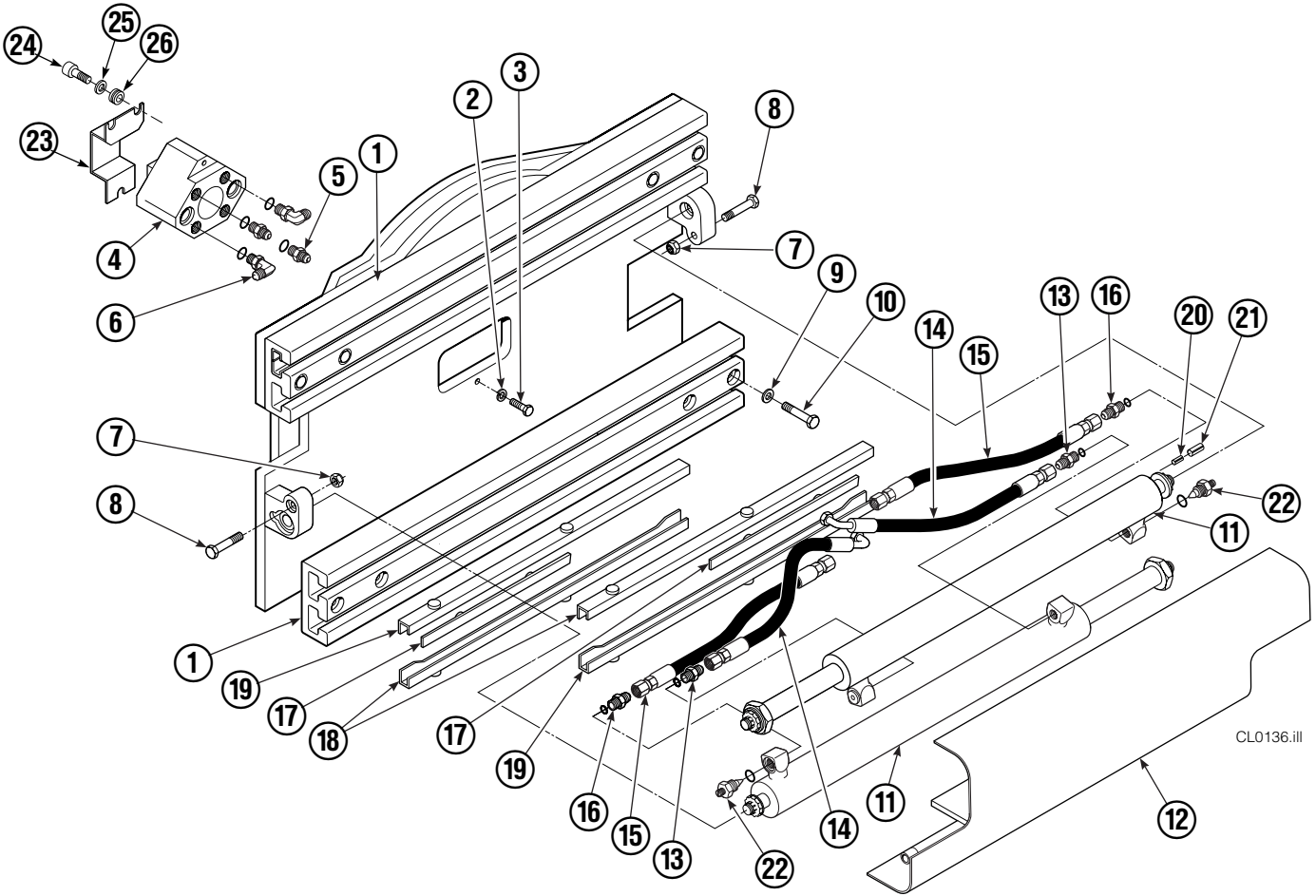
- See Nameplate under valve for correct part number of Gerotor Set and Flange.
- Compatible with water glycol based hydraulic fluids.

# 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



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| 35D |     |          |                         |     |     |          |                        |
|-----|-----|----------|-------------------------|-----|-----|----------|------------------------|
| REF | QTY | PART NO. | DESCRIPTION             | REF | QTY | PART NO. | DESCRIPTION            |
|     |     | 398122   | Frame Group             | 14  | 2   | 659225   | Hose                   |
| 1   | 2   | 674166   | Frame                   | 15  | 2   | 689875   | 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   | 668910   | Bearing                |
| 5   | 2   | 604511   | Fitting, 6-6            | 19  | 4   | 668911   | Bearing                |
| 6   | 2   | 601676   | Fitting, 6-6            | 20  | 2   | 7861     | Roll Pin - Inner       |
| 7   | 2   | 665707   | Nut, 1/2 in. ID         | 21  | 2   | 7962     | Roll Pin - Outer       |
| 8   | 2   | 3659     | Capscrew, 1/2 NC x 2.50 | 22  | 2   | 667609   | Restrictor Cartridge ● |
| 9   | 8   | 667910   | Washer, 1/2 in. ID      | 23  | 1   | 209067   | End Block Bracket      |
| 10  | 8   | 672536   | Capscrew, 1/2 NC x 3.00 | 24  | 2   | 665992   | Shoulder Bolt          |
| 11  | 2   | 667911   | Cylinder ▲              | 25  | 2   | 209021   | Washer, M10            |
| 12  | 1   | 667908   | Bumper                  | 26  | 2   | 208765   | Grommet                |
| 13  | 2   | 611288   | Fitting, 6-8            |     |     |          |                        |

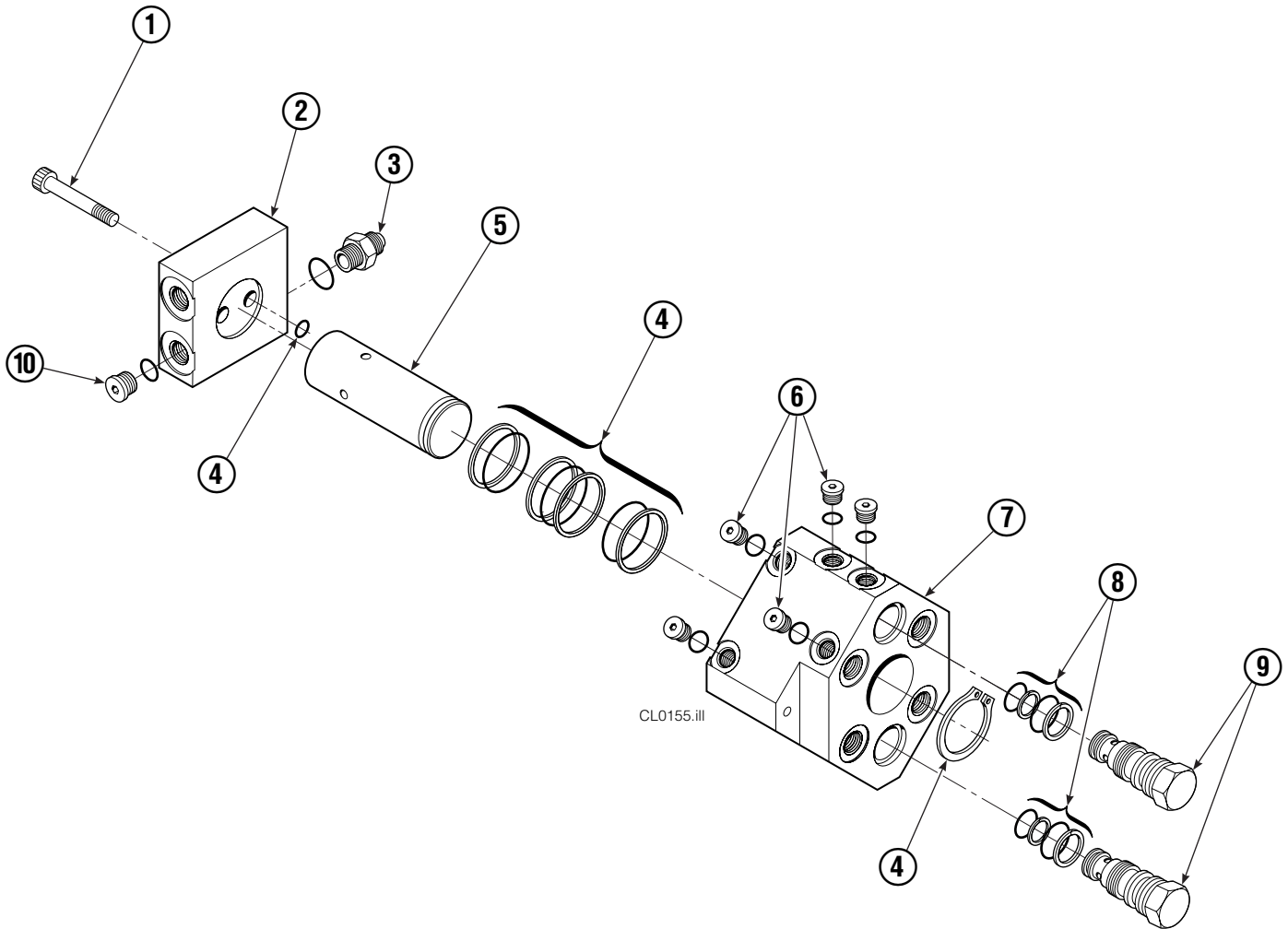
■ See Revolving Connection page for parts breakdown.

▲ See Cylinder page for parts breakdown.

● See Restrictor Cartridge page for parts breakdown.

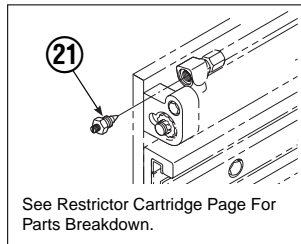
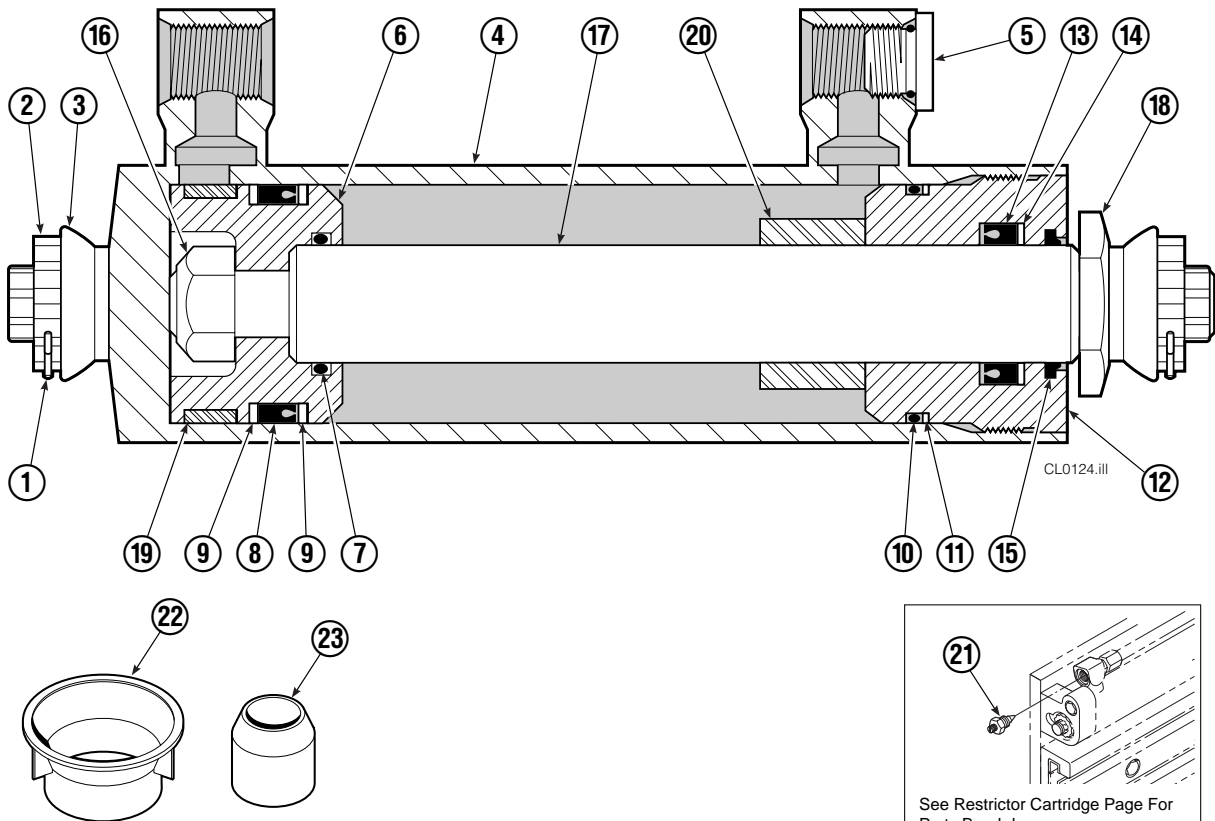
Reference: SK-5660.

# 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                     |

# Cylinder



| 35D |     |          |                         |
|-----|-----|----------|-------------------------|
| REF | QTY | PART NO. | DESCRIPTION             |
|     |     | 667911   | Cylinder Assembly       |
| 1   | 2   | 6510     | Cotter Pin ■            |
| 2   | 2   | 667624   | Nut Retainer ■          |
| 3   | 2   | 667625   | Nut ■                   |
| 4   | 1   | 553758   | Shell                   |
| 5   | 1   | 602580   | Fitting                 |
| 6   | 1   | 670891   | Piston                  |
| 7   | 1   | 2716     | O-Ring ▲                |
| 8   | 1   | 662454   | Seal ▲                  |
| 9   | 2   | 638249   | Nylon Ring ▲            |
| 10  | 1   | 2787     | O-Ring ▲                |
| 11  | 1   | 615130   | Back-Up Ring ▲          |
| 12  | 1   | 667917   | Retainer                |
| 13  | 1   | 662448   | Seal ▲                  |
| 14  | 1   | 638243   | Nylon Ring ▲            |
| 15  | 1   | 636853   | Wiper ▲                 |
| 16  | 1   | 667623   | Nut                     |
| 17  | 1   | 667914   | Rod                     |
| 18  | 1   | 667626   | Washer                  |
| 19  | 1   | 660761   | Bearing                 |
| 20  | 1   | —        | Spacer                  |
| 21  | 1   | 667609   | Restrictor Cartridge ●  |
| 22  | 1   | 671049   | Seal Loader, Piston ▲   |
| 23  | 1   | 671052   | Seal Loader, Retainer ▲ |
|     |     | 667995   | Service Kit             |

▲ Included in Service Kit 667995.

■ Included in Nut Service Kit 668926.

● Not included in Cylinder Assembly.

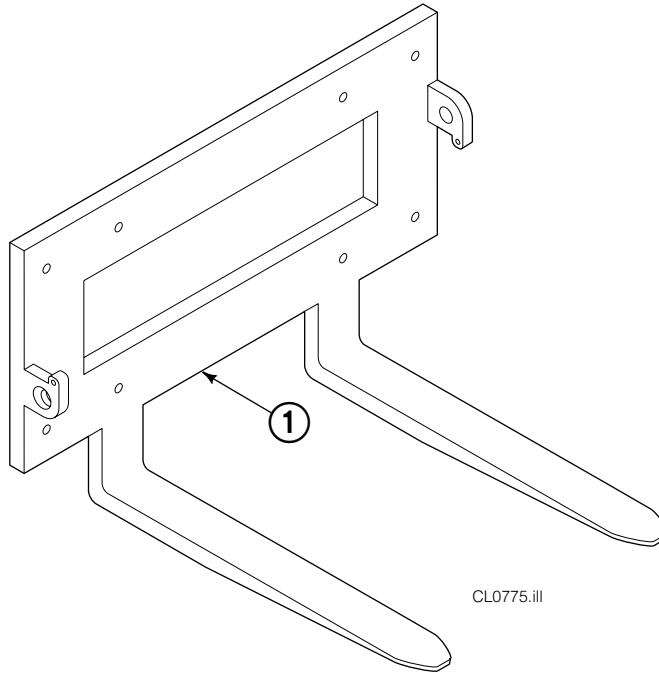
Reference: S-7662.

# Restrictor Cartridge



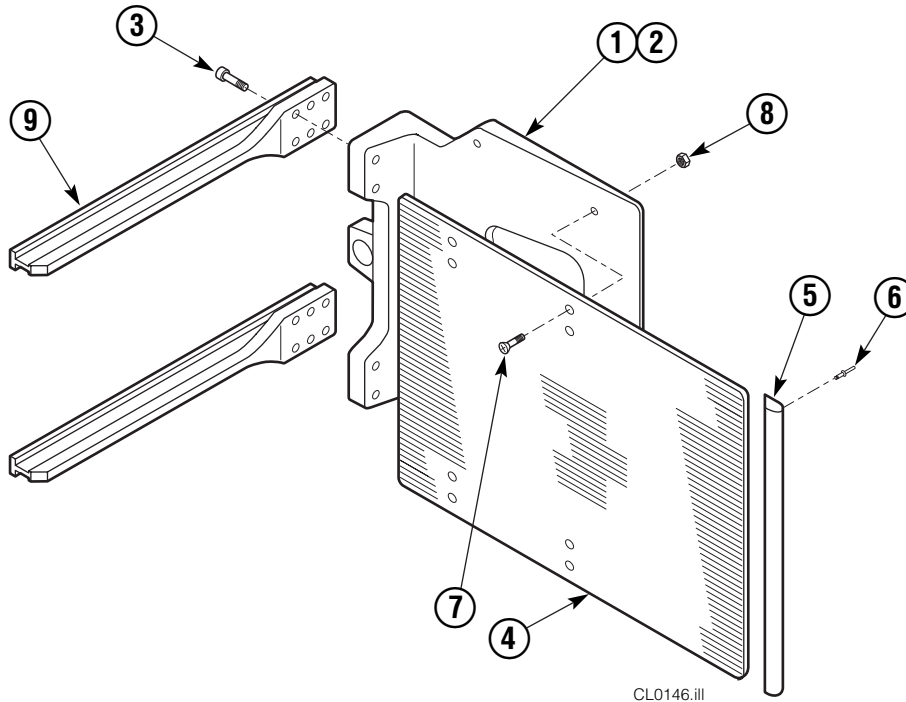
| REF | QTY | PART NO. | DESCRIPTION          |
|-----|-----|----------|----------------------|
|     |     | 667609   | Restrictor Cartridge |
| 1   | 1   | 2701     | O-Ring               |
| 2   | 1   | 667611   | Plunger              |
| 3   | 1   | 2841     | O-Ring               |
| 4   | 1   |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

# Gaylord Fork Weldment




| 35D |     |          |               |
|-----|-----|----------|---------------|
| REF | QTY | PART NO. | DESCRIPTION   |
| 1   | 1   | 6001396  | Fork Weldment |

# Multi-Purpose/Rigid Arms



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

| 35D |     |          |                          |
|-----|-----|----------|--------------------------|
| REF | QTY | PART NO. | DESCRIPTION              |
|     |     | 3006312  | Bale Arm Assembly – LH ▲ |
|     |     | 3006313  | Bale Arm Assembly – RH ■ |
| 1   | 1   | 3006310  | Bale Arm – LH            |
| 2   | 1   | 3006311  | Bale Arm – RH            |
| 3   | 12  | 607103   | Capscrew                 |
| 4   | 1   | 3006306  | Contact Pad ●            |
| 5   | 1   | 345365   | Edge Guard ●             |
| 6   | 8   | 667843   | Rivet ●                  |
| 7   | 4   | 4672     | Capscrew                 |
| 8   | 4   | 550218   | Nut                      |
| 9   | 4   | 667905   | Arm Bar                  |

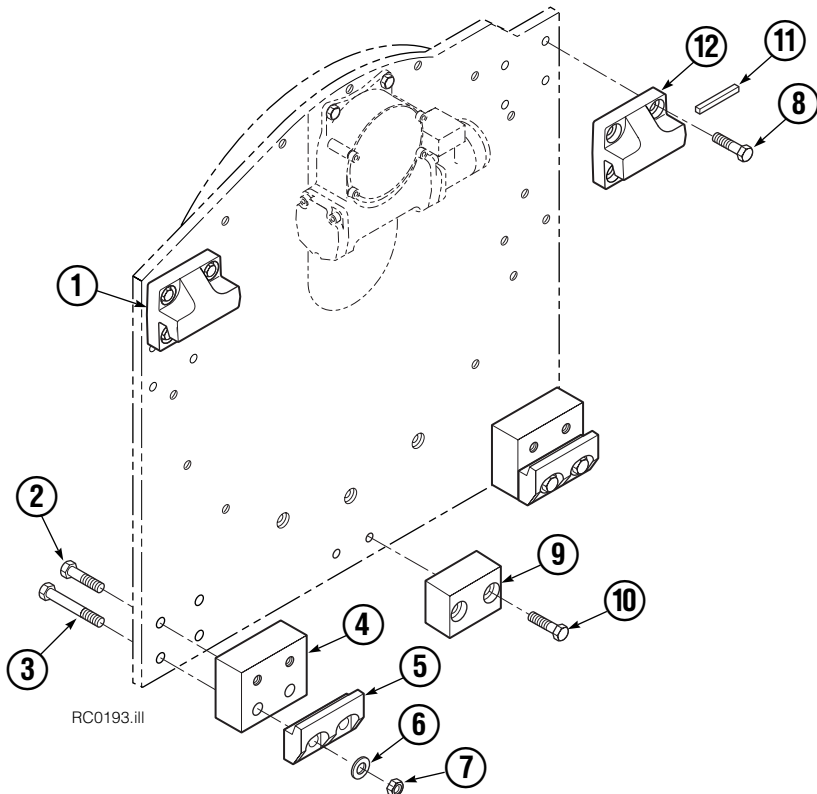
▲ Includes items 1 & 3-8.

■ Includes items 2-8.

● Included in Contact Pad Assembly 3006307.

Reference: S-8265, S-8267

# Bolt-On Mounting Group



| Class II, 0° |     |          |                         |
|--------------|-----|----------|-------------------------|
| REF          | QTY | PART NO. | DESCRIPTION             |
|              |     | 680630   | Mounting Group          |
| 1            | 1   | 670523   | Upper Hook – LH         |
| 2            | 4   | 3709     | Capscrew, 5/8 NC x 1.50 |
| 3            | 4   | 674261   | Capscrew, 5/8 NC x 3.75 |
| 4            | 2   | 676037   | Spacer                  |
| 5            | 2   | 675968   | Lower Hook              |
| 6            | 4   | 667225   | Washer                  |
| 7            | 4   | 676281   | Nut, 5/8 in. ID         |
| 8            | 8   | 667765   | Capscrew, 5/8 NC x 1.50 |
| 9            | 1   | 680683   | Center Spacer           |
| 10           | 2   | 677828   | Capscrew, 1/2 NC x 1.00 |
| 11           | 1   | 669344   | Stop Kit                |
| 12           | 1   | 670524   | Upper Hook – RH         |



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