



Parts Manual

Model 30A Layer Picker

Serial Number SELP-41610

cascade®
corporation

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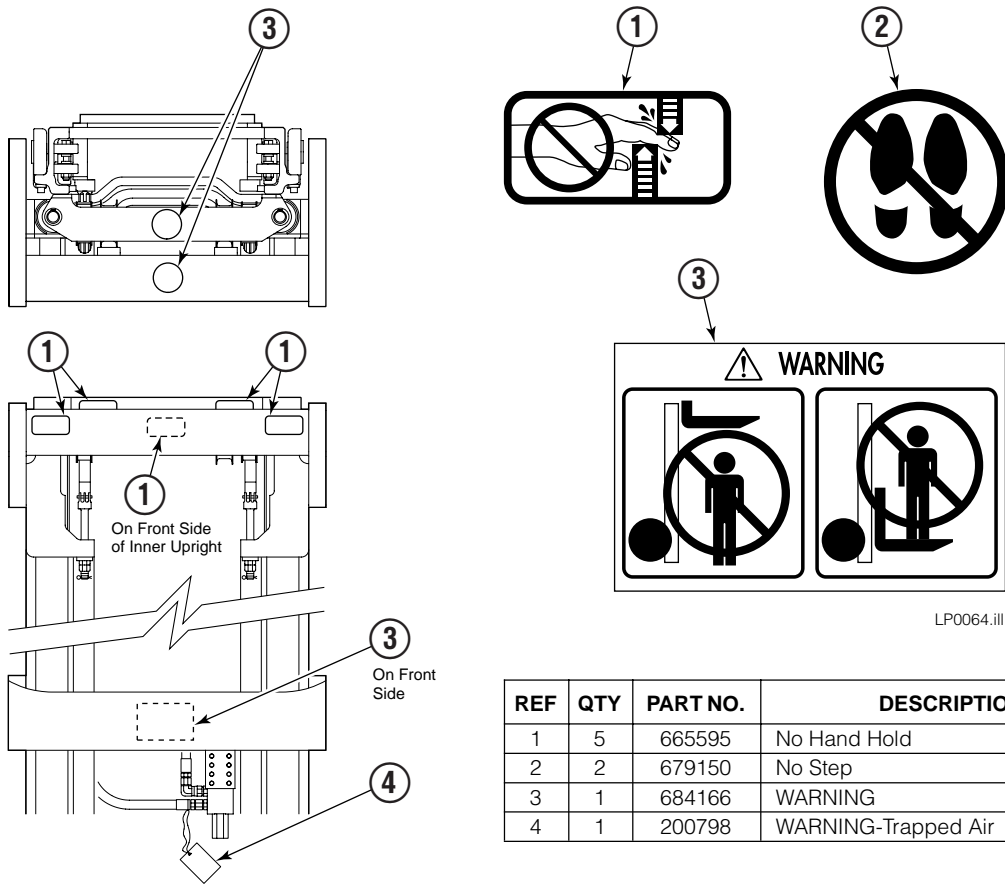
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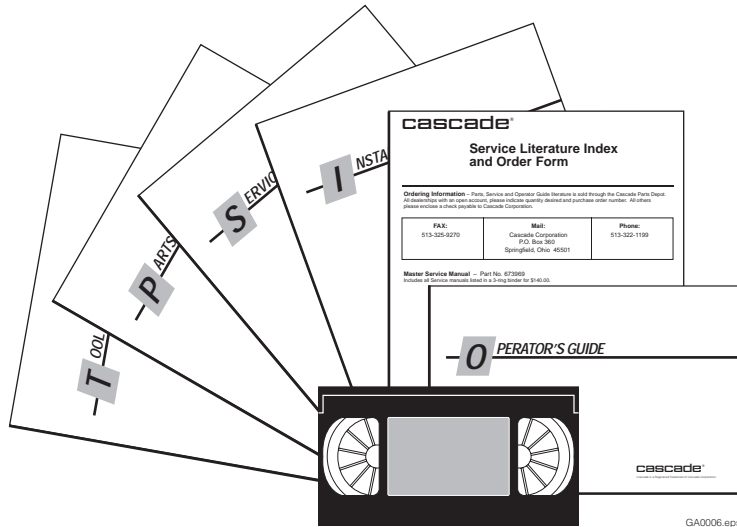
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Safety Decals



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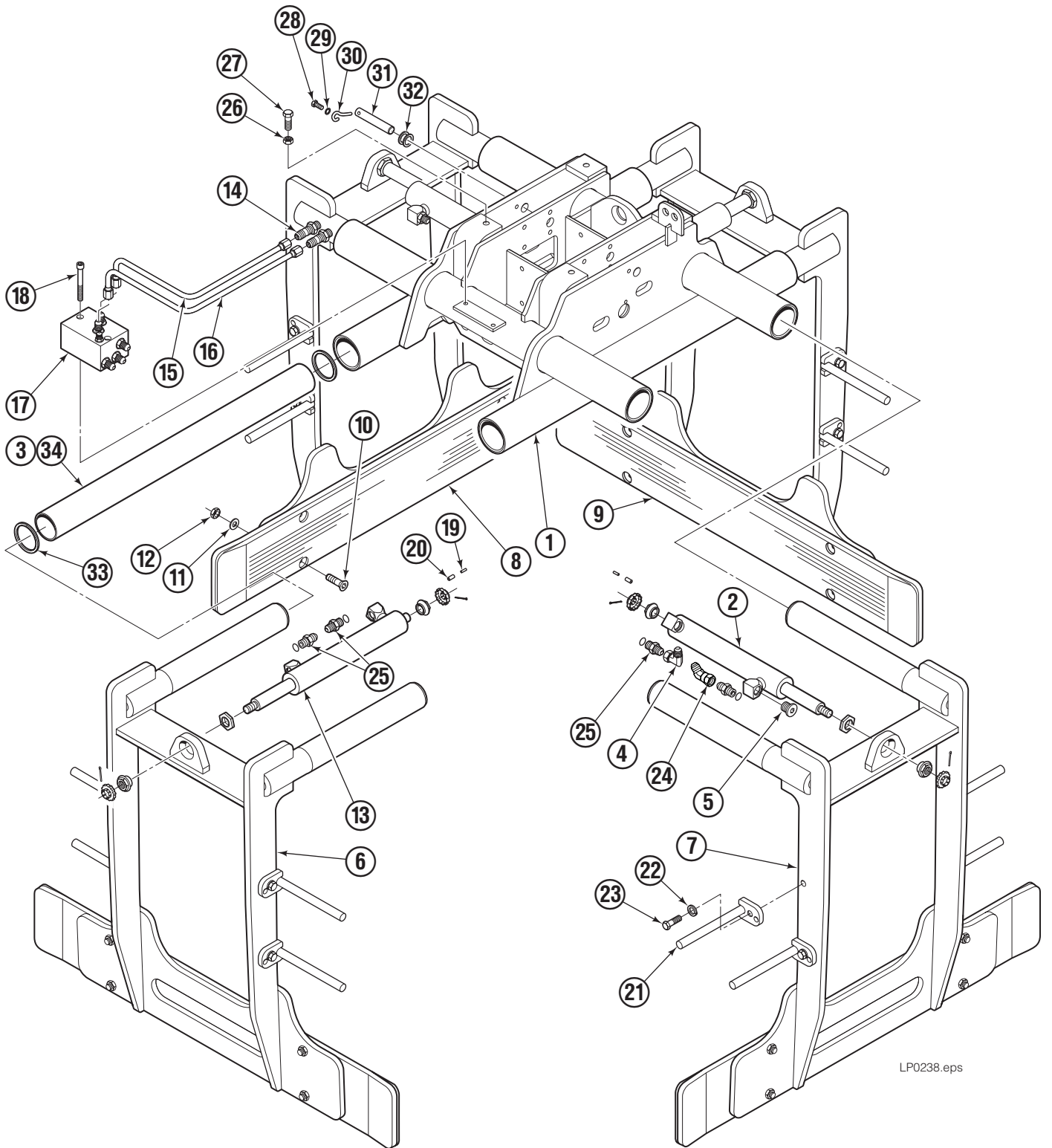
Publications



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| PART NO. | DESCRIPTION |
|----------|-----------------------------|
| - | Parts Manual |
| - | Service Manual |
| 222964 | Installation Instructions |
| 222225 | Operators Guide |
| 679929 | Tool Catalog |
| 673964 | Literature Index Order Form |

Clamp Assembly



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Clamp Assembly

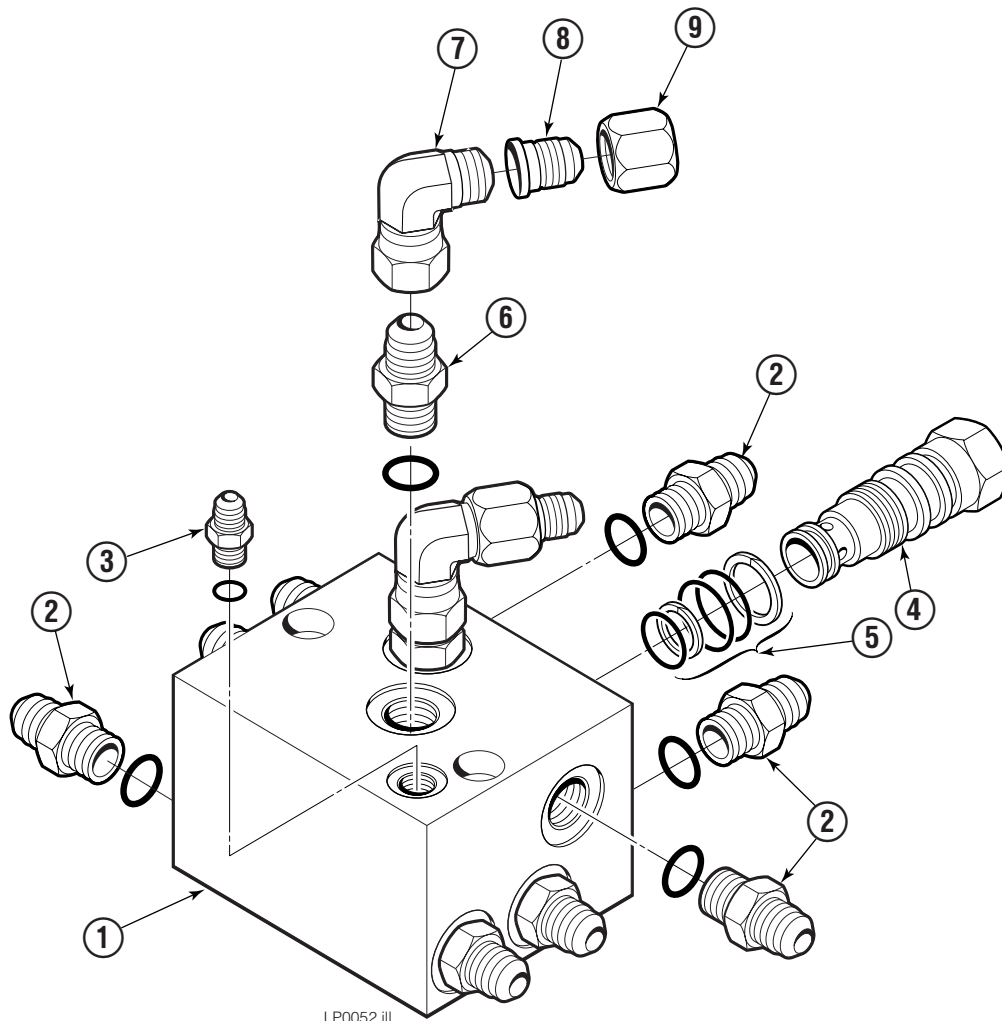
| 30A | | | |
|-----|-----|------------|---------------------------------|
| REF | QTY | PART NO. | DESCRIPTION |
| | | 6138000 | Clamp Assembly |
| 1 | 1 | 6138003 | Frame (28321) |
| 2 | 2 | 6137650 | Cylinder - LA ▲ |
| 3 | 2 | 21066-0985 | Bushing |
| 4 | 6 | 2680 | Fitting, 6-6 |
| 5 | 8 | 602580 | Plug |
| 6 | 2 | 6137997 | Arm – Short (21075) |
| 7 | 2 | 6137998 | Arm – Long (21075) |
| 8 | 2 | 6138002 | Contact Pad, 42 x 9 in. (21031) |
| 9 | 2 | 6138001 | Contact Pad, 38 x 9 in. (21031) |
| 10 | 16 | 755028 | Capscrew, M12 x 50 |
| 11 | 16 | 200456 | Washer, M12 |
| 12 | 16 | 205979 | Nut, M12 |
| 13 | 2 | 6137651 | Cylinder - SA ▲ |
| 14 | 2 | 2375 | Fitting, 6-6 |
| 15 | 1 | 6116409 | Tube |
| 16 | 1 | 6116410 | Tube |
| 17 | 1 | 219694 | Valve ● |
| 18 | 2 | 768802 | Capscrew, M8 x 70 |
| 19 | 4 | 7861 | Roll Pin – Inner |
| 20 | 4 | 7962 | Roll Pin – Outer |
| 21 | 16 | 221199 | Bracket |
| 22 | 16 | 683822 | Lockwasher, M12 |
| 23 | 16 | 763021 | Capscrew, M12 x 30 |
| 24 | 2 | 605230 | Fitting, 6-6 |
| 25 | 8 | 611288 | Fitting, 6-6 |
| 26 | 4 | 688387 | Jam Nut, M12 |
| 27 | 4 | 768555 | Capscrew, M12 x 40 |
| 28 | 2 | 787372 | Capscrew, M8 x 20 |
| 29 | 2 | 787398 | Washer, M8 |
| 30 | 2 | 6020429 | Eye Pin |
| 31 | 2 | 218169 | Pin |
| 32 | 4 | 399469 | Shim |
| 33 | 8 | 222901 | Retaining Ring |
| 34 | 2 | 21066-0805 | Bushing |

▲ See Cylinder page(s) for parts breakdown.

● See Valve page for parts breakdown.

Reference: Common Parts Group 6116436-R1, S-28320.

Clamp Valve



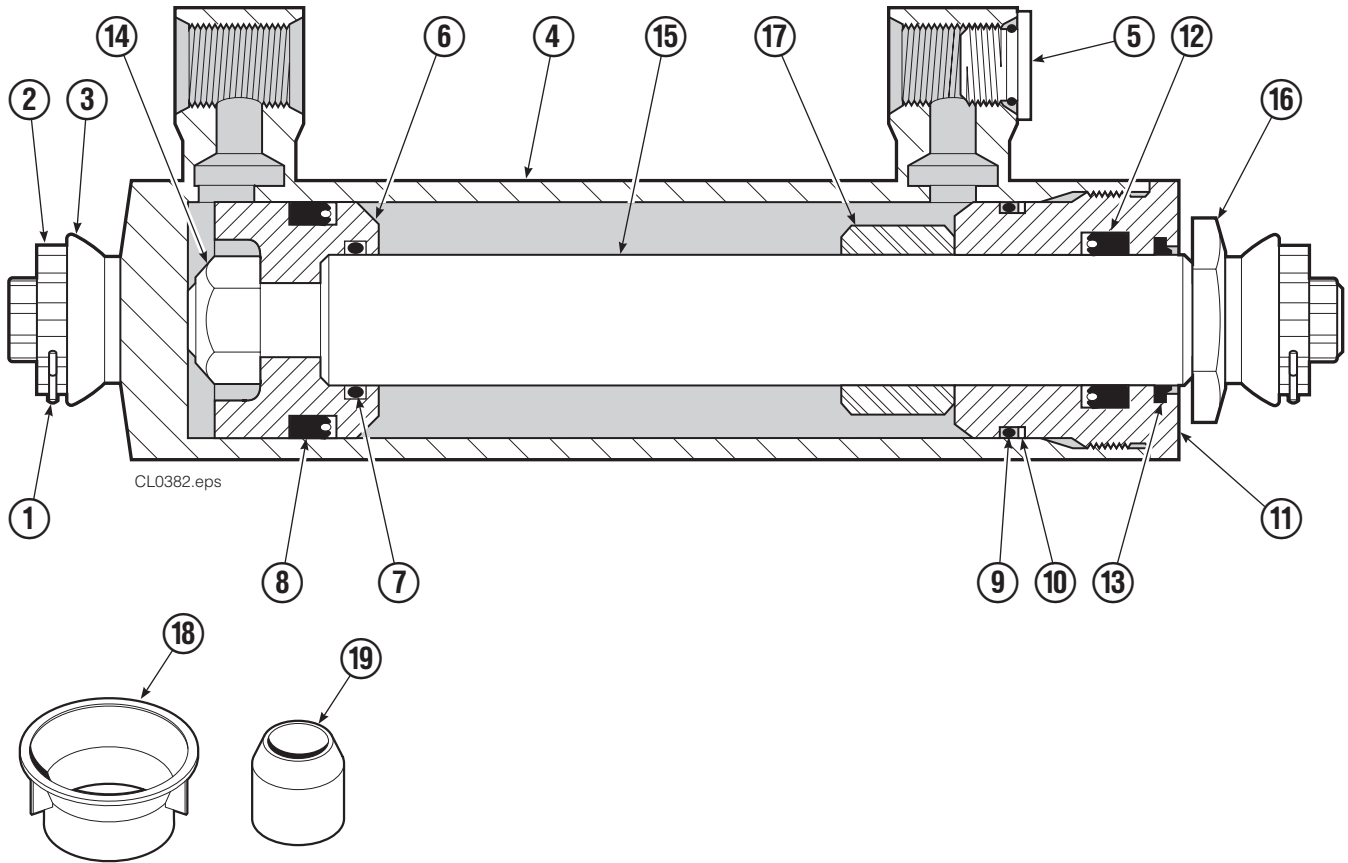
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| REF | QTY | PART NO. | DESCRIPTION |
|-----|-----|----------|------------------|
| | | 219694 | Valve Assembly |
| 1 | 1 | 219693 | Body |
| 2 | 8 | 611288 | Fitting, 6-8 |
| 3 | 1 | 617915 | Fitting, 4-4 |
| 4 | 1 | 659058 | Check Valve - PO |
| 5 | 1 | 667516 | Service Kit |
| 6 | 2 | 601377 | Fitting, 8-8 |
| 7 | 2 | 605761 | Fitting, 8-8 ▲ |
| 8 | 2 | 2671 | Fitting, 8 ▲ |
| 9 | 2 | 2618 | Nut, 8 ▲ |

▲ Not included in Valve Assembly.

Reference: Hydraulic Group 222080.

Cylinder Assembly



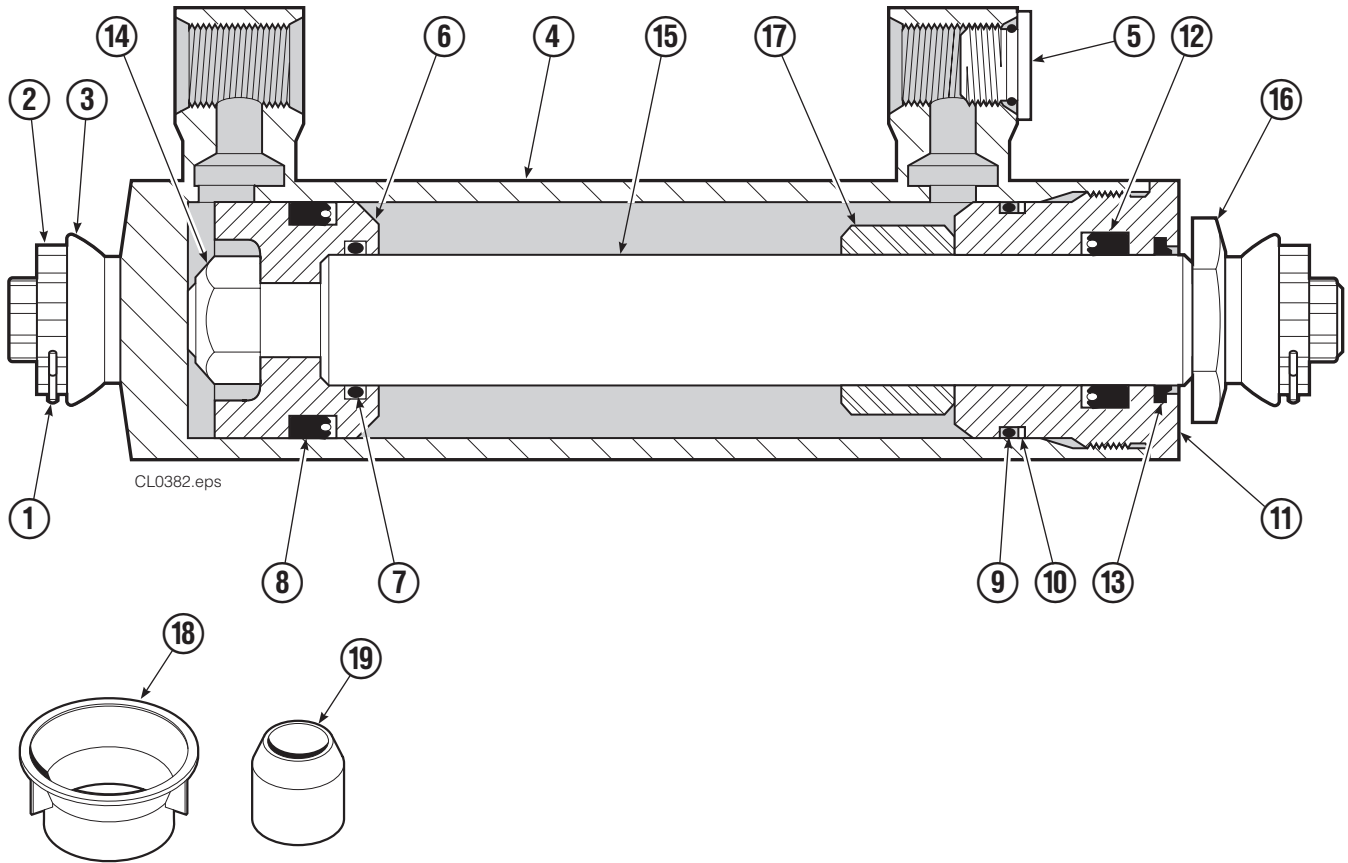
| REF | QTY | PART NO. | DESCRIPTION |
|-----|-----|----------|--------------------------|
| | | 6137651 | Cylinder Assembly |
| 1 | 2 | 6510 | ■ Cotter Pin |
| 2 | 2 | 667624 | ■ Nut Retainer |
| 3 | 2 | 667625 | ■ Nut |
| 4 | 1 | 6128454 | Shell |
| 5 | 1 | 602580 | Fitting |
| 6 | 1 | 559702 | Piston |
| 7 | 1 | 2716 | ▲ O-Ring |
| 8 | 1 | 662450 | ▲ Seal |
| 9 | 1 | 2722 | ▲ O-Ring |
| 10 | 1 | 615126 | ▲ Back-Up Ring |
| 11 | 1 | 413799 | Retainer |
| 12 | 1 | 662448 | ▲ Seal |
| 13 | 1 | 636853 | ▲ Wiper |
| 14 | 1 | 667623 | Nut |
| 15 | 1 | 6127221 | Rod |
| 16 | 1 | 667626 | Washer |
| 17 | 1 | 3013066 | Spacer |
| 18 | 1 | 671047 | ▲ Seal Loader - Piston |
| 19 | 1 | 671051 | ▲ Seal Loader - Retainer |
| | | 560729 | Service Kit |

■ Included in Nut Service Kit 668926.

▲ Included in Service Kit 560729.

Reference: ST-0283, ST-0284.

Cylinder Assembly



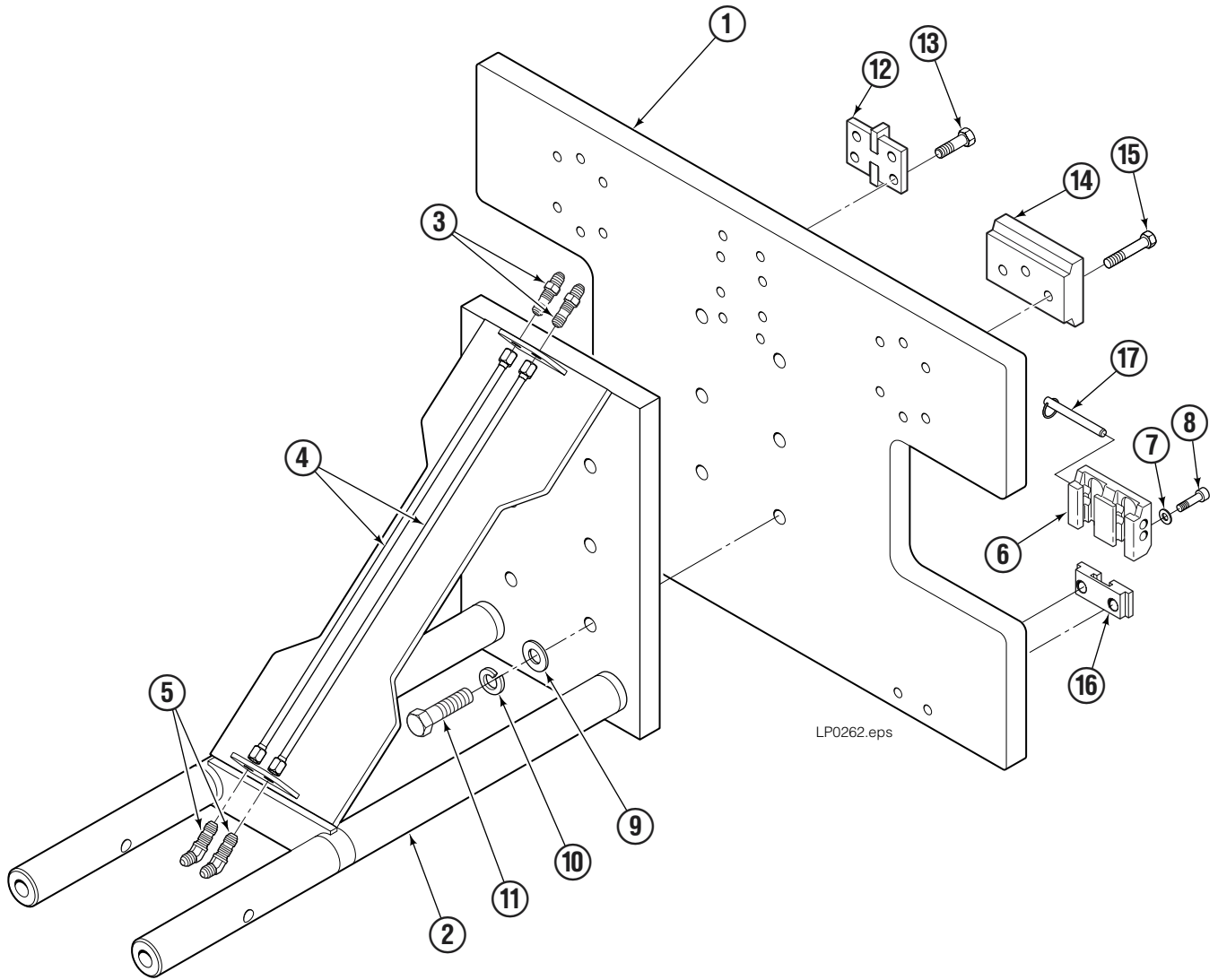
| REF | QTY | PART NO. | DESCRIPTION |
|-----|-----|----------|--------------------------|
| | | 6137650 | Cylinder Assembly |
| 1 | 2 | 6510 | ■ Cotter Pin |
| 2 | 2 | 667624 | ■ Nut Retainer |
| 3 | 2 | 667625 | ■ Nut |
| 4 | 1 | 6115690 | Shell |
| 5 | 1 | 602580 | Fitting |
| 6 | 1 | 559702 | Piston |
| 7 | 1 | 2716 | ▲ O-Ring |
| 8 | 1 | 662450 | ▲ Seal |
| 9 | 1 | 2722 | ▲ O-Ring |
| 10 | 1 | 615126 | ▲ Back-Up Ring |
| 11 | 1 | 413799 | Retainer |
| 12 | 1 | 662448 | ▲ Seal |
| 13 | 1 | 636853 | ▲ Wiper |
| 14 | 1 | 667623 | Nut |
| 15 | 1 | 6120343 | Rod |
| 16 | 1 | 667626 | Washer |
| 17 | 1 | 6137652 | Spacer |
| 18 | 1 | 671047 | ▲ Seal Loader - Piston |
| 19 | 1 | 671051 | ▲ Seal Loader - Retainer |
| | | 560729 | Service Kit |

■ Included in Nut Service Kit 668926.

▲ Included in Service Kit 560729.

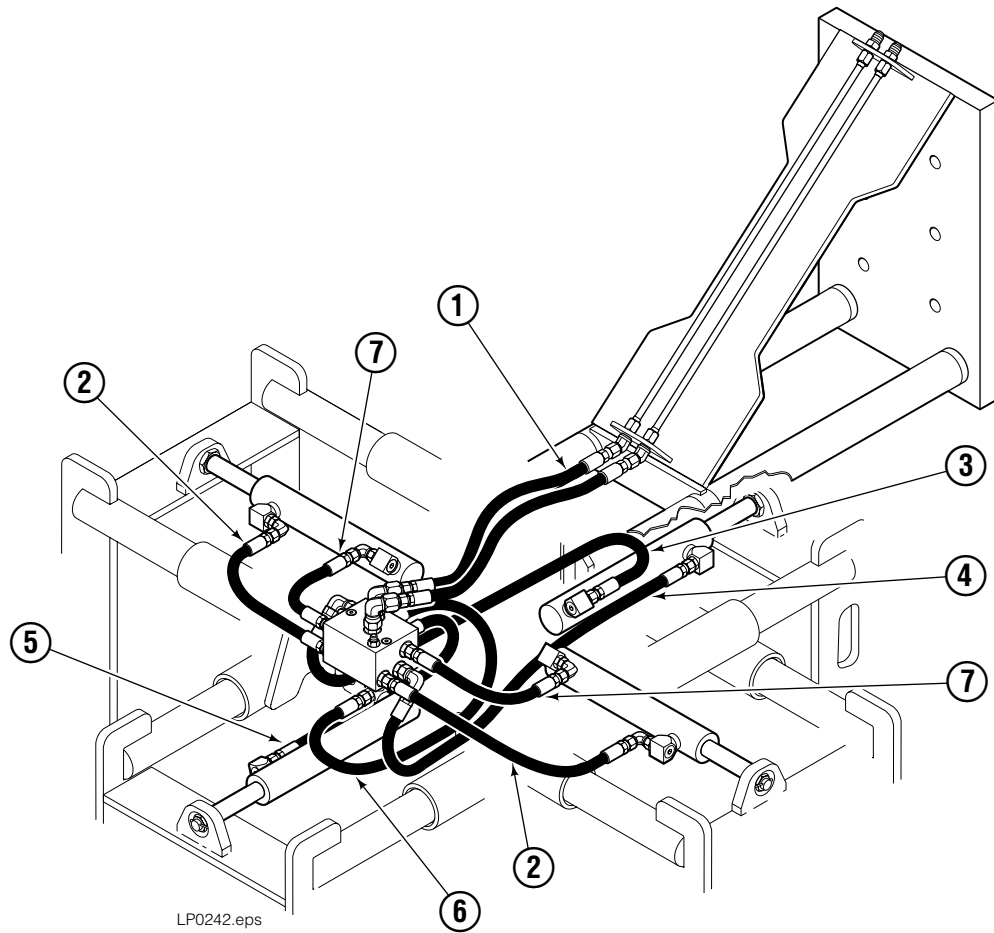
Reference: ST-0283, ST-0284.

Mounting/Frame Assembly



| REF | QTY | PART NO. | DESCRIPTION |
|-----|-----|----------|-------------------------|
| | | 6122048 | Mounting/Frame Assembly |
| 1 | 1 | 6115449 | Mounting Plate |
| 2 | 1 | 3018831 | Frame |
| 3 | 2 | 2375 | Fitting, 6-6 |
| 4 | 2 | 3018912 | Tube |
| 5 | 2 | 2492 | Fitting, 6-6 |
| 6 | 2 | 675514 | Lower Hook |
| 7 | 10 | 684586 | Washer, M16 |
| 8 | 4 | 211180 | Capscrew, M16 x 30 |
| 9 | 6 | 215419 | Washer, M20 |
| 10 | 6 | 681467 | Lockwasher, M20 |
| 11 | 6 | 768582 | Capscrew, M20 x 80 |
| 12 | 1 | 3005793 | Key Plate |
| 13 | 4 | 684633 | Capscrew, M16 x 50 |
| 14 | 2 | 3005795 | Upper Hook |
| 15 | 6 | 751511 | Capscrew, M16 x 55 |
| 16 | 2 | 675515 | Guide |
| 17 | 2 | 678832 | Pin |

Hose Group



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| REF | QTY | PART NO. | DESCRIPTION |
|-----|-----|----------|------------------------|
| | | 6100368 | Hose Group - modified |
| 1 | 1 | 6011624 | Hose, Tinline 32.0 in. |
| 2 | 2 | 221654 | Hose, 35.5 in. |
| 3 | 1 | 221652 | Hose, 30.0 in. |
| 4 | 1 | 205226 | Hose, 34.25 in. |
| 5 | 1 | 201256 | Hose, 21.0 in. |
| 6 | 1 | 686472 | Hose, 25.5 in. |
| 7 | 2 | 221653 | Hose, 24.5 in. |

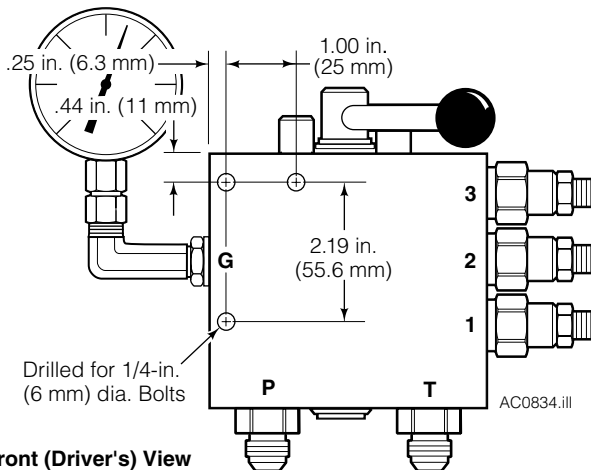


Installation Instructions

Four-Position Pressure Relief Valve 660412

This sheet provides installation instructions for the Four-Position Pressure Relief Valve 660412. The valve enables up to four (4) pressure selections, allowing the clamping force to be varied from load to load. Three pressure relief cartridges can be adjusted to relieve pressure between 100 and 3000 psi, a fourth position blocks flow to all relief cartridges enabling straight-through truck relief pressure. Maximum flow rate through the valve is 20 GPM.

- 1 Determine a convenient location on the truck cowl or safety cage upright, within safe reach and view of the driver (see illustration opposite). Use the mounting hole dimensions shown to mount the valve securely.



Front (Driver's View)

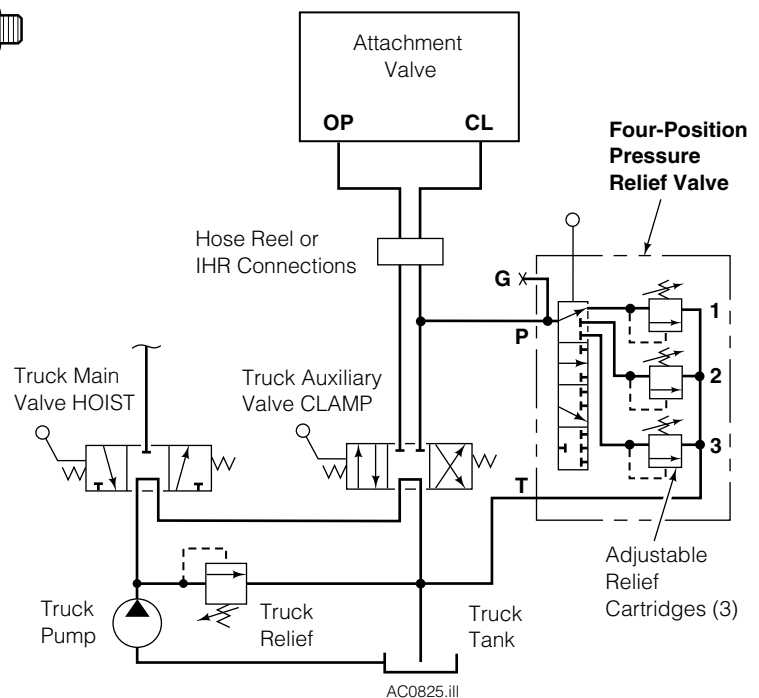
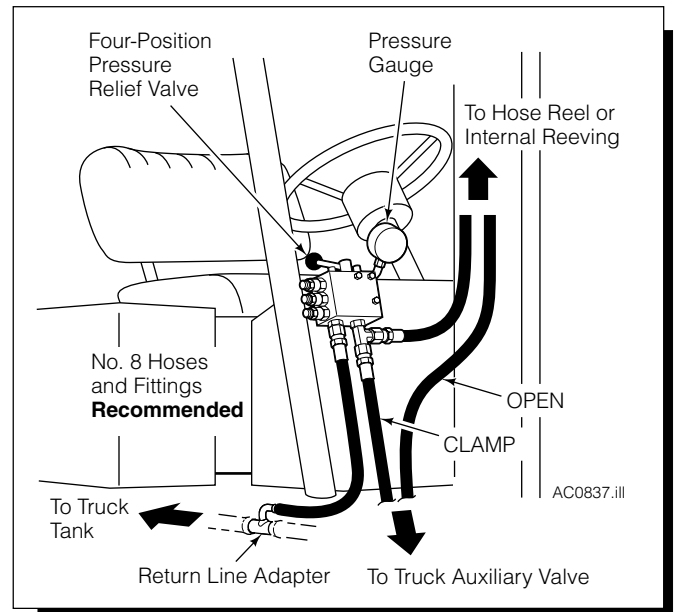


WARNING: Before removing hydraulic hoses, relieve pressure in the Attachment hydraulic system. Turn the truck off and move the auxiliary control lever several times in both directions.

- 2 Attach hoses and fittings between the Pressure Relief Valve, truck auxiliary valve, truck tank, and attachment valve using the diagram and hydraulic schematic. **No. 8 hoses and fittings with 13/32 in. (10 mm) minimum ID. recommended.**

CAUTION: A dedicated return-to-tank line is required from the relief valve 'TANK' port to the truck tank. Return Line Adapter Kits available:

Part No. 214062 (.75 in. dia. line)
Part No. 211745 (1.0 in. dia. line)
Part No. 214066 (1.25 in. dia. line)



Part No. 664827-R4

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- 3** Four basic stop configurations are shown in the illustration opposite (relief valve mounted as shown in this sheet). Many different configurations are possible by rearranging the stops, or by sliding the lever within the valve spool. Position the stops for desired movement of the lever depending on your specific requirements.

IMPORTANT: Numbers stamped around base of lever correspond to relief valve cartridge selected. Positions 1 and 2 are duplicated and can be selected 180 degrees opposite from each other. Position 'X' blocks the flow to all relief valve cartridges so the valve has no effect. Truck relief pressure is then delivered to the attachment.

- 4** To preset the Valve relief cartridges, install a 5000 psi (345 bar) pressure gauge (Cascade Part No. 664158) in the Valve gauge port.

Sample Settings*

| 3-Position | 4-Position |
|------------------------|--------------------------------|
| Pos. X – Not Available | Pos. X – 2300 (Truck Pressure) |
| Pos. 1 – 1400 psi | Pos. 1 – 1800 psi |
| Pos. 2 – 1600 psi | Pos. 2 – 1600 psi |
| Pos. 3 – 1800 psi | Pos. 3 – 1400 psi |

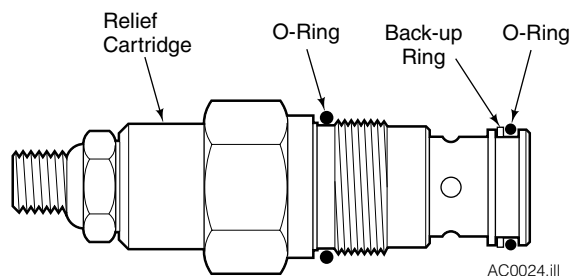
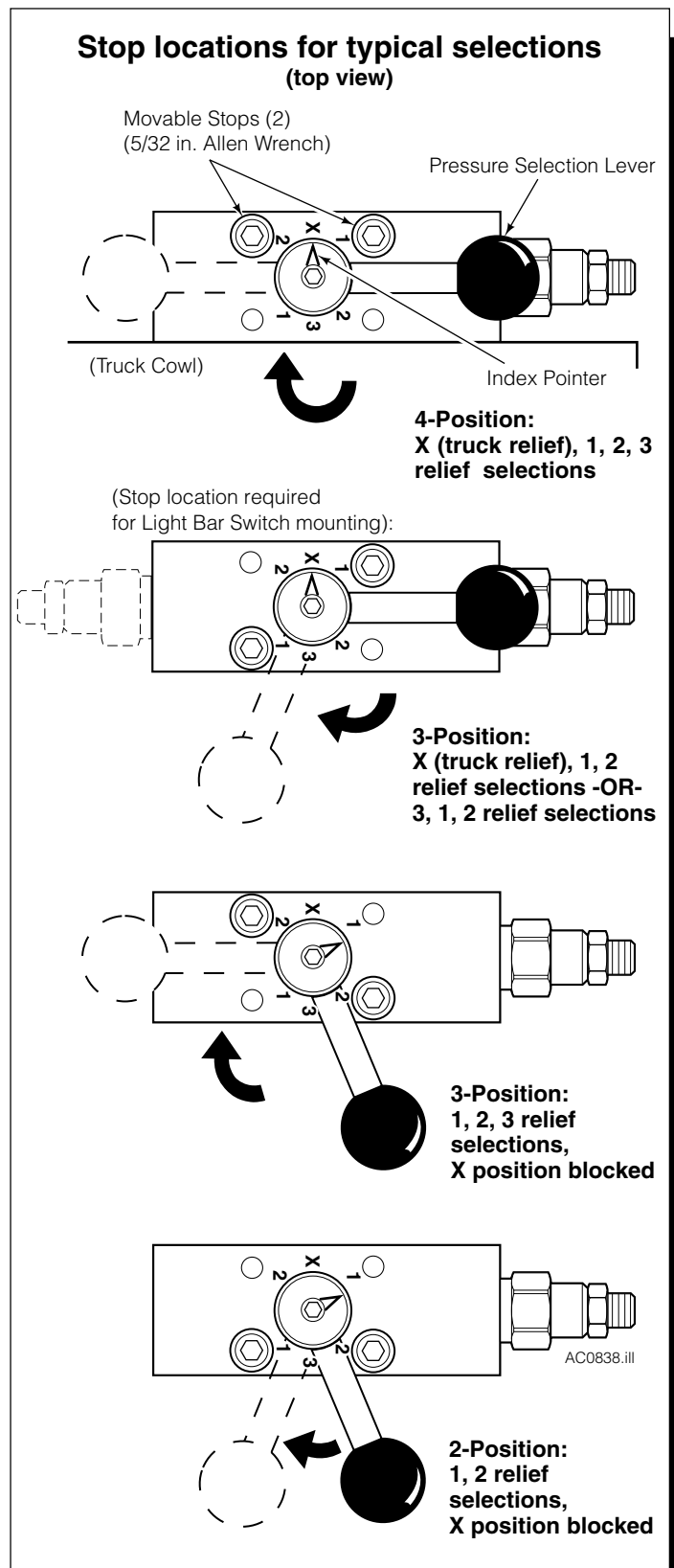
* **IMPORTANT: Cartridges are not factory pre-set.** Pressures must be adjusted for your application. Four (4) positions not available when Light Bar Switch is mounted on valve.

- 5** Shift the valve lever index pointer to position '1' stamped on the valve body.
- 6** Loosen the jam nut on the No. 1 relief cartridge. Adjust the relief cartridge (3/16-in. Allen hex wrench) inward (CW) to raise pressure or outward (CCW) to lower the pressure.
- 7** Clamp up on the load and check the pressure. Readjust as required. Tighten the jam nut.
- 8** Shift the valve lever pointer to position '2' stamped on the valve body. Repeat step 6 and 7 for No. 2 relief cartridge.
- 9** Shift the valve lever pointer to position '3' stamped on the valve body. Repeat step 6 and 7 for No. 3 relief cartridge.
- 10** With the valve lever pointer at position 'X', all ports to the relief valve cartridges are blocked, and the valve has no effect. Pressure to the attachment is determined by truck system relief pressure. The 'X' position selection may be blocked by positioning the stops as shown.

CAUTION: Do not remove the rotating spool from the valve body. Permanent damage will occur due to the spring-loaded detents and will void the warranty. Replace valve as a complete assembly.

Replacement Parts

| Qty | Description | Part No. |
|-----|-----------------------------|----------|
| 3 | Relief Cartridge with Seals | 661676 |
| 3 | Seal Service Kit | 669597 |



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**Cascade Corporation
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2201 NE 201st
Fairview, OR 97024-9718
Tel: 800-CASCADE (227-2233)
FAX: 888-329-8207

Cascade Canada Inc.
5570 Timberlea Blvd.
Mississauga, Ontario
Canada L4W-4M6
Tel: 905-629-7777
FAX: 905-629-7785

Cascade GmbH
Niederwippekühl 1
58579 Schalksmühle
Germany
Tel: 02355-50900
FAX: 02355-509020

Cascade Finland
A. Petreliuksenkatu 3
01370 Vantaa
Finland
Tel: 09-8361925
FAX: 09-8361935

**Cascade N.V.
Benelux Sales and Service**
Damsluisweg 56
PO Box 3009
1300 El Almere
The Netherlands
Tel: 036-5492950
FAX: 036-5492974

Cascade (UK) Ltd.
Unit 4, 12 O'Clock Court
Attercliffe Road
Sheffield, S4 7WW
England
Tel: 0870-850-8756
FAX: 0870-850-8757

**Sales Scotland
Macade Systems Ltd.**
18 Melford Road
Righead Ind. Estate
Bellshill ML4 3LR
Scotland
Tel: 01698-845777
FAX: 01698-845888

Cascade (Africa) Pty. Ltd.
PO Box 625, Isando 1600
60A Steel Road
Sparton, Kempton Park
South Africa
Tel: 27-11-975-9240
FAX: 27-11-394-1147

Cascade Scandinavia AB
Hammarvägen 10
PO Box 124
S-56723 Vaggeryd
Sweden
Tel: 039-336950
FAX: 039-336959

**Cascade France
S.A.R.L. MHP**
1D Rue De Charaintru BP 18,
91360 Epinay-Sur-Orge
France
Tel: 01-6454-7500
FAX: 01-6454-7501

Cascade Hispania S.A.
Carrer 5, Sector C
Zona Franca Duanera
Poligono de la Zona Franca
08040 Barcelona, Spain
Tel: 93-264-07-30
FAX: 93-264-07-31

Cascade Italia S.R.L.
Via Dell'Artigianato 1
37050 Vago di Lavagno (VR)
Italy
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FAX: 39-045-8989160

Movimenta Lda.
Parque Industrial
Vale do Alecrim, Lote 108
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Sales Russia
EMCG Material Handling
Equipment
Moscow
Tel: 095-795-2400
FAX: 095-795-2475
Email: emcg@emcg.ru

Cascade Japan Ltd.
5-5-41,
Torikai Kami
Settsu, Osaka
Japan, 566
Tel: 81-726-53-3490
FAX: 81-726-53-3497

Cascade Korea
121B 9L Namdong Ind.
Complex, 691-8 Gojan-Dong
Namdong-Ku
Inchon, 405-310 Korea
Tel: 82-32-821-2051
FAX: 82-32-821-2055

Cascade Australia
1445 Ipswich Road
Rocklea, QLD 4107
Australia
Tel: 1-800-227-223
FAX: 617-3373-7333

Cascade New Zealand
15 Ra Ora Drive
East Tamaki, Auckland
New Zealand
Tel: 64-9-273-9136
FAX: 64-9-273-9137

Cascade-Xiamen
No. 668 Yangguang Rd.
Xinyang Industrial Zone
Haicang, Xiamen City
Fujian Province
P.R. China 361026
Tel: 86-592-651-2500
FAX: 86-592-651-2571

**Sunstream Industries
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Singapore
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