

Vehicle loading cranes self-assessment tool

Background

Several fatalities, serious injuries and extensive property damage have occurred when manually-operated stabilisers on vehicles fitted with a vehicle load crane (VLC) have unintentionally extended during travel on public roads and hit other vehicles and pedestrians. In 2013 a manually-operated stabiliser, which was on a truck that was fitted with a VLC, unintentionally extended while travelling on a public road and hit and killed a cyclist.

More recently, a stabiliser on an amusement ride was being transported on a trailer, swung out while on a public road and hit a vehicle heading in the opposite direction, killing the driver of the vehicle. Similar incidents involving mobile plant with stabilisers which have unintentionally extended during travel have occurred throughout Australia and world-wide.

How to use this tool

This self-assessment tool will assist the operator of a VLC to identify and control potential hazards and risks associated with plant design, operational systems and work practices related to safely securing manually-operated stabilisers on trucks and other mobile plant with VLCs.

The self-assessment should be undertaken in consultation with your mobile plant operators, truck drivers, plant operators, maintenance staff and others involved with the transport of trucks and mobile plant fitted with stabilisers on public roads.

The self-assessment tool is divided into two parts.

Part 1: Specific procedures to ensure safe use of VLCs for trucks and other mobile plant fitted with stabilisers (only to be reviewed once).

Part 2: Training, safe systems and procedures. Determine if the operator of the VLC and associated equipment has received adequate training, which is supported by effective safe systems and procedures to enable safe use of the VLC.

Once you have completed the self-assessment, refer to **appendix one** for more information about mobile plant risk management, including links to risk management guidance for any areas where you responded 'no'. Alternatively, contact Workplace Health and Safety Queensland on **1300 362 128** if you would like a visit from an inspector or advisor to help you with managing risks associated with mobile plant fitted with stabilisers.

Please note that this self-assessment checklist is relevant for Queensland work health and safety legislation. If this type of plant is being operated in Queensland you may need to consult with the Department of Transport and Main Roads and/or the National Heavy Vehicle Regulator for on-road safety matters covered by their respective jurisdictions.

Workplace details	
Date of assessment:	
Item of mobile plant assessed:	
Person/s conducting self-assessment:	

Part 1: Specific procedures to ensure safe use of VLCs

Self-assess systems and procedures developed and implemented at the workplace to ensure the safe use of vehicle loading cranes and other mobile plant fitted with stabilisers (wheels are not lifted from the ground) or outriggers (lifts the wheels off of the ground).

Part 1: Specific procedures to ensure safe use of VLCs	Yes	No	N/A	Comments / action required
Is the VLC suitable for the range of expected tasks to be performed? (Refer to the manufacturer's manual and/or discuss with the VLC supplier.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are workers/operators of the VLC competent prior to using the VLC? (For any VLC's with a maximum rated capacity (MRC) of 10 metre tonnes or more does the VLC operator hold a 'CV' (VLC) high risk work licence. Or has the operator received sufficient instruction, training and supervision to be 'competent'?)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the VLC inspected and maintained in accordance with the manufacturer's recommendations to ensure safe use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Part 1: Specific procedures to ensure safe use of VLCs	Yes	No	N/A	Comments / action required
Are procedures in place for a competent 'dogger' or 'rigger' to develop and sign off on a safe work method for common 'dogging' tasks where the VLC operator does not have a 'CV' or 'dogging' high risk work licence.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are associated equipment, such as slings and lifting gear, selected, inspected and maintained to ensure safe use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are risk assessments conducted to minimise risk?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Have safe work procedures been prepared for the expected tasks performed by the VLC? (Copies should be kept with the truck).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Have workers/operators been instructed in what is expected to ensure safe use of the VLC?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are effective supervisory systems in place to ensure workers/operators are complying with the expectations to ensure safe use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the VLC service record (logbook) kept up to date?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Part 2: Training, safe systems and procedures

Determine if the operator of the VLC and associated equipment has received adequate training, which is supported by effective safe systems and procedures to enable safe use of the VLC.

Part 2: Training, safe systems and procedures	Yes	No	N/A	Comments / action required
Is the training specific to the VLC operated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did the training include a section on following the manufacturer's recommendations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did the training include a section about risk assessments being conducted to minimise risk?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did the training include a safe work procedures section to help minimise risk?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did training include a section about the importance of pre start and pre-travel checks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did the training explain the importance of locking the stabilisers to the fully extended position when the crane is used and/or following the manufacturer's recommendations for stabilisers with multiple extension positions are used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was the importance of using pads with the stabilizers covered in the training?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was the importance of standing clear of the VLC when in operation explained during training and not folding it onto yourself or others, particularly when packing the crane away?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did the training cover what precautions to take when operating near live aerial conductors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did the training cover inspecting slings and rigging gear before use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was packing stabilisers and cranes away for travel covered in the training?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was the reporting of incidents and repair work covered in the training?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did the training cover completing the crane logbook regarding significant events concerning the safety and operation of the crane?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

References and additional information

GVM (Gross vehicle mass) is the combined mass of the vehicle crane attachment and the maximum load that can be carried.

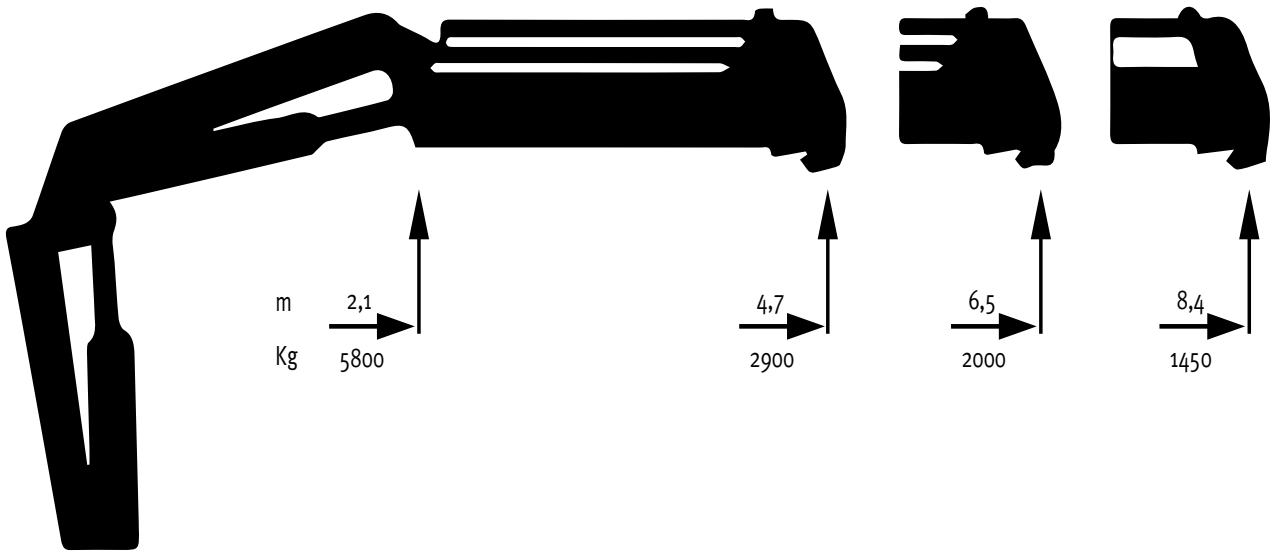
Instructions notes from Australian Standard 2550.11:

Instructions shall be prepared, maintained and made readily available to the appropriate personnel, to ensure the safe use of the crane. Such instructions shall include the manufacturer's instructions, recommendations and specifications. Where any of these instructions, recommendations and specifications are not available from the manufacturer or are deemed inappropriate, they shall be drawn up by a competent person. All instructions shall be not less than those specified in this Standard.

Metre tonnes 'Metre tonnes' is a lifting moment and is used for yearly plant registration purposes only but does not indicate the VLC's capacity. The lifting moment is derived by multiplying the lifting capacity shown for a particular lifting point by the radius at that point. The 'meter tonnes' are usually not a linear progression along the crane boom as structural integrity of the crane components and the tipping moment dictate the lifting capacity at each lifting point. From the load chart below:

- at 2.1 meters this crane can lift 5,800 kg (5.8 tonnes) = 12.18 metre tonnes
- at 4.7 meters this crane can lift 2,900 kg (2.9 tonnes) = 13.63 metre tonnes
- at 6.5 meters this crane can lift 2,000 kg (2 tonnes) = 13.00 metre tonnes
- at 8.4 meters this crane can lift 1,450 kg (1.4 tonnes) = 12.18 metre tonnes

Note: It is WHSQ practice to use the lifting point that derives the greater lifting moment when determining licencing requirements in this instance 13.63 metre tonnes



Records notes from AS2550.11:

A crane service record (e.g. logbook) of the significant events concerning the safety and operation of the crane shall be kept and be readily available. The records shall be easily understood, and written in plain English. Records may be in any suitable format.

Risk assessment notes from AS2550.11:

The risk assessment for the intended lift should apply to the vehicle-loading crane, its carrier vehicle, body and any ancillary equipment.

The risk assessment should be performed by a competent person before carrying out lifting operations.

The assessment should be in writing and should take into account the following:

- (a) The task to be carried out.
- (b) The range of methods by which the task can be done.
- (c) The type of vehicle-loading crane that will be required or that can be used.
- (d) The hazards involved and the associated risks.
- (e) The actual method and the other requisite plant and material.
- (f) Emergency and rescue procedures.

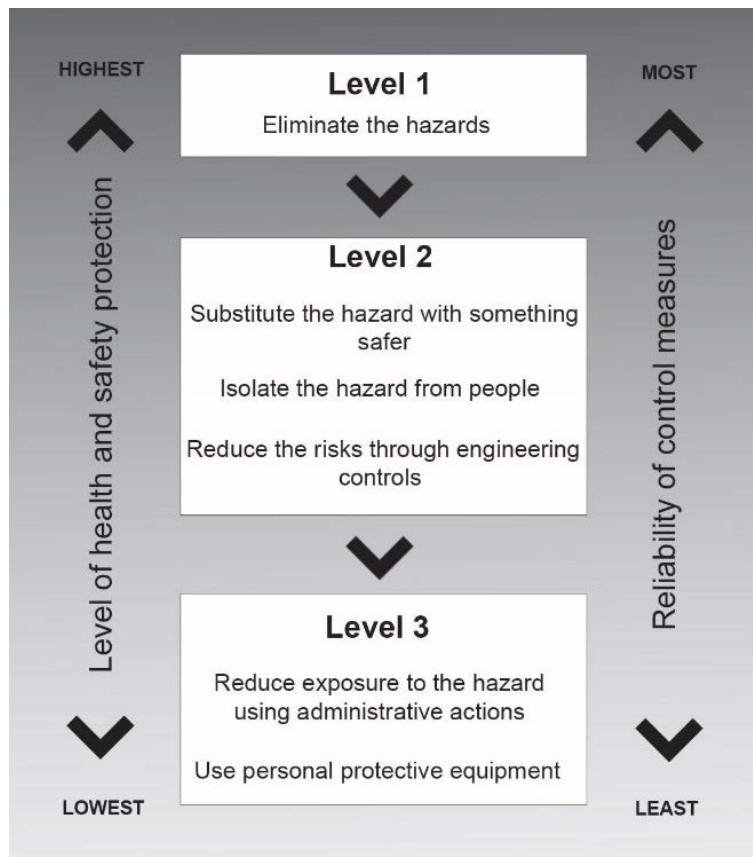
Where a risk assessment is performed, the competent person shall formulate a safe work procedure, which shall be monitored for ongoing effectiveness and changed whenever it is found to be deficient, when the task changes or when the associated risks change.

Appendix 1

How to manage work health and safety risks

The fixed plant self-assessment tool details control measures in line with the hierarchy of controls.

These control measures are ranked from most effective and highest level controls to the least effective and lowest level control measures.



Hierarchy of controls - *How to Manage Workplace Health and Safety Risk Code of Practice 2011*.

Effectively managing risks associated with mobile plant should start with identifying the hazards and assessing the risks so effective control measures can be implemented.

In most cases, a combination of risk control measures will provide the best solution to minimise the risk to the lowest level reasonably practicable.

Legislative requirements

The self-assessment tool has been designed to assist persons conducting a business or undertaking (PCBUs) with their primary duty of care to ensure, so far as is reasonably practicable, the health and safety of workers and others from work being carried out. It also aims to assist PCBUs meet their duty to consult with workers and other duty holders (e.g. suppliers and contractors) about work health and safety matters.

Reference material and further resources:

[Work Health and Safety Act 2011](#)

[Work Health and Safety Regulation 2011](#)

[Managing risks of Plant Code of Practice 2013](#)

[How to Manage Work Health and Safety Risks Code of Practice 2011](#)

Safety alerts:

[Vehicle stabilisers and outriggers](#)