

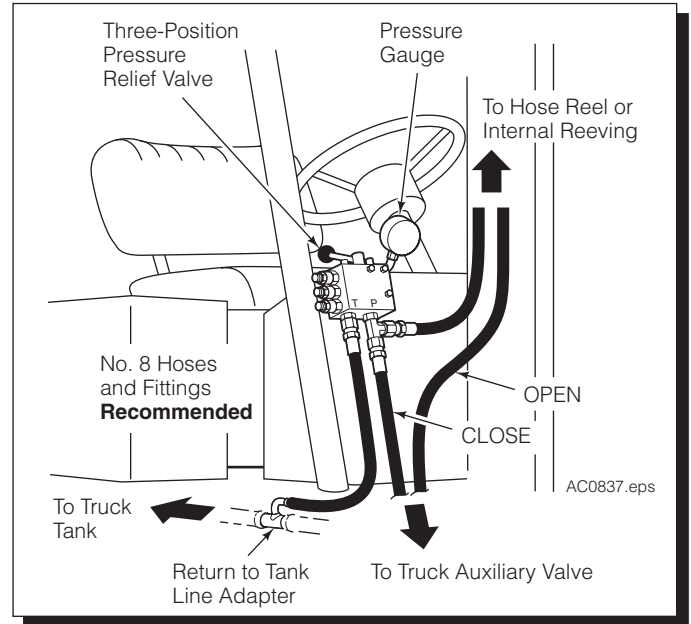
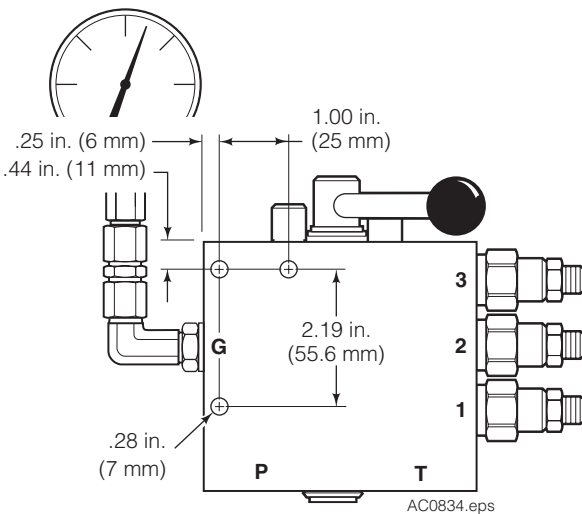


Installation Instructions

Three-Position Pressure Relief Valve 660412

This sheet provides installation instructions for Three-Position Pressure Relief Valve 660412. The valve enables up to four pressure selections, allowing the clamp force to be varied from load to load. The relief cartridges can be adjusted to relieve pressure between 500 and 3000 psi, a fourth position flows straight through at truck relief pressure. Maximum flow rate through the valve is 20 GPM.

- 1 Determine a mounting location on the truck cowl or overhead guard, within safe reach and view of the driver. Use the mounting hole dimensions shown to mount the valve.

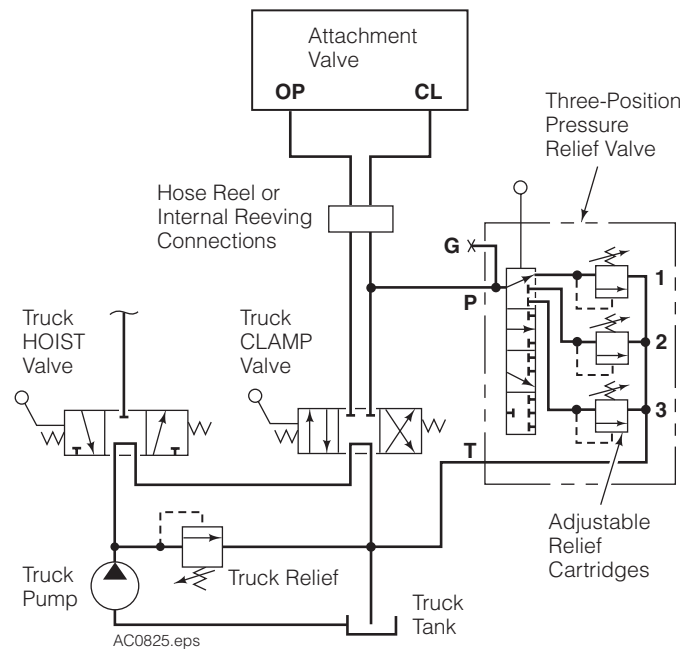


WARNING: Before removing hydraulic hoses, relieve pressure in the attachment hydraulic system. Turn the truck off and move the auxiliary control lever several times in both directions.

- 2 Install hoses and fittings between the Pressure Relief Valve, truck clamp valve, truck tank and attachment valve. **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 T port to the truck tank. Kits available:

- Part No. 214062** – .75 in. (19 mm) inside dia. tank line
- Part No. 211745** – 1.00 in. (25 mm) inside dia. tank line
- Part No. 214066** – 1.25 in. (31 mm) inside dia. tank line
- Part No. 6037507** – 1.50 in. (38 mm) inside dia. tank line



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

- 3** Four stop configurations are shown (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 your specific requirements. The standard three-position setup as supplied is shown on top.

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 flow to the relief valve cartridges, truck relief pressure is supplied to the attachment.

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

Sample Settings

3-Position (as supplied)	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 preset to 1000 psi. Relief pressure for each cartridge must be adjusted for your application. Four stop positions are not available when a Light Switch is mounted on the valve.

- Shift the valve lever index pointer to position **1** stamped on the valve body.
- Loosen the jam nut on the No. **1** relief cartridge. Adjust the relief cartridge (3/16 in. Allen wrench) inward (CW) to raise pressure or outward (CCW) to lower the pressure.
- Clamp a load and check the pressure. Readjust as required. Tighten the jam nut.
- Shift the valve lever pointer to position **2** stamped on the valve body. Repeat step 6 and 7 for No. **2** relief cartridge.
- Shift the valve lever pointer to position **3** stamped on the valve body. Repeat step 6 and 7 for No. **3** relief cartridge.
- With the valve lever pointer at position **X**, flow to the relief valve cartridges is blocked, and the valve has no effect. Pressure to the attachment is determined by the 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	6041432
3	Seal Service Kit	669597

