pacifichire

Truck Drivers Guide 2022

1300 722 132

Pacific Hire's Vision

To be a leader in the equipment hire industry without compromising safety in transport or equipment quality.

At Pacific Hire, we pride ourselves on integrity while offering the best quality, service and offering the latest hire equipment with the latest safety options available on the market.

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INTRODUCTION

Welcome to the Pacific Hire Truck Drivers Guide. Transporting our equipment is recognised as one of the highest safety risks in the industry. Ensuring the safe transport of equipment is one of our key top priorities at Pacific Hire.

This guide is designed as a reference tool for everyone who has an interest or involvement in transporting our equipment, both Pacific Hire staff members, management & sub contractors.

The intention of this guide is to ensure everyone involved in transporting our equipment has the relevant information necessary to undertake their tasks safely. If at any stage you are unsure or don't feel safe with the task you are undertaking then *STOP* immediately and contact your supervisor.

This Guide includes the Pacific Hire Transport Safety Charter which all transport employees and partners are required to comply with. The document is divided into the following 2 sections:

Part 1 - Transport Safety Charter
Part 2 - Transport at Pacific Hire

Part 1

Transport Safety Charter

Pacific Hire Transport Safety Charter

Our duty under Work Health and Safety (WHS) legislation and Road Transport legislation requires appropriate systems to be in place to eliminate or minimize risks associated with the transport of plant and equipment. As part of this process, Pacific Hire have applied a risk management principle to determine the controls required to mitigate the risks associated with transporting equipment, we have incorporated them into the Transport Safety Charter below. This is to ensure all personnel are aware of the controls that must be applied to mitigate the risk when loading, restraining, transporting and unloading equipment whilst in Pacific Hire yards and on job sites on behalf of Pacific Hire:

Transport Safety Charter

1. **We recognise and accept our obligations to develop and maintain and promote safe systems of work and safe transport operations through all locations and whilst on jobsites or transporting equipment to and from site.**

2. **We undertake to comply with all WHS, environment and road transport laws applicable to our operations.**

All drivers must comply with the following requirements:

- **Being fit for duty – alert, healthy and prepared for the driving task**
- **Observing speed limits & seat belt laws**
- **Observing fatigue management regulations**
- **Consider not being under the influence of alcohol or other drugs or impaired by fatigue.**
- **Not tailgating other vehicles**
- **Applying reliable and effective load restraint practices that comply with the Loading Performance Standards in the Heavy Vehicle National Law.**
- **Aware of mass and dimension limits of the vehicle you are operating**
- **Not using engine brakes at inappropriate times and places**
- **Travelling in left lanes unless overtaking**
- **Compliance with all Road Laws.**

3. **We will not knowingly make or meet any demand or requirement that would cause or encourage another driver to breach road transport laws or WHS - Work Health and Safety Act 2011 regulations applying to our operations.**
4. **We will actively support the development of appropriate industry codes of conduct, charters of practice and safety guidelines for the purpose of promoting compliance with road transport and WHS laws. Pacific Hire is subject to the Chain of Responsibility Laws, along with our transport sub contractors and customers. We will provide ongoing education to our employees, sub contractors and customers of our obligations under this legislation and ensure Pacific Hire is compliant across all aspects of the law.**
5. **We will also ensure that we have in place suitable and adequate processes, programs, policies and training so that we comply with all relevant laws.**
6. **We recognise and accept that our obligations include:**

- **Managing waiting and scheduling delivery & collection requirements to minimise the risk of driver fatigue and speeding.**
- **Provide safe loading and unloading areas & traffic management plans at our branch locations, along with safe guidelines whilst on job sites.**
- **Ensuring we use safe and fit for purpose vehicles that are appropriately designed, equipped and maintained.**
- **A commitment to driver health and safety.**

7. **We recognise and accept that the safety of our employees, our transport partners, our customers and the general public are key elements for meeting our obligations under this Charter.**
8. **We undertake to consult with our employees, transport sub-contractors and customers to meet our obligations under HVNL Chain of Responsibility, road laws and WHS legislation to provide and maintain transport operations that are safe for all parties.**
9. **Pacific Hire cares about the environment and its OH&S management systems. We expect our sub contractors to share similar concern by taking steps to prevent pollution and minimise emissions, waste and adverse impacts arising from their operations.**

Part 2

Transport at Pacific Hire

Health, Safety, Environmental & Quality

Pacific Hire has a well established policy and procedure management system across all operations.

Pacific Hire has these systems in place for all Pacific Hire locations. The scope of the range of systems that are available can be viewed and discussed by interested parties upon request.

Issue	Minimum Safety Standard
Safe Systems of Work	• **Competent -** Only licensed, trained, qualified and authorised personnel to conduct work. • **JSEA's -** Are regularly conducted to identify, assess and control risks and hazards especially onsite by way of SWMS guidance in all vehicles. • **Work Instructions -** In some instances Pacific Hire will specify how equipment is to be operated, tied down, loaded or moved. Work must be conducted in compliance with the instructions given by Pacific Hire staff members at all times. • **Incidents & injuries -** All incidents and injuries sustained must be reported to a Branch Manager. All incidents & and injuries must be investigated and the findings are to be reported to the Pacific Hire Operations Manager. • **Sub Contractor Evaluation Process -** Pacific Hire will do random spot checks on all Pacific Hire vehicles and sub contractor vehicles to maintain a level of compliance in all yards, where a breach occurs investigations are conducted to rectify non compliance.
Safe Systems of WorkSafe and Healthy People	• **Safety & Health Requirements;** do not override or interfere with safety and health features or provisions and caution others not to override or interfere with safety devices or practices. • **Substance Abuse Work Instructions;** no person may work if under the influence of alcohol or drugs. This includes illicit drugs and prescription medicine that may compromise safety in any way, shape or form, Drug & Alcohol testing is conducted randomly. • **Personal Protective Equipment (PPE);** PPE requirements applicable to a given task must be adhered to. • **Fatigue Management;** manage the risks associated with fatigue in the workplace. Identify factors that contribute to fatigue and discuss with personnel, make changes as required (including sleep patterns, workload, roster and lifestyle factors), and seek professional help where/if necessary. • **Authorised Use;** only licensed, trained, qualified, or persons deemed "Competent" in house or by way of training or authorised personnel are to operate any equipment.
Safe Plant and Equipment	• **Safe Plant and Equipment** – plant and equipment must be fit for purpose and comply with applicable Standards and legislative requirements. • **Test/Tag** – electrical items must be tested and tagged as per the requirements prior to commencing hire.
Environmental Responsibility	• **Take steps;** to prevent spills and pollution or immediately remedy any releases, and control waste. • **Maintain & Operate;** equipment efficiently to minimise greenhouse gas emissions.

How will Pacific Hire ensure everyone goes home safe?

Pacific Hire has a minimum set of safety standards across all Pacific Hire sites in which Pacific Hire's employees and transport sub contractors are expected to comply with. Some customers may have additional expectations and requirements, over and above these that address specific operational risks which are addressed by way of SWMS or site specific requirement on a case by case scenario to achieve and maximise safety and WHS compliance, all new improvements or requirements are discussed by way of monthly toolbox meetings with all relevant staff members.

Our responsibilities and your responsibilities

Pacific Hire's Responsibilities:	▪ Driver inductions and training in safe operation of equipment, this also includes refresher courses in some cases ▪ Providing safe and fit for use equipment ▪ Constant audit and development of risks involved and procedure adjustments where required ▪ Updated driver training and regulation notifications ▪ We will provide you with the correct vehicle & load restraint systems to suit the equipment transport requirement safely ▪ Pacific Hire will make sure all equipment has correct weights listed
Accessing your truck & equipment	▪ Obey all traffic management plans in place ▪ Secure your vehicle in a safe loading position with flashing lights & hazard lights activated ▪ Walk around the equipment and risk assess the area & the environment around your working areas ▪ Plan your work area ▪ Find a safe access point, use steps & grab handles where available ▪ Face unit when entering and exiting using 3 points of contact ▪ Know the mass and transport dimensions of the machine
Assess the site conditions before moving equipment (Conduct a Transport JSEA [Appendix 1]). Watch for:	• Unstable ground • People in the area • Traffic Conditions • Trenches or underground services • Overhead powerlines • All other site requirements
Prior to operating your equipment	▪ Ensure you understand how to operate the equipment's controls ▪ Determine if you require a licence to operate the equipment ▪ Inspect the equipment for any damage or dangers ▪ Ensure the controls are functional and brakes work ▪ Know the capabilities, characteristics and limitations of the machine including: Braking, Emergency shutdown, Tie down & Lifting points, Dimensions, Gradeability, Mass & Speed options available. ▪ Ensure unit has correct tie down/lifting locations marked ▪ Check if you require a spotter or traffic management ▪ Apply Winch if required to do so (This is a "MANDATORY requirement for all electric machines and double drum rollers) ▪ Apply correct load restraint techniques to secure the unit/s during transport including all accessories and boom baskets
During Operation	▪ Wear a harness if the unit is required to have one used ▪ Wear a seatbelt if the unit is fitted with one ▪ Report any issues on returning to a depot and tag out if required
Safe Operation of Machinery	• NEVER operate a machine which is new to you without first reading the operation instruction manual. • Familiarise yourself with all machine functions at low speed that are appropriate for the loading/unloading process. Take particular attention to steering and braking functions. • Always apply a winch if recommended to do so

Refer to your NHVR Load restraint guide if required for assistance with correct load restraint technique, reference to lifting or restraint points, these also can be found in the equipment operation manual which also includes the full specifications of the equipment including dimensions and gradeability requirements.

Spills

If a spill or release of fuel, oil or other hazardous substance occurs

Stop & Assess	• As a priority ensure the safety of yourself then others – contact emergency services if a clean-up is required. (e.g. oil on public road) • Assess the spill - Size? Substance? Is it Hazardous? Can or has the spill spread to land, watercourse or drains? • Identify resources required (PPE, Spill Kit or External Provider/ Emergency Services if spill large or hazardous)
Secure	• Cordon off the affected area to restrict access and make secure, allow excess space for safety if required to do so.
PPE	• Use appropriate PPE as outlined in product SDS, Pacific Hire MSDS sheets are located on the Team Documents file, contact 1300 722 132 if required.
Contain	• Prevent runoff to storm-water or off site release. • Use your spill kit to contain or prevent entry to drains, water bodies and other environments.
Absorb	• Use Hydrocarbon pads or absorbent pads to capture all spilt materials.
Notify	• Notify your Manager and the Pacific Hire Service Manager. (Pacific Hire's HSEQ team will determine if notification to regulatory authorities is required). If the spill occurs on a customers jobsite, advise your site contact. If the spill is contained inside equipment notify the customer and the appropriate Pacific Hire Branch Manager & Service Manager.
Dispose	• Use disposal bags contained in your spill kit to collect waste for collection by approved hazardous waste contractor (Contact Pacific Hire's Service Manager.
Re-Stock	• Contact Pacific Hire's Service Manager who will contact a supplier to refill and replace used spill kit items for your vehicle.

If in doubt, Call 1300 722 132 and ask for the Service Manager

Loading / Unloading Techniques

Choose the Correct Loading/Unloading Technique

If a winch is present it must be used in the applicable processes listed below. N.B. if the vehicle is fitted with more than one winch (e.g. super-tilt trailer) then one winch of an appropriate size for the load is acceptable.

Technique	Application
Winch & Drive	• Self-powered mobile equipment that has a driving station e.g. forklift, scissor lift with handrails are in place, wheel loader, roller etc. (Check gradeability-refer page 23 • Seatbelts must be worn where fitted. • Vertical & Boom lifts require harnesses to be worn.
Winch & Freewheel	• Trailer mounted equipment and other equipment which has no driving position and no self-power. On Large scissor-lifts collapse handrails before beginning to load if there is a risk of exceeding legal transport height. • Engage freewheel mechanism if required.
No winch: Drive on and use catcher chain	• For loaders and excavators fitted with a bucket/blade. • A Transport JSEA (Appendix 1) must be completed prior to using this method.
No Winch: Drive Only	• Large low-loaders that are not fitted with winches. • Ramps should be of suitable length & width for the equipment being loaded/unloaded.
Crane Only	• Static loads such as traffic barriers and shoring or where site requires crane only

Correct Equipment

Winching must be performed using a remote operated winch. The winch and associated equipment must be rated for the task Refer to the Winch Capacity Guide (Appendix 2). Pre-use visual inspections of all load restraint and winch equipment (including winch cable) are required weekly to ensure they are in a good condition – Refer to Pacific Hire's weekly truck checks on the Syrinx system.

Safe Load/Unloading and Exclusion Zones

- Every Pacific Hire location has a safe load/unloading zone.
- Spotters are required to monitor and enforce the safe zones during load/unloading in some cases.
- Refer to Forklift and Crane Load/Unload Exclusion Zones (Appendix 3).
- Refer to Tilt Tray and Low Loader Exclusion Zones (Appendix 4).
- Refer to Spotter (Appendix 5).

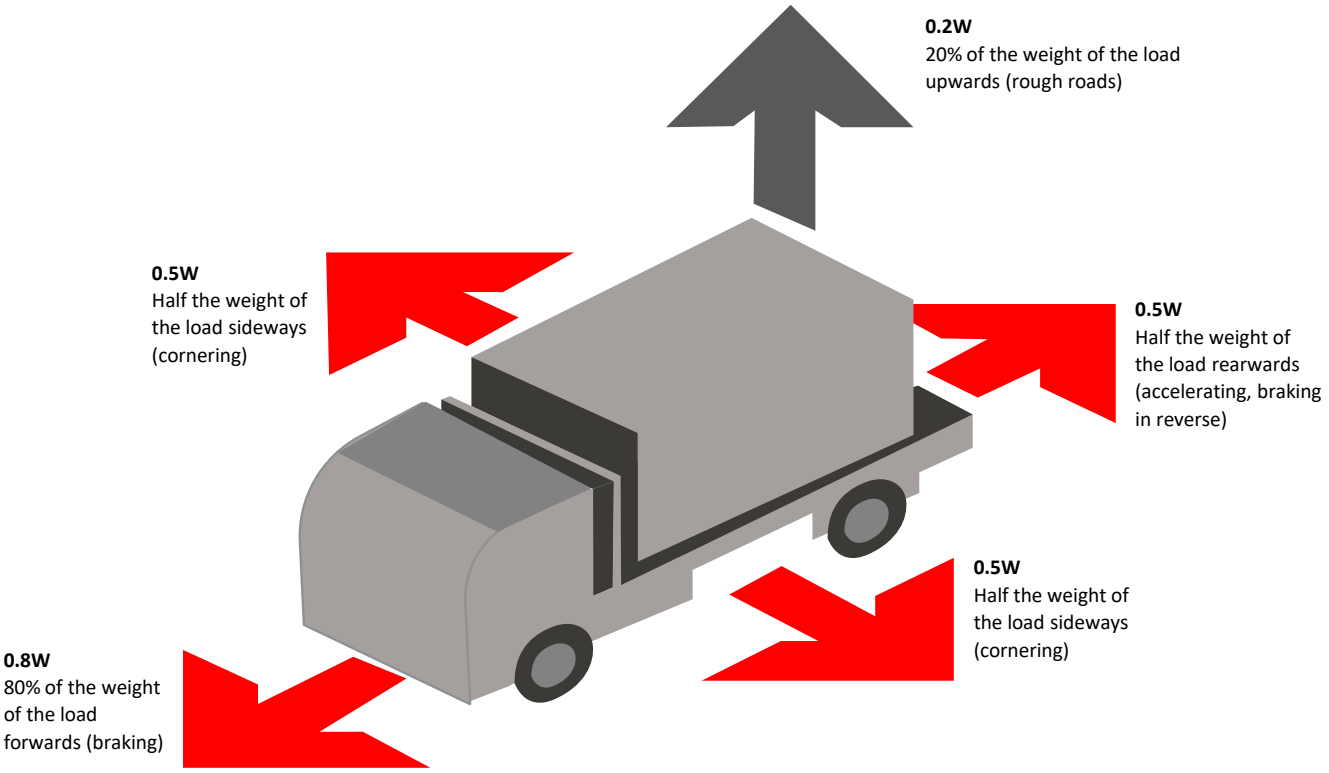
Maximum Slope for Load/Unloading

- Wherever possible, load/unloading should be conducted on flat, dry, clean bitumen or concrete surfaces.
- Refer to Operating Tilt Tray Trucks on a Slope - Wheeled or Tracked Equipment Guide (Appendix 6).
- Refer to Operating Tilt Tray Trucks on a Slope - Skid Mounted Equipment Guide (Appendix 7).

Load Restraint Principles

Load restraint is governed by the Heavy Vehicle National Law, the NHVR Load Restraint Guide provides examples of load restraint systems that can be used to effectively restrain a load.

A load restraint system is legally required to be able to withstand forces specified in the Loading Performance Standards. The diagram below refers to the minimum amount of force a restraint system must be able to withstand in each direction.



If a load is restrained to meet these Performance Standards it will not fall off or affect the stability of the vehicle under expected driving conditions. This includes emergency braking and minor collisions.

The Performance Standards define what is required or recommended, but not how to do it. The NHVR Load Restraint Guide provides general information to help you choose a load restraint system for your load, along with your load restraint training course and general guidance from other Pacific Hire staff.

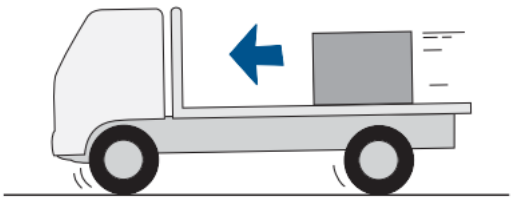
Pacific Hire is governed by the Heavy Vehicle National Law, the NHVR Load Restraint Guide provides examples of load restraint systems that can be used to effectively restrain a load & manufacturers recommendations in regards to load restraint systems specifically designed to restrain plant and equipment. These systems meet the Performance Standards and are certified by an appropriately experienced and qualified engineer.

These guides are specific to certain equipment groups and are available to you for your use and reference. From time to time these guides will be updated and we will inform you when this occurs.

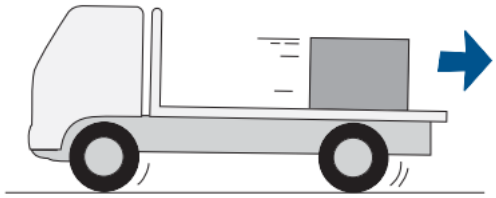
If you would like more information or would like to download a copy of the Load Restraint Guide 2018 please go to:
https://www.nhvr.gov.au/road-access/mass-dimension-and-loading/loading

Why Loads Shift

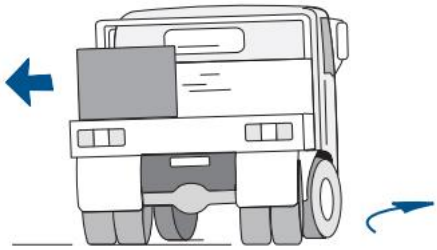
When moving, a vehicle and its load are subjected to forces caused by changes of speed, direction or slope. These forces result from braking, accelerating, cornering or travelling over cambered, undulating or uneven road surfaces and air flow.



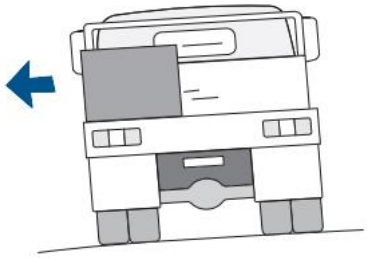
Braking



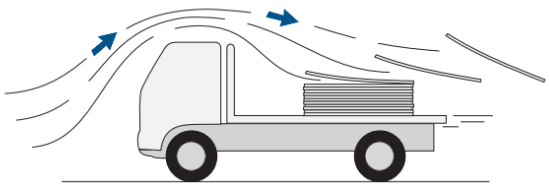
Braking in reverse or hill starts



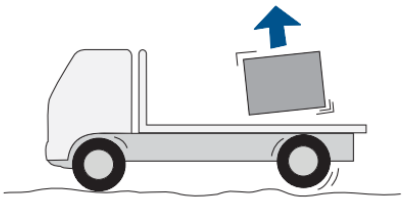
Cornering



Road camber



Air Flow



Rough Roads

Hills

Forces generated at low speed can be often greater than forces generated at high speed. The weight of the load on the vehicle cannot provide enough friction to restrain it when it is subjected to the above forces. The load must be restrained to overcome the forces mentioned above otherwise it will fall off or shift and may cause an incident where the vehicle may overturn or injure person/s or property.

There are 10 steps to follow when restraining your load

Planning the load

1. Understand your load
2. Choose a suitable vehicle for you load type and size.
3. Use a restraint system that is suitable for your load.
4. Position your load to maintain vehicle stability, steering and braking.
5. Check your vehicle structures and restraint equipment are in good working condition and strong enough to restrain your load.

Loading (and unloading) the vehicle

6. Make sure your load is stabilised.
7. Make sure you understand and use safe work practices when loading and unloading a vehicle.
8. Make sure you use enough restraint to keep you and others safe.

Driving according to the load and driving conditions

9. Allow for changes in vehicle stability, steering and braking when driving a loaded vehicle.
10. Check the load and its restraint regularly during our journey.

Planning the load

Step 1: Understand your load

✓ Think about the load that you plan to transport.

What are the load's characteristics:
- Weight
- Dimension
- centre of gravity
- crushable/fragile loads
- wheels
- friction levels
- packaging or unitisation
- any other important or unique features.

✓ Undertake a risk assessment on the load, keeping in mind its specific characteristics, and plan to mitigate any risks.

For example, if you do not know the precise weight of your load, you could:
- under-load for the first trip and verify weight at some stage of the journey if the vehicle's weight cannot be accurately assessed at the time of loading.
- fit scales to loading equipment and keep a "running" total of the weight of the load or each trip.

Step 2: Choose a suitable vehicle for your load type and size

✓ Check your vehicle's load carrying capacity.

Your vehicle should have adequate load capacity and sufficient space for the load.

✗ Do not allow your load to overhand.
If you have a long load your vehicle needs to be long enough to avoid excessive overhand. Excessive overhangs will affect the steering capacity, swept path and stability of your vehicle.

✓ Check the overall height of your load.

The overall height of a loaded vehicle must be safely lower than the height of any obstruction on your journey (such as a bridge or overhead wires)

✓ Choose a vehicle that gives you the roll stability your load needs.

Loads with a **high centre of mass are less stable and increase the risk of vehicle rollover**. Such loads should be carried on a vehicle with a low platform height (for example, drop frame trailer or low loader) or on a vehicle with good roll stability.

Vehicles carrying liquids and loose bulk materials should be designed to completely contain the load and to minimise the effect of load movement on vehicle stability. Large tanks should be adequately baffled if not almost full or empty when transported.

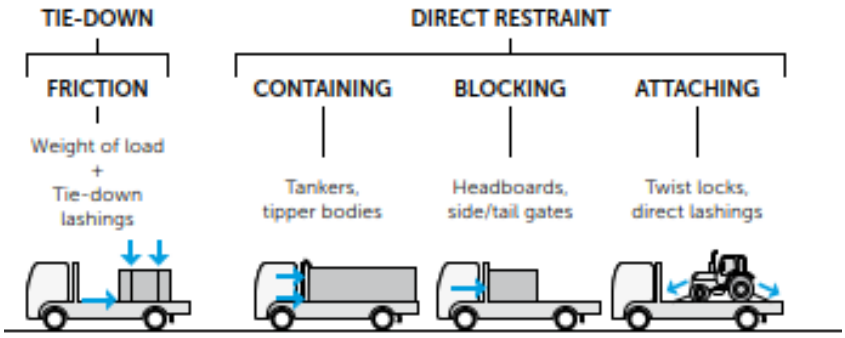
Step 3: Use a restraint system that is suitable for your load

✓ Choose the restraint method that is most suitable given your load and vehicle.

Loads can be restrained by two basic methods: **tie-down** or **direct restraint (i.e. containing, blocking and attaching).**

The following diagram shows the different restraint methods for controlling load movement in the forward direction. The same principles apply to backward and sideways movement.

Figure 1 Different restraint methods



A combination of different restraint methods can be used and in some cases may be necessary to meet the Performance Standards.

✓ Make sure you are using enough lashings of sufficient capacity if using the tie-down restraint method.
You'll need to take into account the weight of your load, whether the load is blocked or unblocked and the amount of friction between the surfaces of your load and the vehicle deck.

✓ Use a direct restraint method for loads that are difficult to tie down.

Using direct lashings to attach a load is especially suitable where there is little or no friction between the load and the loading deck, such as;
- Slippery loads
- Loads on wheels.

✓ Make sure you are using load-rated headboards and load rated side/tail gates if using the blocking restraint method.

✓ Make sure contained loads can't shift within the vehicle structure.

✓ Make sure the load restraint method you use meets the **Performance Standards.**

Step 4: Position your load to maintain vehicle stability, steering and braking

✓ Keep the centre of gravity low and close to the vehicle's centreline.

The position of a load has a significant impact on the vehicle's stability, particularly its rollover stability. Rollover stability is very sensitive to the centre of gravity of the vehicle. Rollover stability increases by lowering the centre of gravity.

✓ Load heavy objects first, and do not offset them to one side of the vehicle.

✓ Check your rollover stability.
Static rollover threshold (SRT) is a basic measure of rollover stability. High SRT values imply better resistance to rollover. ***SRT calculators can be found online to help reduce rollover risk.***

✓ Spread the load evenly across the deck, and share the weight between the axles.

The weight distribution of a load can also affect vehicle dynamics. For example:
- Overloading either the front or rear axle will affect the vehicle's steering ability.
- Uneven weight on the wheels influences the braking force of the wheels and can cause them to lock up.

Axle loads can be obtained by weighing or by calculation.

✗ Do not allow your load to excessively project from the vehicle.

A load should not excessively project from the front or sides of the vehicle because it could cause danger to other road users or damage to property.

✓ Face dangerous projections away from the driver.

A load with any potentially dangerous projections (e.g. boom from an excavator) should be placed in a way that minimises the risk to the driver if the load shifts during braking or a collision.

✓ Understand the legal mass and dimension requirements of your vehicle.

The Heavy Vehicle National Law covers mass and dimension requirements for heavy vehicles. Visit the National Heavy Vehicle Regulator website for more information on mass and dimension requirements.

Step 5: Check your vehicle structures and restraint equipment are in good working condition and strong enough to restrain your load

✓ Make sure that all equipment used in packing, loading and load restraint is serviceable and regularly maintained.

✓ Inspect all vehicle and restraint equipment before each trip to make sure it is in good working order.

Wear and damage on vehicle and restraint equipment can significantly reduce their strength and function. If there is any doubt about their reliability and safety, do not use them for the trip. Instead, replace them with equipment in good condition.

✓ Check your lashings.

Even minor wear and damage may considerably reduce performance compared with the lashings rated capacity, putting you and others at risk.

✗ Do not use equipment weakened by cracked, broken, or worn components for restraining loads.

✓ Check all locking and latching mechanisms are fully functional when being used for load restraint purposes.

✓ Use rated equipment.

Any vehicle structures and restraint equipment used in a restraint system must be strong enough to withstand the forces indicated in the ***Performance Standards***. Restraint equipment is rated by manufacturers to indicate its restraint capacity. ***The restraint capacity of unrated equipment is very low.***

Step 6: Make sure your load is stabilised

**Unstable and tall loads can tip over under heavy braking or cornering, even if they are restrained properly at the base. Bin lifters, EWP's, generators and gas cylinders are examples of potentially unstable tall loads.*

A tall load can **tip forwards if the length of the base is less than 80% of it's height. It can **tip sideways** if the width of the base is less than 50% of it's height.*

! A load will also be unstable if it's on a base such as timber dunnage that is narrower than the base of the load.

To increase the stability of tall loads:

✓ Place unstable loads against a rigid structure (such as a headboard) to prevent them from tipping.

✓ Strap several unstable items together to form a stable pack.

✓ Fully tension your lashings to increase load stability when using tie-down restraints.

✓ Use chains to prevent unstable loads tipping where possible as they have a limited amount of stretch.

✓ Use direct lashings to prevent a load tipping if further restraint is required.

! Rope and webbing straps can stretch and loosen – check them frequently if using these types of lashings to stabilise a load.

! Don't mix and match chains and straps on the same load. They have different stretch factors and breaking points, which may cause lashing to fail.
Always assess the restraint to its weakest point (for example, grab hooks may have a lower capacity than the chain 'strength).

Figure 2 Unstable forwards

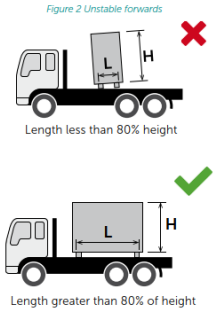
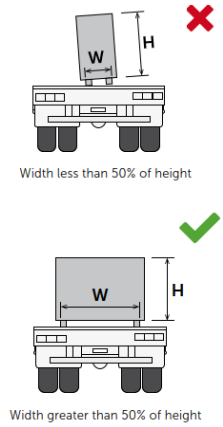


Figure 3 Unstable sideways



Step 7: Make sure you understand and use safe work practices when loading and unloading a vehicle

****Multiple deaths and injuries occur each year in Australia as a result of incorrectly loading and unloading trucks. The following principles and actions are designed to prevent such events.***

Planning
✓ Plan to take into account the load, vehicle and equipment characteristics.

Loading plan
✓ Use appropriate loading equipment.
✓ Use the appropriate load restraint equipment and methods.
✓ Obey the relevant mass and dimension limits for load and route.

Unloading plan
- ✓ Check your load for movement or stability before removing restraints and unloading.
- ✓ Use appropriate equipment for unloading.

Documentation
- ✓ Document an appropriate loading and unloading procedure and load restraint system that is displayed and easily accessed by packers, loaders, drivers and other parties in the supply chain.
- ✓ Use loading, unloading and load restraint diagrams for different types of loads to support safe and compliant loading.
- ✓ Use a template that requires the person in control of packing or loading the goods to verify the accuracy of any records.

Training
- ✓ Make sure everyone understands
- ✓ Train all people on the loading and unloading site according to their role.
- ✓ Include loading and unloading exclusion zones in the site inductions.

Work execution
- ✓ Clarify who has authority.
- The loader has authority over the activity and directs the truck driver or others to make sure the activity is safe.
- The loader and the truck driver discuss how the loading and unloading will occur.
- ✓ Separate equipment and people.
- ✓ Establish the following zones:
- **Loading and Unloading Exclusion Zone.** No People or other equipment can enter this area. Mark the are with fences, witches hats, electronic sensors, barriers or similar.
- **Driver safety zone**, to allow line of sight between the loader and the truck driver to observe the loading or unloading.
- ✓ Include additional measures.
- good layout of the area to maximise visibility.
- additional spotters observing the activity.
- site-specific measures, especially for complex sites.

Communication
- ✓ Check there is fit-for-purpose communication between the loader and the truck driver.
- This includes hand signals, two-way radio, talking, etc.
- ✓ Maintain line of sight between the loader and the driver.
- If broken, the loader immediately stops and waits until the line of sight is re-established.
- ✓ Stop work if people enter the Loading and Unloading Exclusion Zone.
- The Loading, Unloading Exclusion Zone (LUEZ) Guidelines provide more information on this topic.

Step 8: Make sure you use enough restraint to keep you and others safe

- ✓ Restrain your load to prevent unacceptable movement during all expected conditions of operation.
- Movement is unacceptable if it negatively impacts on weight distribution or the stability of the vehicle.
- Expected conditions of operation include emergency braking and minor collisions.
- Part or all of the load coming off the vehicle is a load restraint breach.

- ✓ Make sure your load restraint system can withstand the load restraint performance standard forces.
- The vertical force only applies to tie-down restraint systems that rely on friction.

DRIVE ACCORDING TO THE LOAD AND DRIVING CONDITIONS
Step 9: Allow for changes in vehicle stability, steering and braking when driving a loaded vehicle

- ✓ Understand the effect your load type and it's position can have on the vehicle's stability, steering and braking capacity.
- ! A truck carrying a load with a high centre of gravity will be less stable.
- ! A load that isn't evenly distributed across the width of the trailer will reduce the vehicle's stability when cornering.
- ! Vehicles carrying "live" loads (loads that can move) are more likely to overturn on corners. This includes water trucks and water furphy's, large rubber tyres equipment and vehicles.
- ! If a load isn't evenly distributed along the length of the trailer, and there is more weight on some wheels than others, then each wheel will not brake with the same force. This can cause the wheels to lock up.
- ! Braking forces can be greater at low speed because of the "grabbing" effect.
- ! External factors such as high wind speeds can also reduce vehicle stability or blow the load off.
- ✓ Drive at an appropriate speed for the driving conditions.
- Many rollovers are caused by inappropriate speed when changing direction, particularly on corners. Remember: The faster the vehicle is going, and the tighter the turn, the more likely a driver is to lose control.
- ✓ Be aware of the height and width of your loaded vehicle.
- You should make allowances for high and wide loads when driving around corner, under bridges and electric cables and near power poles, traffic lights and other obstructions.

Step 10: Check the load and its restraint regularly during your journey

- ✓ Check your load and lashings regularly during your journey to make sure the load remains secure.

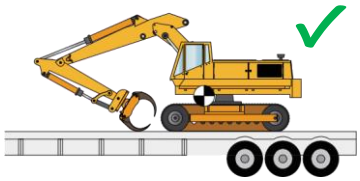
Some loads can settle and shift during a journey, causing lashings to loosen, The amount of checking required depends on many factors including the type of load, the type of restraint system, the roughness of the road and how well it's packed.

- ✓ Understand the characteristics of your load and know how often it needs to be checked during a journey.

Some loads require the lashings to be checked and re-tensioned after only a very short distance (e.g. bales, bags and sacks).

Load Restraint Specifics

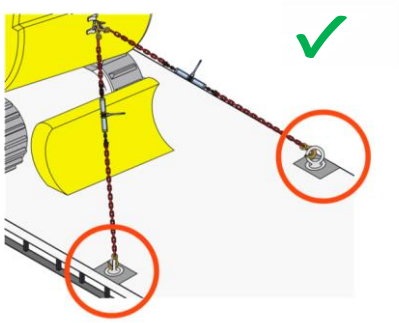
- **Transport large/tall vehicles and mobile equipment on low loaders to increase vehicle stability.**



- **Restrain vehicles and mobile equipment by direct lashings and/or blocking wherever possible. Lashings should be of the same type, same length and equivalent angles to work together.**

- **Attach two separate lashings to directly restrain vehicles or equipment.**

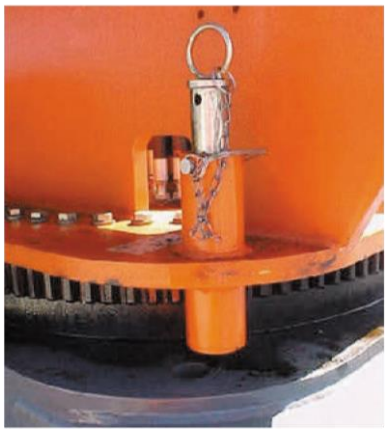
- **Do not use a single lashing passed across the deck through a lashing point, as this will not directly restrain sideways movement.**



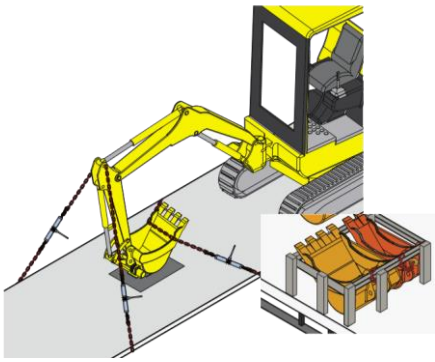
Please Note: *Specific Load Restraint Guides will provide a guide of lashing type and configuration in certain circumstances as a guide only, refer to the OEM Operations Manual for correct loading & load restraint requirements.*

Articulated equipment including Knuckle & Straight Booms:

- **Engage steering locks where fitted.**
- **Slew lock pins must be engaged where fitted.**
- **Operate controls at least twice while the engine is off to relieve residual hydraulic pressure.**

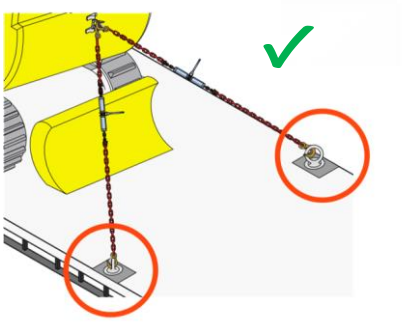


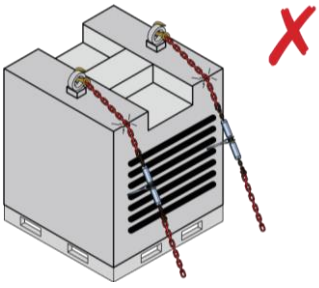
- **Restrain ALL parts that can move or rotate including auxiliary components blades, rippers, etc).**



Load Restraint Specifics

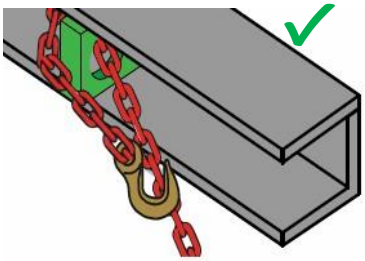
- If restraint anchorages are fitted onto/into the surface tray on tilt trays and low loaders, where suitable, use these anchorages.
- Do not use lifting lugs as lashing points
- Lifting lugs are often incorrectly positioned for load restraint (even if identified as tie-down points).





Portable Buildings:

- Complete Pre-Transit Checklist (Appendix 8)
- Apply 4 independent tie downs
- Apply roof straps unless inspection check plate is fitted
- Close and secure lock or cover all windows, doors and openings
- Secure all objects inside buildings
- Ensure external fittings such as air conditioners and hot water heaters are secured and do not protrude to either side of the vehicle when loaded



Shipping Containers:

- Check all doors are well secured. Watch for fuel leaks in large container mounted compressors and generators. If items are not tightly packed into containers they must be securely braced or internally secured to prevent damage, load movement or instability and or loss of load.
- Containers should only be transport via vehicles with "twist locks"

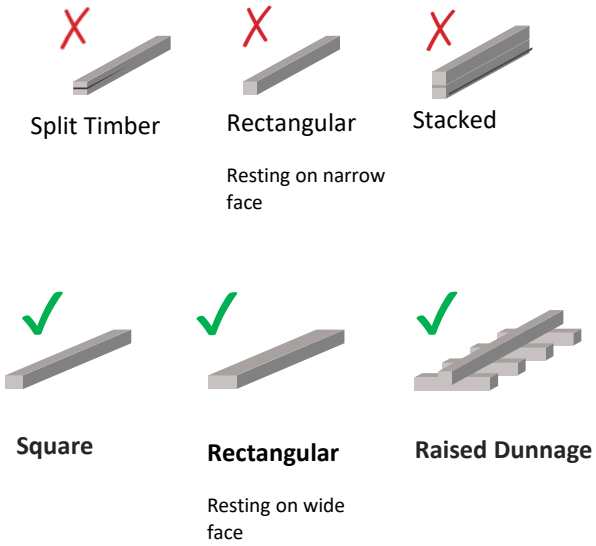
Ensure a Container Weight Declaration (Appendix 9) is completed and available.

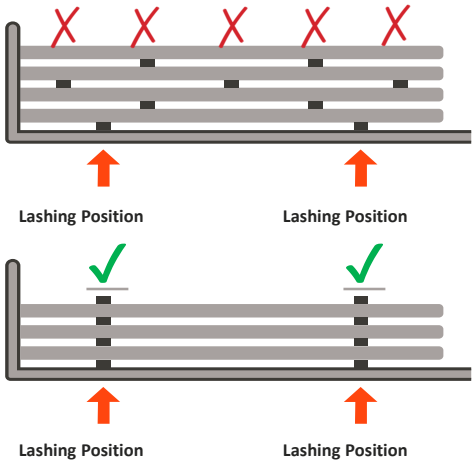
Load Restraint Specifics

Steel Plates:

- **Single plates must always be placed on rough sawn hardwood dunnage to** increase friction and also to provide better bite for more effective **load restraint - a minimum size of 100mm x 100mm must be used.**

- **Multiple sheets must have interleaved hardwood dunnage.**

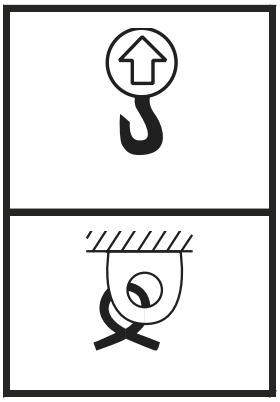




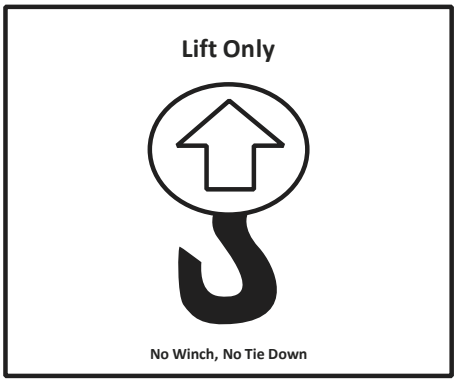
Attachment Points

Designated recommended attachment points fitted on equipment indicate whether the point is a lifting or tie-down attachment.

Tie Down Point



Combination Tie and Lift Point

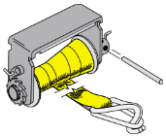


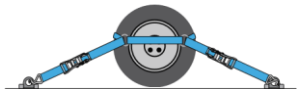
Lifting Point

Load Restraint Equipment and Attachments

Suitable Webbed Strapping Assembles

Designated recommended attachment points fitted on equipment indicate whether the point is a lifting or tie-down attachment.





Webbing straps are only suitable if restraining light motor vehicles or equipment.

Use purpose-designed

Do not use ropes

Use restraint equipment that is suitable, strong and appropriately applied.

Load Restraint Equipment and Attachments

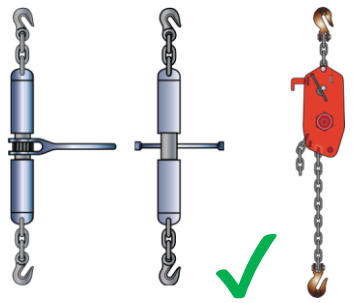
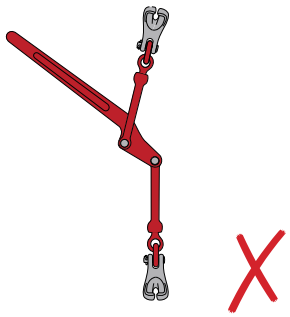
Chains

- Transport chain is a highly durable lashing type with low stretch characteristics
- Chain used for load restraint must comply with Australian Standard AS/NZS 4344
- All transport chain made to AS4344 is marked at least every 500mm with its lashing capacity

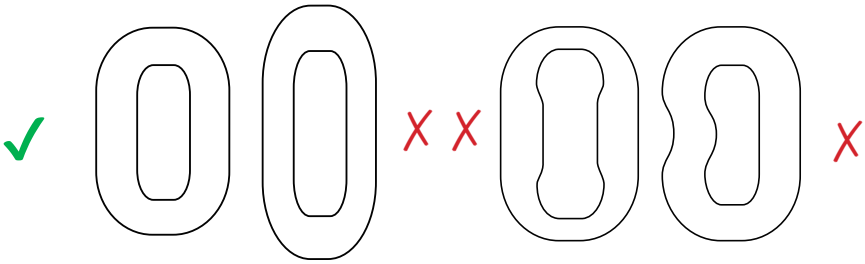
Suitable Load Restraint

Attachments

- **Lever type load binders are banned at Pacific Hire**
- Quick-binders, Maxi Binders are most suitable for tensioning chains which are attached directly to the load and where a high-strength rating is required.
- For winching or lifting applications: always use a hook which is self-locking or rated D shackles to ensure positive (captive) connection.

Approved Types of Load Binders	Unauthorised Lever Type Load Binder
	

Self-Locking Hook Example

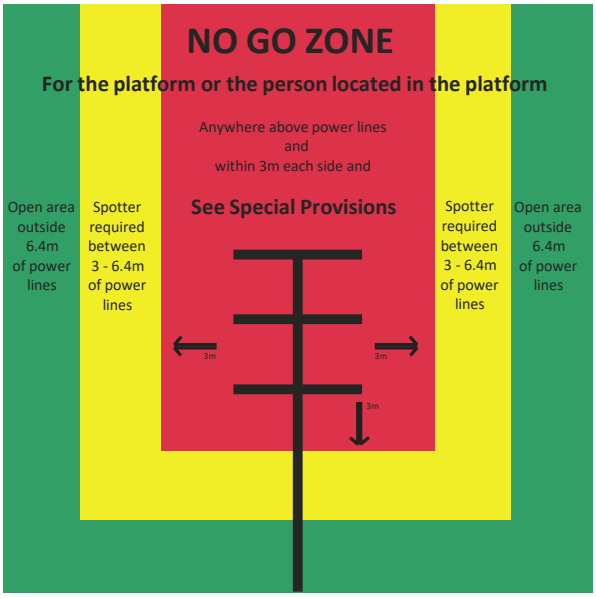



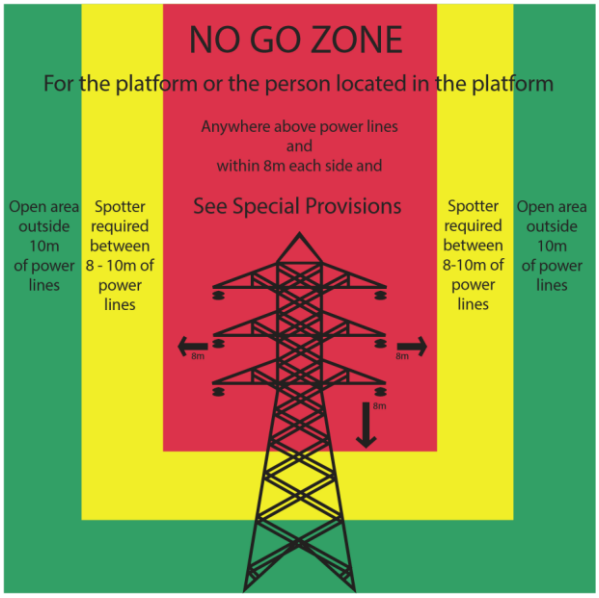
Always inspect load restraints. Do not use equipment, weakened by worn or damaged components, for securing loads.

NB: Diagrams from this document are sourced from the Load Restraint Guide published by the National Transport Commission 2018. The full guide can be accessed on the NHVR website.

Vehicle Loading Cranes (VLC)

- Always wear an approved hard hat during crane use
- Look up and live! Look for overhead power lines and other hazards
- You must hold a high risk work (HRW) licence to operate a VLC that has a capacity of 10 tonnes or more
- Never operate a VLC unless all outriggers are fully extended
- Check the ground surface is stable before using outriggers
- Except on concrete or very hard sealed surfaces suitable packing must be placed under outriggers to distribute the load
- Look for signs of underground services or recent back filling which could affect stability
- People must not get within 3 metres of any load suspended on a crane and for each metre of lift add one metre to the separation distance. Drivers can increase their separation from suspended loads by using a tag line
- Ensure you can always see your load. If your view of the load is obscured, engage an appropriately qualified dogman to assist and guide
- The crane and associated equipment must be rated for the load and task
- If the truck has to be frequently relocated during a delivery or pickup, the crane outriggers must be fully stowed away and the crane Jib lowered to a height no greater than the normal stowed height of the crane and placed within the dimensions of the truck
- Never drive a vehicle with a VLC jib extended
- The VLC must be well maintained and in good condition and have an annual compliance test. Periodic statutory inspections are also required, along with Pacific Hire weekly truck checks on Syrinx. All testing must include thorough inspection and a validation that the crane can meet its rated working load limit. These findings must be written on a test certificate and kept in the truck and shown to Pacific Hire Management, WorkSafe or a site foreman whilst onsite or when requested
- The crane, outriggers and any associated equipment must be fully stowed and secured before leaving the site
- Remote controls must be used at all times to help maintain a safe working distance from the load

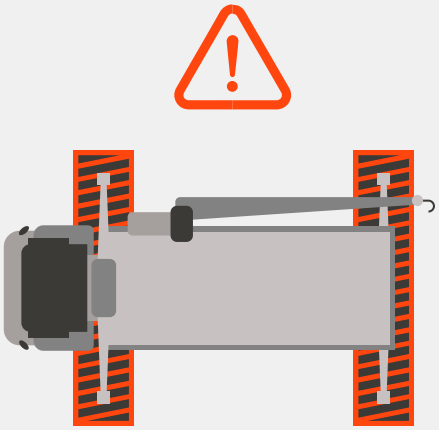




Vehicle Loading Cranes (VLC)

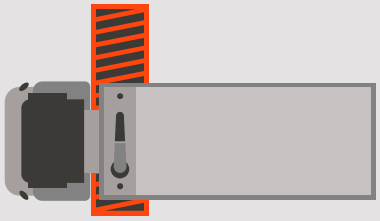
Danger

- As a priority ensure the safety of yourself then others – contact emergency services if a clean-up is required. (e.g. oil on public road)
- Never use the stabiliser legs as a parking brake
- Slide the stabiliser, on both sides of the vehicle, out completely. Then lower the stabiliser legs for support
- Never operate the stabiliser legs, while the crane has a load



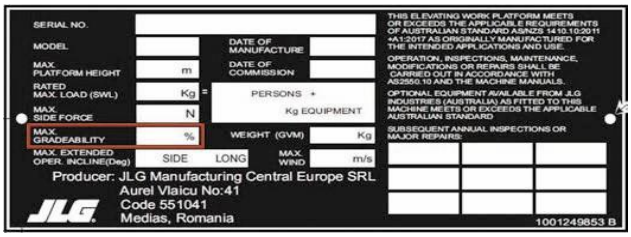
Danger

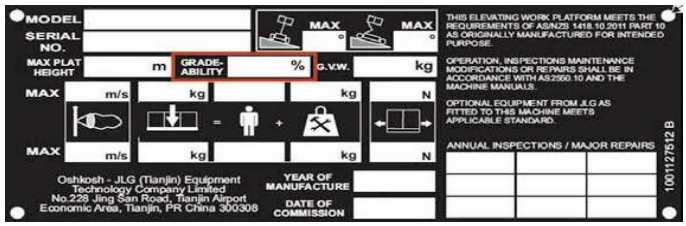
- Do not stand in front of the boom system when operating the crane out of the stowed position

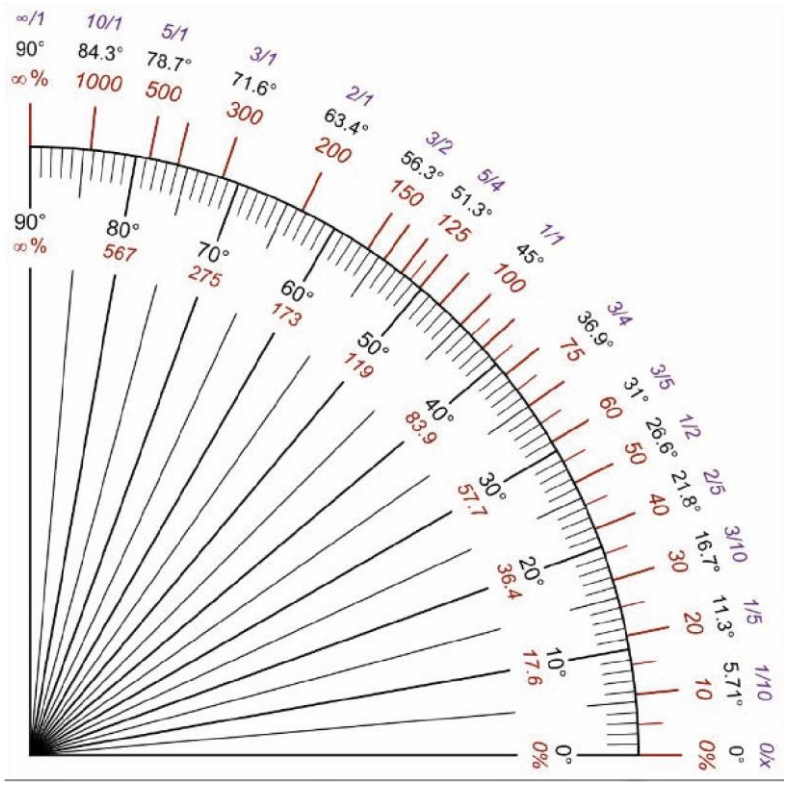


Understanding Gradeability

The gradeability rating of a piece of mobile equipment indicates the maximum gradient it can safely be driven up. This relates predominately to access and materials handling equipment. It is measured in a number of different ways, shown in the graph:







- This is of particular importance when “slab” EWP’s are being used
- Whilst safe to use on a level surface these style of EWP’s are not necessarily designed to be driven up or down steep slopes such as ramps or steep driveways
- The operator must be aware of the relevance of gradeability at all times
- For example 100% gradeability is a 45° slope but 20% gradeability is a 5:1 gradient or 11°angle
- Max Extended Operation on incline in this example is 3° due to stability being compromised by slope

Towable Items

Various types of coupling are used on Pacific Hire light trailers.

Coupling light-vehicle type trailers

Start by inspecting all components – check they are compatible, rated correctly, 50mm tow balls are used with minimum kg required.

1. **Brake the trailer** (trailer brakes & wheel chocks if required)

2. Wind Jockey wheel **UP** so the tow coupler will clear the vehicles tow bar

3. **Reverse vehicle** and align vehicle tow ball below the tow coupler

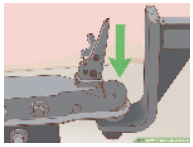
4. **Check** the vehicle's tow bar rating suits the item being towed

5. **SECURE** tow vehicle (Park brake MUST be on)

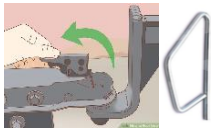
*****WARNING*** DO NOT approach the tow vehicle until the driver has exite**  **and it's secured!**

7. **Cross** over the trailer chains, connect to vehicle tow bar with **rated** tow shackles

8. **OPEN** the locking latch and **LIFT** coupler handle

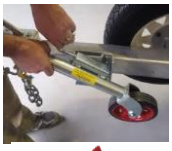


9. **LOWER** trailer onto tow ball by winding **DOWN** the jockey wheel



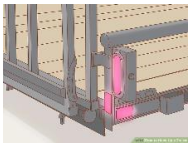
10. **ENGAGE** coupler handle, **LOCK** latch and fit a **SAFETY AIR LOCK CLIP PIN** (Or colour indicator is **Green**)

11. Connect trailer **LIGHT PLUG** to vehicle



12. Fully **WIND UP** jockey wheel, **ROTATE** and **LOCK** into locked position

13. Release **TRAILER BRAKE** and open **REVERSE LOCK OUT** latch (if fitted)



14. Check **ALL** trailer lights are working

15. **CHECK & RECHECK** all aspects of the trailer hook up process and confirm your happy with it, you as the driver have the full responsibility to make sure everything is connected correctly and working

Working at Heights

Other potential causes of injuries are falls from trucks and those associated with loading and unloading activities. Whilst it is not reasonably practical to eliminate these risks, we can minimise them.

Manual handling risks can be minimised by using mechanical lifting aids, dividing the load or asking for help.

Fall risks are more difficult to control and using 3 points of contact when climbing onto trucks or equipment must be adhered to at all times. Where practical, fall restraint equipment such as Elevated Work Platform (EWP) harnesses, hand rails, access ladders, etc. must be used.

It becomes very challenging to eliminate the need to climb onto a truck in all circumstances. However, at no time shall any person under Pacific Hire's control or direction, climb onto equipment loaded on the rear of truck unless it has purpose designed access points.

In respect to accessing the tray of a truck/trailer, due to the variety of equipment carried nationally and the mix of contractors and owned fleet it is not possible to provide trucks with handrails and other fall prevention measures in all cases, Pacific Hire has handrail systems available however these jobsite requirements must be pre organised prior to the vehicle leaving the depo to make sure it's not a hinderance to the safety of the load that's being carried. There are some other solutions are available and should be used whenever possible, such as pre-slinging loads to eliminate the need to climb for example multi load light towers can be pre slung prior to loading so they can safely be tied down from the ground level rather than up on the deck.

Some customers enforce that persons must not climb onto trucks – if that is their position drivers are required to ask for their assistance in providing appropriate docks or other access equipment so this can be safely done.

Appendix 1 - Transport JSEA

Section 1	**Customer and Job Location:**	**Date:**			
	Activity:	**Asset/Job No:**			
Section 2	**Before Commencing – Vehicle and Load Assessment**				
	Transport Vehicle Configuration/ Suitability	Vehicle Load Capacity Weight of Load			
	What load/unload method will be used? (Refer to Drivers Guide as required)	Winch and Drive – Winch and Freewheel No Winch (Drive on/ Catcher Chain) Drive Only (No Winch) Crane, Forklift, Manual Handling or Towed Item			
	What load restraint is required? (Refer to NTC Load Restraint Guide)	Chain size (mm)/ Quantity or Other Restraints (SWL)			
	What are the vehicle/load dimensions?	Overall Load Height, Width & Length **STOP! If your load is higher than 4.3m contact your Supervisor. Over dimension loads will be required to operate under a notice or permit.**			
	Is a High Risk Licence/specific competency required to perform the task?	LF (Forklift) – WP (Elevating Work Platform CV (Vehicle Loading Crane) — DG (Dogging)			
	Do I have the appropriate documentation e.g. Pre-Transit Checklist; Delivery docket, Container Weight Declaration; Permit?	Yes	No	Not Applicable	
	Is the load restrained appropriately? (Refer NTC LRG) have I taken photo's of the load?	Yes		No	
Section 3	On Arrival to site				
	Check	Is it safe to proceed		Details	
	Report to site office to establish site contact/s and site specific requirements.	Yes	No		
Section 4	**Load/ Unload Zone Assessment**				
	Possible Hazards	**If a Hazard Exists – What can I do about it?**	**Is it safe to proceed?**		
	Is the load/unload area identified and accessible? Check for unstable, un-level, soft surfaces, trenches & slippery ground conditions.		Yes	No	
	Is the load/unload area free of overhead obstructions? Check for power lines, tree branches, awnings or structures		Yes	No	
	Can I establish an effective safe zone without a spotter?		Yes	NO	
Section 5	**Key Hazards and Controls (refer overleaf)**				
	Hazards – How can I, or other people get hurt?	**What can I do about it?**	**Is it safe to proceed?**		
			Yes	No	
			Yes	No	
			Yes	No	
			Yes	No	
	IF YOU ANSWERED "NO" TO ANY OF THE ABOVE QUESTIONS, STOP AND CONTACT YOUR SUPERVISOR.				
Section 6	**Before I Leave Site**				
	Check	**Is it safe to proceed?**		**Details**	
	Do I have the appropriate documentation e.g. Pre-Transit Checklist; Collection docket, Container Weight Declaration; Permit?	Yes		No	Not Applicable
	Is the slew lock/articulation pin engaged?	Yes	No	Not Applicable	
	Are bonnets/canopies latched and secure?	Yes	No	Not Applicable	
	Have I stowed or restrained loose items e.g. chains, dunnage, fire extinguishers etc.?	Yes	No	Not Applicable	
	Is the load restrained appropriately? (Refer NTC LRG)	Yes	No	Not Applicable	
	I have a photo of the load.	Yes	No	Not Applicable	
	Overall Load Height: _____m. Width: _____m. Length: _____m. **STOP! If your load is higher than 4.3m. Over dimension loads may require a permit.**				
	Print Name:	**Signature:**			

Appendix 1 - Transport JSEA

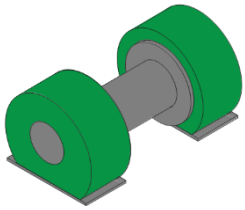
	Common Hazards	Example Control Measures
Arriving on Site	Unaware of site requirements PPE Unaware of traffic requirements Unaware of drop off/pick up point Unfit for work	➢ Report to site supervisor or representative to get directions and instruction ➢ Accurate directions supplied from Transport Co-Ordinator, Hire Office or Field Service Co-Ordinator. ➢ Valid site induction held ➢ Escorted around site by site personnel ➢ Where required Permit to Work issued by site supervisor ➢ Ensure adequate rest period has been taken between shifts ➢ Not affected by Drugs, Alcohol or Fatigue ➢ Meet Site PPE requirements
General	Dust, noise, dropped objects etc.	➢ Hard hat ➢ Hand protection ➢ Eye protection ➢ Protective clothing & Hi Vis garments ➢ Fire Resistant clothing (Petrochemical plants) ➢ Safety footwear ➢ Hearing protection ➢ Respiratory Protection
Interaction with Traffic, Plant & People	Roadways Vehicles or cyclists Pedestrians, including workers, in and around the area Equipment working in and around the area Blind corners Moving Vehicles & Mobile equipment Railway, Tram lines, crossings Shipping, Wharf activities	➢ Physical barriers or other separation of activities ➢ Traffic control ➢ Barrier mesh/ tape/Bunting ➢ Witches hats ➢ Use a spotter when moving Vehicle/Crane/Equipment, especially when reversing ➢ Persons stay in safety zones during loading ➢ Travel speed maximum 10km/h or as per site conditions ➢ Engage flashing lights & hazard lights ➢ Engage magnetic basket lights if dark ➢ Motion/reversing alarm ➢ Ensure only essential personnel are in the work area
Site Conditions	Unstable/uneven surfaces/un-level ground Poor site housekeeping Wet ground conditions Waterways/drainage nearby Trees/Flora Buildings, structures and equipment Bridges Other overhead obstruction	➢ Ground conditions assessed by a competent person ➢ Fully extend outriggers/stabilisers on mobile plant ➢ Suitable packing is to be used under outriggers/stabilisers ➢ Outriggers near a trench are as far away from the trench as the trench is deep ➢ Ensure adequate distance/protection is maintained for all onsite facilities or equipment. ➢ Relocate position of crane or equipment if necessary ➢ Use a spotter ➢ Wear suitable protective footwear/clothing
Services and Power Lines	Underground services Overhead Services Live Aerial conductors (power lines) Gas Transmission Lines Above ground pipes Check for all services requiring ground instillation	➢ Locate power lines ➢ Locate and mark all services ➢ Maintain safe working distance ➢ Observe No Go Zone restrictions ➢ Use a trained and competent spotter ➢ Contact authorities and isolate power if necessary ➢ Ring "Dial Before you Dig" 1100 ➢ Obtain approval for work in gas transmission pipeline areas ➢ Relocate task to another area
Weather and Visibility	Windy or stormy conditions Elec. Storm/Heavy rain Extreme heat Poor visibility, night work Extreme cold/icy conditions	➢ Do not operate equipment or cranes during an electrical storm or heavy rain ➢ Do not operate EWP's or cranes if wind speed rating exceeded ➢ Wet weather clothing; adequate clothing during cold/icy conditions ➢ Postpone all work until suitable conditions are present ➢ Ensure hydration levels are maintained to safe working level. ➢ Take appropriate breaks if required ➢ Sun protection e.g. Hat and Sunscreen
Working from Heights	No edge protection Working from a ladder Working above 2 metres Operating a boom lift Climbing on to equipment	➢ Maintain 3 points of contact when on a ladder ➢ Ensure ladders are adequately secured both top and bottom ➢ Use a person to assist in securing a ladder ➢ Use a work platform or EWP (Booms requires a safety harness) ➢ Pre sling loads ➢ Ensure all surfaces are non-slip, not fragile or unstable ➢ Do not go within a 2 metre distance of an unprotected edge ➢ Employ fall arrest equipment when working from heights in Boom lift
Confined Spaces	Have identified a confined space Required to enter a confined space	➢ Assess site for confined spaces ➢ Suitably trained, qualified and equipped to enter a confined space ➢ Have obtained a confined space entry permit
Manual Tasks	Task involves manual handling	➢ Use mechanical lifting aids
Own Use Equipment	Need to conduct an inspection of equipment Need to use hand tools Need to use electrical equipment	➢ Daily inspection of equipment/cranes and lifting gear has occurred ➢ Daily inspection recorded in a log book; hand tools are inspected before use ➢ Electrical equipment is adequately tested and tagged

Appendix 2 - Winch Capacity Guide

Winch Capacity Guide

This Document

- Covers an engineered assessment of the capacity required of a winch mounted on single axle, dual axle and twin steer tilt trays in use by Pacific Hire.
- All equipment used in winching procedures must have a Working Load Limit **(WLL)** equal to or greater than the required winch tension capacity.



Skid Product - Winch Sizing Considerations

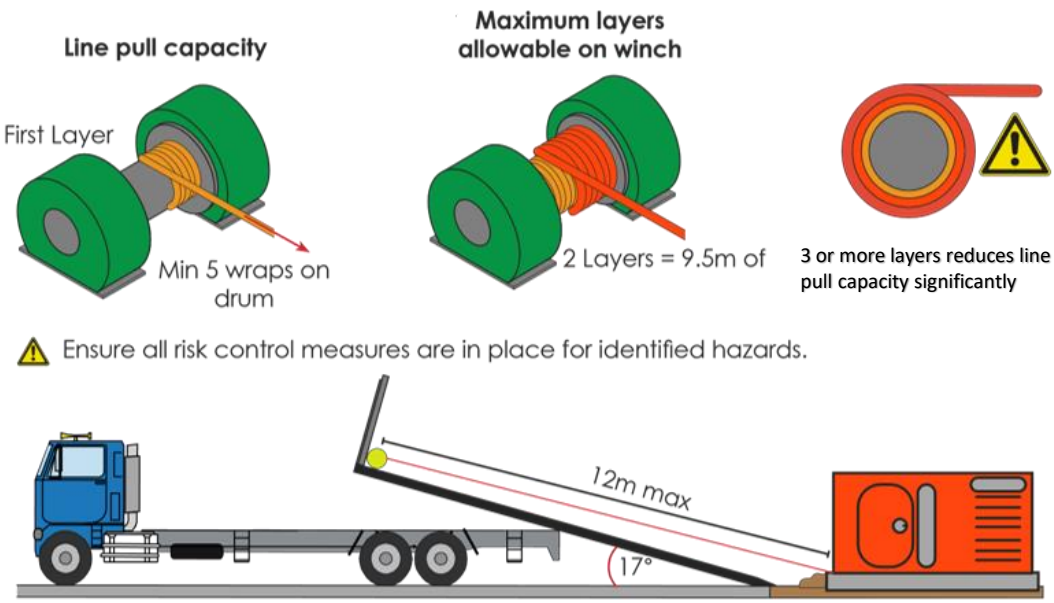
- ✓ Heaviest mass being winched assumed to be skid mounted item weighing 10000kg.
- ✓ Maximum angle of tray tilt 17 degrees.
- ✓ Winch capacity varies with cable length payed out.
- ✓ Worst case load, skid based item being dragged along soft ground – Refer to table 1.

TABLE 1

Skid Mass (Kg)	Required winch tension capacity (Kg)
500	1000
2000	2500
4000	4500
6000	7000
8000	9000
10000	11000

Skid Product - Winch Requirements

- ✓ Maximum 2 layers of cable required to be spooled onto winch.
- ✓ Winch with a minimum rated line pull capacity of 11000kg for the first layer.
- ✓ Minimum of 5 coils of cable required to be on drum at all times.
- ✓ Approximately 12m of cable length will fill the two layer maximum
- ✓ Maximum slope of ground when loading is 7 degrees.



Appendix 2 - Winch Capacity Guide

Winch Capacity Guide

Wheeled Product – Winch sizing considerations

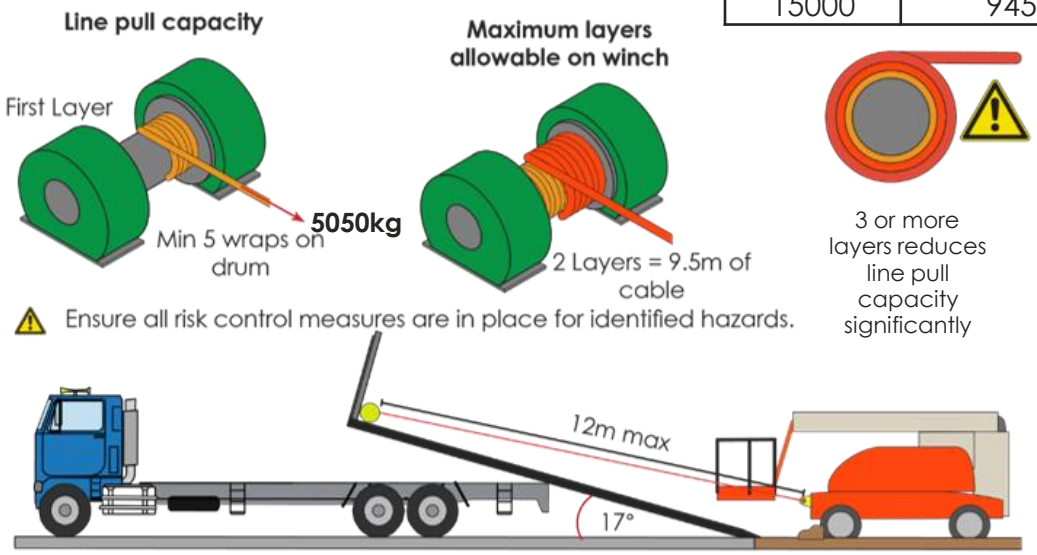
- ✓ Heaviest mass being winched assumed to be wheeled item weighing 16000kg.
- ! Consider payload capacity of vehicle before winching heavy equipment.
- ✓ Maximum angle of tray tilt 17 degrees.
- ✓ Winch capacity varies with cable length payed out.
- ✓ Worst case load, wheeled item being dragged along soft ground.
- × Do not drive Mobile equipment on and off tilt trays without a winch cable appropriately attached. Load/Unload items per Pacific Hire procedures.

Wheeled Product – Winch Requirements

- ✓ Maximum 2 layers of cable required to be spooled onto winch.
- ✓ Winch with a minimum rated line pull capacity of 5050kg for the first layer.
- ✓ Minimum of 5 coils of cable required to be on drum at all times.
- ✓ Approximately 12m of cable length will fill the two layer maximum
- ✓ Maximum slope of ground when loading is 7 degrees – Refer to table 2

Table 2

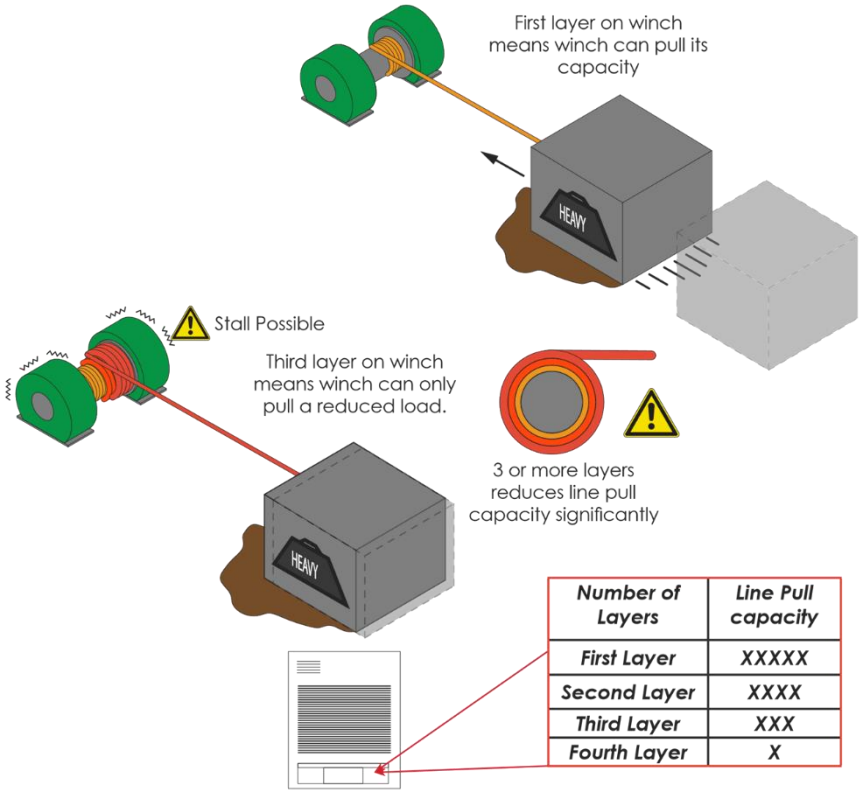
Mass (Kg) wheeled product	Required winch tension capacity (Kg)
500	350
2000	1300
4000	2550
6000	3800
8000	5050
10000	6300
12000	7600
14000	8850
14300	9000
15000	9450



Winch Capacity Guide

Winch Limitations

- ✓ Winch Capacity is based on the load a winch can pull with a single layer on the drum
- ✓ Capacity reduces the more layers of cable there are on the drum
- ! Too much cable on the drum will reduce its capacity and the winch may stall
- ✓ Consult manufacturers specifications to determine winch capacity for the number of layers on the drum.
- ✓ Choose cable length so that when the load is pulled along the ground the winch will have enough capacity to pull load.



Number of Layers	Line Pull capacity
First Layer	XXXXX
Second Layer	XXXX
Third Layer	XXX
Fourth Layer	X

Winch capacities are highly dependent on the type and make of winch. Each winch should have a data sheet showing the rated capacity for different layers of cable on the winch. This data can be used to determine the load the winch can pull in conjunction with the above document.

Appendix 3: Forklift and Crane Load/Unload Exclusion Zones

SAFE ZONES

TILT TRAY AND LOW LOADER LOAD/UNLOAD EXCLUSION ZONES

Ensure personnel are clear of tilt tray & loading ramp "Swing arc" areas:

- **During lowering or raising of ramps or trays**
- **When raised but not secured**
- **"EXCLUSION ZONE"** when loading or unloading equipment. Keep out of the zone!
- **"SAFE ZONE"** when loading or unloading equipment on ramps or tray *****SPOTTER MUST MOVE WITH THE LOAD*****

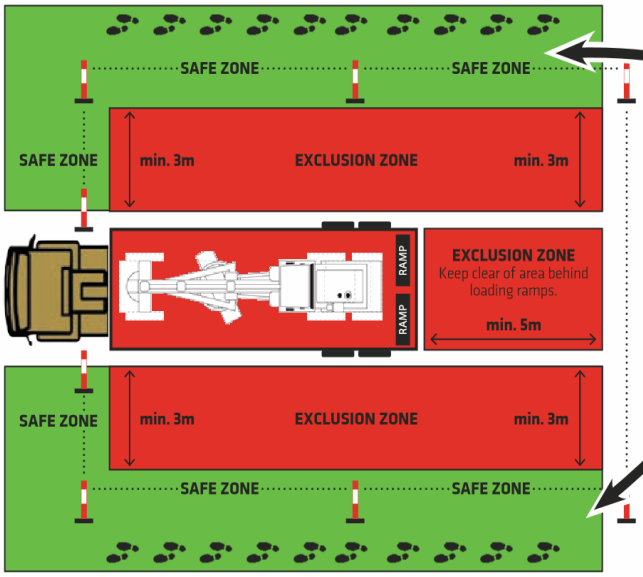
Appendix 4: Tilt Tray, Float & low loader exclusion zones

SAFE ZONES

TILT TRAY AND LOW LOADER LOAD/UNLOAD EXCLUSION ZONES

Ensure personnel are clear of tilt tray & loading ramp "Swing arc" areas:

- **During lowering or raising of ramps or trays**
- **When raised but not secured**
- **"EXCLUSION ZONE"** when loading or unloading equipment. Keep out of the zone!
- **"SAFE ZONE"** when loading or unloading equipment on ramps or tray *****SPOTTER MUST MOVE WITH THE LOAD*****



- When spotting, stand in these 'Safe Zone' areas and move with the load.

  These areas (either side) must be cleared of passing traffic, and have the best visibility of the operator tray and wheels.

- Designated load/unload exclusion zones are to be segregated by a physical barrier (eg, concrete, steel, water filled, T-Top bollards with chains, retractable rope/chain etc) to prevent inadvertent pedestrian access.

TRANSPORT SAFETY SPOTTING

At all Pacific Hire Locations

During Business Hours

A Spotter is recommended for all the below tasks:

- Loads being winched or free wheeled to or from a transport vehicles
- Site Accommodation & Holding Tanks
- Generators & Fuel Tanks
- Broken/damaged machines

At all Pacific Hire Locations

During Business Hours

A Spotter is mandatory for all the below tasks:

- Loads being lifted by way of Crane, Telehandler or duel forklifts
- Dangerous loads
- In the event the yard is congested or at capacity by way of vehicles or extra machinery

At all Pacific Hire Locations

Outside of Business Hours

A Spotter is mandatory for all the below tasks:

- Loads being lifted by way of Crane, Telehandler or duel forklifts
- Dangerous loads
- In the event the yard is congested or at capacity by way of vehicles or extra machinery

Appendix 6: Operating Tilt Tray Trucks on a Slope: Wheeled or Tracked Equipment

OPERATING TILT TRAY TRUCKS ON A SLOPE

WHEELED OR TRACKED EQUIPMENT

The risks associated with operating a Tilt Tray Truck are increased in certain environments, such as when working on uneven or sloping grounds. Wherever possible, unloading should be conducted on flat level, dry, clean bitumen or concrete surfaces.

This Work Instruction applies to wheeled or track mounted equipment which CANNOT be loaded/unloaded on a flat, level surface i.e. needs to be loaded/unloaded on a slope.

This work instruction DOES NOT apply to skid mounted equipment.

Special Requirements

A tool to measure surface incline is required. Mobile APPs such as the "Angle Pro" are available free of charge from the Google Play Store or the Apple Store.

Apple **GooglePlay**

Steps:

1. Consider if there is an alternative safe place or option to load & unload
2. If there is a slope, park the cab facing down the slope
3. Determine the incline of the slope
4. Refer to Table 1.

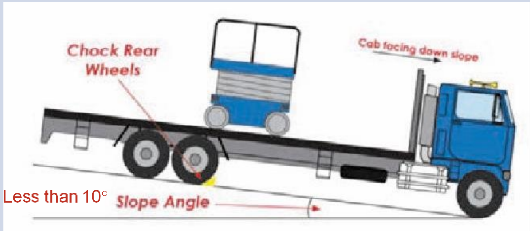
If the slope is *greater* than what is described in Table 1 (Mass and Surface considered) STOP!

5. Contact your supervisor or manager.
   *****NEVER ATTEMPT TO LOAD OR UNLOAD WITH THE CABIN FACING UP OR ACROSS A SLOPE!*****

If the slope is within that described in Table 1 (Mass and Surface considered)

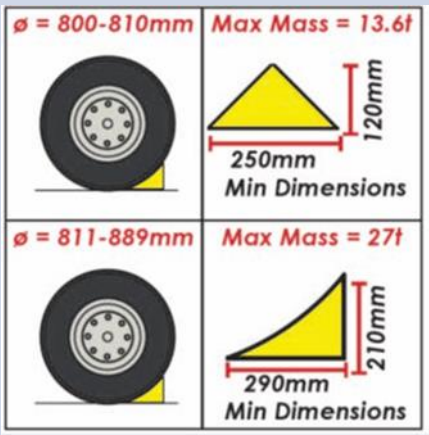
6. Apply the park brake
7. Place wheel chocks in front of rear wheels (forward rear axle for duel axle trucks) to prevent truck being able to roll
8. Ensure the wheel chocks are an appropriate size and material as per diagram

TABLE 1



1.1 Unloading must only occur with cab facing down slopes and slopes must be less than 10 degrees

TABLE 2

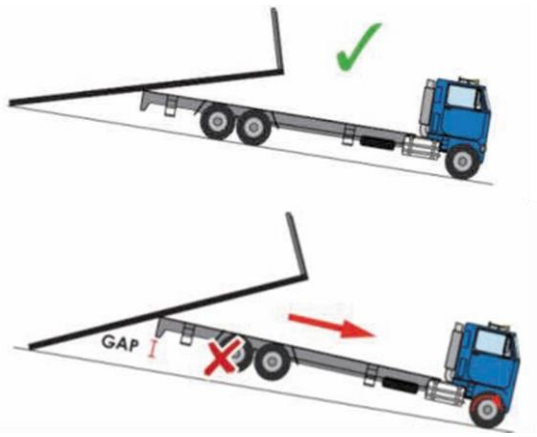


8.1 Wheel chock size based on Wheel Dimension

Appendix 6: Operating Tilt Tray Trucks on a Slope: Wheeled or Tracked Equipment

10. Tilt the tray until it just touches the ground and no further. If the tray is tilted beyond just touching the ground, there is a possibility that the drive axles and the tyres being lifted off the ground resulting in the vehicle no longer being braked sufficiently.

11. DO NOT engage the stabilizer legs/stands if they are fitted to the truck.



If Unloading

1. Ensure the winch cable is connected to the equipment and the winch is engaged
2. For skid steer equipment or excavators with a blade, ensure a “Catcher Chain” is in place
3. For Double Drum Rollers, Buildings & Generators, the winch cable must be attached until unloading is complete
4. Remove all other load restraints and safely unload the equipment

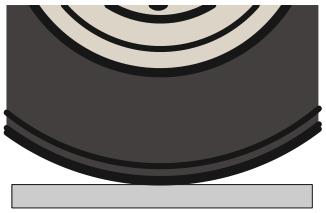
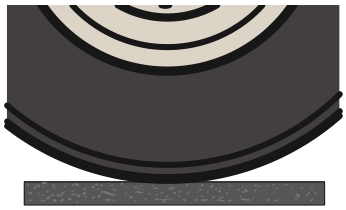
If Loading

1. Position the equipment at the rear of the tilted tray and connect the winch rope.
2. Ensure the winch is engaged
3. For skid steer equipment or excavators with a blade, ensure a “Catcher Chain” is in place
4. For Double Drum Rollers, Buildings & Generators, the winch cable must be attached until loading is complete
5. Safely load the equipment and apply all required load restraints

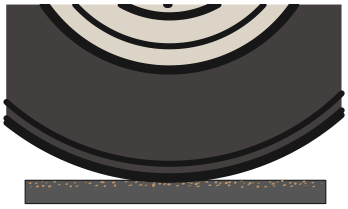
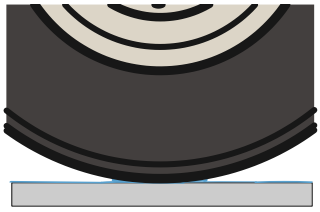
Mass (kg)	Friction μ			
	Very Low	Low	Medium	High
	Max. allowable slope angle			
0 - 2000	4°	6°	8°	10°
2001 - 4000	3°	5°	7°	9°
4001 - 5000	3°	5°	6°	8°
5001 - 6000	2°	4°	6°	8°
6001 - 7000	2°	4°	6°	7°
7001 - 8000	2°	4°	5°	7°
8001 - 9000	2°	3°	5°	7°
9001 - 10000	2°	3°	5°	6°
10001 - 11000	1°	3°	5°	6°
11001 - 12000	1°	2°	4°	5°

***Table 3: Maximum load/unload conditions based on mass, surface and incline**

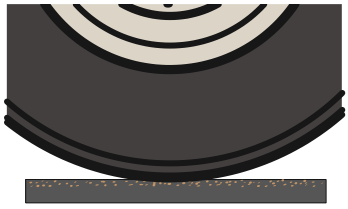
High Friction Interface

	
Dry Concrete	Dry Clean Asphalt

Medium Friction Interface μ

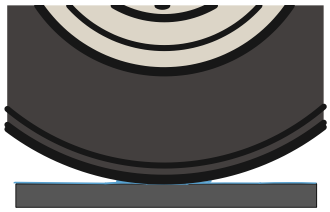
	
Dry Dusty Asphalt	Wet Concrete

Low Friction Interface μ



Dirt Road

Very Low Friction Interface μ

	
Wet Dirt Road	Wet Smooth Asphalt

Appendix 7: Operating Tilt Tray Trucks on a Slope: Skid Mounted Equipment

The risks associated with operating a Tilt Tray Truck are increased in certain environments, such as when working on uneven or sloping grounds. Wherever possible, unloading should be conducted on a flat level, dry, clean bitumen or concrete surface or hardstand.

This Work instruction applies to Skid Mounted equipment which **CANNOT** be loaded/unloaded on a flat, level surface i.e. needs to be loaded/unloaded on a slope.

This work instruction **DOES NOT** apply to Wheeled to Tracked equipment.

Relevant Procedures and Forms: Transport JSEA & RISK ASSESSMENT

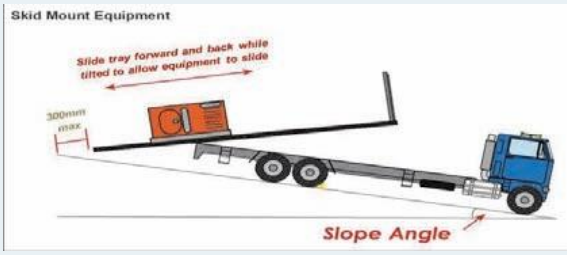
Special Requirements

A tool to measure surface incline is required.
Mobile APP's such as the "Angle Pro" are available free of charge from the Google Play Store and the Apple Store.

APPLE **Google Play**

Steps

1.1 If there is a slope, park with the cab facing down the slope
1.2 Consider if there is an alternative safe place to load or unload.
1.3 Determine the incline of the slope.
1.4 Refer to Table 1.



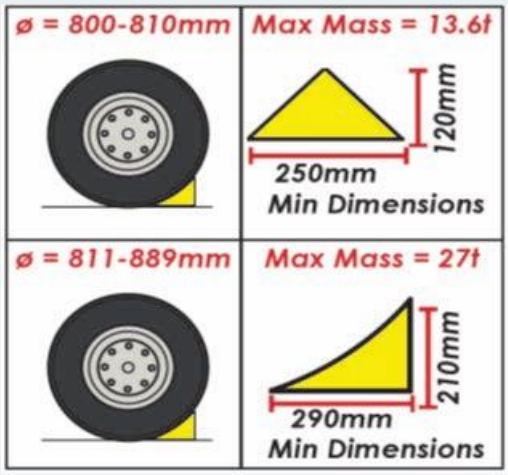
1.1 Un/loading must only occur with cab facing down slopes and slopes must be less than 7 degrees

If the slope is *greater than* what is described in Table 1 (Mass and Surface considered) STOP

2.1 Contact your supervisor or manager. Never attempt to load or unload with the cab facing up or across a slope.

If the slope is *within* that described in Table 1 (Mass and Surface considered):

3.1 Apply the park brake to the truck
3.2 Check that the truck tyre pressures and wear are within manufacturers recommendations
3.3 Place wheel chocks in front of rear wheels (forward rear axle for dual axle trucks) to prevent the truck being able to roll
3.4 Ensure the wheel chocks are an appropriate size and material as per diagram 3.4
3.5 DO NOT engage the stabiliser legs/stands if they are fitted to the truck
3.6 Once tilted, slide tray back and forward to allow equipment to slide

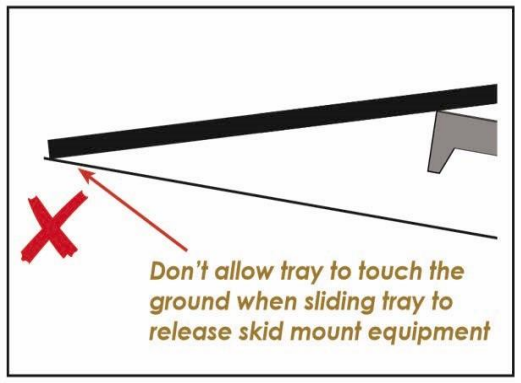


3.4 Wheel Chock size based on Wheel Dimension

Appendix 7: Operating Tilt Tray Trucks on a Slope: Skid Mounted Equipment

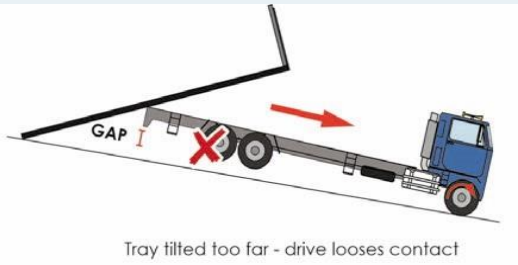
3.7 When equipment begins to slide, stop back and forward movement. Move Tray to max 300mm from the ground

*****WARNING*****
DO NOT ALLOW THE TRAY TO TOUCH THE GROUND WHEN SLIDING!



3.8 Once equipment is moving, extend tray to rest on the ground and allow equipment to slide off

NOTE If Tray is just touching – all wheel must remain in contact with the ground, if the Tray is tilted too far the drive wheels loose contact with the ground



If Unloading

1. Ensure the winch cable is connected to the equipment and the winch is engaged
2. Remove all other load restraints and safely unload the equipment

If Loading

1. Position the equipment at the rear of the tilted tray and connect the winch cable
2. Ensure the winch is engaged
3. Safely load the equipment and apply all the required load restraints

Appendix 7: Operating Tilt Tray Trucks on a Slope: Skid Mounted Equipment

*Table 1: Maximum allowable slope angle to load/unload skid mount

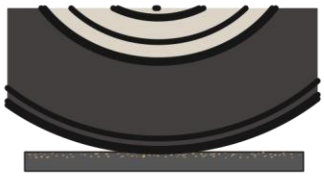
Mass (kg)	Friction μ			
	Very Low	Low	Medium	High
0-2000	X	3°	4°	7°
2001 - 10000	X	2°	4°	7°
10001 - 14000	X	1°	4°	7°

High Friction Interface μ

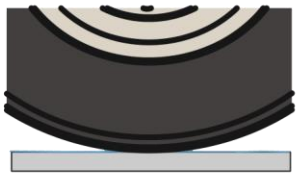
Dry Concrete

Dry Clean Asphalt

Medium Friction Interface μ



Dry Dusty Asphalt



Wet Concrete

Low Friction Interface μ

Dirt Road

Very Low Friction Interface μ

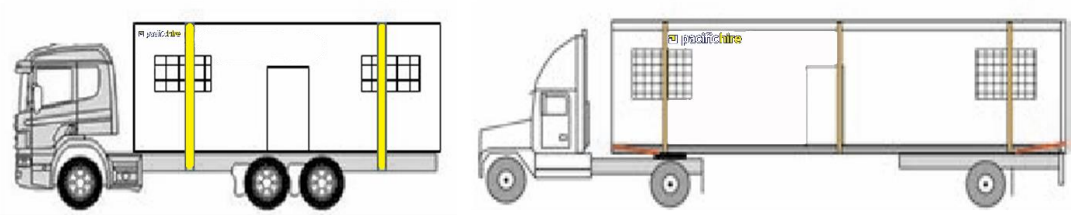
Wet Dirt Road

Wet Smooth Asphalt

Pre-Transit Checklist Site Accommodation

- **Air Conditioners & Components** – Correctly installed and secure, remove any air conditioners fitted to side walls or temporarily fitted.
- **Modular Complex's** – Transit bracing, strap and brace appropriately
- **Internal Walls & Partitions** – Strap and Secure any internal walls or partitions
- **Chassis Rails & Skids** – Remove any loose dirt, rocks etc. from the base
- **Plumbing & Electrical** – Remove any loose cabling or plumbing under or around the unit, all electrical and plumbing has been disconnected
- **Walls & Roof** – Check there are no loose items like flushing's, electrical conduit, plumbing pipes or window grills or doors
- **Roof** **– CHECK THERE ARE NO LOOSE ITEMS ON THE ROOF!**
- **Doors** – All doors internal & external are secured and locked (Including Toilet cubical doors)
- **Windows** – All windows are closed and secure, no windows or window grills are loose
- **Furniture** – Secure all furniture, stow at floor level so it can't move, weight is distributed evenly
- **Toilets** – Check all toilets have been flushed prior to disconnection and all water tanks are empty
- **Check all lifting, winching and tie down points** – Check all are undamaged and ok to use
- **Transportation** – Check all items including buildings are correctly secured for transport, tie down accordingly, fit safety flags, lights and oversize load signs where required
- **Transportation Roof is secure** – fit appropriate amount of tie down straps to the roof to secure it, WARNING: Do not overtighten roof securing straps as damage to the building may occur, the primary restraint of the building is via the chassis load restraint points. Old style buildings that require roof strapping as per the images below (Picture 1), Note: new style buildings don't require roof strapping as per the image below (Picture 2)

PICTURE 1



PICTURE 2

To download a copy of the “Truck Drivers Handbook” & the NHVR’s “Load Restraint Guide” can be found on our website at www.pacifichire.com.au under the brochures tab and on the team documents share folder

Proud members of

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