



PROCEDURE



Title: **Mobile Equipment Standards**

| | | | |
|----------------------------------|---|----------------------------|---|
| Procedure No: P314.707 | Issue: 1 | Revision: 10 | Operative Date: 25/06/2018 |
| Department: HSEC | Sect./Classification: Vehicles/Mobile Equipment | Author: D Thomas | Approver Role: Manager - Health, Safety & Environment |

CONTENTS

| | | |
|------|---|---|
| 1.0 | PURPOSE | 1 |
| 2.0 | SCOPE | 1 |
| 3.0 | RESPONSIBILITIES | 2 |
| 4.0 | REFERENCES | 2 |
| 5.0 | DEFINITIONS | 3 |
| 6.0 | ACTIONS | 4 |
| 6.1 | Unregistered Mobile Equipment and Trailers | 4 |
| 6.2 | Roll Over and Falling Objects Protective Structures | 4 |
| 6.3 | Light, Medium and Heavy Vehicles – Minimum Equipment Required | 5 |
| 6.4 | Emergency Equipment | 5 |
| 6.5 | Maintenance and Standards..... | 5 |
| 6.6 | Lifting Attachments | 6 |
| 6.7 | Trailer/Towed Equipment..... | 6 |
| 6.8 | Towing & Snigging/Pulling Mobile Equipment..... | 7 |
| 6.9 | Tricycle..... | 7 |
| 6.10 | Elevating Work Platform (EWP), as well as self-propelled trailer and truck mounted boom lift and scissor lift | 7 |
| 6.11 | Tipping Trucks | 7 |
| 6.12 | Oversize Mobile Equipment..... | 7 |
| 6.13 | Drill Rig | 8 |
| 6.14 | Audit..... | 8 |
| 6.15 | Record Keeping | 8 |
| 6.16 | Exemption..... | 8 |
| 7.0 | ATTACHMENTS | 8 |
| 7.1 | Letter of Authority | 8 |
| 7.2 | Drill Rig Inspection Template..... | 8 |
| 8.0 | REVISION HISTORY | 8 |

1.0 PURPOSE

To define the minimum standard and maintenance of mobile equipment at QAL.

2.0 SCOPE

This procedure applies to all mobile equipment, powered mobile plant, trailers, motorised buggies, side-by-side passenger ATVs, boats, tricycles or any other form of vehicle at QAL that are operated on QAL property including when driven or ridden on public roads. Mobile cranes are covered by Procedure P314.414. Forklifts are covered by Procedure P314.706.

The procedure applies to privately owned/leased vehicles, visitor's vehicles or delivery vehicles in so far as the procedure is applicable to them.

| | | |
|-------------------------|---|-------------|
| FORM NO: QA-053-0216 | IF THIS DOCUMENT IS IN PRINTED FORMAT, AND NOT CONTAINED IN A CONTROLLED MANUAL, THIS IS <u>NOT</u> A CONTROLLED QUALITY SYSTEM DOCUMENT | PAGE 1 of 8 |
|-------------------------|---|-------------|

3.0 RESPONSIBILITIES

Legal and Other Requirements

QAL is committed to manage mobile equipment and driving in accordance with legal and other requirements. A comprehensive list of legal and other requirements for mobile equipment and driving is located in the Legal Obligations Manual located on Portal under Qnet/HSEC. Reference to frequently used Australian Standards and legislative requirements are listed on Portal.

All mobile equipment maintenance will be executed in accordance with the equipment manufacturer's recommendations and relevant Australian Standards.

3.2 Roles and Responsibilities

| Role | Responsibility |
|--|---|
| Superintendents / Contractors | Implement the requirements of this procedure within their area for all mobile equipment activities. |
| Mobile Equipment Owner | Audit the system on a regular basis. Mobile equipment is operated and maintained to the standard defined in this procedure and in line with appropriate asset standards. Mobile equipment is made available for scheduled maintenance and repair. |
| Maintenance Planners/ Schedulers / Maintainers | Ensure requirements of this procedure and manufacturers' guidelines/instructions are followed during the planning of routine servicing, modification and maintenance of mobile equipment. |

4.0 REFERENCES

P202.011 Management of Change
P314.302 Road Closure and Part road Closure
P314.414 Cranes and Lifting
P314.701 Operation of Mobile Equipment
P314.706 Operation of Forklifts
P762.205 Safe Access for Unregistered Equipment to the Recreation Grounds
QM50-140-02 Trailers and Towing Accessories Engineering Standard
Transport Operations (Road Use Management) Act Schedule 4 – Dictionary.
Transport Operations (Road Use Management – Vehicle Registration) Regulation
Transport Operations (Road Use Management –Road Rules) Regulation
Transport Operations (Road Use Management – Vehicle Standards and Safety) Regulation
Transport Operations (Road Use Management – Mass, Dimensions and Loading) Regulation
Vehicle Standards Bulletin (VSB1) – Building Small Trailers
Australian Design Rules
AS 1418 – Cranes, Hoists and Winches Set
AS 2550 - Cranes, Hoists and Winches Set
Rio Tinto Performance Standard – C3 Vehicles and Driving

5.0 DEFINITIONS

| Term | Definition |
|---------------------------|---|
| Mobile Equipment | <p>Any mechanically or electrically driven machine capable of moving under its' own power and requires a driver/operator.</p> <p>Mobile equipment is under the control of an operator and includes a trailer attached to the equipment, and heavy machinery equipment. Examples include but are not limited to:</p> <ul style="list-style-type: none"> • Regardless of engine capacity, all hoists, mobile truck mounted concrete placing booms, load shifting equipment, dozers, excavators, forklifts, front-end loaders, backhoes, graders, order picking forklift trucks, boats, road rollers, skid steer loaders, and scrapers. • Tractors, road sweepers etc. • Remotely controlled mobile equipment. • It includes any form of transport that moves on wheels and a hovercraft; but not a train or tram. |
| Light Vehicles | <p>“Light vehicles” are any vehicle weighing less than 4.5 tonnes gross vehicle mass (GVM), as per Queensland road rules.</p> <p>For the purpose of these rules, light vehicles are vehicles, personnel carriers and miscellaneous vehicles comprising:</p> <ul style="list-style-type: none"> • Cars, 4WD sports utility vehicles, pickups, utilities, mini loaders (Dingo). • Personnel carriers such as long wheel base “troop carriers” light trucks with crew cabins and other vehicles designated from time to time as personnel carriers. • Any self-propelled equipment and any associated sidecar including side-by-side passenger ATVs, skidoos and similar vehicles. • Any vehicle that requires the driver to hold a Queensland car drivers licence. |
| Medium Vehicles | <p>“Medium vehicles” are any vehicle over 4.5 tonnes GVM, but excluding the heavy earthmoving equipment.</p> <p>Examples of medium vehicles include:</p> <ul style="list-style-type: none"> • Buses carrying 12 or more persons • large forklifts and telehandlers; • small front end loaders and back hoes; • service trucks; and • tippers including gravel trucks, bulk materials delivery trucks and road trains (heavy). |
| Heavy Machinery Equipment | <p>“Heavy Machinery Equipment” includes mobile equipment such as:</p> <ul style="list-style-type: none"> • bulldozers, graders, loaders, rubber tyred backhoes, scrapers, compactors, agricultural tractors, rubber tyred dozers; • rear dump trucks carrying overburden, refuse, rehabilitation material; • water trucks, road sweepers and all excavators. |
| Elevated Work Platform | <p>A mobile machine (device) that is intended to move persons, tools and material to working positions and consists of at least a work platform with controls, an extending structure and a chassis, but does not include mast climbing work platforms.</p> |

| Term | Definition |
|-------------------------------------|--|
| Road | Designated roads; as per QAL Drawing 155623 Roads. It includes refinery roads, external roads, and dirt and haul roads. |
| Bike | Tricycle or side-by-side passenger ATV that is powered or self-propelled mobile three or four wheeled bike. |
| Trailer | A vehicle that is built to be towed, <u>or is towed</u> , by a motor vehicle, but does not include a motor vehicle being towed. (Transport Operations (Road Use Management) Act Schedule 4 – Dictionary). All trailers shall be compliant with QAL Engineering Standard QM50-140-02 Trailers and Towing Accessories. |
| QAL Site | All property owned or leased by QAL |
| RDA | Residue Disposal Areas |
| Operational Area | Includes all areas of the Refinery bounded by the perimeter fence and the RDA. |
| QAL Roads Open to the Public | Roads on QAL owned or controlled property that members of the public have unrestricted access to. Roads include Harbour Road and Entrance Road on the South side of the QAL West and Main Security Gates, QAL Main Car Park, Admin Crescent, Recreation and Boggo Roads, East Car Park, and any other QAL provided car park that is external to the Plant boundaries. Note: Harbour Road north of the West Security Gate is not a road open to the public, access is controlled and monitored by QAL. |
| Roll-Over Protective Structure | Means a structure designed and constructed to prevent or minimise the risk of death or injury to the operator as a result of rolling over in any direction. |
| Falling Object Protection Structure | Is a solid structure protecting the occupants of any mobile equipment from falling objects |
| Wheel Chocks | Devices designed to be placed in front of or behind a wheel of the mobile equipment (or both), to prevent the mobile equipment moving forwards or backwards. |
| WLL (Rated Capacity) | Working Load Limit is the maximum weight that can be lifted or moved by the crane or hoist as per the manufacturer's specifications. |

6.0 ACTIONS

6.1 Unregistered Mobile Equipment and Trailers

Unregistered mobile equipment including trailers and all towed equipment, shall not be driven or operated on any road open to the public unless subject to specific exemptions provided by Transport Operations (Road Use Management – Vehicle Registration) Regulation Section 4.

Unless otherwise provided for, operation of unregistered equipment on roadways is restricted to those within:

- The confines of the Plant boundaries as defined by the Main, West and East Security Gates;
- Other areas owned or controlled by QAL that are not open to the public, e.g. the Red Mud Dam and waste disposal ponds.

Unregistered Refinery Support equipment moving between the Plant boundaries and the QAL Recreation Grounds is provided for in P762.205 – Safe Access for Unregistered Equipment to the Recreation Grounds.

6.2 Roll Over and Falling Objects Protective Structures

All mobile equipment (example tractor) that have been designed with a Roll Over Protective structure shall only be operated with a Roll Over Protective Structure in place. Mobile equipment (example forklifts) that have been designed with Falling Object Protective Structure shall only be operated with this structure in place.

6.3 Light, Medium and Heavy Vehicles – Minimum Equipment Required

All QAL and Contractor vehicles used in operational areas shall have the following minimum equipment:

- Company Identification
- Vehicle Identification Number
- Reversing Alarm
- Wheel chocks designed for the size of the mobile equipment to prevent it from rolling while parked

Private vehicles entering the West Gate for the wharf or Raw Materials Maintenance are exempt from the above requirements.

Light vehicles entering the RDA shall have the following additional equipment:

- A rotating and/or flashing beacon which is to be in operation at all times whilst the vehicle is operating
- A UHF two-way radio with access to the QAL RDA operating channel.

Electric buggies shall have a red flag **or flashing light** on the vehicle to aid visual location.

Medium vehicles being driven in operational areas shall have an orange rotating or flashing beacon fitted and operational.

All bobcats/skidsteers shall have a clear impervious front protection screen fitted

Heavy machinery support equipment (graders, water carts, fuel and service vehicles, forklifts) being driven in the refinery shall have an orange rotating or flashing beacon fitted and operational.

All mobile equipment capable of carrying passengers shall be fitted with seat belts. If the mobile equipment was never designed with a seat belt, then a specific risk assessment relating to its use without seatbelts shall be conducted and approved by the **Superintendent Safety and Plant Protection**.

Any mobile equipment that has the capacity to travel at speeds greater than the lowest posted speed limit within the QAL refinery shall have an operational speedometer fitted with the exception of electric buggies, bobcats and Yanmars where a label indicating the maximum capable speed of the vehicle shall be fitted.

6.4 Emergency Equipment

First aid kits and a fire extinguisher shall be carried in buses where there are 12 or more passengers and in vehicles regularly working in designated remote areas (like RDA & Ash Ponds). In addition, fire extinguishers shall be fitted to diesel trucks, coal trucks, fire tender, security vehicles, environment vehicles and electrical/instrument primary distribution vehicles.

6.5 Maintenance and Standards**6.5.1 Servicing & Inspections**

All QAL owned mobile equipment shall have a PM01 maintenance plan in SAP for routine maintenance.

All mobile equipment shall have service books maintained and available for inspection. Equipment shall be serviced and inspected, at a minimum, in accordance with manufacturer's recommendations. In the absence of manufacturer's recommendations, a documented preventative maintenance program for 12 months is to be developed by the owner. The period between inspections/servicing shall not exceed 12 months and shall be conducted by a competent person.

6.5.2 Modifications to Equipment

Modifications to equipment that affects its capacity or safe operation shall be performed in accordance with P202.011 – Management of Change, and Engineering Standard QM50-140-02 Trailers and Towing Accessories. Modification to a motor vehicle must be approved by a Queensland Transport authorised officer or approved person as per Section 30 Transport Operations (Road Use Management – Vehicle Standards and Safety) Regulation.

6.6 Lifting Attachments

All lifting attachments for telehandlers, forklifts or any other mobile equipment shall be specifically designed for use with the intended machine, operated in accordance with the manufacturer's recommendations and maintained in accordance with P314.414 Cranes and Lifting.

6.6.1 Certification

All new lifting devices shall be supplied complete with Certificate of Inspection and Test in accordance with AS 1418.2 Cranes (including hoists and winches) – Serial hoist and winches.

6.6.2 Identification

Before lifting attachments are put into service the Equipment Identification Number and WLL or Rated Capacity shall be displayed on the equipment and a metal tag shall be affixed with a relevant Equipment Identification Number and Next Due Inspection Date.

6.6.3 Inspections

Inspections shall be carried out as per the manufacturer's recommendation or a minimum of every 12 months. Inspections shall take the form of a visual check and a WLL load test.

6.6.4 Records

Records for inspection, services and test results shall be maintained for each individual lifting device for the life of the lifting attachment. Records shall be kept in the Owner's computerised maintenance management system or Contractor's own system.

6.7 Trailer/Towed Equipment**6.7.1 Side Load and Top Load Trailers**

All Side Load and Top Load Trailers shall comply with the requirements of AS 1418.11 and have weightometers and associated built in safeguards fitted.

6.7.2 Engineering Standard for Small Trailers & Towing Accessories

Trailers shall comply with, and be towed in accordance with Engineering Standard QM50-140-02 Trailers and Towing Accessories, and this procedure. Trailers must meet the Vehicle Standards Bulletin (VSB1) – Building Small Trailers if used on public access roads.

6.7.3 Towing Capacity

All mobile equipment fitted with a tow hitch shall have the braked and un-braked towing capacity, plus the maximum down force clearly visible, a suitable means of identification shall be securely and permanently attached in a prominent location near the tow hitch. The Towing Capacity identification tag shall have the Un-braked, Braked and Maximum Down Force capacities in kilograms.

| | |
|------------------------|----------------|
| Towing Capacity | |
| Un-braked | 750kg |
| Braked | 2,050kg |
| Max Down Force | 205kg |

6.7.4 Roadworthiness Compliance

All trailers shall be operated and maintained in a roadworthy condition and comply with and not less than the applicable Australian Design Rules for Motor Vehicle Safety (ADR).

6.8 Towing & Snigging/Pulling Mobile Equipment

Lifting equipment (chains, slings etc) normally used for lifting and rigging purposes **SHALL NOT** be used for towing, snigging or pulling. Only specific towing equipment shall be used as per section 6.29 of procedure P314.701 Operation of Mobile Equipment.

The vehicle or heavy machinery equipment being recovered shall only be towed to ensure it is made safe and is removed from its hazardous situation. Towing shall not be undertaken for transport purposes, instead purpose built equipment shall be utilised such as a tilt tray truck, low loader or tow truck to travel longer distances from the recovery area.

6.9 Tricycle

Tricycles shall be maintained in a sound mechanical condition. For night time use or low visibility conditions rear and side reflectors, white front light and red rear light shall be fitted and used.

6.10 Elevating Work Platform (EWP), as well as self-propelled trailer and truck mounted boom lift and scissor lift

All mobile elevating work platform baskets must be enclosed with mesh from toe board to mid rail to prevent loose objects falling out of the basket. The basket or platform shall also be fitted with secondary guarding to further reduce the risk of entrapment or impingement of the operator in the basket or platform against a solid object.

When selecting secondary guarding for a machine, preference should be given to devices with the ability to stop the movement of the equipment and emit an audible or visual alarm.

Secondary Guarding shall consist of one or both of the following:

Physical barriers

(e.g. caged)



Pressure sensing devices

("e.g. Sky Guard")

**6.11 Tipping Trucks**

All mobile equipment with the ability to elevate a tray must be fitted with an engineering designed device to prevent them from travelling in a forward motion >6 km/hr with the tray elevated.

6.12 Oversize Mobile Equipment

Any oversize mobile equipment coming to or leaving the Plant shall comply with the requirements of the Transport Operations (Road Use Management) Act and the relevant Regulations for oversize vehicles.

Any mobile equipment inside the Plant boundaries exceeding any of the following dimensions will require an escort/pilot vehicle - 3.5m wide, 4.3m high, and 19.0m long. (Reference Transport Operations (Road Use Management) Regulation Section 11).

Escort vehicles shall have fitted and operate an orange flashing light and/or orange hazard lights and have two way radio contact with the mobile equipment being escorted.

6.13 Drill Rig

Drill rigs being bought onto the QAL lease will be required to have an inspection completed and documented on attachment 7.2 by the QAL Contract Supervisor of the contract, the drilling company representative and a member of the QAL H&S team.

6.14 Audit

An annual safety element audit of this procedure will be conducted on Contractors and QAL sections.

6.15 Record Keeping

The equipment owner shall keep completed service and maintenance log books while the equipment is in service. The records shall be kept either in the mobile equipment, with the service provider or at a site office.

6.16 Exemption

An exemption to this procedure can be obtained once a documented risk assessment has been prepared by the owner of the vehicle and submitted to the Safety Specialist for consideration.

If satisfied with this request the Safety Specialist will submit the risk assessment to the Health and Safety Manager for approval.

7.0 ATTACHMENTS

7.1 Letter of Authority

7.2 Drill Rig Inspection Template

8.0 REVISION HISTORY

| Issue | Revision | Revision date | Change Reason |
|-------|----------|---------------|--|
| 1 | 10 | 25/06/2018 | Removed 6.4 Orange Rotating/Flashing Beacon Requirement – Road traffic legislation has been repealed |
| 1 | 9 | 06/06/2016 | Update to 6.11 – updated to clarify requirements of physical barriers and pressure sensing devices in Elevating Work Platforms |