

OPERATING MANUAL

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OPERATING INSTRUCTIONS

TO FILL

1 Overhead Fill - open top hatch, fill from overhead stand pipe to desired level indicated on visual sight gauge.

2 Pressure Fill - From hydrant or pumping source. Connect hose to rear delivery valve, open tank fill valve, open rear delivery valve. Water may now be pumped into tank to desired level indicated on visual sight gauge.

- External Suction -
- (a) Connect suction lines with strainer to external suction port located at rear right hand side of vehicle, immerse in the supply (dam etc.)
 - (b) Close tank suction valve.
Open rear suction.
Open tank fill.
Allow water in the reserve internal supply to flow into pump.
 - (c) Switch on pump, allow tank to fill to desired level.
Run engine at a maximum 1100 rpm.
 - (d) When tank has filled to the desired level switch off pump.
Close rear suction.
Close tank fill.
Remove suction lines.

NOTE Internal reserve must contain water to allow priming. Ensure that there are no air leaks at hose connections. Pump may be primed by removing one rear spray, open that spray valve, fill with water.

OPERATING INSTRUCTIONS

PUMP CONTROL

Engage PTO.

Switch pump control to the on position. Pump will not run until master switch is activated.

Move pump speed control to obtain the required volume of water.

With pump control set at maximum, pump maximum speed will not be exceeded by increasing engine revs above 900 RPM as the hydraulic pump is of a variable displacement type and will automatically compensate for the increased engine revs.

Pump speed control may be left at desired position and control pump by using the pump on/off switch either in cabin or at pump at the right hand rear of vehicle.

DO NOT run pump for extended periods without having a water delivery valve open.

REMOTE VALVE OPERATION

Sprays and rear bars are operated by switches in the cabin as marked. The spray valves will not operate until the master switch is activated.

It is advised to select pump and sprays required before activating the master switch. At the end of each run switch master off to close valves and stop pump.

NOTE Before leaving cabin to operate valve and pump at rear the control panel must be switched to rear operation.

OPERATING INSTRUCTIONS

HOSE REEL

A manual rewind hose reel with a manual valve is located at the left hand rear of vehicle. Always ensure that the hose is rewound and that the reel lock is in place before the vehicle moves off.

GENERAL

Fuses to protect the accessory wiring are located under the battery cover. Should any malfunction of electrical equipment occur always check these fuses.

NEVER enter the interior of the tank without observing the confined space entry procedure attached to this manual. This should only be undertaken by trained personnel.

Authorised by:

Date:

ENTRY PROCEDURE FOR INSPECTION/CLEANING OF TANKS

NATURE OF CONFINED SPACE

Steel fabricated water tanks for water tankers. Water tanks on this site have been defined as confined spaces.

1. WORK TO BE DONE

Inspection and/or cleaning.

2. PRE-ENTRY REQUIREMENTS

Entry is not permitted until the following actions have been taken.

Inform all relevant persons of intended work, duration and tank number/id.

Isolation of extraction ventilation in the “on” position
of all isolating points on air compressor and airline (for breathing apparatus) in the “on” position (when needed to be used)

Personal Protective Equipment.

The following PPE must be worn by all persons entering the tank for inspection/cleaning purposes:

- a) non slip safety boots
- b) gloves
- c) cotton drill or similar work clothing, long sleeves, pants
- d) air hood breathing apparatus (when applicable)
- e) ear plugs
- f) P2 respirator (when applicable)

Safety Equipment.

The following safety equipment must be used by all persons entering tank for inspection/cleaning procedures:

- a) full harness and lanyard
- b) RPD
- c) gas monitor
- d) extraction ventilation
- e) fire extinguisher
- f) first aid kit
- g) portable ladder (for access into tank)
- h) air compressor and breathing app. (when applicable)
- i) copy of relevant MSDS (kept with ‘entry permit’)

Signage and Barricading

Portable signs are to be in place to prevent unauthorised entry while work is in progress (ie “Danger Confined Space No Unauthorised Entry”).

Communication

Standby person to be in audible contact with worker in confined space.
Standby person to have access to a telephone for emergency communications

Gas Monitoring

The atmosphere in the tank is to be tested prior to entry and levels recorded on entry permit. Continuous monitoring is to be undertaken whilst work is in progress.

Entry Permit

All pre-entry details are to be completed on entry permit prior to entry.

3. ENTRY

Entry and Exit

Full harness and RPD is to be attached to overhead crane prior to entry and remain in place whilst working in tank.

Ventilation

Extraction device to be connected and set in place.

Houskeeping

Ensure work area is kept free from safety hazards.

4. COMPLETION OF WORK

Check Area

Retrieve all tools and equipment on completion of task.

Isolation

When tank is vacated, all devices isolated “on”, may be switched “off”.

Entry Permit

Ensure that entry permit is completed and signed off when task complete.

5. EMERGENCY PROCEDURE

In the event of an emergency in the confined space, the standby person is to immediately initiate the site confined space emergency procedure.

CONFINED SPACE ENTRY PERMIT

1. Confined Space Name: Location: _____ Authorised by: (competent supervisor's name) _____	Date Issued:
This permit is valid from: _____ hrs _____ / _____ / _____ Date _____ hrs _____ / _____ / _____ Date	

2. Work to be done: (give an exact description of the work proposed) _____ _____		
Hot Work: Does this include hot work? Yes () No () (tick one) If you answered YES complete the rest of this section. (a) All combustible material cleared from area () (b) Appropriate fire extinguisher on site () (c) Welding machine located outside space () (d) Power leads not draped over tank or access ways ()		
Isolation: (List all items isolated for safe entry) _____ _____ _____		
Authorised (sign) _____		
Atmosphere Testing: <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Monitor type: _____</td> <td style="text-align: right;">Calibration Date Due: _____</td> </tr> </table> Oxygen _____ % Flammable Gases _____ % L.E.L. Carbon Monoxide (CO) _____ ppm Hydrogen Sulfide (H ₂ S) _____ ppm	Monitor type: _____	Calibration Date Due: _____
Monitor type: _____	Calibration Date Due: _____	
Authorised (sign) _____		
Ventilation: Mechanical Ventilation has been established () tick		

3. Hazard Control

Precautions: The following precautions (ticked) have been implemented:

- Warning notices/barricades are in position ()
- Smoking/naked flame has been banned in the confined space and immediate area ()
- Appropriate entry procedure is attached to this permit ()
- Any relevant MSDS's are attached for this entry ()
- Other (specify) _____ ()

Equipment: (including personal protective equipment (ticked) shall be worn or used)

Supplied air respirator (BA) () Hand Protection () Protective Clothing ()
 Respiratory Protective Devices () Foot Protection () Fire Extinguisher ()
 Safety Harness () Eye Protection () Portable Lighting ()
 Fall Arrestor () Hearing Protection () First Aid Kit () RPD (winch) ()
 Lanyard ()

Chemicals: (only the chemicals listed below can be taken into the confined space)

a) _____ b) _____ c) _____ d) _____

Other Precautions: _____

4. Persons entering the confined space:

Name	Sign In	Time	Date	Sign Out	Time	Date

Standby Person

Name	Sign On	Time	Date	Sign Off	Time	Date

5. Authorisation:

The requirements of this permit represent adequate control measures for the hazards listed in the entry/procedure/risk assessment for this area. Provided these requirements are fully observed, I consider the area safe for entry to complete the work nominated.

Competent Supervisor (name) _____(sign) _____ Date:

Signing off:

All personnel and equipment have been removed from the area. The plant, equipment, area is/is not safe to return to service.

Competent Supervisor (name) _____(sign) _____ Date: