



Standard Operating Procedure

Procedure Name:	Refuelling of Vehicles		
Author:	Steve Smallman		
Approved By:	Albie Wheeler		
Version	1.0	With Effect from	1/1/12
Review Date	1/1/13	Document Number	SOP 16
Risk Assessment	Name	RA SOP 16 Management of fuelling	
	Date	6/8/12	

1. Aim of procedure

To identify and formalise the risks and control processes involved in refuelling of vehicles including cranes, trucks and light vehicles at our yard and on client sites.

2. Scope of application

This procedure applies to all Wheeler Cranes personnel refuelling items of plant or the fuel cell from our bunded fuel store, or when refuelling from the fuel cell on remote locations.

3. References

Protection of the Environment Operations Act

Guidelines for safe Above Ground Fuel Storage on farms and industrial sites AIP GL12 – 2003.


Work Health and Safety Regulation 2011

4. Pre-requisites

Persons undertaking refuelling operations must be not less than 16 years of age.

Persons undertaking refuelling operations within our yard will be instructed on the proper fuelling processes including data entry, emergency stops and the location of spill kits.

Persons using the fuel cell will be instructed on the safe and proper use of the fuel cell.

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5. Procedure

Management of the fuel store within the Depot

The guidelines for safe above ground fuel storage nominate the following areas as of particular concern:

- Access to the tank;
- The material from which the tank is constructed;
- The supporting structure of the tank;
- The foundations for the tank support;
- The ladder;
- Earthing of the tank;
- The hose and fittings; and
- Location of the tank to ignition sources and other Dangerous Goods

Many of these issues are also addressed in the Work Health & Safety Regulation. Further, NSW Planning provides guidelines that state that fuel stores should be sized to 133% of the maximum capacity of the containers they hold. Our bunding has been designed for this capacity.

Access to the tank

The tank is accessed by stepping over a low wall that forms the bunding for the tank contents. The floor area is smooth finished concrete, and access to the top of the tank is provided by a steel ladder.

The access to the ladder and around the tank is to be kept free of any equipment which will impede free access to the tank or to the bowser.

Construction of the tank


The tank is commercially supplied to comply with applicable design standards

The ladder

The access ladder to the breather/vent and draw pipe complied with design standards at the time of construction. Any major repairs or replacement of the ladder will necessitate revisiting the ladder design.

Earthing of the tank

The tank is earthed in accordance with design standards through its fittings. Regardless of the earthing, personnel should always ensure that the metal portion of the nozzle is placed in contact with the metal of the vehicle body prior to fuelling.

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The hose and fittings

The hose and fittings supplied meets design standards.

Location of the tank to ignition sources and other Dangerous Goods

The tank is segregated from the remainder of the workshop. Smoking is not permitted within 6m of the tank or bowser.

Inspection of the tank and bowser

The tank, hose and fittings are to be inspected annually by the workshop supervisor to ensure that all equipment is in an appropriate condition.

Maintenance of fuel bund

The fuel bund is to be inspected on a quarterly basis to ensure that the bunding is intact. After rain periods, the bund needs to be emptied to ensure that the bund is capable of capturing the volume of the tank. Items may not be stored in the bunding that impact on the storage volume of the bund.


Refilling of the bulk tank

The systems manager will order fuel from the nominated supplier on a weekly basis. Orders will generally be placed on Mondays, however, supply can be arranged on any week day. We are not subject to minimum order quantities, however, to minimise incremental errors in our supply, orders should be placed so that at least 5,000l are ordered. Every effort should be made to refill at 6,000l volume, however, an order must be placed when stocks are at 3,000l.

Refuelling of vehicles - Bowser

Before refuelling, personnel must have the refuelling procedure explained and data entry into the flow control box demonstrated.

1. Vehicles are to be parked adjacent to the bowser, with the fuel tank in close proximity to the bowser.
 - a. Dual tank vehicles may need to be moved during refuelling, or for a person to assist the driver by receiving the refuelling nozzle as the nozzle is passed across the vehicle.
 - b. Some light vehicles have indicators on the fuel gauge that tell which side of the vehicle the fuel filler is on. If not otherwise indicated, generally, the side of the dashboard console on which the fuel gauge is located is the side of the vehicle on which the filler nozzle is located.
2. Vehicles are to be switched off during refuelling.
3. Drivers must not smoke while refuelling.
4. Drivers must not re-enter the vehicle while refuelling.
5. Drivers must not use mobile phones while refuelling.

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6. Drivers will remove the fuel filler cap and place the fuel filler cap in a secure location. If none is available on the crane, the cap is to be placed on top of the bowser. This will prevent the cap being dislodge, falling into the dirt. This will eliminate a possible source of fuel contamination.
7. Drivers will start refuelling using their yellow fuel key fob. To start the pump, touch the yellow fob to the round receptacle on the flow control meter on the left hand side of the bowser. To allow flow to occur, some basic data entry needs to happen:
 - a. Registration No. – For Cranes/Trucks enter the unit number, for light vehicles enter the registration number. The fuel cell is to be entered as fuel cell. Press enter to move on to the next step
 - b. Odometer – For cranes enter the hours for all other vehicles enter the odometer reading (kilometres). For the fuel cell, enter 0. Press enter
8. Lift the fuelling nozzle. The pump will now begin working.
9. An emergency stop is located underneath the flow control meter
10. Place the fuelling nozzle into the filler pipe. Ensure the metal of the fuelling nozzle comes into contact with the metal of the filler pipe. This will equalise the electrical potential between the vehicle and fuelling nozzle, eliminating a potential source of a spark.
11. Squeeze the trigger and fuel will flow.
12. Do not delay fuelling as the pump has a cut off that prevents it burning out. If no fuel flows, the pump shuts off.
13. When the tank is full, the back pressure from the tank will shut off the filler nozzle. Once the filler nozzle shuts off, do not attempt to fill the tank further. This will minimise the potential for overfilling and spillage of fuel.
14. Remove the nozzle from the filler pipe, holding the nozzle upright to prevent spillage of any remaining fuel in the hose.
15. Replace the nozzle in the bowser and the fuel pump will shut off.
16. Replace the filler cap.
17. Remove the crane/vehicle from the bowser.

Data Entry into the flow control meter

The keypad has alpha characters as well as numeric, similar to a telephone keypad. By pressing a number multiple times, the display will cycle through the number, the alpha characters in upper case, the alpha characters in lower case.

Characters can be skipped (space) or back spaced using the directional arrows.

Press Enter to confirm each entry.


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Refuelling at Service Stations

1. This will only be done in an emergency.
2. If you require fuel at a service station you will require a means to pay for the fuel:
3. If you will be absent from the depot for some time; you may be issued with a motor charge card.
 - a. It is only to be used to refuel Wheeler Cranes vehicles/plant.
 - b. It is only to be used to purchase fuel and oils
 - c. A receipt for each transaction is to be retained and handed in to the office on return to the depot.
4. In an emergency, you may call the office to arrange payment direct to a Service Station, or
5. You may pay for the fuel personally and be re-imbursed on return to the depot.

Refuelling from Fuel Cell

1. To enable the fuel cell to operate a 12v DC (car/truck) battery is required to power the pump. This can be the battery of the carrying vehicle, or a dedicated battery. If a dedicated battery is used, then it is vital to ensure the battery is charged prior to departure from the workshop.
2. The fuel cell will be filled at the bowser using the bowser refuelling procedure.
3. Determine if there are any specific requirements of the site on which the refuelling occurs. Comply with any requirements of the site owner.
4. Vehicles are to be switched off during refuelling.
5. Personnel must not smoke while refuelling.
6. Personnel must not re-enter the vehicle while refuelling.
7. Personnel must not use mobile phones while refuelling.
8. Drivers will remove the fuel filler cap and place the fuel filler cap in a secure location. This is to prevent the cap being dislodge, falling into the dirt. This will eliminate a possible source of fuel contamination.
9. Attach the alligator clamps to the battery (Red to Positive, Black to Negative) the pump will operate.
10. Place the nozzle of the fuel cell into the fuel filler pipe of the vehicle. Ensure the metal of the fuelling nozzle comes into contact with the metal of the filler pipe. This will equalise the electrical potential between the vehicle and fuelling nozzle, eliminating a potential source of a spark.
11. Squeeze the trigger and fuel will flow. Do not delay fuelling as leaving the pump running without fuel flowing can cause the pump to burn out.
12. When the tank is full, the back pressure from the tank will shut off the filler nozzle. Once the filler nozzle shuts off, do not attempt to fill the tank further. This will minimise the potential for overfilling and spillage of fuel.

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13. Remove the nozzle from the filler pipe, holding the nozzle upright to prevent spillage of any remaining fuel in the hose.
14. Replace the nozzle in the bowser and the fuel pump will shut off.
15. Replace the filler cap.
16. Replace the nozzle in the receptacle on the fuel cell.
17. Disengage the battery clips.

Fuel spill emergency response procedures

1. A spill management plan should be written to ensure effective response to spills (this document).
2. Ensure staff are familiar with the plan and it is regularly updated.
3. A clear sign outlining spill clean-up procedures and emergency contact numbers should be prominently displayed.
4. The general response to a fuel spill is:
 - a. Switch off all pumps using the automatic shut off
 - b. Keep the public away from the spill area.
 - c. Contain the spill within the bunded area.
 - d. Use the absorbents in the spill kit to soak up as much fuel as possible.
 - e. Call the Fire Brigade on 000 if a major spill occurs.
 - f. If an uncontrolled spillage to un-bunded ground occurs, notify DECC on 131555 and Port Stephens Council on 49800255
 - g. Contact Australian Waste Oil on 49320488 to recover excess oils and contaminated absorbents used in clean up.

6. Approval



Albie Wheeler
 Managing Director
 13/9/12



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7. Acknowledgement

Name	Signature	Name	Signature