

Place on your Safety Notice Board and discuss at the next Toolbox or Daily Prestart

This is a safety briefing on the (Operation of Powered Mobile Plant) in relation to QLD WHS regulations and OFSC Audit criteria H16. Plant and workers interaction is a high risk that PCBUs have to manage on a daily basis.

So please be mindful and remember work health and safety implementation is everyone's responsibility.

QLD WHS Regulation 2011 – Powered Mobile Plant	Optional - PCBU or Worker Action for meeting compliance
Assess risks associated with: plant overturning - things falling on the operator - the operator being ejected - the plant colliding with any person or thing mechanical failure of pressurised elements of the plant that may release fluids that pose a risk to health and safety have been identified and managed. QLD WHS Regs 2011 s.214	Conduct a Plant Risk Assessment before allowing plant to operate and ensure daily plant pre starts are conducted by the plant operator
A SWMS is available for work that includes the use of powered mobile plant that has commenced or is about to commence. QLD WHS Regs 2011 s.291 and s.299	No SWMS no work as this is a high risk construction activity, ensure the SWMS is relevant to the work being undertaken and is checked at the time of site induction by the site supervisor and the workers using the SWMS understand it
Mobile plant operators hold the appropriate high risk work licence or, for earthmoving equipment and particular cranes, have been deemed competent. QLD WHS Regs 2011 s.81 and schedule	Check operators licences or verification of competency at the time of site induction for each worker who will operate the mobile plant at the site
A suitable combination of operator protective devices for each item of powered mobile plant have been provided, maintained, and used. QLD WHS Regs 2011 s.215	Roll over, falling object and associated guarding to protect both the plant operator and other worker in the vicinity of the work area
People other than the operator of an item of mobile plant are prevented from riding on the plant or are otherwise provided with a level of protection that is equivalent to that provided to the operator. QLD WHS Regs 2011 s215	No riding on the outside of the plant – Must be inside in the operator cab in an appropriate seat this need to be defined in the SWMS
Powered mobile plant is prevented from colliding with pedestrians or other powered mobile plant. QLD WHS Regs 2011 s.215	Set up exclusion zones and place safety spotters to reduce interactions with works and plant this need to be defined in the SWMS
Where there is a possibility of powered mobile plant colliding with pedestrians or other powered mobile plant, a warning device has been fitted. QLD WHS Regs 2011 s.215	Flashing lights and reversing beepers are fitted and operational and can be seen and heard by workers working in the vicinity of the mobile plant this needs to be defined in the SWMS
Each industrial lift truck has been equipped with lifting attachments that are suitable for the load being lifted or moved. QLD WHS Regs 2011 s.218	Ensure SWL ratings are correct, never exceeded and are checked for operational integrity at the daily pre start check and ongoing before lifting commences needs to defined in the SWMS
Each industrial lift truck is operated in a manner that ensures risks to the operator or other nearby people are eliminated or minimised. QLD WHS Regs 2011 s.218	PCBU and Operator must check that controls measures such as exclusion zones are implemented also check that ground & load stability and any surrounding infrastructure is considered including worker using the surrounding infrastructure
OFSC Audit Criteria Reference H 16 – Mobile Plant	Optional - PCBU or Worker Action for meeting compliance
H16.1 The risks associated with the use of mobile plant are identified, assessed and controlled in accordance with the Hierarchy of Control	Project Risk Assessment is conducted before mobile plant commences on site and includes specific control measures relevant to that piece of mobile plant operation
H16.2 The system ensures that a Plant Risk Assessment is carried out on all items of plant prior to use on-site.	Ensure plant risk assessments are specific to the mobile plant
H16.3 Safe systems of work are established for the operation of mobile plant taking into account: <ul style="list-style-type: none"> • the operator manual; • outcomes from the plant risk assessment; • site specific requirements; and the need for ROPS and FOPS. 	Develop a project procedure that includes SWMS development in consultation with workers and includes manufacturer's instructions, plant risk assessment and is specific to the mobile plant work to be conducted and includes both falling objects and ground stability issues
H16.4 Safe systems of work have been developed for all above ground and underground services taking into account: <ul style="list-style-type: none"> • identification and location of services; • management of works adjacent to services; and; any necessary liaison with the asset owner. 	Develop a project procedure that considers above and underground utilities and the need to liaise with asset owners – consider using a PTW process
H16.5 Safe systems of work have been developed for the use of mobile cranes taking into account: <ul style="list-style-type: none"> • ground conditions; • development of lift plans in accordance with relevant legislation, codes of practice and Australian standards; and lifting of materials and workers. 	Develop a project procedure that considers the development of lift plans where required, always include specific mobile crane SWMS includes ground conditions and lifting of different materials and workers
H16.6 The system ensures there is an inspection and maintenance program for rigging and lifting equipment.	Develop a project procedure that includes ongoing inspection and maintenance program for lifting equipment ensure this is listed in the SWMS
H16.7 The system ensures that movement of plant and vehicles on-site is controlled.	Develop project specific traffic movement plan that includes site layout max speed exclusion zones to stop or minimise mobile plant and worker interactions – communicate this at the time of site induction

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H 16.8 The system ensures that all workers operating mobile plant are licensed trained or competent.	Check operators licences or verification of competency at the time of site induction for each worker who will operate the mobile plant
H 16.9 The system ensures there is an inspection program that is specific to the needs of the type of mobile plant, taking into account: <ul style="list-style-type: none"> regulatory inspections and registration; manufacturers' inspection requirements; pre-start inspections; and commissioning prior to use on-site. 	Develop a project procedure that includes and defines that individual pieces of plant have different manufacturer, regulatory inspection and registration requirements and that daily individual plant pre start inspections and commissioning are plant specific and need to be robustly implemented
H 16.10 The system ensures that there is a process for the ongoing maintenance of mobile plant.	Ensure project procedure specifies and manages ongoing maintenance, plant register – hours between different maintenance service windows – plant ID stickers issued with next service listed to help supervisors direct plant operators to comply to plant manufacturers O&M requirements
H 16.11 The system ensures that emergency procedures are established specific to the scope of works.	Project Risk Assessment initially identified potential emergencies relating to the operation of mobile plant and site specific emergency response arrangements are developed for different identified risks pertaining to mobile plant

General Information on Earthmoving Plant in Lifting Mode

One of the major hazards associated with operating mobile plant is using it in crane mode.

When specified by the manufacturer in their operating procedure, and where mobile plant is used as a mobile crane to lift or lower freely suspended loads, the level of safety provided by the lifting set up should be at least that of mobile crane.

Rated Lifting Capacity for Earthmoving Plant

Manufacturers' specifications will provide the rated lifting capacity for earth moving plant.

The rated lifting capacity will be the maximum load that can be safely handled at the maximum lift-point radius without strength and stability requirements being exceeded. To ensure stability of the mobile plant, the rated capacity must never exceed:

- 75% of tipping load in the stationary mode
- 66% of tipping load in the pick-and-carry mode
- 50% of tipping load for articulated wheel loaders and tool carriers

Load Charts

When determining the load, the mass of any attachments (such as buckets and quick-hitch devices) must be deducted unless the rated-capacity chart states otherwise.

The load chart for the earthmoving plant must include: Each lift-point location including

- The rated capacity for each lift-point location.
- The manufacturer's name and model.
- Boom and dipper arm identification and length.
- Track width (if this is variable).
- Deductions for attachments to allow the net load to be determined.

Which is to include either

- The rated load in the least stable position, or
- If variable load rating is provided, a method for clearly determining the load position in accordance with the rated capacity chart.

Lifting Points on Earthmoving Plant

All lifting points must form a closed eye to which a load-rated shackle can be attached and each lifting point must be tested using a static strength test at 200% of the rated capacity for that point. Lift points must show no permanent deformation following the test.

Lifting points must either be: Supplied by the manufacturer or Designed by an engineer

Lifting lugs must not be attached to buckets because a load lifted to the side of the bucket may load pins and linkages beyond their intended design and the operator can easily overload the plant by not allowing for the weight of the bucket. Additionally the lifting chain/sling can become damaged as it passes over the edge of the bucket and lifting lugs on the bucket may become damaged when the bucket is used for digging.

Quick Hitches

Sudden loss of hydraulic pressure can cause attachments to fall off the quick hitch.

If a quick hitch device relies on positive hydraulic pressure to remain attached, it must be fitted with an independent latching device that: Is both positively and mechanically locked in the 'engaged' position and needs to be intentionally disengaged to uncouple the attachment.

Where the quick hitch uses a check valve to prevent hydraulic pressure being lost the manufacturer must provide a statement clearly stating that the device will not unintentionally disengage due to loss of hydraulic pressure. Evidence will be required to show that any conditions related to the manufacturer's guarantee are being complied with and copies of both these documents must be kept in the workplace.

Burst Protection

Burst protection must be fitted to the boom and dipper arm hydraulics (where attached) of all mobile plant used as a crane, regardless of the rated capacity of the plant. Burst protection consists of either: Controlled lowering devices or a Pilot-operated check valves.

Operator Competency

All operators of mobile plant on the project must be trained to use the particular equipment they are required to operate.

When the mobile plant is to be used as a mobile crane, the operator may require additional training and competencies.

Operators of plant are to supply their certificate or their VOC to operate equipment to the PCBU for verification and record keeping.

All Operators of plant are to conform to the National Guidelines for WHS Competency Standards for the Operation of Load shifting Equipment and Other Licence Type requirements for Specified Plant and Equipment defined by the state based regulating authority.

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