



Installation Instruction

Cascade Three Function Valve Kit 233122

The Cascade Three Function Hydraulic Valve Kit provides auxiliary pressure and flow control to attachments. The Valve Kit is designed for use with trucks rated 3.5 ton and up. The Valve eliminates performance problems associated with excessive pressure and/or flow. The standard hydraulic circuit on trucks coming from the factory can deliver up to 3,400 PSI and 40 GPM. Cascade attachment requirements specify 2,300-2,600 PSI and 10-20 GPM. The Valve Kit adjusts the hydraulic pressure and flow from the truck down to attachment operating levels of 2300 PSI and 10-20 GPM.

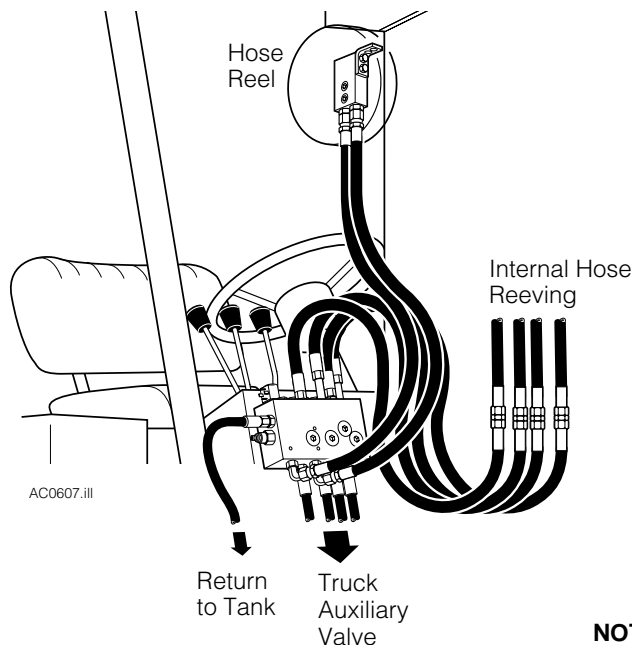
Flow to the valve is limited to maximum input of 35 GPM.

Installation is recommended with No. 8 Internal Hose Reeling or Hose Reels and Low Pressure Tank Line kits Part No. 214062 (.75 in. ID), 211745 (1.00 in ID) or 214066 (1.25 in. ID).

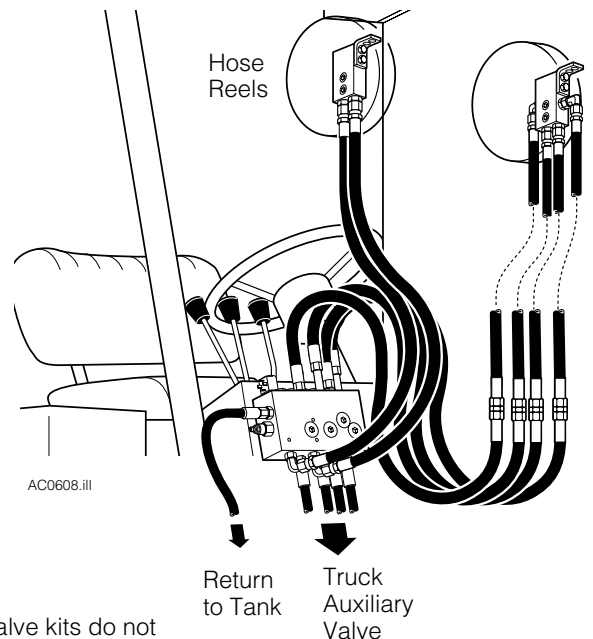
A Low Pressure Tank Line Kit and Operator Control wiring and switch kit are not included in the valve kit, they must be purchased separately.

Problems associated with excessive pressure and flow include:

- Increased engine wear and tear
- Increased attachment wear and tear
- Engine and transmission overheating
- Hydraulic system overheating
- Poor fuel economy
- Adds up to greater maintenance and production costs



**Valve Kit mounted on truck cowl with
Internal Reeling and Hose Reel**



**Valve Kit mounted on truck cowl
with Hose Reels**

NOTE: The valve kits do not include hoses and fittings.

cascade[®] corporation

For Technical Support . . .

Call: 1-800-227-2233

OR

Write: Cascade Corporation, P.O. Box 20187, Portland, OR 97294

To Order Parts . . .

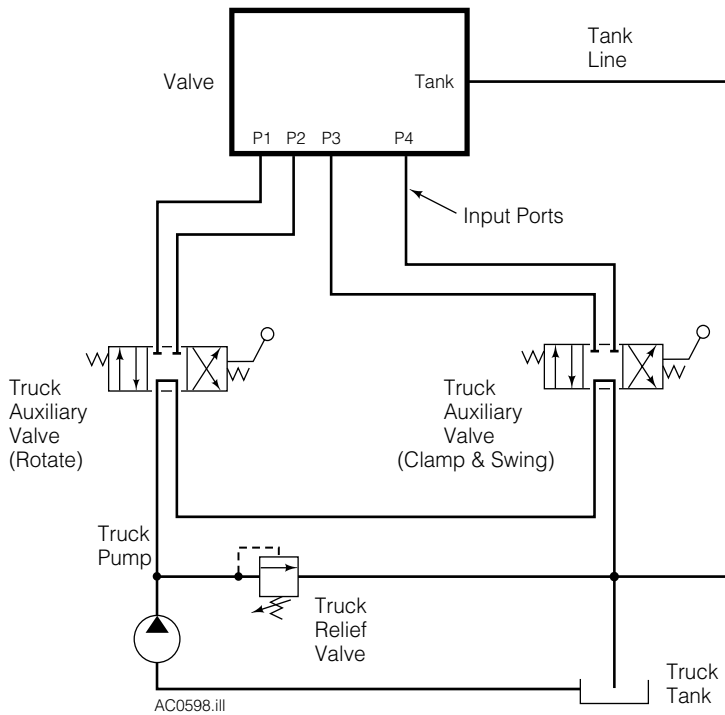
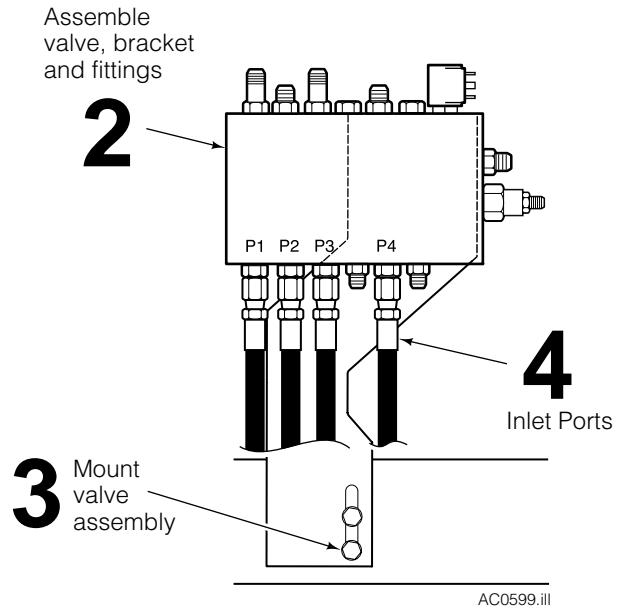
Call: 1-888-227-2233

OR

Write: Cascade Corporation, 2501 Sheridan Ave., Springfield, OH 45505

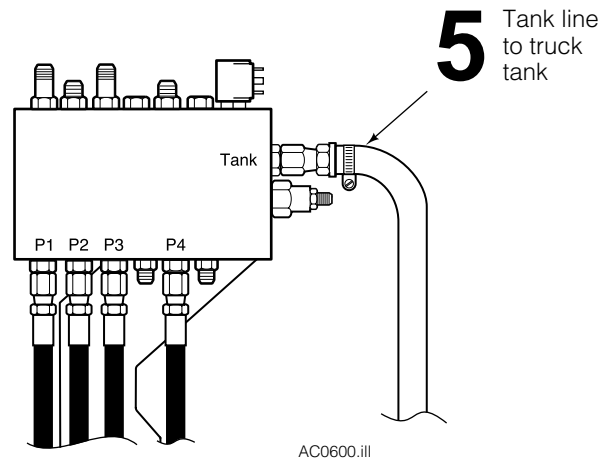
- 1 Determine an appropriate mounting location for the valve and bracket on the truck cowl or mast center crossmember. The bracket can be welded or bolted in place. The valve must not extend outside the width of the cowl or interfere with the truck or mast when tilted back.
- 2 Assemble the valve, bracket and fittings. Position the valve in place noting any clearance problems.
- 3 Mark a mounting location. Mount the valve assembly using capscrews or welding.
- 4 Measure and assemble two No. 8 hoses (user supplied) to run from the valve **Inlet P1** and **P2** ports to the truck auxiliary valve rotate ports. Install the hoses.

Measure and assemble two No. 8 hoses (user supplied) to run from the valve **Inlet P3** and **P4** ports to the truck auxiliary valve clamp ports. Install the hoses.



- 5 Install a tank return hose using one of the Cascade Tank Line kits listed below. Install the barbed push fitting to the valve **Tank** port fitting. Measure and install the hose to run from the valve **Tank** port fitting to tee into the truck main return hose.

Low Pressure Tank Line Kits	
Truck Main Return Hose ID	Kit Part No.
.75 in.	214062
1.00 in.	211745
1.25 in.	214066

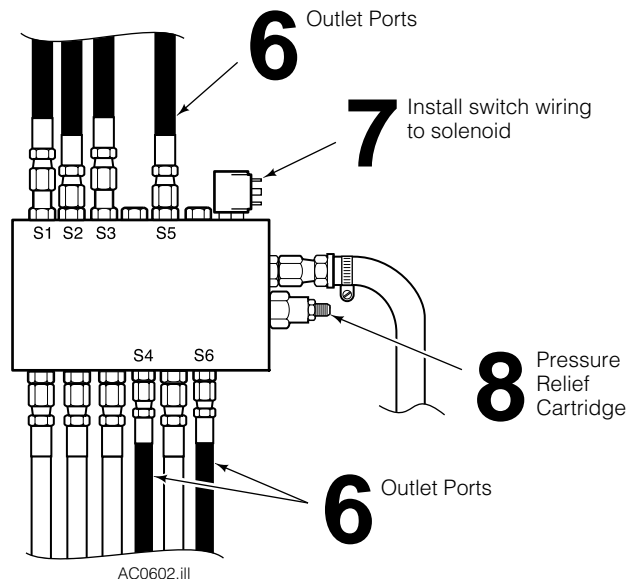
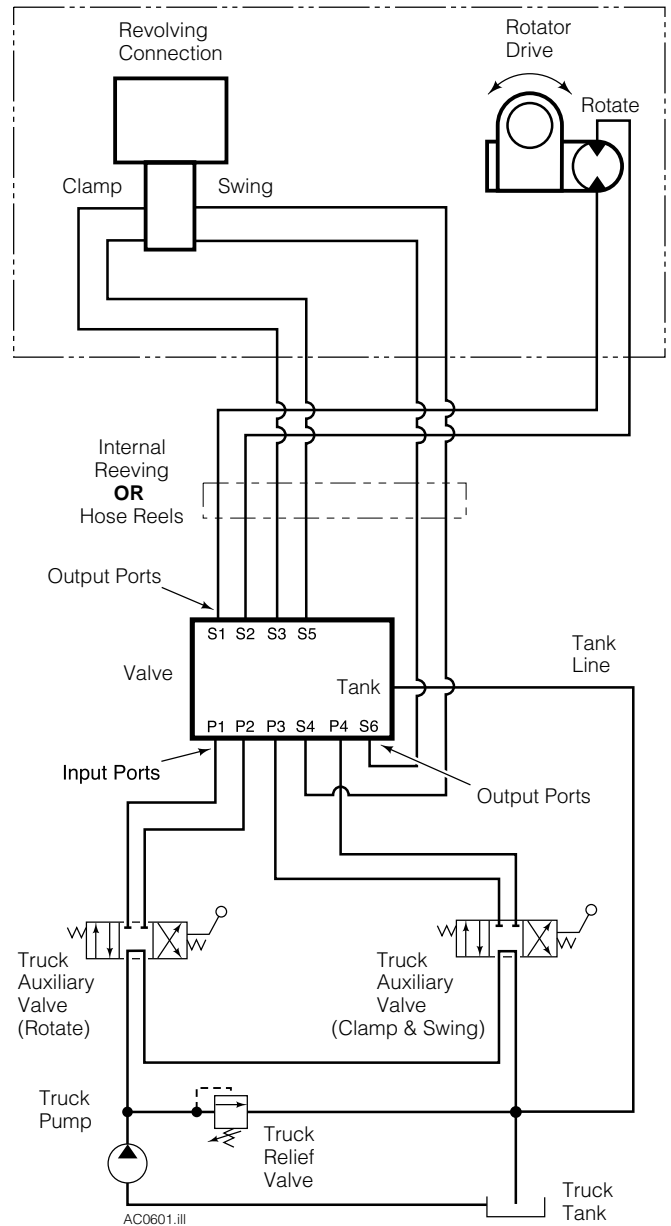


- 6** Measure and assemble two No. 8 hoses (user supplied) to run from the valve **Output S1 and S2** ports to a RH Hose Reel. Install the hoses.
- Measure and assemble two No. 8 hoses (user supplied) to run from the valve **Output S3 and S5** ports to a LH 4-Port Hose Reel or internal reeving supply. Install the hoses.
- Measure and assemble two No. 6 hoses (user supplied) to run from the valve **Output S4 and S6** ports to the LH 4-Port Hose Reel or internal reeving supply. Install the hoses.

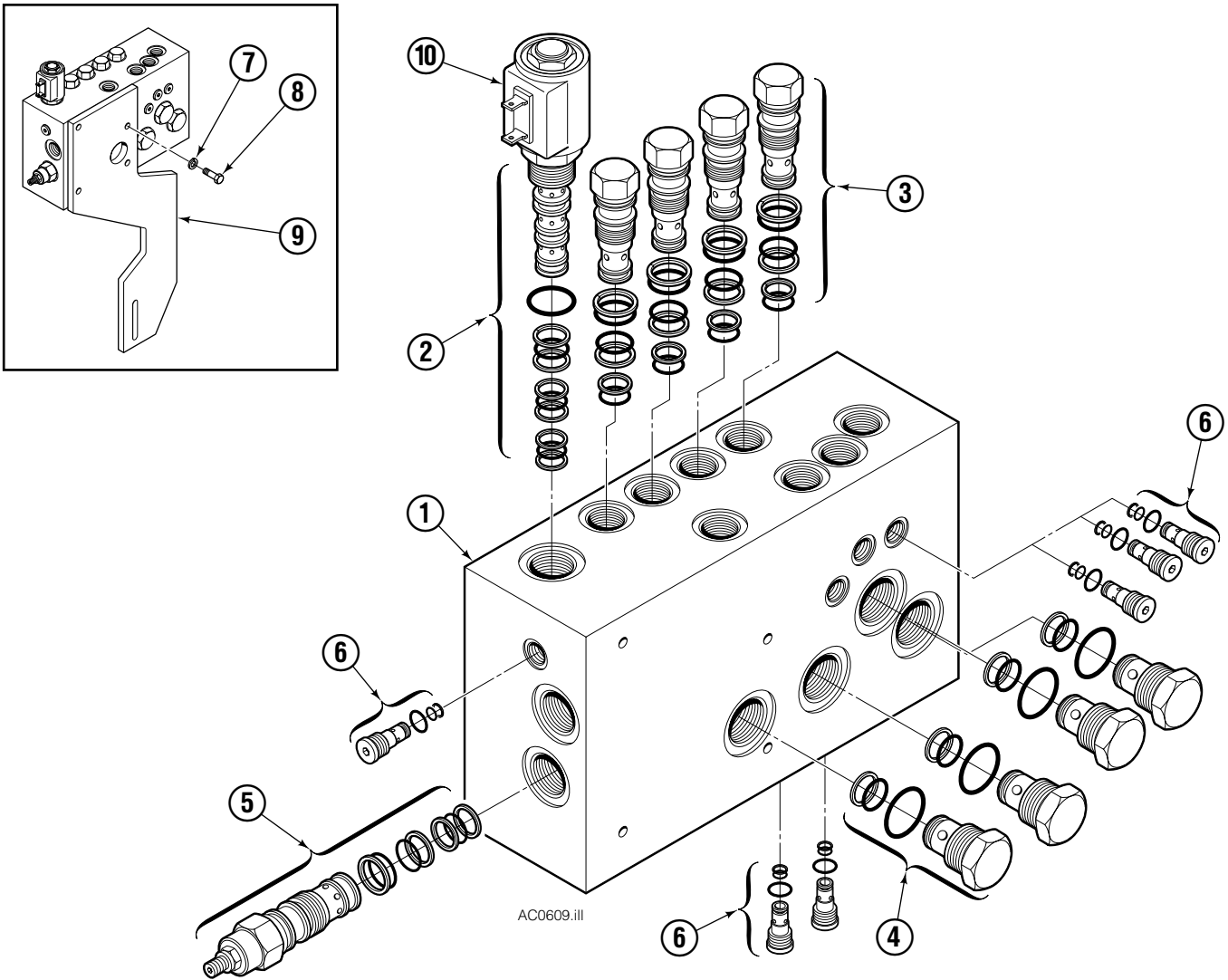
- 7** Install Operator Control kit 6013396 or user supplied switch and wiring to control the valve solenoid.

- 8** The pressure relief cartridge on the side of the valve is adjustable from 1000 to 3000 psi. Install a pressure gauge to the attachment valve gauge port or in the clamp supply line near the valve. Adjust the cartridge to achieve a specific operating pressure for the attachment. Loosen the locking nut and turn the adjustment screw **CW** to decrease pressure or **CCW** to increase pressure.

- 9** Before returning the truck/attachment to service operation, test all functions to assure they perform properly.



Three Function Valve Kit



REF	QTY	PART NO.	DESCRIPTION
		233122	Valve Kit-15 GPM ●
1	1	233038	Valve Assembly
2	1	220627	Spool Valve
3	4	372915	Logic Valve
4	4	6018227	Check Valve
5	1	6018248	Relief Valve
6	6	220869	Check Valve
7	4	787389	Lockwasher, M8
8	4	787372	Capscrew, M8 x 20
9	1	233073	Mounting Bracket
10	1	220632	Coil-12V

● Includes items 1 through 10.