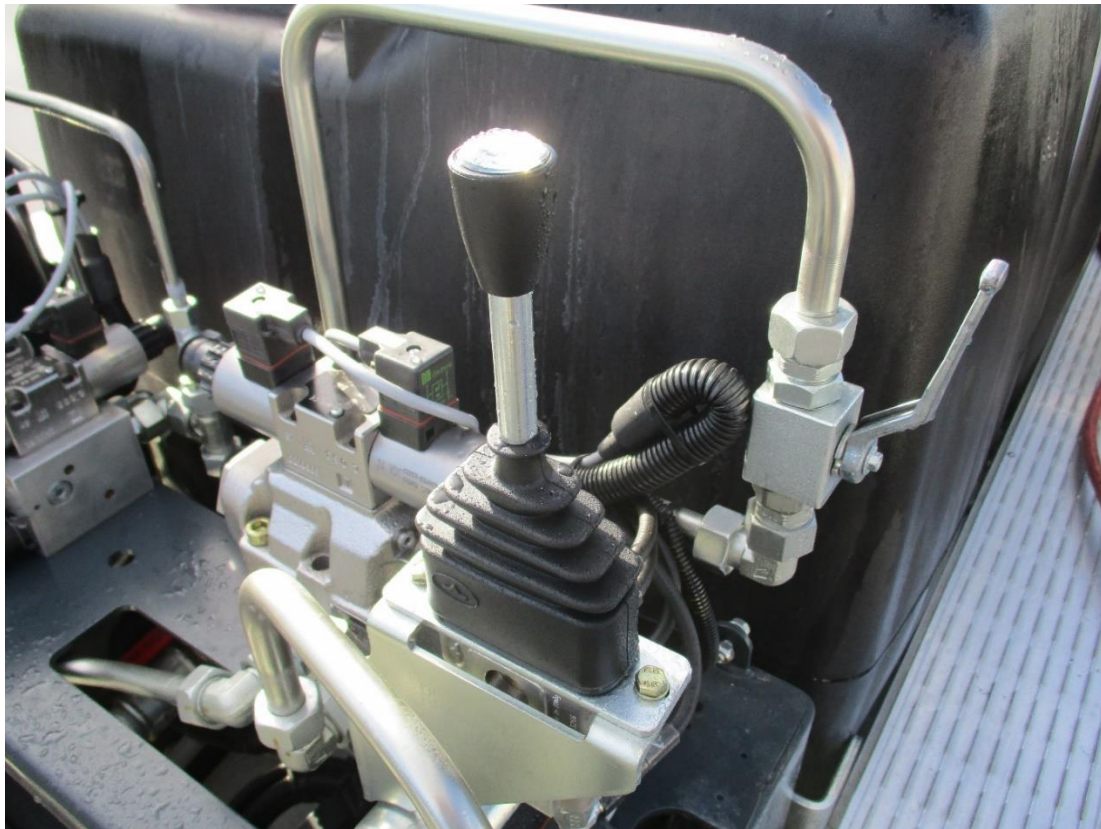


INFORMATION FOR OPERATORS Emergency Lever (4/3-way valve)

Component: Emergency Lever (4/3-way valve) - Part Number 595371

In the event of an electrical breakdown on your Putzmeister concrete pump, that prevents the normal pumping operation from continuing, it becomes vitally important to clean the concrete out from your delivery line and hopper area to prevent it from hardening in the elapsed time that it could take to sort out the breakdown. If the machine does still have engine and PTO function that allow the hydraulic pumps of the machine to “spin”, this cleaning procedure can be carried out efficiently.

To do this, we will need to be acquainted and understand 3 core components on the unit, the first of which is depicted in the image below - the emergency lever. Essentially a mechanically operated 4 ports 3-way hydraulic valve.

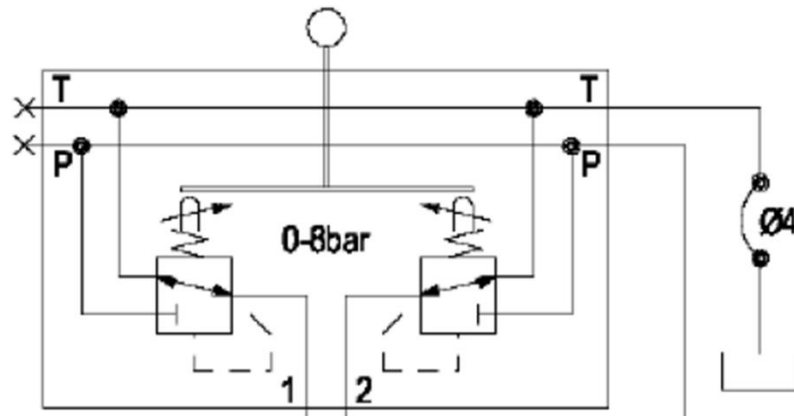


Function: The emergency lever can only be activated in two directions, for purposes of explanation, let's call it a “push” and “pull”. When the lever is pulled in one direction, you will notice the delivery hydraulic cylinder rods move in one direction. When you then push the lever in the opposite direction, you will notice that the delivery hydraulic cylinder rods move in the opposite direction. This essentially allows you to control the direction of the delivery piston.

How it works:

The system is designed to allow the operator to mechanically effect the position of the swash plate within the main hydraulic pump. This is carried out as follows:

When the main hydraulic pump is spinning, Hydraulic control pressure (pilot oil) is present on the port labelled “p”. When the emergency valve has not been activated this hydraulic control pressure is simply diverted back to tank / reservoir.



When the emergency valve lever is activated and moved in a specific direction, the spool within the valve will move into a position that will allow the “pilot” hydraulic oil to stop flowing to tank, but rather divert to either port 1 or 2.

These two ports simply lead to the main hydraulic pump controller. The controller, which is normally electrically controlled, will now be controlled by means of hydraulic “signal”. This hydraulic signal will deflect the swash plate within the main hydraulic pump to create flow in a specific direction which then moves the appropriate main hydraulic drive cylinder rods / rams.

Maintenance tip: frequently inspecting your machine for any hydraulic oil leaks is essential, and this valve should always be checked. There should be no “excessive play” on the handle of the valve, and the protective covering box should always be in place unless the valve is to be used.

Safety: The risk of accidents is increased during the emergency cleaning procedure. Do not do anything that you do not think you are capable of or that you have not practised. When moving a piston in a specific direction, when the piston reaches its end position of travel, release the lever of the valve immediately. Move the piston in the opposite direction.

Disclaimer: While we have made every attempt to ensure the information contained in this article has been obtained from reliable sources, CPENZ is not responsible for any errors, omissions, or for the results obtained from this information.

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- Operating your pump
- Health & Safety when using your pump
- Trouble-shooting
- Maintenance
- Servicing.

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