Mobile Plant and People Interaction
Guide and Critical Risk Standard

Safety is everyone’s responsibility
Mobile Plant and People Interaction Guide

Safety is everyone’s responsibility
Check before you begin

1. **Is the mobile plant suitable for this work and in a safe condition?** Does it have the right lifting attachments for this task? Is it rated for the zone requirements? Is it fitted with warning devices? Check the manufacturer’s handbook if you’re not sure.

2. **Are you a competent person authorised to do this work?** Do you hold a current High Risk licence for *this* mobile plant? Has a supervisor assessed you to use *these* attachments? Do you know how to calculate a safe load for *this* plant? Do you understand the safe work procedures for its operation, shut down and maintenance?

3. **Is the work area safe to operate in?** Is it clearly marked and sign-posted with speed limits? Is it free of obstructions? Are there solid barriers protecting workers from mobile plant? Does it have separate pedestrian crossings and walkways? Can you see safe loading and unloading zones? Check the Traffic Management Plan for this site. Do you understand the hazards, risks and control measures?

4. **Have you completed the Thales pre-start checklist?** Do a pre-start safety check every time you use different mobile plant and at the beginning of each shift. Make sure previous operators have left the mobile plant in a safe condition.

If the mobile plant is not in proper working order, there are obstacles in the work area or you believe the work area is not safe for you or pedestrians – **DO NOT** begin work. **Report all hazards or unsafe working practices immediately.**
When operating mobile plant

- Wear a correctly fitted seatbelt (or a harness for EWPs) and appropriate PPE
- Operate the plant safely and obey all traffic signage, especially speed limits
- Sound the horn before entering doorways, blind corners or anywhere you can’t see ahead
- Stay inside the boundaries of the Traffic Management Plan and only load and unload in marked exclusion zones
- **DO NOT** lift people unless the plant is equipped for this purpose
- **DO NOT** carry passengers unless the plant has a protected passenger seat with restraints
- **DO NOT** tow or push another vehicle, unless purpose-designed for the task
- **ONLY** use a mobile phone or two-way radio when the plant is stopped in a safe location with the handbrake on and the fork arms down
- Work at a safe distance from overhead or underground electric lines

When you are moving loads with a forklift

- **DO NOT** drive with a raised load – it should be as low as possible
- **DO NOT** lift a load over a person unless the plant is designed for this purpose
- Only carry loads within the lifting capacity of the mobile equipment and attachments. **Remember:** bulk containers reduce your lifting capacity by 20%
- Secure the load across both fork arms for balance
- Place the load against the carriage or back-rest with the mast tilted back to stop the load slipping off. If in doubt, restrain the load with straps
- Only lift vertically. Do not drag a load off a raised surface
- **Check the pallet:** Is it in good condition? Is it the correct pallet for the task? **If in doubt about any load, don’t lift it – consult your Supervisor.**
When you are parking

- Park on level ground with the load removed and without blocking traffic
- Set the wheels straight and leave the drive controls in neutral
- Apply the park brake
- Fully lower the mast and tilt forward so most of the fork blade touches the ground
- Turn the engine off, shut off the fuel line, lock the start control or remove the ignition key
- Disable parked plant to prevent unauthorised use
- Park and store any plant powered by LPG engines in well-ventilated areas
- Use chocks if you can’t avoid parking on a slope.

If you are moving explosive ordnance

- Limit the number of people in the area according to the sign posts
- Establish exclusion zones around EO facilities, with setbacks specified for mobile plant operators
- Assess loads to ensure they are in a safe condition for transport
If you believe mobile plant is unsafe for use:

- Stand down, shut down and lock down the plant immediately.
- Securely attach an ‘Out of Service’ tag indicating why the plant is unsafe.
- Report the fault to a Supervisor.

If you have an accident or near miss:

- Report the incident to your supervisor immediately.
If you are changing or charging batteries

CHECK BEFORE YOU BEGIN

⚠️ Have you received the proper training? Do you know how to follow the manufacturer’s instructions?

⚠️ Are you wearing eye protection and other PPE? Have you removed rings and bracelets?

⚠️ Do you have washing facilities, including eye baths, and fire extinguishers on hand?

⚠️ Is the area well ventilated?

AS YOU WORK

✔️ Check the vent caps in the batteries are functioning correctly

✔️ Hold open the battery cover while on charge to allow any gases to escape

🚫 **DO NOT** smoke or use open flames

🚫 **DO NOT** use metal objects that make strike a spark

🚫 **DO NOT** use mobile phones or other electronic devices.

IF YOU SPILL ELECTROLYTE

✔️ Contain the spill

✔️ Dispose of the spill and contaminated materials safely.

If you are using a forklift on a slope

For example when driving it onto another vehicle

CHECK BEFORE YOU BEGIN

⚠️ Are the brakes on the trailer being unloaded set and the wheels chocked?

⚠️ Will a disconnected trailer be able to carry the combined weight of the forklift truck and the load along its whole length?

⚠️ Does the trailer floor have any defects?

⚠️ Will the floor support the mass of the forklift truck and its load?

⚠️ Are the ramps wide enough and well-maintained? If the loading dock or ramp does not have buffers or raised edges, do not drive on it if you think a wheel may drive over an edge.

AS YOU WORK

When travelling up or down a slope:

✔️ **With a load** – Put the load on the uphill side. Tilt the mast so the load can’t fall off

✔️ **Without a load** – Put the forks on the downhill side (reverse up; drive down)

🚫 **NEVER** drive mobile plant across the face of a slope.
Mobile Plant and People Interaction
Critical Risk Standard

Safety is everyone’s responsibility
Introduction

The Thales Australia Critical Risk Standards describe the minimum requirements for controlling each of the critical work health and safety risks that are common to our operations and workplaces. The Critical Risk Standards provide a high level framework for managing health and safety hazards.

Scope

This Critical Risk Standard describes the Critical Controls for “Mobile Plant and People Interaction” and applies to all Thales sites and operations. **Every effort must be made to eliminate the need for personnel to work in and around an area of operating mobile plant.**

The intent is to eliminate or minimise the risk of fatalities and serious injuries arising from the operation of forklifts and other mobile equipment, including the interactions with pedestrians.

The aim is to prevent harm to persons resulting from:

- Being struck by a moving load,
- Being struck by mobile equipment;
- Loss of load containment;
- Being involved with unstable equipment or ground; and/or
- Being involved in a collision with mobile equipment.

The following aspects are within the scope of these Critical Risk Standards:

- Interaction of people with forklifts, mobile cranes, EWPs and other mobile plant.
- When operating or maintaining the plant.
- Interaction of people with loads being shifted/transported by mobile plant.
- Forklift and other plant roll-over when being operated.

The following activities are **not** within this scope:

- Light motor vehicles
- Truck operations
- Fuel handling, storage and refuelling of plant
- Plant operating in close proximity to overhead electrical cables
- Gantry cranes
- Falls from trucks and mobile plant
- Mobile plant striking structures
- Use of work boxes or platforms on forklifts for work at heights.

Where Thales Australia does not have control of the worksite or is working under a client’s safety management system, then:

- The client’s standards shall be applied if they are equal or higher, and
- The Thales Australia Standard shall be applied for aspects where the client’s system is “silent”.

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If the client’s standards are lower and this presents a material risk then this must be escalated with the Thales Australia Contract Manager.

What if a Critical Control Cannot Be Applied?

If for any reason there are circumstances where the Minimum Requirement for a Critical Control cannot be met, then a formal Control Standard variation is required. Deviation from the requirements set out in each Control Standards shall be formally approved by a variation which involves:

- A documented and detailed risk assessment of the situation;
- A documented recommendation supported by the Business Safety Manager;
- A documented recommendation from a Technical Expert where appropriate; and
- Formal approval from the Business General Manager or Business Vice President that the level of risk as a result of the alternate control measures is understood, and considered acceptable to the organisation.

Contracted Mobile Plant Work

Contracted Mobile Plant workers and their Supervision must be inducted in this Critical Risk Standard.

Contractors are required to meet or exceed this Standard when undertaking work for Thales Australia where there is a risk of mobile plant and people interaction.

Definitions

The following terms are used in this Risk Standard. Additional definitions can be found in the reference documents.

<table>
<thead>
<tr>
<th>Critical Risk</th>
<th>A risk where there is potential for a fatality or life-altering injury.</th>
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<tbody>
<tr>
<td>Critical Control</td>
<td>A control that is crucial to preventing the event or mitigating the consequences of the event. The absence or failure of a critical control would significantly increase the risk despite the existence of the other controls.</td>
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<tr>
<td>Minimum Requirements</td>
<td>Aspects of the Critical Control that must be applied in all Thales Australia controlled operations.</td>
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<tr>
<td>Additional Requirements</td>
<td>Aspects of the Critical Control that may be applied based on a site-specific or task-specific risk assessment.</td>
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<tr>
<td>Like for like</td>
<td>Replacement of part with the same or equivalent manufacturer’s part number or an OEM approved alternative.</td>
</tr>
<tr>
<td>SWMS</td>
<td>Safe Work Method Statement</td>
</tr>
<tr>
<td>JSEA</td>
<td>Job Safety and Environment Analysis</td>
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</table>
| **Reasonably Practicable** | ‘Reasonably practicable’, in relation to a duty to ensure health and safety, means that which is, or was at a particular time, reasonably able to be done to ensure health and safety, taking into account and weighing up all relevant matters including:  
  a. the likelihood of the hazard or the risk concerned occurring; and  
  b. the degree of harm that might result from the hazard or the risk; and  
  c. what the person concerned knows, or ought reasonably to know, about the hazard or risk, and about the ways of eliminating or minimising the risk; and  
  d. the availability and suitability of ways to eliminate or minimise the risk; and  
  e. after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimizing the risk, [here](https://www.safeworkaustralia.gov.au/doc/how-determine-what-reasonably-practicable-meet-health-and-safety-duty) |
| **Spotters** | Someone on the job site to make sure that people, equipment and the site don’t come together in the wrong way. |
**Mobile Plant Critical Controls**

The minimum requirements for preventing an incident with mobile plant and people interaction and associated work are:

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<th>Plant and people are separated, defined exclusion zones are maintained, and entry to work areas is controlled.</th>
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<td>MP2</td>
<td>Operators must be trained, assessed as competent and authorized to operate the specific item of mobile equipment.</td>
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<td>MP3</td>
<td>Mobile plant and attachments that are selected are suitable for the task, the load mass, the load dimensions and other characteristics.</td>
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<td>MP4</td>
<td>Mobile Plant is inspected before mobilization and before use.</td>
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<td>MP5</td>
<td>Before mobile plant is used it must be inspected and a Pre-Start Check completed.</td>
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<td>MP6</td>
<td>A Site Based Traffic Management Plan must be in place.</td>
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<td>MP7</td>
<td>Only authorised people are permitted to operate mobile plant.</td>
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<td>MP8</td>
<td>Seat Belts must be worn where fitted on the mobile equipment.</td>
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<td>MP9</td>
<td>Where mobile plant is used to move Explosive Ordnance (EO), the number of personnel in the area is minimised.</td>
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<td>MP10</td>
<td>Fit for purpose packaging and load restraints are used to restrict movement when being handled and to protect the product in the event of being dropped or mishandled.</td>
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<td>MP11</td>
<td>Mobile phones and two-way radios may be used provided the mobile plant is stopped in a safe location with the handbrake applied.</td>
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MP1 Exclusion Zones

Plant and people are separated, defined exclusion zones are maintained, and entry to work areas is controlled.

MINIMUM REQUIREMENTS

- Every effort must be made to eliminate the need for personnel to work in and around an area of operating mobile plant.
- Physical separation by solid barriers will be used to protect all workers from mobile plant operations.
- Where elimination or physical separation is not reasonably practicable, one or more of the following controls must occur:
  - deactivation of plant undertaken prior to anyone entering an area of operating mobile plant delineation and exclusion zones established
  - pedestrian and obstacle detection systems implemented to mobile plant.
  - engineering detection systems implemented
- Exclusion zones are clearly identified through painted markings and signage.
- Mobile plant no go areas are clearly identified through markings and signage.
- Positive communication instructions implemented for mobile plant operations on site.

ADDITIONAL REQUIREMENTS

The following additional requirements should be considered in the risk assessment:

- where possible, restrict site access to people who are directly involved with the work activities and minimise the movement of people and mobile plant in the working area.
- when there are other types of mobile plant or traffic in the workplace, use traffic controllers to ensure the mobile plant does not collide with any plant, structure or person.
- Spotters may also operate from a safe zone or elevated position adjacent to the exclusion zone. The spotters role is to communicate with the mobile plant operator and alert them of their proximity to surrounding structures, trees and electrical lines.
- The use of spotters and guides must be minimised and a clear Standard Operating Procedure must be in place to manage the interaction of the Guide and mobile plant such that plant movement cannot occur when the guide is within the operating arc of the plant or load.
NOTES AND REFERENCES

For further information, refer to:

- 83392463 Forklift Operation Guideline
- 83392435 Traffic Management Guideline
MP2 Verification of Competency

Operators must be trained, assessed as competent and authorized to operate the specific item of mobile equipment

MINIMUM REQUIREMENTS

Operators are assessed for competency in operating under different conditions, including:

- Use of different types/models of mobile plant.
- Use of different attachments or other ancillary equipment.
- Operating on sloping or uneven ground.
- Operating with awkward loads or where loads obstruct vision.
- Operating in restricted spaces.

Competency assessment is conducted initially and refreshed as required.

Supervisors undergo training in their responsibilities for overseeing mobile plant operations.

The qualifications of mobile plant contractors operating mobile plant shall be verified upon site induction and recorded in the contractor management system. The qualifications of workers providing ad hoc services may be randomly checked, for example, at visitor sign-in or during site safety walks.

ADDITIONAL REQUIREMENTS

The following additional requirements shall be considered in the risk assessment:

- A system shall be in place to verify the qualifications and competency (VoC) of persons who operate mobile equipment. VoC is to be performed by those that supervise or manage the work and have accountability for the safety performance of the team.
- During the induction process, employees and contractors shall receive awareness training appropriate to the mobile equipment hazards on the site,
- Mobile equipment operators shall receive awareness training in the exclusion zones, site walkways and equipment pre-start requirements.
NOTES AND REFERENCES

There are standard forms and guidance material to ensure a consistently high standard of competency assessment is conducted across the range of Thales operations, including the handling of explosive ordnance.

For further information, refer to:

- 83392463 Forklift Operation Guideline
- 83392435 Traffic Management Guideline
MP3 Fit for Purpose Mobile Plant

Mobile plant and attachments that are selected are suitable for the task, the load mass, the load dimensions and other characteristics

MINIMUM REQUIREMENTS

- “Sealed surface” forklifts must only conduct loading and unloading operations on flat sealed surfaces. Rough terrain forklifts must be used in all other circumstances.
- Where new plant is brought to site the MOC process has been followed.
- A formal risk-based equipment selection is in place to mandate the choice of the least hazardous mobile plant for the task.
- Pre-Purchase Risk Assessments are conducted with the involvement of end-users so that the safest and most suitable mobile plant is selected.
- Reference is made to compliance plates and operating manuals.
- Any attachments must have the necessary certificates to ensure compatibility and suitability for use before being used.

ADDITIONAL REQUIREMENTS

The following additional requirements should be considered in the risk assessment:

- There shall be a system in place to manage and coordinate the Thales owned and leased mobile plant fleet.
- Processes for Pre-Purchase Risk Assessment and Management of Change are reviewed to identify improvements when applied to the selection, purchase or hire of mobile plant.
- Mobile plant and attachments must meet a set of preferred safety attributes for all mobile plants. For example, crush protection on EWP, seat belt interlocking on forklifts, reversing cameras on specific vehicles etc. It is also recommended that this interface is identified in the Forklift Operating Guideline.
- Safe work loads must be adhered to at all times

NOTES AND REFERENCES

For further information, refer to:

- 83392463 Forklift Operation Guideline
- 83392435 Traffic Management Guideline
MP4 Inspection and Maintenance

Mobile Plant is inspected before mobilization and before use

MINIMUM REQUIREMENTS

- Plant is maintained and serviced as required in accordance with the specifications provided by the original equipment manufacturer (OEM) where these are available.
- Inspections and maintenance are conducted to relevant standards by approved providers.
- Defective mobile plant is tagged or locked out and quarantined.

ADDITIONAL REQUIREMENTS

The following additional requirements should be considered in the risk assessment:


NOTES AND REFERENCES

- For further information, refer to:
  - 83392463 Forklift Operation Guideline
  - 83392435 Traffic Management Guideline
# MP5 Pre-Start Checks

Pre-Start Checks are completed before mobile plant is used

## MINIMUM REQUIREMENTS

- Before you operate any mobile plant, both the plant and any attachments shall be checked to identify faults or conditions that may lead to a failure. A Pre-Start Check shall be done every time you use different mobile plant and at the beginning of each shift.
- The use of technology is mandatory to enforce Pre-Start requirements for forklifts.
- Appropriate technology is used to track the completion of Pre-Start Checks and keep a record of the issues identified.
- Faulty mobile plant are tagged or locked out to prevent operation.
- All new mobile plant must have Pre-Start technology fitted.

## ADDITIONAL REQUIREMENTS

The following additional requirements should be considered in the risk assessment:

- Pre-Start inspections shall be maintained, located on the machine and audited.
- There is a plant stand down process in place if any safety related fault is identified.

## NOTES AND REFERENCES

- For further information, refer to:
  - 83392463 Forklift Operation Guideline
MP6 Traffic Management

A Site Based Traffic Management Plan must be in place

MINIMUM REQUIREMENTS

- Mobile plant and truck routes are planned to minimise pedestrian, plant and vehicle interactions, blind spots and reversing.
- Pedestrian walkways are identified and protected by hard barriers where practicable.
- Infrastructure, including pedestrian chicanes, gates, mirrors, signage, crossings and bollards are used to support the separation of pedestrians and mobile plant.
- Areas where mobile plant must not be operated are identified.
- Loading and unloading zones are identified which ensure appropriate swing space is available to complete the task. If a safe loading or unloading area cannot be established, the task must not proceed.

ADDITIONAL REQUIREMENTS

The following additional requirements should be considered in the risk assessment:

- Where reasonably practicable, situations where trucks are required to reverse (other than in a designated exclusion zone), must be eliminated.

NOTES AND REFERENCES

- Changes to traffic movements or pedestrian walkways shall be subject to Management of Change
  
  For further information, refer to:

- 83392435 Traffic Management Guideline
MP7 Technology and Authorised Usage

Only authorised people are permitted to operate mobile plant

MINIMUM REQUIREMENTS

- Technology shall be used to prevent the operation of forklifts without a seat belt being fitted.
- Technology is used to speed-limit mobile plant based on location/zone.
- Mobile plant must be fitted with warning devices as appropriate, for example ‘forklift to worker’ proximity sensors, reverse lights, reverse sensors, reverse cameras, flashing lights, beepers, squawkers and focus beams.
- “Smart” technologies like proximity card devices is used to restrict the operation of specific mobile plant to authorised operators only.

ADDITIONAL REQUIREMENTS

The following additional requirements should be considered in the risk assessment:

- Pedestrian sensing technologies may be used as an additional layer of defence, not as an alternative, to physical separation through the use of physical barriers as described in MP1.
- The technology profiles for mobile plant operating in explosive process buildings must be supported by an assessment in line with the requirements of the Thales Australia Explosive Safety Manual and include considerations such as RADHAZ.
- All EO services forklifts are approved for use by the Technical Manager.

NOTES AND REFERENCES

For further information, refer to:

- 83392463 Forklift Operation Guideline
- 83392435 Traffic Management Guideline
MP8 Seat Belts and Other Restraints

Seat Belts must be worn where fitted on the mobile equipment

MINIMUM REQUIREMENTS

- Seat belts must be worn at all times when operating mobile plant.
- Harnesses must be worn in boom type Elevating Work Platforms (EWP) except when operating over water where special conditions apply.

ADDITIONAL REQUIREMENTS

The following additional requirements should be considered in the risk assessment:

- Seatbelts and other restraint systems shall be used when they are provided unless a risk assessment indicates it is not safe to do so and other risk controls are implemented.
- Harnesses shall be worn in scissor lifts where indicated by the risk assessment.
- Seat belts and rollover protection is mandatory for all mobile plant, including ride-on mowers, golf buggies, tractors etc. A review and phase-out of all older non-compliant assets shall be undertaken.

NOTES AND REFERENCES

For further information, refer to:

- 83392463 Forklift Operation Guideline
- 83392435 Traffic Management Guideline
MP9 Personnel Limits

Where mobile plant is used to move Explosive Ordnance (EO), the number of personnel in the area is minimised.

MINIMUM REQUIREMENTS

- Procedures describe personnel limits for all tasks where EO are handled by mobile plant to meet security requirements whilst minimising exposure.
- Personnel limits are set for EO storage facilities based on minimising the numbers for safety without allowing individuals to work alone. These limits are sign-posted on each storage facility.

ADDITIONAL REQUIREMENTS

The following additional requirements should be considered:

- Exclusion zones shall be established around EO storage facilities with setbacks specified for truck drivers and other personnel.

NOTES AND REFERENCES

For further information, refer to:

- 83392463 Forklift Operation Guideline
- 83392435 Traffic Management Guideline
MP10 Packaging and Loads

Fit for purpose packaging and load restraints are used to restrict movement when being handled and to protect the product in the event of being dropped or mishandled.

MINIMUM REQUIREMENTS

- Mobile equipment operators shall only carry loads within the lifting capacity of the mobile equipment and attachments.
- Mobile equipment operators shall only use approved and registered attachments.
- All explosive products being moved shall be assessed to ensure that they are in a safe condition for transport using a forklift.

ADDITIONAL REQUIREMENTS

The following additional requirements should be considered in the risk assessment:

- The Thales Standard describe the requirements for this control in both EO and non-EO operations.
- The transportation of EO will be in accordance with Load Restraint Guidance.
- EO will be packaged in accordance with Topic 25 or Defence Explosive Ordinance Classification Listing Standards.
- The responsibility for packaging and securing of loads be clearly described.
- Fit for purpose racking is in place that is compliant with the relevant standards.

NOTES AND REFERENCES

For further information, refer to:

- 83392463 Forklift Operation Guideline
MP11 Mobile Devices

Mobile phones (hands free or hand held) and two-way radios may be used provided the mobile plant is stopped in a safe location with the handbrake applied.

MINIMUM REQUIREMENTS

- Mobile phones (hands free or hand held) and two-way radios may be used provided the mobile plant is stopped in a safe location with the handbrake applied.

- Use of mobile devices and two-way radios whilst completing a task is prohibited.

ADDITIONAL REQUIREMENTS

The following additional requirements should be considered in the risk assessment:

- Considerations may include stopping mobile plant "with the ignition off" and "with the tynes/bucket lowered".

NOTES AND REFERENCES

For further information, refer to:

- 83392463 Forklift Operation Guideline