



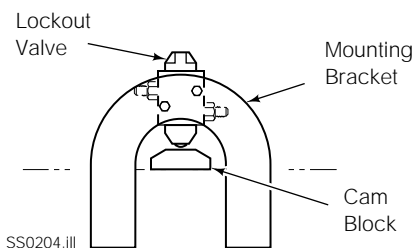
Installation Instructions

Rotation Lockout Valve Kit 329105 for Attachments Mounted on Sideshifters

This sheet provides instructions to install a rotation lockout valve on a rotating attachment mounted on a sideshifter. The normally-closed valve prevents attachment rotation until the sideshifter reaches the centered position on the lift truck.

NOTE: This installation requires welding on the mast upper carriage bar and sideshifter upper hook. The installation should be performed with the rotating attachment/sideshifter mounted on the truck, to assure proper clearances.

- 1 Assure that the sideshifter is properly centered on the truck carriage. Inspect the sideshifter anchor lug and truck center carriage notch for damage. Replace or repair as necessary.
- 2 Assure that the attachment is properly centered on the sideshifter. Use the mast carriage as a reference and measure as necessary to determine the centered position.
- 3 Temporarily mount the lockout valve on its horseshoe-shaped mounting bracket (leave port plugs in place).



- 4 Determine a suitable mounting area on the truck upper carriage bar and sideshifter upper hook, where the bracket and cam block can be welded. Temporarily clamp the bracket in position.

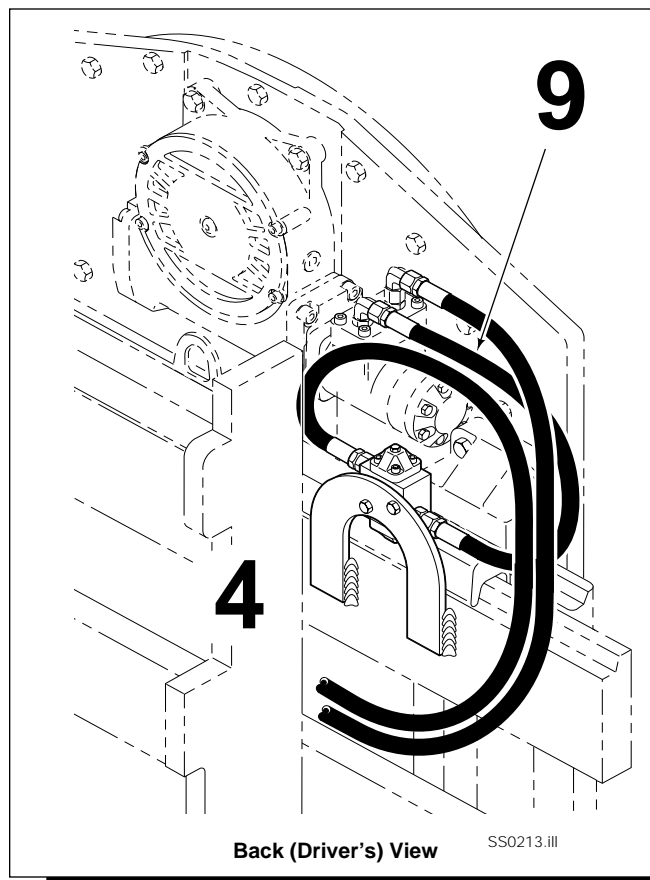
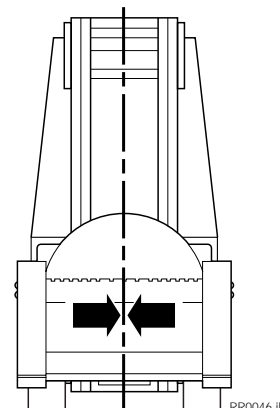
IMPORTANT: Make sure the cam block is centered directly under the valve plunger wheel. Position the bracket vertically so that the valve plunger will be fully depressed (OPEN) when resting on the center of the cam block. Refer to dimensions on back page.

CAUTION: Assure that there will be adequate clearance from cylinders, brackets, drive motor, etc., over the full range of sideshifter movement.

Part No. 220494

1, 2

Center sideshifter and attachment



Back (Driver's View)

SS0213.iii

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- 5 Scribe location marks for both the bracket and cam block. Remove the valve from its mounting bracket and clamp the parts in preparation for welding.



WARNING: Cascade Corporation recommends that a qualified welder experienced in this type of work be used for best quality.

- 6 Weld the parts to the mast carriage and sideshifter using the following weld procedures:
- Protect hydraulic hoses from weld spatter.
 - Preheat weld areas to 70° F (21° C).
 - **WELD METHOD A – FCAW (Flux-Cored Arc Weld).** Attach ground wire to carriage/sideshifter. Weld using AWS E70T-1 1/16 in. (1.6 mm) or 5/64 in. (2 mm) diameter wire with 100% CO₂ shielding gas at 35–50 CFH. Set welding amps per manufacturer's recommendations. Apply weld holding a close arc. Do not oscillate or use a wash bead pattern. Let welds normal air-cool.
 - **WELD METHOD B – SMAW (Stick Welding).** Attach ground wire to carriage/sideshifter. Weld using E-7018 low hydrogen 1/8 in. (3.2 mm) or 5/32 in. (4 mm) diameter electrodes. Set welding amps per manufacturer's recommendations. **Do not use electrodes exposed to moisture without first re-drying them at 200° F (75° C) for 2 hours.** Apply weld holding a close arc. Do not oscillate or use a wash bead pattern. Let welds normal air-cool.

- 7 Remove slag and weld splatter and inspect the welds.

- 8 Install the valve on the mounting bracket. Check mounting dimensions. Install the fittings in the valve.



WARNING: Before removing any hydraulic lines or components, relieve pressure in the hydraulic system. Turn the truck off and move the truck auxiliary control valves several times in both directions.

- 9 Disconnect and remove either one of the rotator drive supply hoses (valve can be plumbed into either rotator drive supply line). Connect the new hoses supplied in the kit (see schematic opposite and illustration on front page).
- NOTE:** Allow 4 in. (10 cm) extra hose length in each direction for sideshift movement. Route hoses to avoid wear and pinch points. Hoses may need to be shortened depending on valve location.
- 10 Start the truck and check for leaks and proper attachment/sideshifter operation.



WARNING: After completing any service procedure, always test the Attachment through 5 complete cycles. First test empty, then test with a load to make sure the Attachment operates correctly before returning it to the job.

