



TROUBLE AT LIFT STATION NO. 4 (HIGHWAY)

Lift Station No. 4 has a Mission Control Radio for alarms. It communicates alarms through the cell towers and to a cell phone. The station has two 3-phase, 2 HP pumps.

This Lift station is Model No. B-231A102, P/N 27231A102, MFGR. 04-02

This station pumps against approximately 9.5 PSI head pressure. The main 4-inch Station is set for an upgrade in 2022.

The Highway Lift Station No. 4 is kept grease free and occasionally gets a plugged pump. To clear impellers of rags, the current procedure is to reverse phase. These pumps have a relief pressure stream on the side of the pump. This stream will be evident when pumping this station down. These small streams jetting out the side of the pump are normal and can get plugged. Although this is not serious, if it doesn't self-clear eventually, it should be cleared the next time the pump is pulled. These are grinder pumps that have the teeth removed. The station operates at a very low setting with the float swings and cycles. The pumping cycles are higher, but the pumps do not plug as often. So, it runs just off the bottom with less than a foot of water level rise before the pump kicks on.

There is a bypass valve outside the station. It is a 2-inch square head valve key access. The bypass valve allows for pumping straight out of the auxiliary bypass valve. This station can also be pumped down with the emergency 4-inch trash pump stored at the Water Reclamation Facility. The 4-inch pump could be used with the tanker trunk as a receiver. There is also a pump pulling tube in the ground to set the pump pulling pole. This pump pulling pole is always kept at the barn in the valve tools area. It is a 6 foot long, 3-inch steel crossbeam puller, and is painted yellow. The top beam has a hand crank pulley for pulling the pumps.

The pumps occasionally must be used to clear accumulated rag debris from the impeller. The pumps will generally sound out of balance and make extra noise. It is easy to tell the pump is working harder and noisier. Key the station out at the



APPENDIX I

mission control panel using your magnetic access key. This will prevent alarms from reaching other operators. Turn off the breakers or lock out the station.

Reverse the plugged pump phase. Run the pump in reverse and it will almost always spit out the majority of the plugged tissue. Run it in reverse until it starts to break suction with a swathing noise. It is okay with the particular pumps used at Lift Station No. 4. The pumps will run without liquid for plenty of time without damage. After the pumps has broken suction, allow it to run for a period until the pump smooths out and clears up noise, or you are convinced the debris has been thrown out of the impeller. Continue by reversing the phase to this pump back to default settings, and run the pump in forward rotation, also breaking suction with the pump in forward. Allow a minute or two for this pump to run in forward rotation, breaking suction periodically with a swathing sound. When complete, return the pump taggle switches to AUTO and check to see the ALARM toggle switch is on.

Log the readings of the station and reset minute clickers. Record the maintenance in the log.

This Lift #4 Trouble Procedure will be rewritten on completion of the station replacement in 2022 with a Smith & Loveless style pumping station.