



Installation Instructions

Electronic Pressure Regulator Kits with Backhand Relief

This manual provides instructions for Cascade Electronic Pressure Regulator with backhand relief and Indicator System. The kits provide selectable clamp force for the attachment through a driver operated selector switch and indication of the force selected by colored lights on a cab mounted light bar. The system is standard with a control box to select three pressure settings.

Cascade recommends using a Low Pressure Tank Line Kit for a dedicated return connection to the truck tank.

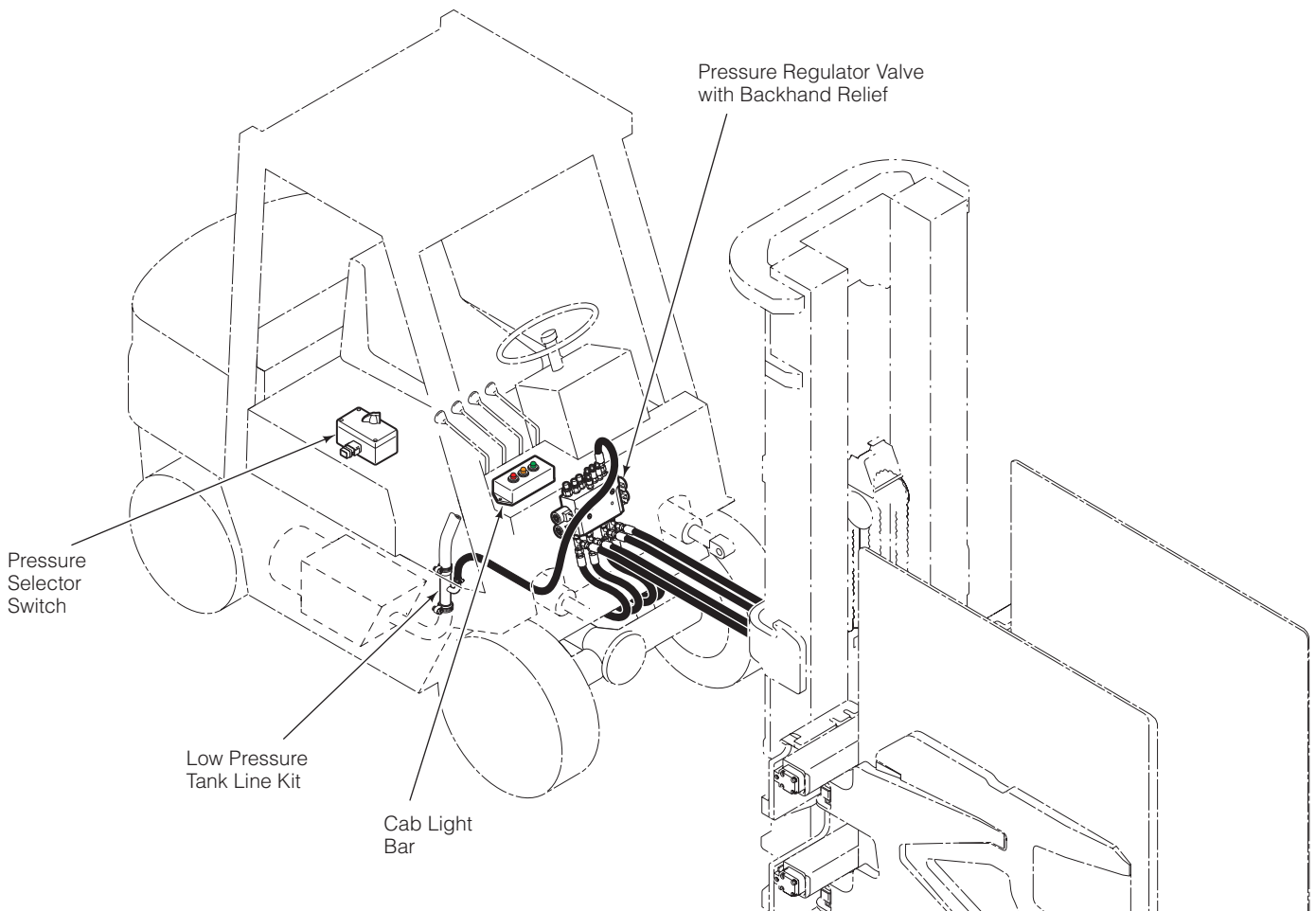
12V Kits

6071593 (Without Anti-Spike)
6081604 (With Anti-Spike)

24-48V Kits

6083517 (With Anti-Spike)
6081407 (Without Anti-Spike) ★
6081876 (With Anti-Spike) ★

★ Includes Voltage Converter
Kit 217932



cascade®
corporation

For Technical Support . . .

Call: 1-800-227-2233 Fax: 1-888-329-8207
Internet: www.cascorp.com
Write: Cascade Corporation, PO Box 20187, Portland, OR 97294

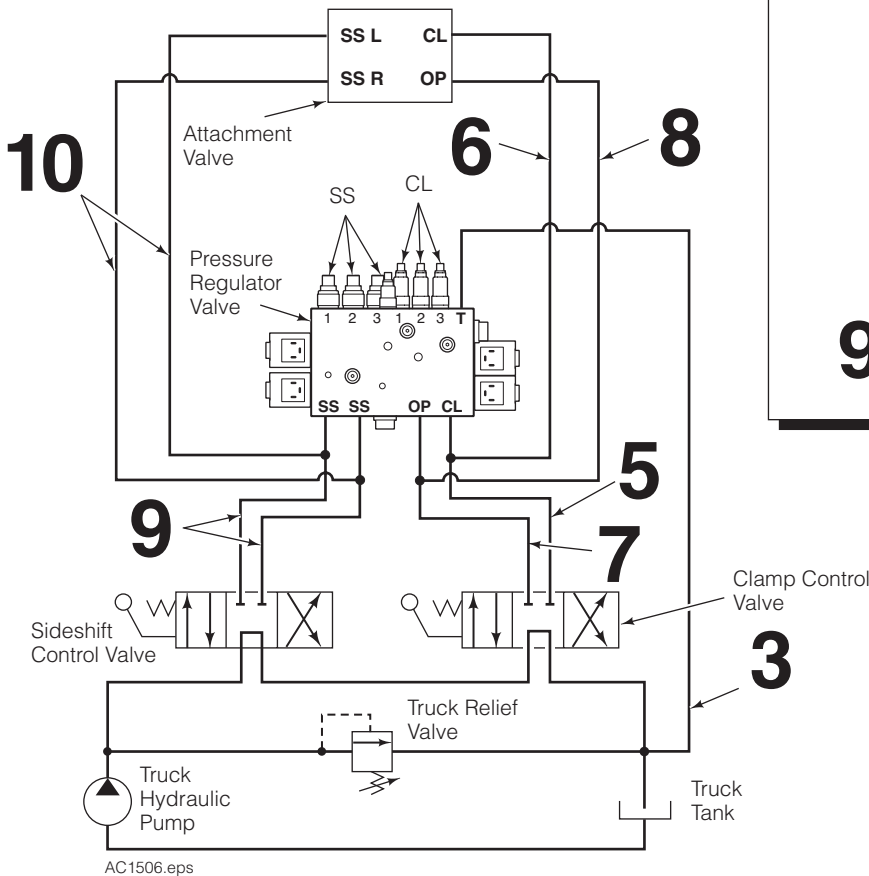
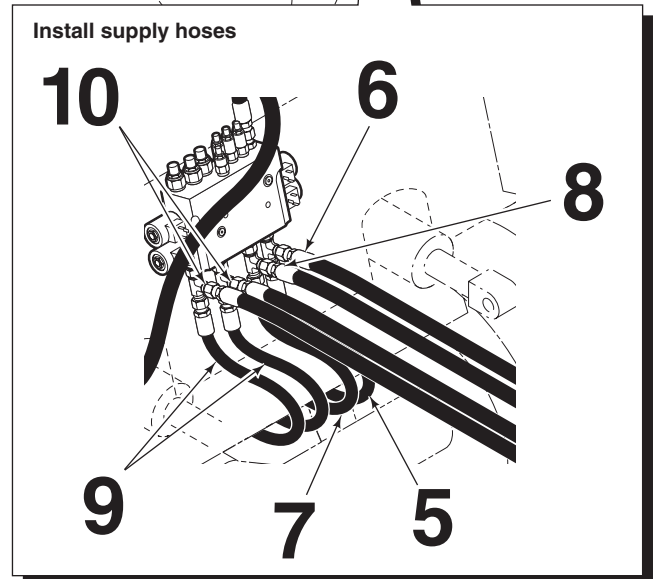
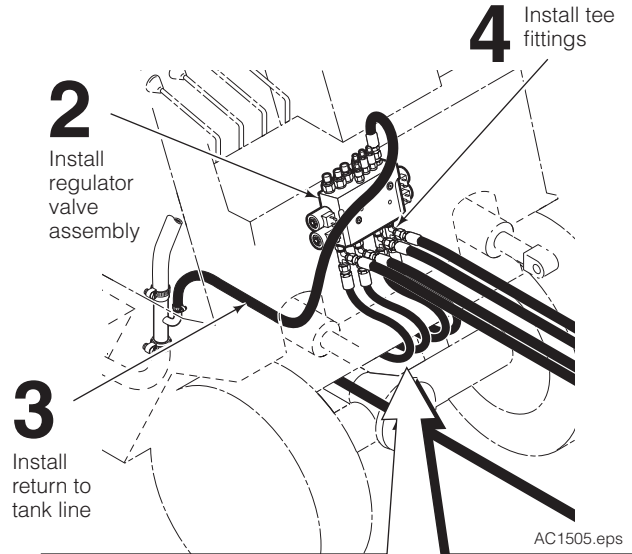
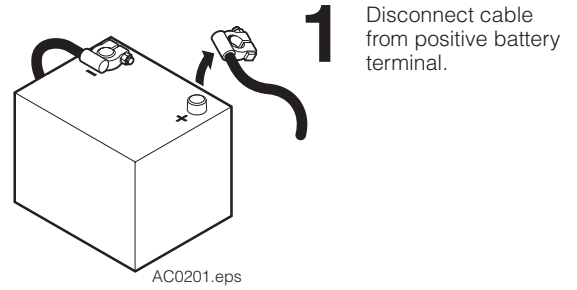
To Order Parts . . .

Call: 1-888-227-2233 Fax: 1-888-329-0234
Internet: www.cascorp.com
Write: Cascade Corporation, 2501 Sheridan Ave., Springfield, OH 45505

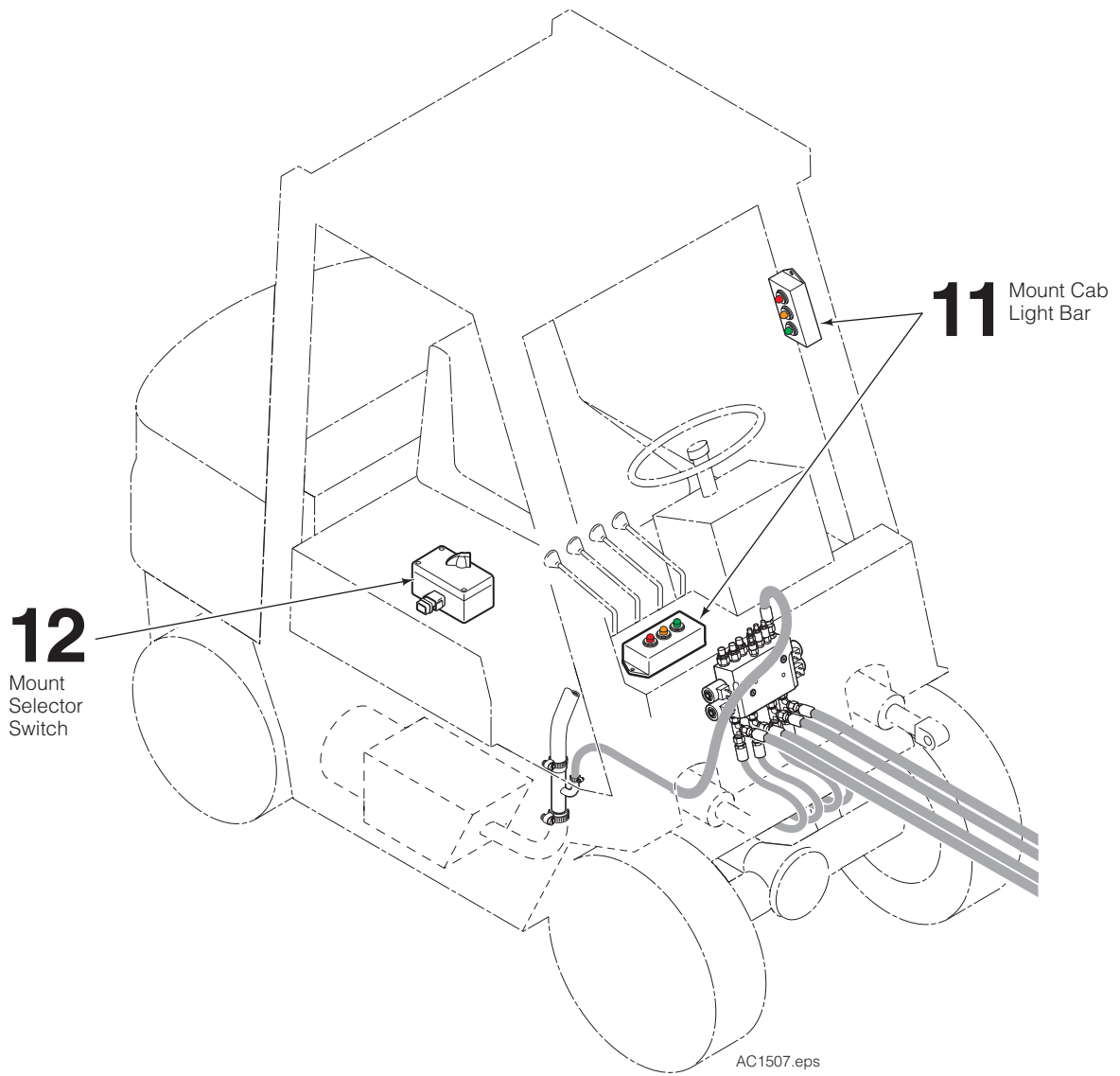
Installation

- 1 Disconnect the cable from the positive battery terminal.
- 2 Locate and install the regulator valve assembly on the truck cowl or under the floorboard using 3/8 in. capscrews. Watch for clearance when the mast is tilted back if mounting on the cowl. The regulator valve has adjustment screws that need easy access for final adjustment.
- 3 Install a return to tank line to the T port on the side of the valve to connect with the truck tank line. Cascade Low Pressure Return Line Adapter Kits are listed below.

.75 in. (19 mm) ID Tank Hose	Part No. 214062
1.00 in. (25 mm) ID Tank Hose	Part No. 211745
1.25 in. (31 mm) ID Tank Hose	Part No. 214066
1.50 in. (38 mm) ID Tank Hose	Part No. 6037507
- 4 Install four No. 8 tee fittings to the SS Ports, OP port and CL Port located on the bottom of the regulator valve.
- 5 Install a No. 8 hose from the truck auxiliary valve CLAMP port to the CL port tee fitting on the bottom of the regulator valve.
- 6 Install a No. 8 hose from the valve CL port tee fitting to the supply circuit for the attachment CLAMP port.
- 7 Install a No. 8 hose from the truck auxiliary valve OPEN port to the OP port tee fitting on the bottom of the regulator valve.
- 8 Install a No. 8 hose from the valve OP port tee fitting to the supply circuit for the attachment OPEN port.
- 9 Install No. 8 hoses from the truck auxiliary valve SIDESHIFT ports to the SS port tees fitting on the bottom of the regulator valve.
- 10 Install No. 8 hoses from the valve SS port tee fittings to the supply circuit for the attachment SIDESHIFT ports.



- 11** Locate and mount the cab light bar on the truck dashboard or overhead guard with the velcro provided. Position for best peripheral viewing due to brightness of lights.
- 12** Locate and mount the selector switch in a location convenient to the truck operator with the fasteners provided.



CAUTION: Consult the Lift Truck OEM for proper + power source connection.

13 Connect the cable ends.

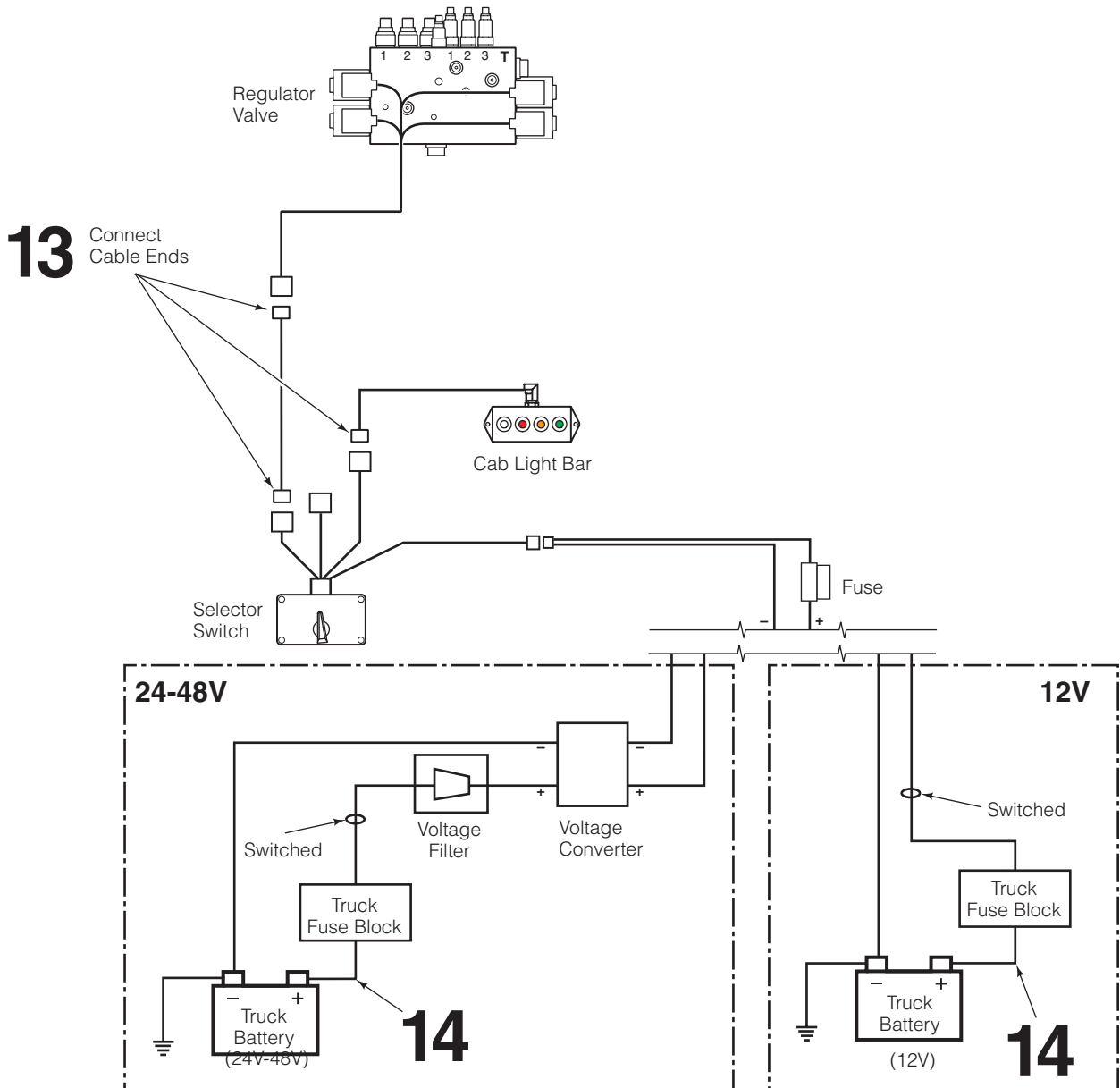
12V Trucks – Connect the fused positive wire to a 12V switched power source. Connect the ground wire.

24V-48V Trucks – Connect the fused positive wire from the cable harness to the voltage converter supplied. Connect the voltage converter to the voltage filter. Connect the voltage filter to a switched power source. Connect the ground wire.

NOTE: When installing on electric trucks with regenerative braking, voltage filter 6061953 must be installed. Failure to install voltage filter can cause damage to electrical components.

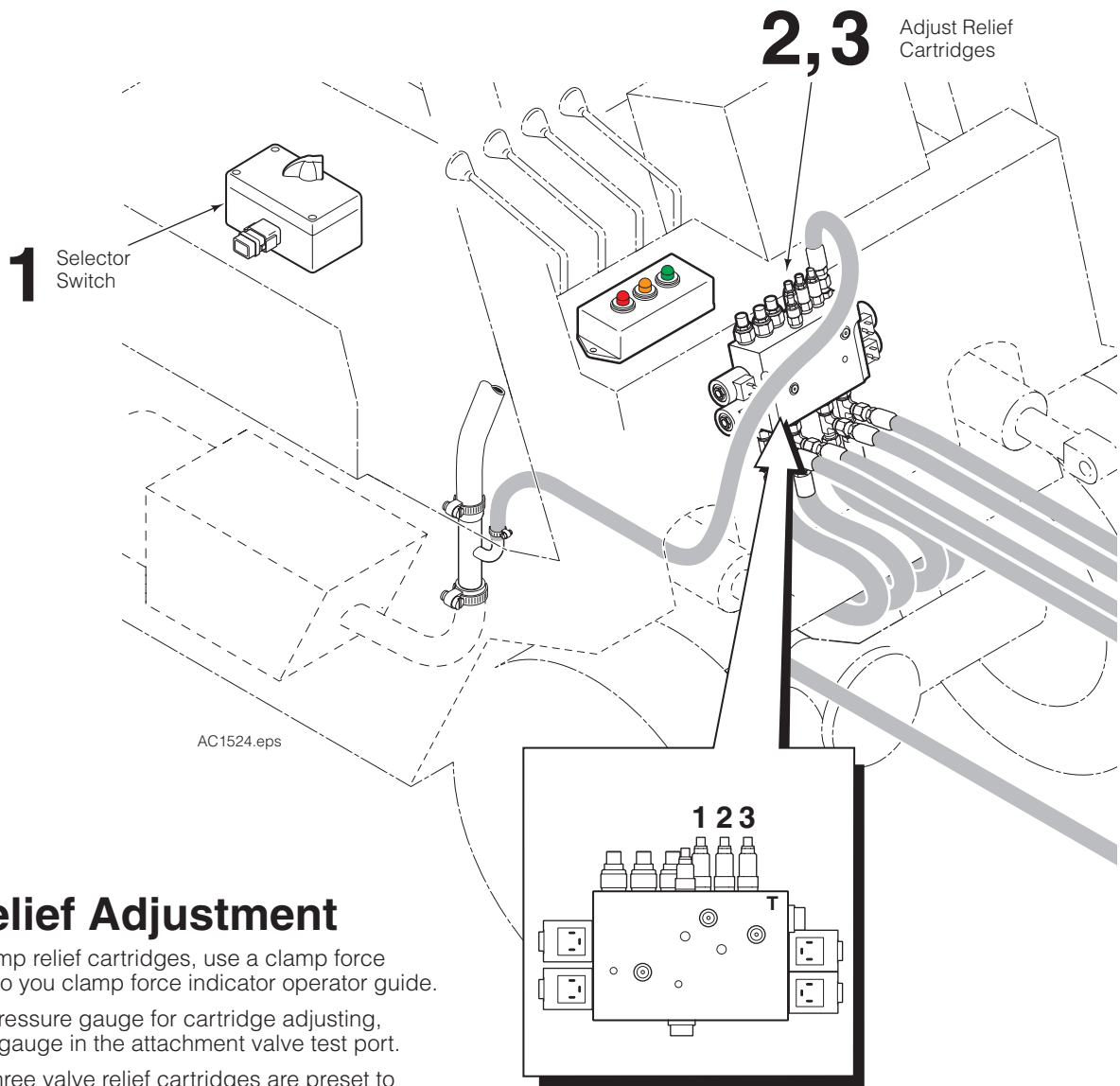
Check the cable routing for pinch points and clearance. Use wire ties as needed.

14 Reconnect the positive battery cable to the battery.



IC Trucks – Use chassis ground.
Electric Trucks – Use battery ground.

AC1508.eps



Clamp Relief Adjustment

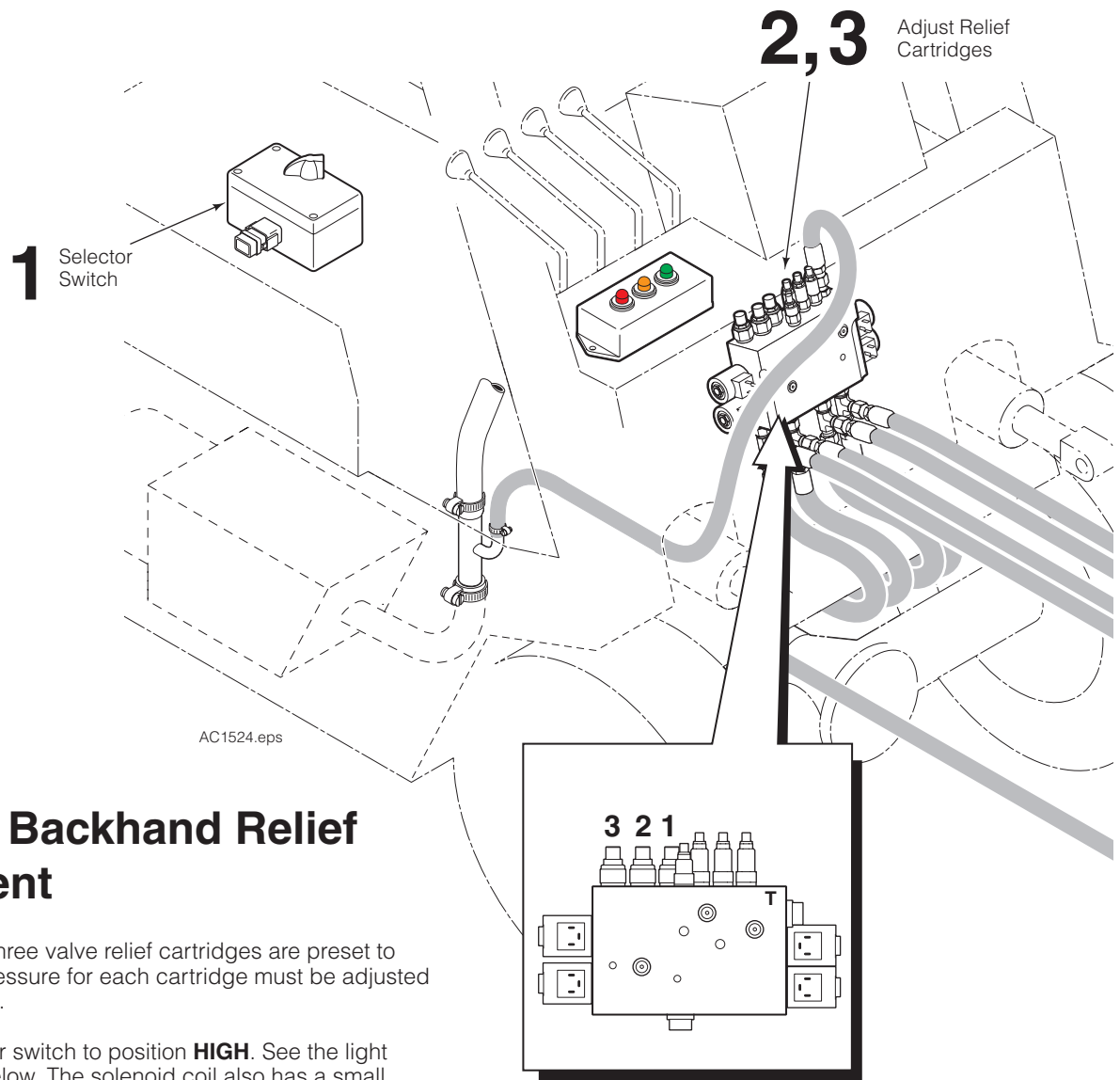
To set the valve clamp relief cartridges, use a clamp force indicator(s). Refer to your clamp force indicator operator guide.

NOTE: If using a pressure gauge for cartridge adjusting, install the pressure gauge in the attachment valve test port.

IMPORTANT: All three valve relief cartridges are preset to 2300 psi. Relief pressure for each cartridge must be adjusted for your application.

- 1** Shift the selector switch to position **LOW**. See the light display chart below. The solenoid coil also has a small indicator light.
- 2** Loosen the jam nut on the CL1 relief cartridge. Adjust the relief cartridge (5/32 in. Allen hex wrench) inward (CW) to raise pressure or outward (CCW) to lower the pressure.
- 3** Clamp a load and check the pressure. Readjust as required. Tighten the jam nut.
- 4** Shift the selector switch to position **MED**. Repeat steps 2 and 3 for CL2 relief position.
- 5** Shift the selector switch to position **HIGH**. Repeat steps 2 and 3 for CL3 relief position.

Switch Position	Relief Cartridge	Cab Light Bar (3)	Cab Light Bar (4)
LOW	1	Green	Green
MED	2	Amber	Amber
HIGH	3	Red	Red
N/A	None	N/A	Clear



AC1524.eps

Sideshift Backhand Relief Adjustment

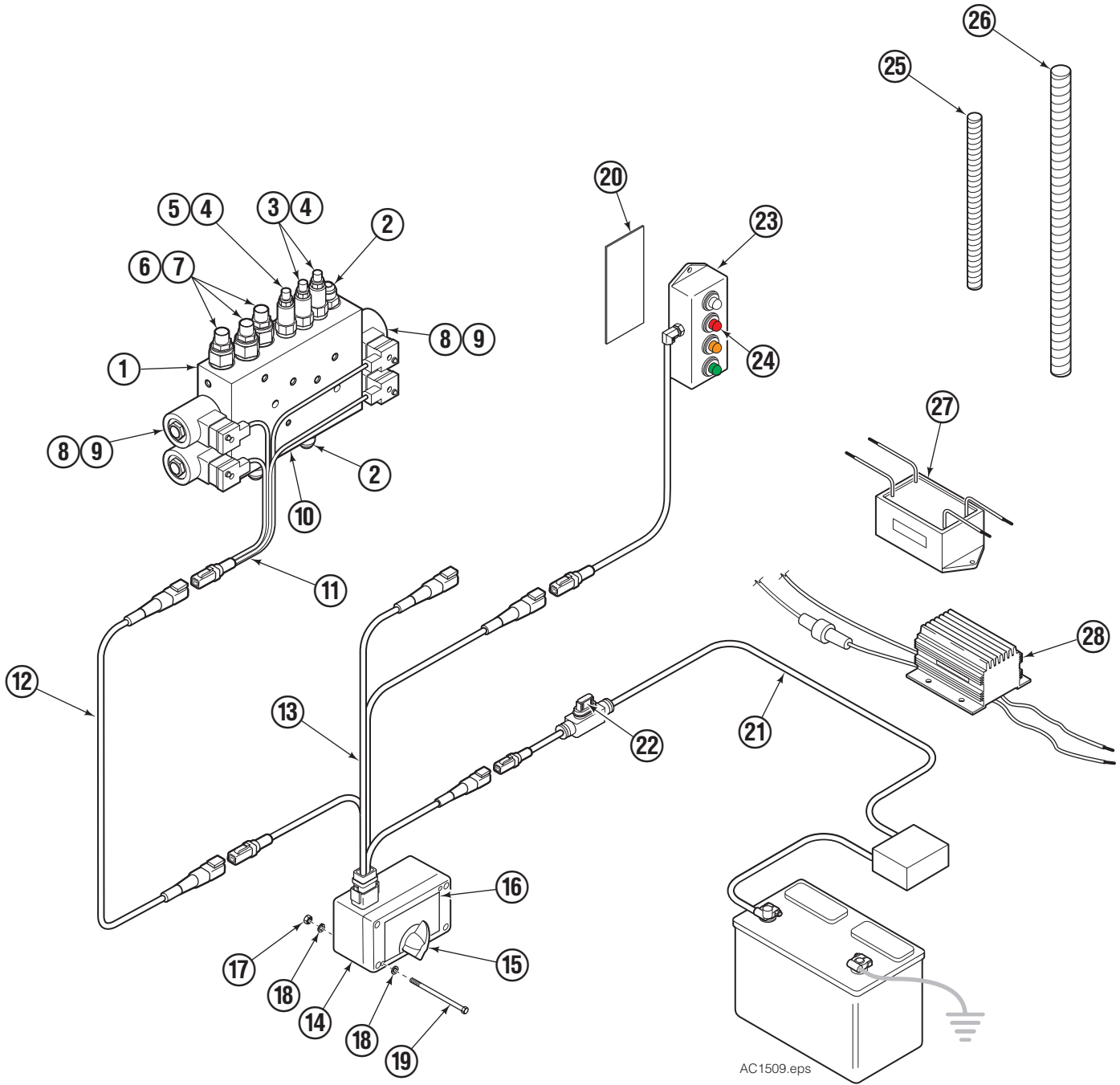
IMPORTANT: All three valve relief cartridges are preset to 2300 psi. Relief pressure for each cartridge must be adjusted for your application.

- 1** Shift the selector switch to position **HIGH**. See the light display chart below. The solenoid coil also has a small indicator light.
- 2** Loosen the jam nut on the SS3 relief cartridge. Adjust the relief cartridge (.315 in. Allen hex wrench) inward (CW) to raise pressure or outward (CCW) to lower the pressure.
- 3** Clamp the heaviest load. Raise the load and sideshift. Turn outward (CCW) relief cartridge until the load does not sideshift. Turn inward (CW) in 1/2 turn increments until the load can be sideshifted fully left and right. Tighten the jam nut.
- 4** Shift the selector switch to position **MED**. Repeat steps 2 and 3 for SS2 relief position, except clamp a **medium** load.
- 5** Shift the selector switch to position **LOW**. Repeat steps 2 and 3 for SS1 relief position, except clamp a **light** load.

Switch Position	Relief Cartridge	Cab Light Bar (3)	Cab Light Bar (4)
LOW	1	Green	Green
MED	2	Amber	Amber
HIGH	3	Red	Red
N/A	None	N/A	Clear

Electronic Pressure Regulator Control & Indicator Kits

(4 Indicator Cab Light Bar and Valve without Anti-Spike)



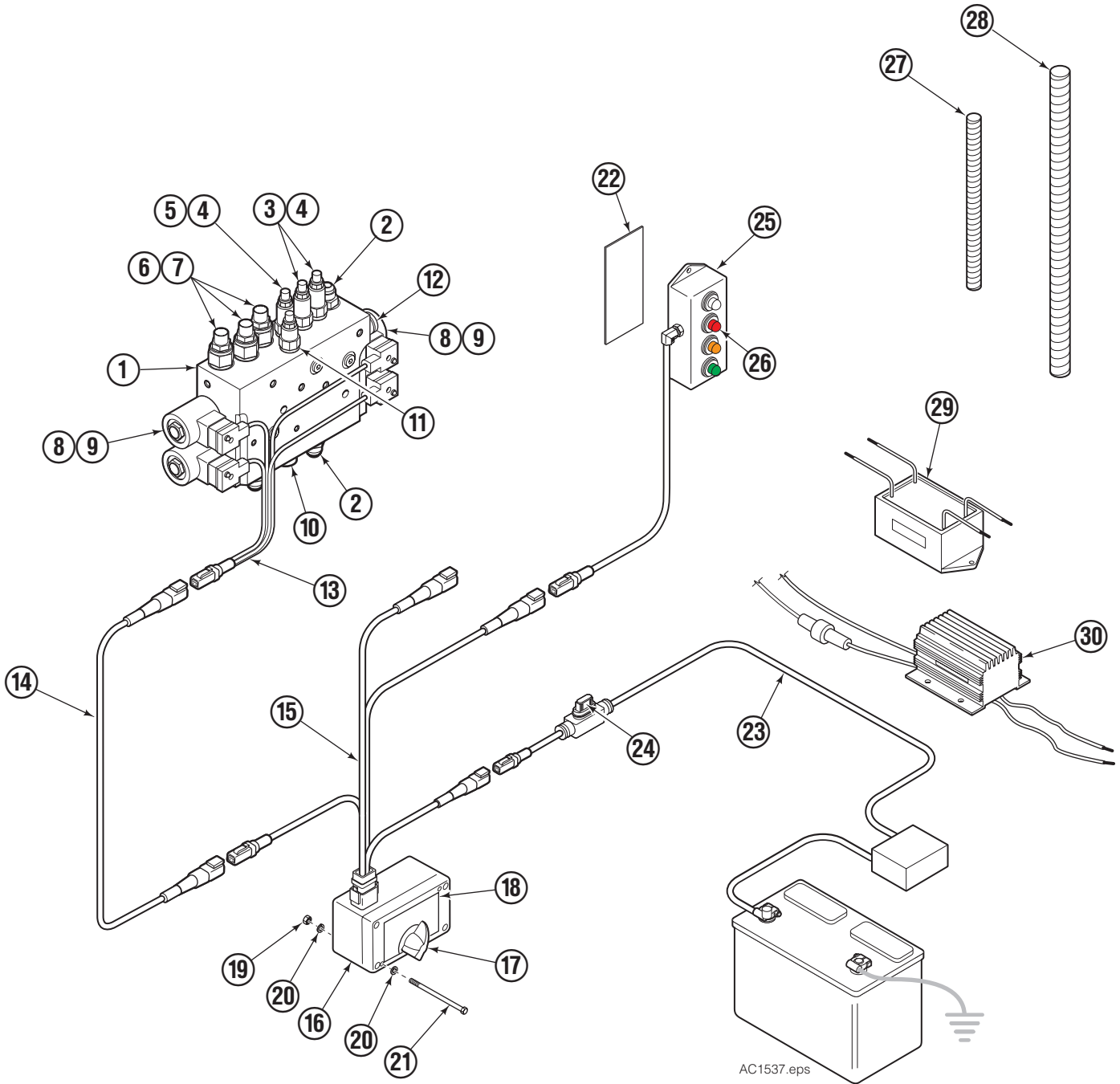
Electronic Pressure Regulator Control & Indicator Kits

(4 Indicator Cab Light Bar and Valve without Anti-Spike)

REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		6071593	Pressure Regulator - 12V ■	15	1	6061213	Switch
		6081407	Pressure Regulator - 24-48V ▲	16	1	6081449	Label
		217932	Converter & Filter Kit ●	17	2	765474	Nut, M4
1	1	6069381	Valve Assembly	18	4	686454	Washer, M4
2	5	601377	Fitting, 8-8	19	2	768510	Capscrew, M4 x 70
3	2	641432	Relief Valve Cartridge	20	1	6029665	Velcro
4	3	669597	Seal Kit	21	1	6048139	Power Harness
5	1	661676	Relief Valve Cartridge	22	1	6016993	Fuse, ATM type 7.5 amp
6	3	6001450	Crossover Relief Cartridge	23	1	6053986	Cab Light Bar
7	3	682170	Seal Kit	24	1	6004132	Bulb – Green
8	4	6033410	Solenoid Cartridge		1	6004133	Bulb – Amber
9	4	6014287	Solenoid Coil – 12V		1	6011823	Bulb – Red
10	1	6064027	Directional Valve Cartridge		1	6049981	Bulb – White
11	1	6071535	Solenoid Cable Harness	25	1	6021369	Conduit, 9 mm ID x 300 mm
12	1	6053985	Solenoid Cable	26	1	6057697	Conduit, 25 mm ID x 1000 mm
13	1	6053968	Wire Harness	27	1	6061953	Voltage Filter
14	1	6081443	Control Box	28	1	6064659	Voltage Converter, 24V-48V→12V

- Includes items 1 through 26.
- ▲ Includes items 1 through 28.
- Includes items 27 & 28.

Electronic Pressure Regulator Control & Indicator Kits (4 Indicator Cab Light Bar and Valve with Anti-Spike)



Electronic Pressure Regulator Control & Indicator Kits

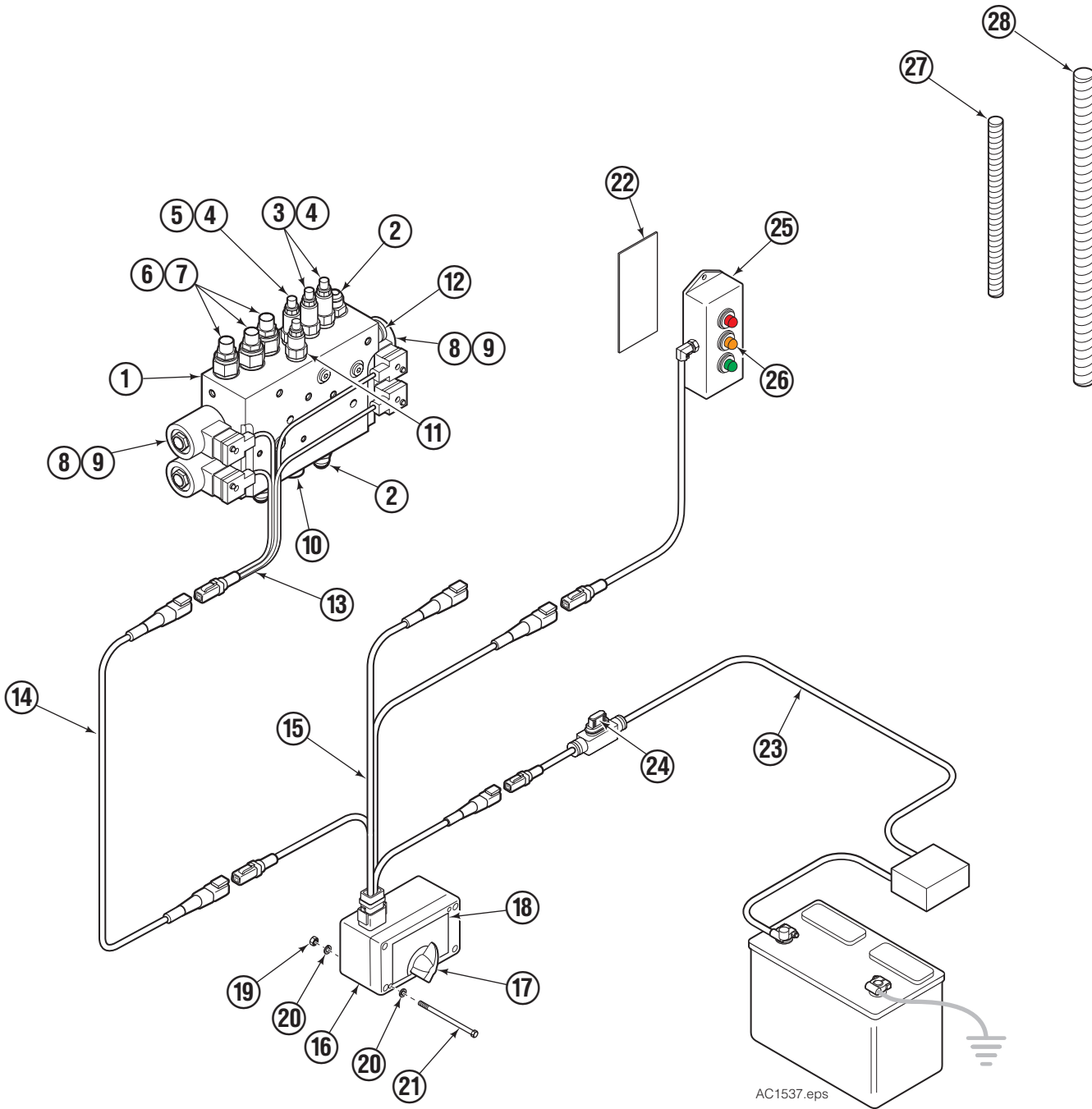
(4 Indicator Cab Light Bar and Valve with Anti-Spike)

REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		6081604	Pressure Regulator - 12V ■	16	1	6081443	Control Box
		6081876	Pressure Regulator - 24-48V ▲	17	1	6061213	Switch
		217932	Converter & Filter Kit ●	18	1	6081449	Label
1	1	6064005	Valve Assembly	19	2	765474	Nut, M4
2	5	601377	Fitting, 8-8	20	4	686454	Washer, M4
3	2	641432	Relief Valve Cartridge	21	2	768510	Capscrew, M4 x 70
4	3	669597	Seal Kit	22	1	6029665	Velcro
5	1	661676	Relief Valve Cartridge	23	1	6048139	Power Harness
6	3	6001450	Crossover Relief Cartridge	24	1	6016993	Fuse, ATM type 7.5 amp
7	3	682170	Seal Kit	25	1	6053986	Cab Light Bar
8	4	6033410	Solenoid Cartridge	26	1	6004132	Bulb – Green
9	4	6014287	Solenoid Coil – 12V		1	6004133	Bulb – Amber
10	1	6064027	Directional Valve Cartridge		1	6011823	Bulb – Red
11	1	6026853	Relief Valve Cartridge		1	6049981	Bulb – White
12	1	6026861	Directional Valve Cartridge	27	1	6021369	Conduit, 9 mm ID x 300 mm
13	1	6071535	Solenoid Cable Harness	28	1	6057697	Conduit, 25 mm ID x 1000 mm
14	1	6053985	Solenoid Cable	29	1	6061953	Voltage Filter
15	1	6053968	Wire Harness	30	1	6064659	Voltage Converter, 24V-48V→12V

- Includes items 1 through 28.
- ▲ Includes items 1 through 30.
- Includes items 29 & 30.

Electronic Pressure Regulator Control & Indicator Kits

(3 Indicator Cab Light Bar and Valve with Anti-Spike)



Electronic Pressure Regulator Control & Indicator Kits

(3 Indicator Cab Light Bar and Valve with Anti-Spike)

REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		6083517	Pressure Regulator - 12V	16	1	6081443	Control Box
1	1	6083534	Valve Assembly	17	1	6061213	Switch
2	5	601377	Fitting, 8-8	18	1	6081449	Label
3	2	641432	Relief Valve Cartridge	19	2	765474	Nut, M4
4	3	669597	Seal Kit	20	4	686454	Washer, M4
5	1	661676	Relief Valve Cartridge	21	2	768510	Capscrew, M4 x 70
6	3	6001450	Crossover Relief Cartridge	22	1	6029665	Velcro
7	3	682170	Seal Kit	23	1	6048139	Power Harness
8	4	6033410	Solenoid Relief Cartridge	24	1	6016993	Fuse, ATM type 7.5 amp
9	4	6018138	Solenoid Coil – 12V	25	1	6083520	Cab Light Bar
10	1	6064027	Directional Valve Cartridge		1	6083531	Bulb – Green
11	1	6026853	Relief Valve Cartridge	26	1	6083528	Bulb – Amber
12	1	6026861	Directional Valve Cartridge		1	6083532	Bulb – Red
13	1	6071535	Solenoid Cable Harness	27	1	6021369	Conduit, 9 mm ID x 300 mm
14	1	6053985	Solenoid Cable	28	1	6057697	Conduit, 25 mm ID x 1000 mm
15	1	6053968	Wire Harness				

Do you have questions you need answered right now? Call your nearest Cascade Service Department. Visit us online at www.cascorp.com

AMERICAS

Cascade Corporation Parts Sales

2501 Sheridan Ave.
Springfield, OH 45505
Tel: 888-CASCADE (227-2233)
Fax: 888-329-0234

Cascade Canada Inc.

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

Cascade do Brasil

Rua João Guerra, 134
Macuco, Santos - SP
Brasil 11015-130
Tel: 55-13-2105-8800
Fax: 55-13-2105-8899

EUROPE-AFRICA

Cascade Italia S.R.L. European Headquarters

Via Dell'Artigianato 1
37050 Vago di Lavagno (VR)
Italy
Tel: 39-045-8989111
Fax: 39-045-8989160

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

ASIA-PACIFIC

Cascade Japan Ltd.

2-23, 2-Chome,
Kukuchi Nishimachi
Amagasaki, Hyogo
Japan, 661-0978
Tel: 81-6-6420-9771
Fax: 81-6-6420-9777

Cascade Korea

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

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

Cascade India Material Handling Private Limited

No 34, Global Trade Centre
1/1 Rambaugh Colony
Lal Bahadur Shastri Road,
Navi Peth, Pune 411 030
(Maharashtra) India
Phone: +91 020 2432 5490
Fax: +91 020 2433 0881

Cascade Australia Pty. Ltd.

1445 Ipswich Road
Rocklea, QLD 4107
Australia
Tel: 1-800-227-223
Fax: +61 7 3373-7333

Cascade New Zealand

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

Sunstream Industries Pte. Ltd.

18 Tuas South Street 5
Singapore 637796
Tel: +65-6795-7555
Fax: +65-6863-1368

