



# TOLEDO FIRE & RESCUE DEPARTMENT



## D-5 Pumps

### Maintenance Manual

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### Relief Valves

Ideally during daily rig checks, but **at minimum** once a week on tool day, the relief valve shall be exercised all the way in and out, with the pump under pressure, to prevent it from seating in one position. The relief valve should then be preset to 150 psi. The correct procedure to set the relief valve follows:

- Put pump in gear.
- Open the Tank to Pump valve fully.
- Open the Tank Fill valve 1/4 of the way or so.
- Turn relief valve counter clockwise to the fully closed position, then clockwise to the fully open position.
- Throttle pump up to 150 psi.
- With water circulating from the tank to the pump and back to the tank, set the relief valve to 150 psi.

Relief valves will tend to stick if not used frequently. Engaging the pump and working the relief valve several times each week will eliminate sticking.

### Discharge Gate Valves

Lubrication of the discharge gate valves is most important. Some manufacturers provide grease fittings for this purpose. There are some ball-type gate valves, however, for which no provision has been made. It is recommended that light oil such as WD-40 be used to lubricate the gate valves.

## Monthly Big Way Intake Threads

A bit of grease on the threads will help reduce friction and protect the threads on the engine from corrosive problems.

## The Pump Flush Process

This process is to flush out the rust and should be done every tool day, after Drafting and anytime you have used a “particularly nasty” hydrant.

Start on driver side (Left) pump panel:

- Make sure the Tank Fill and Tank to Pump are open (pulled all the way out).
- Open the Master Drain ALL THE WAY. Leave open for the entirety of the flushing process.
- Open 2.5in Auxiliary Intake half way (to clear the ball valve) until rust clears, then fully open until it clears the rest. Close when water clear. If water does not clear, you should flush the whole system.

Now move to the Officer side (Right) pump panel:

- Go to the 2.5in Auxiliary Intake, open half way (again, this is to clear the ball valve itself of rust) until rust clears. Then open all the way. Close when water is clear of rust.

Back to the Driver side (Left) pump panel:

- Hook the hydrant to the 2.5in Auxiliary Intake. Your Inlet valve will be your control during this process.
- Open Big Way and drain the remainder of the system.
- Close Tank to Pump (pushed all the way in) If this is not closed, it will ruin the valve.
- Keep Tank Fill open.
- Open hydrant, then open the 2.5in Auxiliary Intake.
- Close the Big Way

Back on the Officer side (Right) pump panel:

- There is no need to open the LDH Intake
- Open 2.5in Discharge half way until water clears and then open fully, close when water runs clear.
- Open LDH Discharge half way until water clears and then open fully, close when water runs clear.

Back to Driver Side (Left) pump panel:

- You do not need to open deck gun and pre-connects, for they are used regularly.
- Open 2.5in Front Discharge valve half way until water clears and then open fully, close when water runs clear.
- Open 2.5in Rear Discharge valve half way until water clears and then open fully, close when water runs clear.

- Close Master Drain.
- Fill tank. Overfill out the top for 1 minute to clear that.
- Close the 2.5in Auxiliary Intake and disconnect from the hydrant to complete the process.

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See Also:

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