

CRYSTEEL MFG. INC.
PRINCE VALVE TROUBLE SHOOTING GUIDE

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This document describes the steps to trouble shoot a Prince valve.

What to do if customer says: *The load won't lift.* Assuming that it has been determined that the pump is functioning and pushing oil to the valve.

- Check to see that both ends of the cable are intact and that the valve is shifting fully.
- Make certain that the hydraulic circuit is plumbed correctly.
 1. The pressure port of the pump is connected to the “inlet” port of the valve.
 2. The “B” port of the valve is plumbed to the power up port of the cylinder.
 3. In a double acting system the “A” port of the valve is plumbed to the power down side of the cylinder.
 4. The valve needs to have a return back to the tank.
- Check the pressure of the valve by deadheading from the “B” port, (power up), directly into a pressure gauge. If the pressure is not at the recommended level, adjust the pressure relief valve until the desired level is obtained. Check the appropriate specifications of the equipment being powered by the valve for the recommended pressure setting.
 1. Loosen the jam nut on the relief cartridge.
 2. Turn the adjusting screw clockwise to increase pressure and counter-clockwise to decrease the pressure.

What to do if customer says: *The load will not come down.* Assuming that it has been determined that the pump is functioning and pushing oil to the valve.

- Check to see that both ends of the cable are intact and the valve is shifting fully.
- Make sure that no foreign material has become lodged in the hoist frame preventing it from coming down.
- Secure the body in the up position with a chain hoist, blocking, and /or a forklift.
- Remove the hose from the power up side of the cylinder and attempt to lower the load. If the hoist comes down, you have isolated the problem to the valve.
- Check the down side pressure in the same manner as the power up side. This pressure will be checked by deadheading from the valve's “A” port. It should be approximately 500 PSI.
- If none of these steps has solved the problem the valve will be returned to Crysteel's vendor.