

Safe Work Instruction – Operation and Maintenance of E-One Sewer Pressure System

DO NOT use this plant* unless you have been inducted in its safe use and operation by an Authorised Experienced Operator

This SWI may not cover all possible hazards and risks and should be referred to as a control measure in the risk assessment process. Additional training may be required for high risk plant. Site and task may change required PPE.

PERSONAL PROTECTIVE EQUIPMENT



Eye protection must be worn



Hand protection must be worn



P2 face mask must be worn when airborne dust or fumes are created



Foot protection must be worn



High visibility clothing must be worn

POTENTIAL HAZARDS AND RISKS



Manual Task Injury

Manual task injury from incorrect manual handling techniques



Slip, Trips, Falls

Slip, trip, fall due to uneven or slippery work surfaces



Other

Exposure to atmospheric contamination

PRE-OPERATIONAL SAFETY CHECKS

- ✓ Ascertain reason for plant inspection/site visit eg audible alarm
- ✓ Complete site specific risk assessment with reference to Corporate Procedure [P28 Energy Isolation & Barricading](#)
- ✓ Notify owners if applicable of your presence and tasks you are about to perform
- ✓ Complete the appropriate pre-operational plant checklist if applicable
- ✓ Ensure you are familiar with plant operations and controls
- ✓ Confirm access route from vehicle to E-One collection tank is clear for pump transport if needed

OPERATING PROCEDURES

- ✓ Once fault/alarm has been reported proceed to property and locate E-One pump control panel
- ✓ If alarm is sounding press the mute button underneath the pump control panel
- ✓ Unlock/unscrew and open panel door
- ✓ Check screen to diagnose/confirm the fault
- ✓ Turn off pump breaker to reset fault (wait 30 seconds)
- ✓ Turn on pump breaker which will initiate time delay to start eg 5 minutes
- ✓ After the time delay and if the fault clears, the pump should resume normal pumping (observe pump complete a full run)
- ✓ If fault doesn't clear (eg High Level Alarm), turn off pump breaker and isolate/tag out.

Note: For Control panels without a display (older models – Southern area):

- ✓ Turn off Mains Power to clear fault (wait 30 seconds)

- ✓ Turn on Mains Power which will initiate a time delay to start (The main difference between the older models and the new self-diagnosing LED screen version is that the time delay on the older models comes from an "Under Voltage Relay" which also has a time delay setting. These are a very troublesome relay, which were replaced as needed by a newer version which is also very troublesome.)
- ✓ If the pump does not start after a known delay time the system must be tested to ascertain the fault
- ✓ Turn off Mains Power to perform circuit test
- ✓ To test the relay, connect a test box with lights to the pump/supply plug which will indicate either power to the pump circuit and/or alarm circuit from those relays. Basically a pump power light with no pump running means a faulty pump, if you have no pump power light to the pump then it may be the relay which requires an electrician to replace/remove the relay.

E-ONE PRESSURE PUMP REMOVAL

- ✓ Isolate energy to pump by turning off Mains Power in E-One pump control panel (Attach isolation tag)
- ✓ Undo screws/bolts and remove E-One collection tank/pod lid (put screws/bolts in lid for safe keeping)
- ✓ If tank level is full (above discharge valve) it will need to be pumped down to access valve, power lead connection and pump lifting ropes (possibly to an external Sulo bin or similar using a submersible pump)
- ✓ Disconnect E-One pump power lead (EQD – Electrical Quick Disconnect) from power supply lead and put covers on both power lead ends
- ✓ Close ball valve lever on pump discharge valve

- ✓ Disconnect/unscrew pump discharge pipe from discharge valve connection assembly, ensuring O ring and seal from nozzle of pump discharge pipe are not lost
- ✓ Unravel pump lifting ropes in readiness for E-One pump trolley lift or two man lift
- ✓ Position E-One pump trolley around collection tank opening and connect pump lifting ropes to winch on trolley
- ✓ Wind winch handle raising pump out of tank/pod whilst also maintaining exit of pump discharge hose and power lead to prevent entanglement
- ✓ If possible when pump is nearing the top of tank stop winch movement to hose off excess fat and debris making pump cleaner for transport
- ✓ Wheel trolley with pump to vehicle and load using proper manual handling techniques
- ✓ **Note – If an E-One pump trolley is not available, a two man lift is to be used for pump retrieval**
- ✓ **Both workers with gloves on and a secure footing must grasp the pump lifting rope and together (on command) lift the pump directly out of the collection tank/pod. (proper manual handling techniques must be adhered to at all times)**
- ✓ Put lid back on collection tank whilst unattended

E-ONE PRESSURE PUMP REPLACEMENT

- ✓ Re-check that the Mains Power in E-One pump control panel is off and isolation tag attached
- ✓ Remove collection tank/pod lid if in place
- ✓ After transporting the pump using the E-One pump trolley, position the trolley around the tank opening
- ✓ Lower the pump into the tank using the winch on the trolley until it comes to rest level on the bottom
- ✓ Leave connected to trolley until pump operation complete
- ✓ Connect pump discharge pipe to discharge valve connection assembly on tank and open discharge valve
- ✓ Take covers off both power leads (EQD) and connect together and hang lead from top hook also
- ✓ Remove isolation tag from E-One pump control panel and turn Mains Power back on
- ✓ Turn on pump breaker which will initiate time delay to start eg 5 minutes (may vary with panels)
- ✓ After the time delay the pump should start pumping down collection tank to bottom water level (observe full pump run)
- ✓ Undo the pump rope from the trolley winch and coil around the top hook on the inside of the tank/pod
- ✓ Close control panel and lock/screw panel
- ✓ Put lid back on tank and screw/bolt in place
- ✓ Remove barricades if used and clean up area.

Note – Manual run can be used also to check pump operations by pressing in the “Manual Override” button for more than 2 seconds and holding it for length of time needed.

If the E-One problem/fault is not pump or associated system related then it is probably an electrical fault with the control panel. Call an electrician.

In the event of a prolonged power outage all E-One systems have a generator connection point for emergency operation. (Refer to SWI24-Generator)

DO NOT

- ✗ Do not use an E-One pump if faulty. Attach a DO NOT OPERATE tag with location, time/date, your name and possible reason for fault and take to workshop for repairs.
- ✗ Do not walk, drive or put heavy objects on the collection tank lid.
- ✗ Do not leave open E-One collection tank/pod unattended

***Plant in this SWI refers to any machinery, equipment, appliance, container, implement and tool.**