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Heavy Lift Tow Vehicle Safe Work Procedure

Trailer Towing

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Amendments

Revision Number	Revision Date	Description of Key Changes	Section / Page No.
1	27/10/2025	Updated document link in Related Documents table.	p. 3

Related Documents

Document Name	Location
Heavy Lift Tow Truck Period Permit Operating Conditions	https://www.mainroads.wa.gov.au/4a4bd6/globalassets/heavy-vehicles/permits-orders-schemes/heavy-lift-tow-truck/heavy-lift-tow-truck-period-permit-operating-conditions.pdf
Load Restraint Guide	https://www.nhvr.gov.au/files/202112-1285-load-restraint-guide-2018.pdf

1 PURPOSE

Wherever possible, a trailer should be towed with an appropriate vehicle, such as a prime mover in the case of a semi-trailer and a block truck in the case of a dog trailer. However, where a trailer has been damaged and cannot be safely towed with these vehicles, it is necessary to tow the trailer with a Heavy Lift Tow Truck (HLTT) or a Heavy Lift Tow Semi-Trailer (HLTST), referred to as a Heavy Lift Tow Vehicle (HLTV). This document specifies the Safe Work Procedure that must be followed to ensure the HLTV is towing the trailer in the safest manner possible.

2 SCOPE

2.1 In Scope

This document provides a Safe Work Procedure for:

- (a) Reverse towing an unladen damaged dog trailer;
- (b) Direct towing an unladen damaged semi-trailer with an underlift fifth wheel plate; and
- (c) Direct towing an unladen damaged semi-trailer with underlift forks.

2.2 Out of Scope

This document does not provide procedures relating to:

- (a) Safe operation of the HLTV; or
- (b) Traffic management and working safety within live traffic; or
- (c) Risk assessment relating to functions being undertaken.

HLTV operators are expected to provide adequate staff training, including but not limited to load restraint awareness and managing the operation of a tow truck, as well as have their own procedures to address the above points.

3 RESTRAINT EQUIPMENT & PROCEDURES

3.1 Load Restrain Guide

3.1.1 Drivers must be adequately trained in load restraint and understand the Load Restrain Guide.

3.1.2 While the Load Restrain Guide doesn't directly provide specific examples of how to restrain a vehicle to the HLTV for towing purposes, the guidelines relating to performance standards, selecting the correct restraint equipment, safe and effective use of restraint equipment and identifying appropriate restraint anchor points, remain relevant.

3.2 Underlift Attachments

The HLTV operator must ensure the underlift assembly and attachments used to connect to the trailer are a suitable size for the task and are suitably rated for the mass of the trailer.

3.3 Chains & Straps

3.3.1 Chains or straps used to secure the trailer to the underlift assembly must be suitably rated for the forces being applied through the connection under all driving conditions.

3.3.2 Chains used to ensure the dolly remains in line with the semi-trailer must be suitably rated for the forces being applied through the chain under all driving conditions.

3.3.3 Chains or straps used to secure the drawbar in an upright position must be suitably rated for the weight of the drawbar.

4 INSPECTING TRAILER FOR DAMAGE

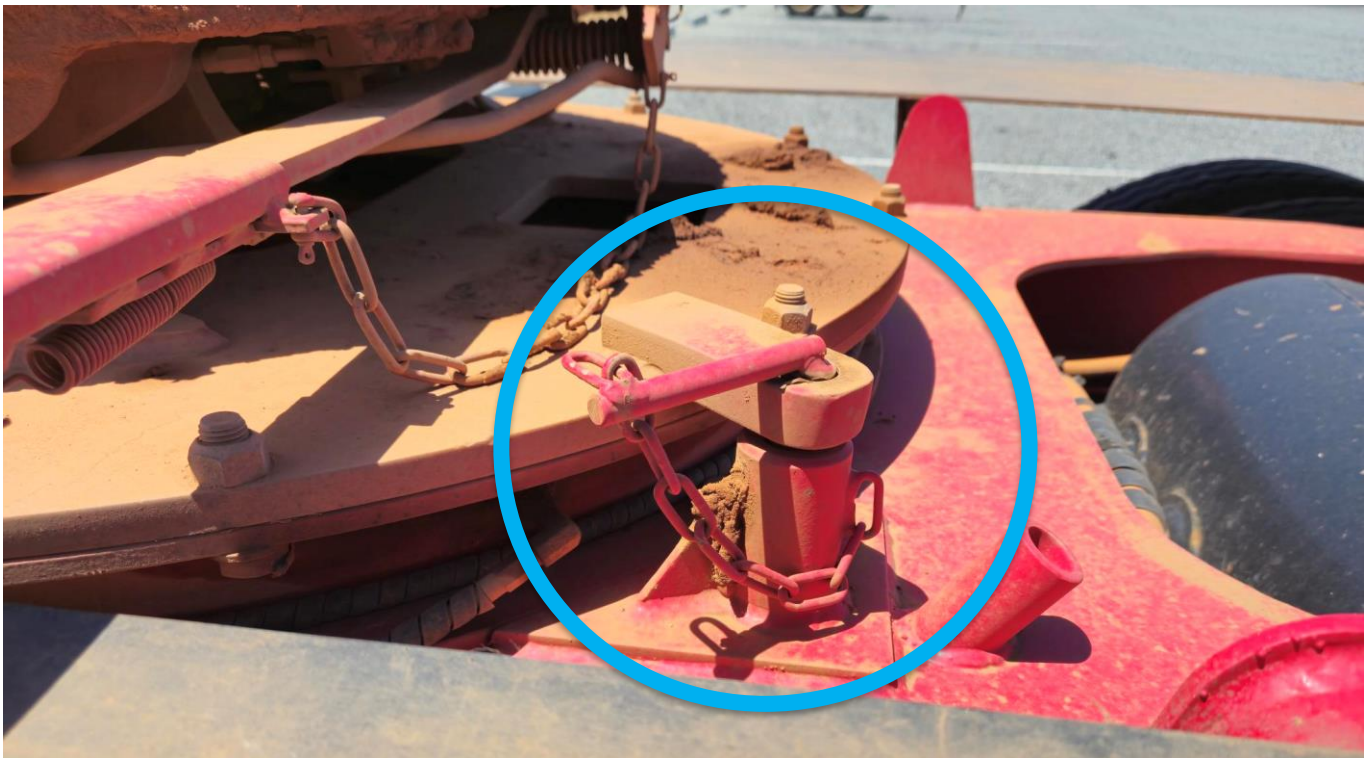
Prior to connecting the HLTV to the trailer, the driver must conduct an inspection of the trailer to ensure the trailer has not suffered damage that compromises the structural integrity and safe towing of the trailer, including but not limited to:

- (a) Wheel or tyre damage (if to remain in contact with the road);
- (a) Axle or suspension damage (connect to wheels remaining in contact with the road);
- (b) Fifth wheel assembly or king pin damage;
- (c) Chassis damage;
- (d) Body damage resulting in dangerous projections or loose items.

5 REVERSE TOWING AN UNLADEN DAMAGED DOG TRAILER

5.1 Locking the Ballrace

Prior to towing an unladen damaged dog trailer, the ballrace must be locked with the locking pin.



5.2 Lift & Secure Dolly Drawbar

Prior to towing an unladen damaged dog trailer, the drawbar must be secured in an upright position, at a minimum 45° angle, so that it is not causing a dangerous projection.



5.3 Connect and Secure Trailer to Underlift

- 5.3.1** The underlift must be connected to the rear of the dog trailer under the rear axle or chassis, subject to structural integrity, using appropriately sized forks.



- 5.3.2** The trailer must be secured to each underlift fork with adequately rated chains or straps.



- 5.3.3** Any rear axle(s) of the dog trailer that are still in contact with the ground must be chained up so there is sufficient ground clearance between the tyres and the road surface for towing.

5.4 Secure Dolly In-Line with Semi-Trailer

- 5.4.1** The dolly must be cross-chained to the semi-trailer with suitably rated chains, so that it remains in a fixed position in-line with the semi-trailer and cannot turn independently of the semi-trailer.



- 5.4.2** Secure the dolly to the semi-trailer by using suitably rated tie down points or by chaining around the chassis at appropriate angles to prevent the dolly turning.

5.5 Connect Brake Air Lines

Connect air lines to the trailer braking system and ensure brakes are functioning correctly.

5.6 Install Signage and Light Board

- 5.6.1** Install the “Undertow” or “Oversize” sign, as required, so that it is clearly visible to traffic approaching from the rear of the HLTV.
- 5.6.2** Install the light board on the rear, connect the necessary wiring and ensure all lights are fully functional.

6 DIRECT TOWING AN UNLADEN DAMAGED SEMI-TRAILER WITH AN UNDERLIFT FIFTH WHEEL PLATE

6.1 Connect and Secure Trailer to Underlift

- 6.1.1** An unladen damaged semi-trailer may be towed by the HLTV using a suitably rated fifth wheel plate attachment on the underlift assembly.



6.1.2 The locking pin or locking pate must be fitted firmly across the king pin to prevent separation.

Example of locking pin:



Example of locking plate:



- 6.1.3** Where the trailer does not have a block for a ballrace turntable, The underlift crossbar must be chained equally on both sides, or pinned, in a parallel position to prevent it from pivoting and allowing the trailer to articulate on the fifth wheel plate.

Example of trailer fitted with a block for a ballrace turntable:



Example of chained underlift crossbar:



Example of pinned underlift crossbar:



6.2 Connect Brake Air Lines

Connect air lines to the trailer braking system and ensure brakes are functioning correctly.

6.3 Install Signage and Light Board

- 6.3.1 Install the “Undertow” or “Oversize” sign, as required, so that it is clearly visible to traffic approaching from the rear of the HLTV.
- 6.3.2 Install the light board on the rear, connect the necessary wiring and ensure all lights are fully functional.

7 DIRECT TOWING AN UNLADEN DAMAGED SEMI-TRAILER WITH UNDERLIFT FORKS

7.1 Connect and Secure Trailer to Underlift

7.1.1 An unladen damaged semi-trailer may be towed by the HLTV using appropriately sized forks.



7.1.2 The semi-trailer must be secured to each underlift fork with adequately rated chains or straps.



7.2 Secure Safety Chains

If using straps to secure the underlift forks to the towed vehicle, adequately rated safety chains must be connected between the HLTV and the semi-trailer to ensure the semi-trailer remains connected to the HLTV in the event the connection fails at the underlift assembly and/or forks.



7.3 Connect Brake Air Lines

Connect air lines to the trailer braking system and ensure brakes are functioning correctly.

7.4 Install Signage and Light Board

- 7.4.1 Install the “Undertow” or “Oversize” sign, as required, so that it is clearly visible to traffic approaching from the rear of the HLTV.
- 7.4.2 Install the light board on the rear, connect the necessary wiring and ensure all lights are fully functional.