



# Installation Instructions

## 3-Position Electronic Pressure Regulator Kits

This manual provides instructions for Cascade Electronic Pressure Regulator 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 an optional light bar or light tower.

The system is standard with four settings active (three adjustable and truck relief). The switch box can be easily modified to three active settings, blocking out the truck relief position. See Modifying for Three Active Settings Section.

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

### Kits without Light Tower

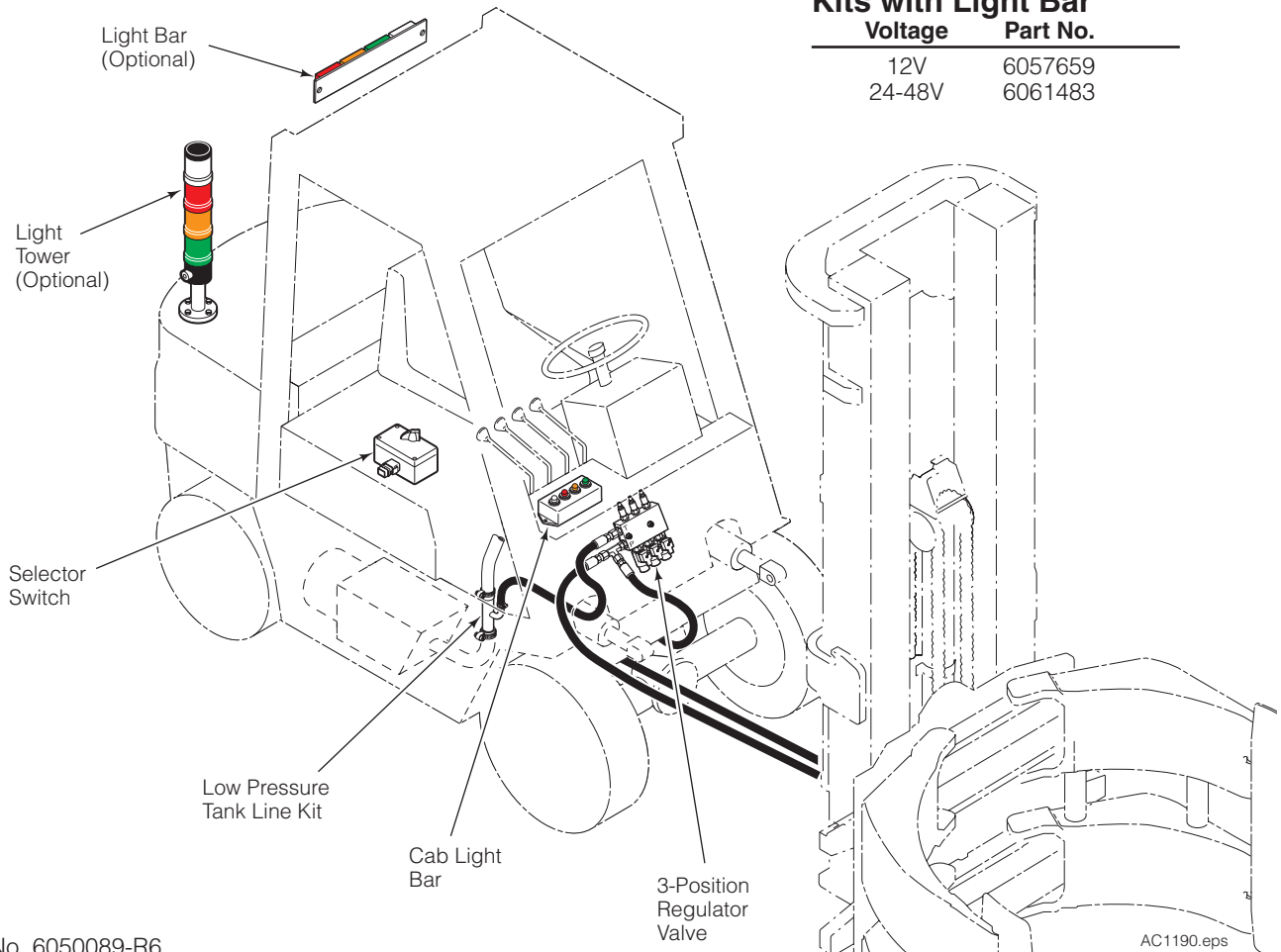
Voltage	Part No.
12V	6050694
24-48V	6050695

### Kits with Light Tower

Voltage	Part No.
12V	6050088
24-48V	6050464

### Kits with Light Bar

Voltage	Part No.
12V	6057659
24-48V	6061483



Part No. 6050089-R6

AC1190.eps

# cascade<sup>®</sup> corporation

#### For Technical Support . . .

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

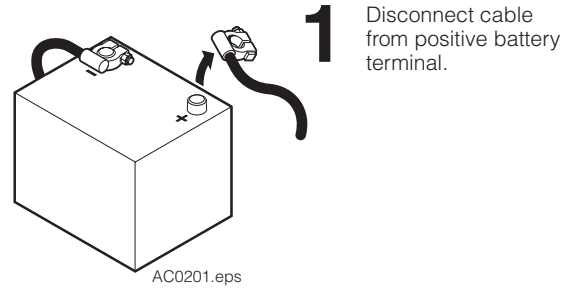
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Internet: [www.cascorp.com](http://www.cascorp.com)  
Write: Cascade Corporation, 2501 Sheridan Ave., Springfield, OH 45505



# 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.

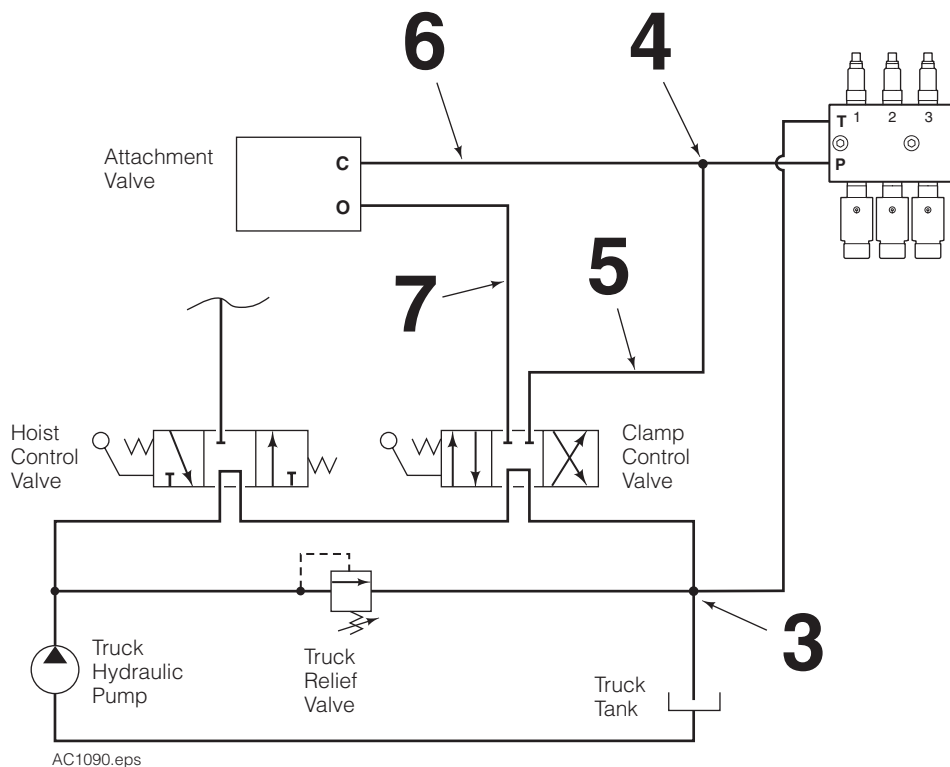
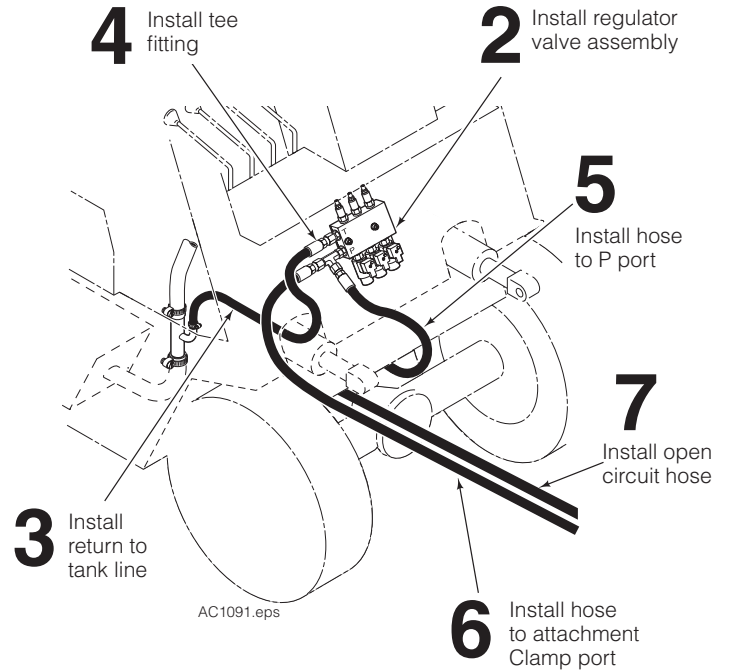
.75 in. (19 mm) ID Tank Hose	<b>Part No. 214062</b>
1.00 in. (25 mm) ID Tank Hose	<b>Part No. 211745</b>
1.25 in. (31 mm) ID Tank Hose	<b>Part No. 214066</b>
1.50 in. (38 mm) ID Tank Hose	<b>Part No. 6037507</b>

**4** Install a No. 8 tee fitting to the P port on the side of the regulator valve.

**5** Install a No. 8 hose from the truck clamp auxiliary valve CLAMP port to the P port tee fitting on the side of the regulator valve.

**6** Install a No. 8 hose from the valve P port tee fitting to the supply circuit for the attachment CLAMP port.

**7** Install a No. 8 hose from the truck clamp auxiliary valve OPEN port to the supply circuit for the attachment Open port.

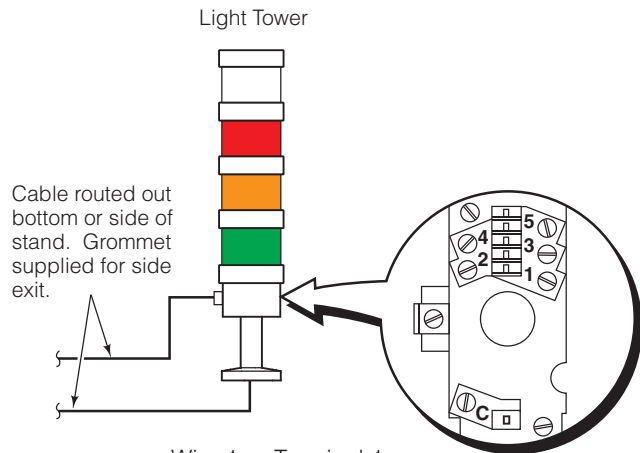


**8** Locate and mount the Cab Light Bar on the truck dashboard or overhead guard with the velcro provided. Position for best peripheral viewing due to brightness of lights.

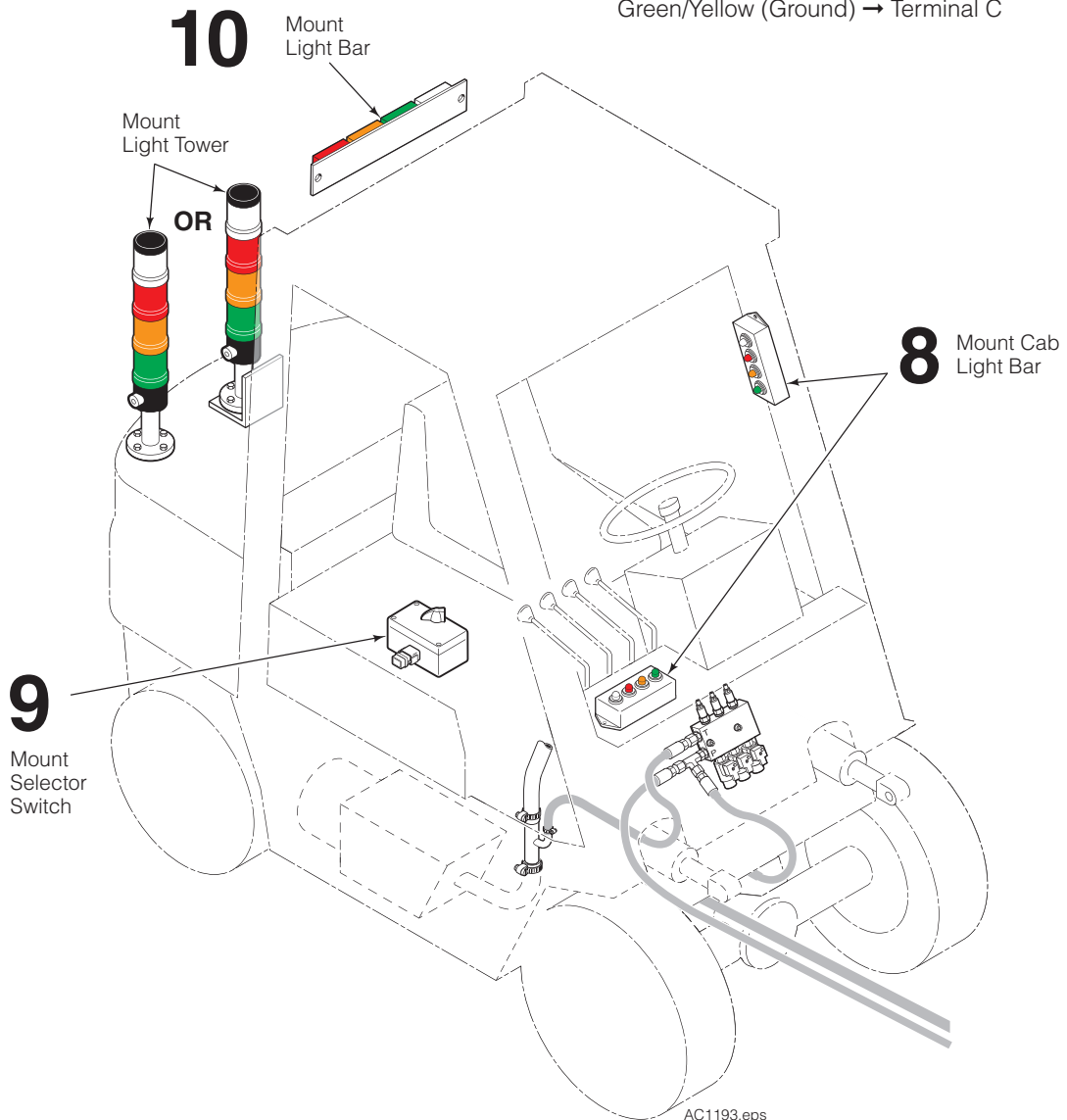
**9** Locate and mount the Selector Switch in a location convenient to the truck operator with the fasteners provided.

**10 Light Tower Option** – Locate and mount the optional Light Tower at the rear of the truck. A simple bracket can be fabricated to mount the Light Tower on the back of the overhead guard. The light tower cable can be routed out the bottom of the stand or out the side of the light assembly using the grommet supplied. See the wire and terminal connections shown.

**Light Bar Option** – Locate and mount the optional Light Bar on the back of the overhead guard.



- Wire 1 → Terminal 1
- Wire 2 → Terminal 2
- Wire 3 → Terminal 3
- Wire 4 → Terminal 4
- Green/Yellow (Ground) → Terminal C



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

**11** Connect the cable ends.

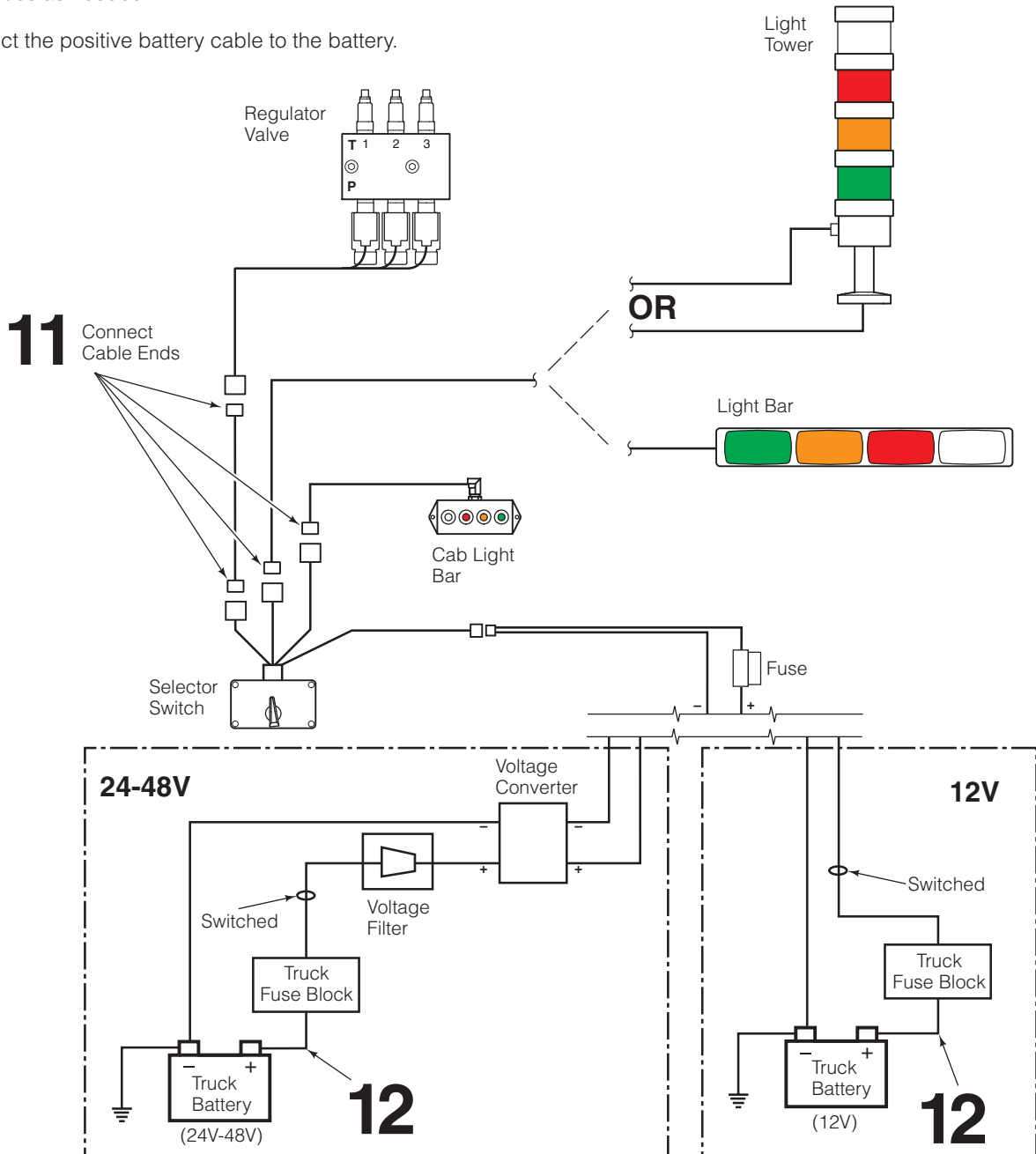
**12V Trucks** – Connect the fused positive wire to a 12V switched power source. Connect the ground wire.

**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.

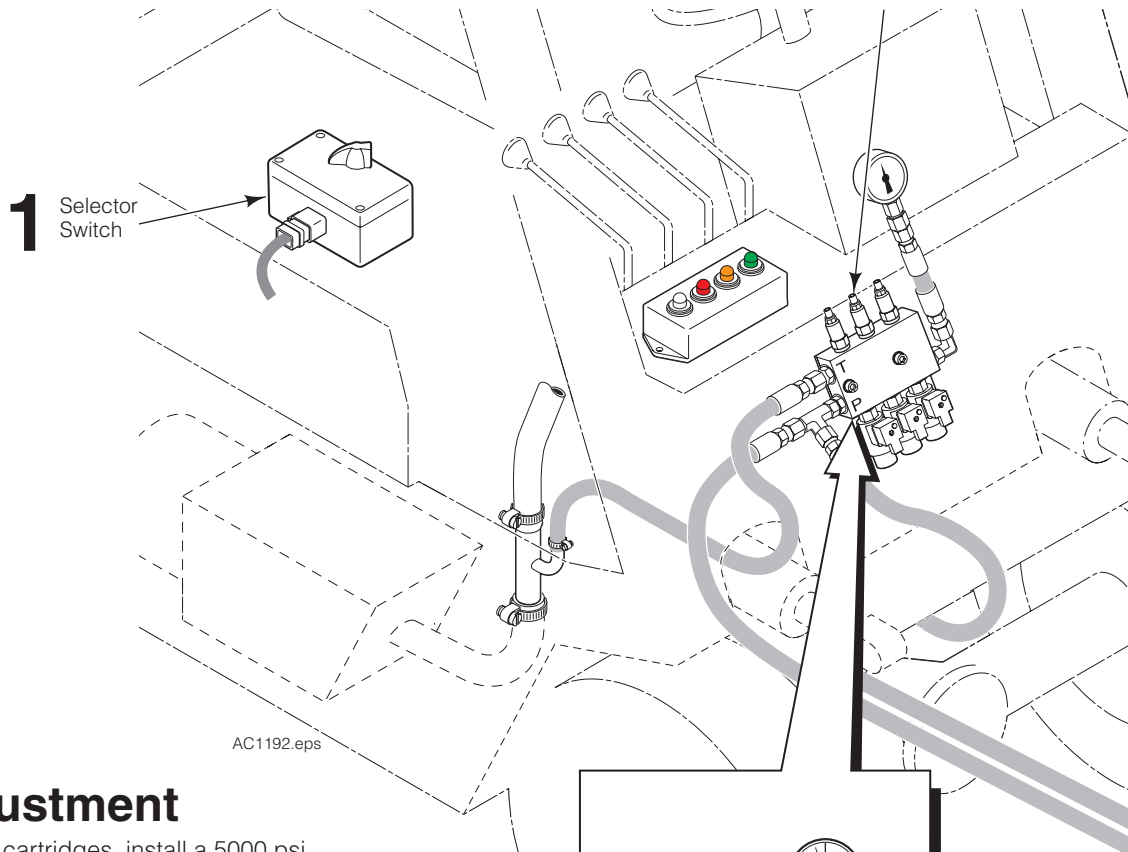
**12** Reconnect the positive battery cable to the battery.



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

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## 2,3 Adjust Relief Cartridges



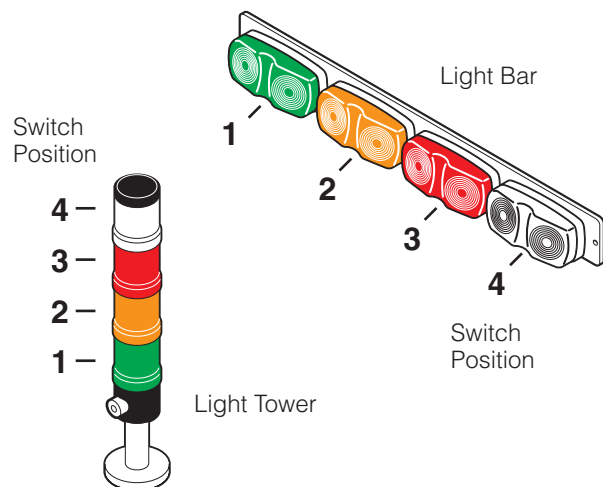
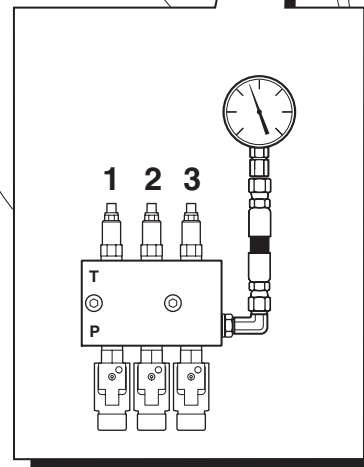
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## Relief Adjustment

To set the valve relief cartridges, install a 5000 psi (345 bar) pressure gauge (Cascade Part No. 664158) in the valve **P** port. A clamp force indicator can also be used to adjust the relief cartridge settings. Refer to Clamp Force Indicator Operator Guide 6053280 for Carton Clamps or 214750 for Paper Roll Clamps.

**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 **1**. See the light display chart below. The solenoid coil also has a small indicator light.
- 2** 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.
- 3** Clamp a load and check the pressure. Readjust as required. Tighten the jam nut.
- 4** Shift the selector switch to position **2**. Repeat steps 2 and 3 for the other 2 relief positions.
- 5** With the selector switch in the 4th position, the relief valve has no effect. Pressure to the attachment is determined by the truck system relief pressure.

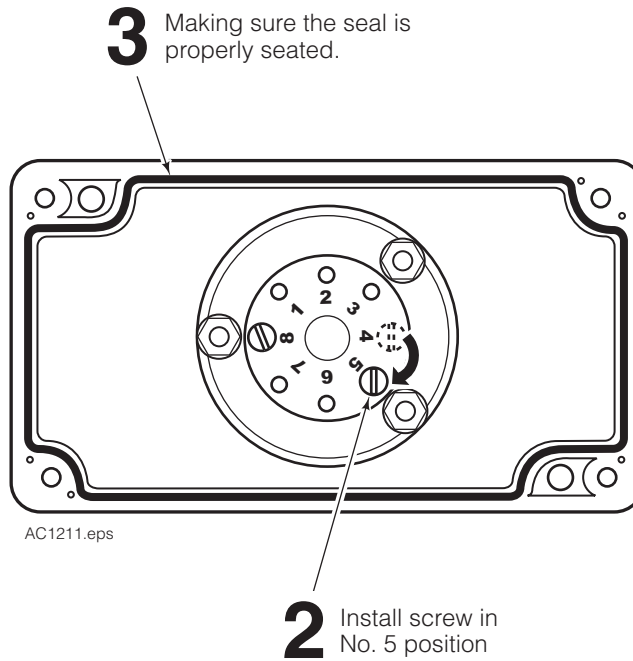
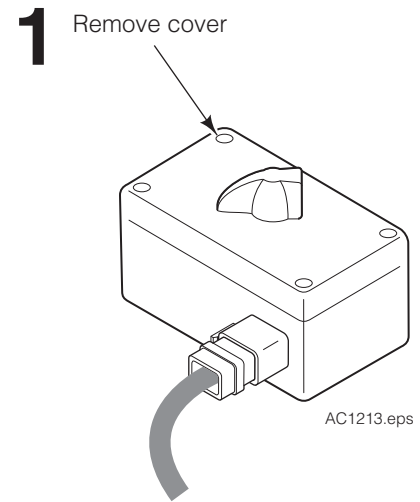


Switch Position	Relief Cartridge	Light Tower	Light Bar	Pressure
1	1	Green	Green	Lowest
2	2	Amber	Amber	Higher
3	3	Red	Red	Next Higher
4	None	Clear	Clear	Highest

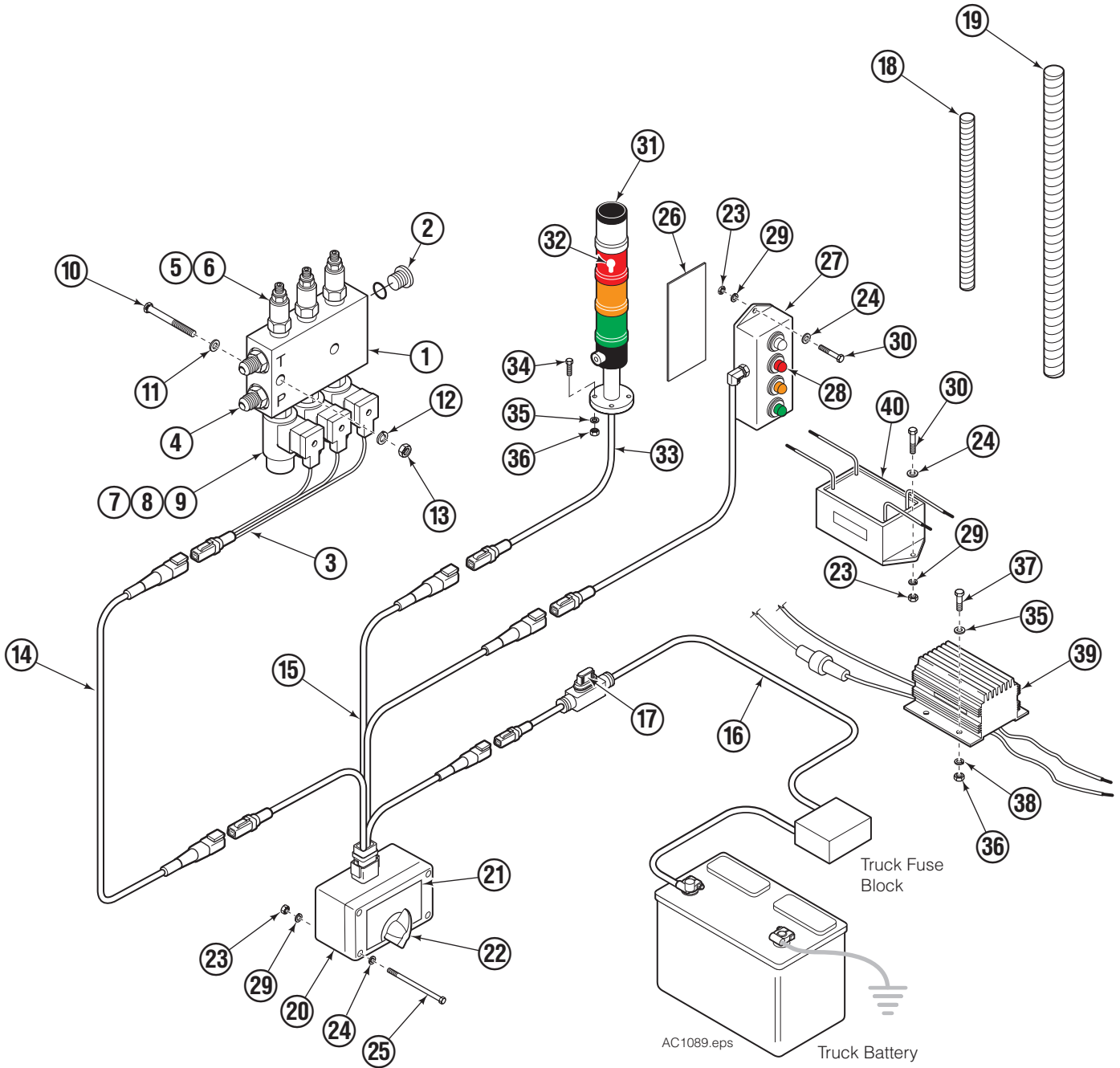
# Modifying for Three Active Settings

The system is standard with four settings active (three adjustable and truck relief). The switch box can be easily modified to three active settings, blocking out the truck relief position.

- 1** Remove the cover from the switch box.
- 2** Remove the screw from the No. 4 position on the switch and install it in No. 5 position.
- 3** Reinstall the cover making sure the seal is properly seated.



# Electronic Pressure Regulator Control & Indicator Kits With Light Tower

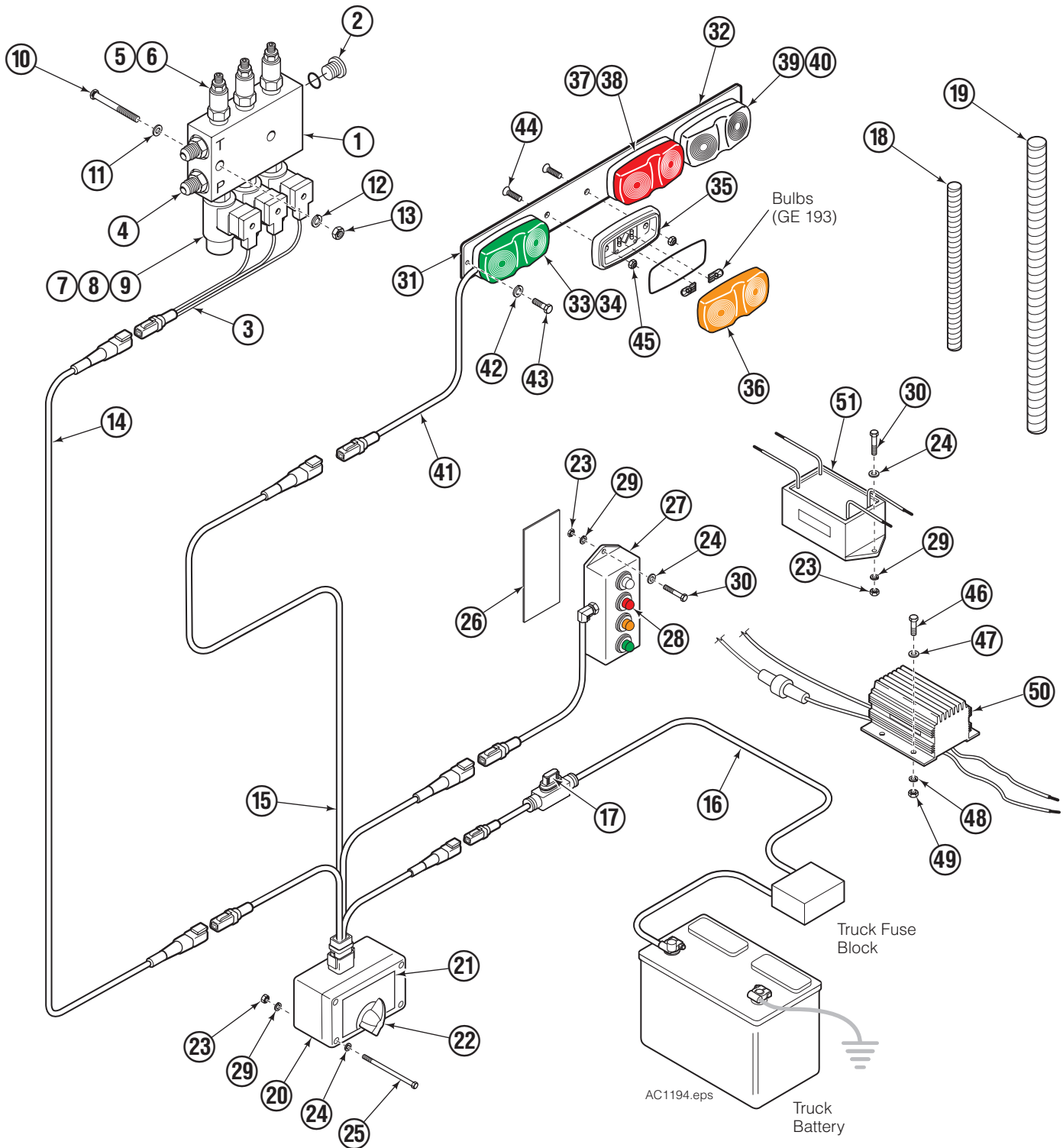


# Electronic Pressure Regulator Control & Indicator Kits With Light Tower

REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		6050088	Pressure Regulator-12V ■	21	1	6061218	Label
		6050464	Pressure Regulator-24-48V ▲	22	1	6061213	Switch
		217932	Converter & Filter Kit ●	23	◆	765474	Nut, M4
1	1	838489	Relief Valve Assembly	24	◆	686454	Washer, M4
2	2	602580	Plug	25	2	768510	Capscrew, M4 x 70
3	1	6053967	Solenoid Cable Harness	26	1	6029665	Velcro
4	2	601377	Fitting, 8-8	27	1	6053986	Cab Light Bar
5	3	211230	Relief Cartridge	28	1	6011823	Bulb - Red
6	3	661312	Seal Kit		1	6004133	Bulb - Amber
7	3	6002189	Solenoid Cartridge		1	6004132	Bulb - Green
8	3	6062857	Seal Kit		1	6049981	Bulb - Clear
9	3	6002190	Solenoid Coil - 12V	29	◆	685899	Lock Washer, M4
10	2	768530	Capscrew, M8 x 65	30	◆	768502	Capscrew, M4 x 25
11	2	787398	Flat Washer, M8	31	1	6053982	Light Tower with Cable
12	2	686119	Lock Washer, M8	32	4	6057068	Bulb, Square D type D:1BLJ
13	2	767414	Nut, M8	33	1	6053981	Light Tower Cable
14	1	6053985	Solenoid Cable	34	4	768782	Capscrew, M5 x 25
15	1	6053968	Wire Harness	35	◆	6002107	Washer, M5
16	1	6048139	Power Harness	36	◆	768202	Nut, M5
17	1	6016993	Fuse, ATM type 7.5 amp	37	4	6405318	Capscrew. M5 x 25
18	1	6021369	Conduit, 9 mm ID x 300 mm	38	4	685866	Lockwasher, M5
19	1	6057697	Conduit, 25 mm ID x 1000 mm	39	1	6064659	Voltage Converter, 24-48V→12V
20	1	6061212	Control Box	40	1	6061953	Voltage Filter

- Includes items 1 through 36.
- ▲ Includes items 1 through 40.
- Includes items 35 & 36.
- ◆ Quantities as required.

# Electronic Pressure Regulator Control & Indicator Kits With Light Bar

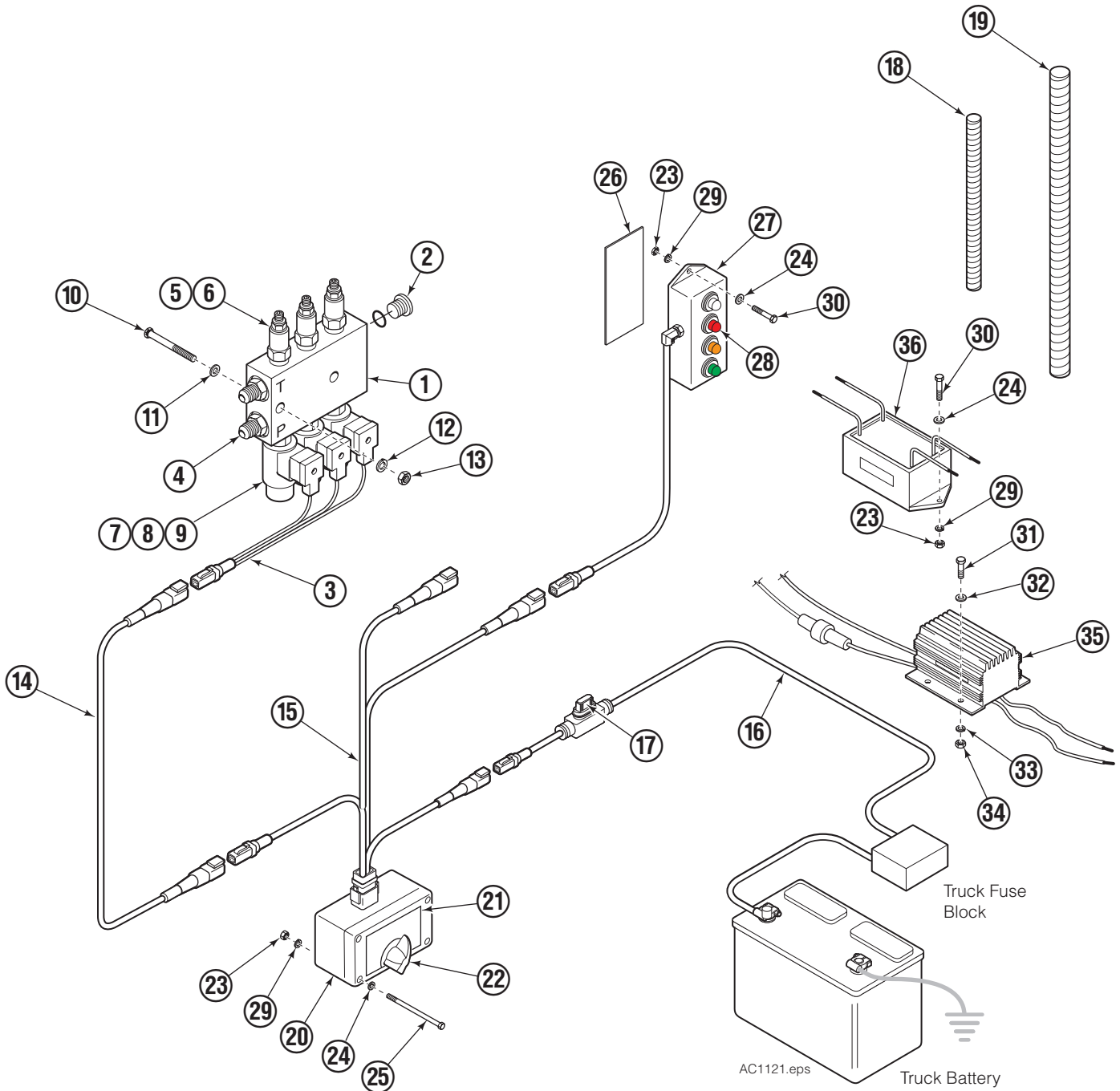


# Electronic Pressure Regulator Control & Indicator Kits With Light Bar

REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		6057659	Pressure Regulator-12V ■	27	1	6053986	Cab Light Bar
		6061483	Pressure Regulator-24-48V ▲	28	1	6011823	Bulb - Red
		217932	Converter & Filter Kit ●		1	6004133	Bulb - Amber
1	1	838489	Relief Valve Assembly		1	6004132	Bulb - Green
2	2	602580	Plug		1	6049981	Bulb - Clear
3	1	6053967	Solenoid Cable Harness	29	◆	685899	Lock Washer, M4
4	2	601377	Fitting, 8-8	30	◆	768502	Capscrew, M4 x 25
5	3	211230	Relief Cartridge	31	1	6080827	Light Bar Assembly
6	3	661312	Seal Kit	32	1	6076676	Aluminum Bar
7	3	6002189	Solenoid Cartridge	33	1	6076819	Green Lamp Assembly
8	3	6062857	Seal Kit	34	1	217952	Green Lens
9	3	6002190	Solenoid Coil - 12V	35	1	6076820	Amber Lamp Assembly
10	2	768530	Capscrew, M8 x 65	36	1	217950	Amber Lens
11	2	787398	Flat Washer, M8	37	1	6076821	Red Lamp Assembly
12	2	686119	Lock Washer, M8	38	1	217948	Red Lens
13	2	767414	Nut, M8	39	1	6076818	Clear Lamp Assembly
14	1	6053985	Solenoid Cable	40	1	6077910	Clear Lens
15	1	6053968	Wire Harness	41	1	6053981	Light Bar Cable
16	1	6048139	Power Harness	42	2	206323	Lock Washer, M6
17	1	6016993	Fuse, ATM type 7.5 amp	43	2	763169	Capscrew, M6 x 20
18	1	6021369	Conduit, 9 mm ID x 300 mm	44	8	6405847	Capscrew, M4 x 20
19	1	6057697	Conduit, 25 mm ID x 1000 mm	45	8	686453	Nut, M4
20	1	6061212	Control Box	46	4	6405318	Capscrew, M5 x 25
21	1	6061218	Label	47	4	6002107	Flat Washer, M5
22	1	6061213	Switch	48	4	685866	Lock Washer, M5
23	◆	765474	Nut, M4	49	4	768202	Nut, M5
24	◆	686454	Washer, M4	50	1	6064659	Voltage Converter, 24-48V→12V
25	2	768510	Capscrew, M4 x 70	51	1	6061953	Voltage Filter
26	1	6029665	Velcro				

- Includes items 1 through 45.
- ▲ Includes items 1 through 51.
- Includes items 50 & 51.
- ◆ Quantities as required.

# Electronic Pressure Regulator Control & Indicator Kits Without Light Tower/Light Bar



# Electronic Pressure Regulator Control & Indicator Kits Without Light Tower/Light Bar

REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		6050694	Pressure Regulator-12V ■	19	1	6057697	Conduit, 25 mm ID x 1000 mm
		6050695	Pressure Regulator-24-48V ▲	20	1	6061212	Control Box
		217932	Converter & Filter Kit ●	21	1	6061218	Label
1	1	838489	Relief Valve Assembly	22	1	6061213	Switch
2	2	602580	Plug	23	◆	765474	Nut, M4
3	1	6053967	Solenoid Cable Harness	24	◆	686454	Washer, M4
4	2	601377	Fitting, 8-8	25	2	768510	Capscrew, M4 x 70
5	3	211230	Relief Cartridge	26	1	6029665	Velcro
6	3	661312	Seal Kit	27	1	6053986	Cab Light Bar
7	3	6002189	Solenoid Cartridge	28	1	6011823	Bulb - Red
8	3	6062857	Seal Kit		1	6004133	Bulb - Amber
9	3	6002190	Solenoid Coil - 12V		1	6004132	Bulb - Green
10	2	768530	Capscrew, M8 x 65		1	6049981	Bulb - Clear
11	2	787398	Flat Washer, M8	29	◆	685899	Lock Washer, M4
12	2	686119	Lock Washer, M8	30	◆	768502	Capscrew, M4 x 25
13	2	767414	Nut, M8	31	4	6405318	Capscrew, M5 X 25
14	1	6053985	Solenoid Cable	32	4	6002107	Flat Washer, M5
15	1	6053968	Wire Harness	33	4	685866	Lock Washer, M5
16	1	6048139	Power Harness	34	4	768202	Nut, M5
17	1	6016993	Fuse, ATM type 7.5 amp	35	1	6064659	Voltage Converter, 24-48V→12V
18	1	6021369	Conduit, 9 mm ID x 300 mm	36	1	6061953	Voltage Filter

- Includes items 1 through 30.
- ▲ Includes items 1 through 36.
- Includes items 35 & 36.
- ◆ Quantities as required.

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