



RPA0003

Issue 1

October 2016

Good Practice Guide for Safe Replenishing of Fluids on On-track and Civils Plant

Rail Plant Association Ltd

Document revision history

Issue	Date	Reason for change
1	Oct 2016	First issue

Background

A sub-group of the Rail Plant Association have, in light of reported incidents, looked at the activity of refuelling mobile plant. The mobile plant types range from On-track Plant (OTP) to Civils plant. To help reduce incidents whilst undertaking this or other fluid replenishment activities, the Rail Plant Association recommends this document as good practice for the industry.

Rail Plant Association Ltd documents are produced for the benefit of members who wish to follow the good practice on any railway infrastructure. Where an infrastructure manager has mandated their own comparable requirements, the more onerous requirements should be followed as a minimum for work on their managed infrastructure.

The Rail Plant Association Ltd makes no warranties, express or implied, that compliance with this document is sufficient on its own to ensure safe systems of work or operation. Users are reminded of their own duties under health and safety legislation

Sub-group Contacts

Safe Replenishing of Fluids on Mobile Plant working group	
Darren Matthews (Chair)	darrenm@readypower.co.uk
Jim Nabarro	jim.nabarro@bbrail.com
Steve Wadham	steve.wadham@totalrailsolutions.co.uk
Mark Farnsworth	mark.farnsworth@vpplc.com

Sign off

The Rail Plant Association Ltd agreed and signed off this document on 05 October 2016 and published on 17 October 2016

Company	Name	Position/Title
A P Webb	Paul Helks	Compliance Director
Balfour Beatty	Jim Nabarro	Plant SC Manager
Quattro Plant	Graham Pirson	Assurance & Compliance Manager
Readypower	Darren Matthews	Head Of Compliance
Road Rail Cranes	Steve Williams	Director
Stobart Rail	David Richardson	Plant Manager
Torrent Trackside	Mark Farnsworth	Compliance Manager
Total Rail Solutions	Steve Wadham	Head of Assurance
TXM Plant	Richard Romaszko	Assurance Director
Volker Rail	Paul Milner	Engineering Manager

Purpose

It is recognised that there are significant hazards associated with replenishing fluids such as refuelling and topping up oils on mobile plant that range from fire, slips, trips, falls from height, and manual handling to environmental spillages. An RPA sub-group has assessed activities associated with handling fluids such as refuelling mobile plant, and have produced this Good Practice to help minimise any risks.

Scope

This Good Practice Guide concerns the activity of refuelling or topping up other fluids on mobile plant on site or at depots with automated pumps, hand pumps, bowsers, drums or hand held containers

Definitions

COSHH	Control of Substances Hazardous to Health
MSDS	Material Safety Data Sheet
OTP	On-track Plant
PPE	Personal Protective Equipment
RA	Risk Assessment
WAH	Working at Height

1 Mobile Plant replenishment points.

1.1 Requirements

1.1.1 All mobile plant replenishment points should;

- a) be fully risk assessed with a safe system of work in place, see 2.1
- b) be segregated from non-authorized personal, ideally this would be a permanent fenced off area.
- c) have suitable access equipment/platforms for different plant types
- d) be well lit in hours of darkness, ideally on a PIR or movement sensor.
- e) be equipped with spill kits, first aid kit, eye wash and suitable fire extinguishers
- f) have suitable washing/welfare facilities.
- g) have access to the relevant COSHH and/or MSDS.
- h) have fully bunded fuel/oil storage area.
- i) have all relevant Health & Safe signage.

1.1.2 In addition to 1.1.1 depot mobile plant replenishment points should;

- a) be on a flat, level hard standing connected to an interceptor.

1.1.3 In addition to 1.1.1 Long term site mobile plant replenishment points should;

- a) be a minimum 50m away from any water courses.
- b) be on flat, level and hard ground, ideally connected to an interceptor.

1.3 Transient site locations

1.3.1 Transient site mobile plant replenishment point should;

- a) have a dynamic risk assessment carried out prior to replenishment, see 2.1
- b) have an exclusion zone established around the machine.
- c) be equipped with spill kits, first aid kit, eye wash and suitable fire extinguishers, these may be in the cab of the machine or the operators or technicians vehicle.

- d) have suitable hand cleaning provisions, which may be in the cab of the machine or the operators/technicians vehicle.
- e) have access to the relevant COSHH and/or MSDS, which may be in the cab of the machine or the operators/technicians vehicle.
- f) be a minimum 50m away from any water courses.
- g) be on flat, level and hard ground
- h) have fuel stored in a double skinned bowsers with either hand or 24v DC electric pump.
- i) have oils and coolant stored on the machine or operators/technicians vehicle.
- j) Last option - drums / cans which require upright storage, funnels and manual handling involvement with adequate spill kits

2 General Process

- 2.1 Replenishment activities should be fully risk assessed which in turn forms part of the relevant site documentation - safe system of work, OTP plan, task briefing, WPP etc.
- NOTE RPA-H&S-F-01 is the generic RPA fluid replenishment risk assessment, prior to use it should be reviewed against the specific site location, plant types and amended accordingly.
- 2.2 Check the appropriate COSHH assessments for adverse effects on health and ensure assessment control measures are implemented.
- 2.3 Always wear approved and suitable PPE for the task and as stated within the relevant COSHH assessments. Gauntlet rubber gloves are the preferred option, but smaller Nitrile gloves may be used. Barrier cream should be administered prior to wearing rubber gloves to prevent skin irritation and safety glasses should be worn where there is a risk of fluids splashing back.
- 2.4 Select a suitable location to undertake the fluid replenishing activity, as detailed in section 1
- 2.5 Ensure the correct fuel, oils or coolant and other fluids have been selected for the machine system being replenished.
- 2.6 Prior to commencement of any mobile plant movements to or from the replenishment location, a banksman/controller should be appointed to set up and maintain an exclusion zone around the plant.

- NOTE Duplex communication or suitable alternative should be used by the banksman/controller and operator for all movements of plant
- 2.7 When required, and with the aid of a banksman/controller, steadily drive the machine to the replenishment location.
- 2.8 On arrival at the replenishment area the operator/technician should
- stop the machine,
 - apply the park brake,
 - switch off the engine and isolate.
 - depending where the fluids to be replenished are positioned on the machine, it may be required to allow the relevant machine systems to cool.
- 2.9 Where possible, ask for assistance in the fluid replenishing process. An assistant has been identified in the RPA assessment, as a good control measure to act as a 'buddy'; especially if there is a need to climb up onto the machine to any filling apertures such as the diesel tank or radiator. The buddy could;
- Pass drums / cans up to the person topping up fluids.
 - Use the hand pump of a manual bowser.
 - Switch electric pumps on or off on DC powered bowzers.
 - Quickly access the emergency pump stops on DC bowzers.
 - Pass spill pads up if spills occur.
 - Pass fire extinguishers if required.
 - 'Foot' ladders if ladder access is needed to mount a part of the machine to replenish fluids.
- NOTE Two persons remove the Lone Worker hazard.
- 2.10 When mounting a machine, ensure 3 points of contact are always maintained. Only access machinery at the approved points, and ensure hand rails and footholds are fit for purpose.
- 2.11 When the replenishing operation has been completed, ensure that any filler caps etc. have been correctly replaced on the machine and on the receptacles that have been used for the replenishment.
- 2.12 Before moving the plant from the replenishment location;

- the banksman/controller should check the area around the plant to ensure that no personnel are in the exclusion zone, especially in the machine operator's blind spots.
- the machine operator should only move on the command of the banksman/controller and after sounding the machine horn.

3 Hierarchy of Controls when selecting where to replenish fluids on mobile plant

- 3.1 Position the machine in an approved area that avoids the need to work at height. For example; rail mounted machines could be travelled to a platform and slewed 5 to 10 degrees to allow access to the superstructure for refuelling without the need to climb up. This also removes a risk of falling into the gap between the platform edge and machine. Other examples may be the site setting up a platform structure suitable to prevent falls from height that the machine parks next to.
- 3.2 If there is a need to access the machine, opt for using the machines designed access points primarily, always keeping 3 points of contact.
- 3.3 If using the designed accesses is not possible (for example, the machine is rail mounted, thus lifting the machine further from the ground, which itself isn't often level), then a ladder may be used, but only if that ladder is secured / footed by a 'buddy'.
- 3.4 Crash mat provision is an option provided the crash mats are fully surrounding the area where a possible fall may occur.

4.0 Other factors

- 4.1 Adverse weather may have a significant impact on the people undertaking the activities above, should it be necessary not to carry out the activities because the weather is making it too dangerous, then the employer should support the employees right to pause work on the grounds of safety.
- 4.2 Poor lighting around the fluid replenishing area may cause unwanted shadows that increase the risks of trips and falls. A suitable area should be adequately lit in hours of darkness.