Industry Alert

Risk of trailers disconnecting from incorrect coupling and damaged couplings

Truck tow couplings with a dropping pin must be checked and inspected regularly.

Drivers must check the trailer coupling at every connection and at least once a day (before driving).

Inspection is needed after recent incidents of drawbar trailers failing to couple correctly, causing them to disconnect or damage the coupling.

Trailer coupling dropping pins must be able to drop to the fully locked position and lock without being blocked by dirt or anything else.

Trailer coupling devices must be safe, effective and ensure a secure connection between the towing and towed vehicles under all conditions.

Towing connections must not be modified.

Checking locking indicators

Coupling lock indicators (also called secondary safety devices) must clearly show whether the coupling is open or closed (locked).

Don't use a coupling if the indicator is inaccurate, damaged, or unreadable.

Always check and physically confirm the coupling is closed (locked) before driving.

Examples of common lock indicators can be found on page 3.

Dropping pin failures

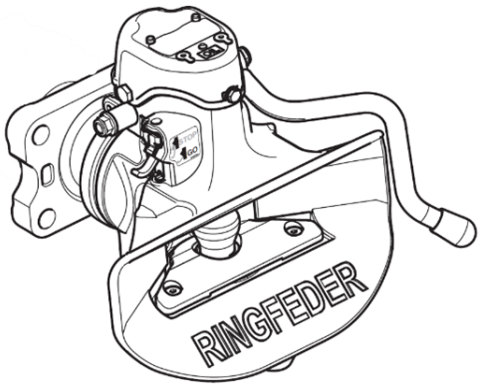
Industry inspections found damaged and heavily worn couplings caused by the dropping pin not being in the correct position when towing.

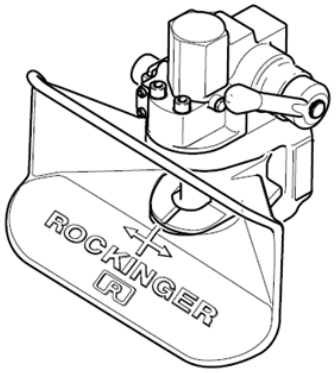
If a dropping pin is blocked, held-up or obstructed from its fully down and locked position, it isn't secure, and the coupling isn't safe. It can cause excessive stress on other parts, causing high wear and damage. In some cases, the trailer can unexpectedly disconnect.

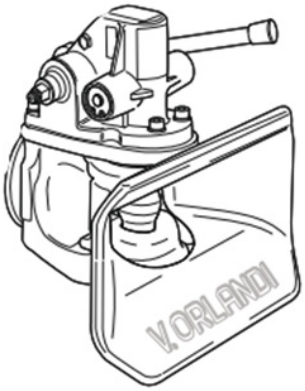
Towing with a coupling improperly locked causes excessive wear, and can cause loose and damaged dropping pins, their bushes and receivers. This can happen due to modifications or contamination that stops the dropping pin from correctly locating and properly locking.

To prevent this, make sure couplings are regularly inspected, maintained, lubricated and kept clean.

Figure 1: Examples of dropping pin style couplings







Key points

- Do not use modified or damaged couplings. Look out for release handles which have been bent or shifted from their original position (sometimes referred to as, 'clocked' on the spline)
- Keep coupling bottom bushes clean and free of debris. Do not drive with the dropping pin in the raised position, it allows dirt and debris to enter the lower pin bush.

For operators

If you operate vehicles with a drawbar:

- Inspect your fleet and check the condition of towing connections.
- Stop using vehicles with a damaged coupling or towing connection.
- Clean dirt or debris from the towing connection before inspection and use.
- Test the coupling and confirm it is working correctly, and the locking indicator is accurate.
- Complete repairs and maintenance before returning the vehicle to service.
- Keep couplings closed (pin down) when not towing, to reduce dirt in the lower pin receiver.
- Drivers must always physically check correct trailer coupling before driving.

For vehicle inspectors

When inspecting a drawbar coupling:

- check the locking indicator shows the correct coupling pin position (open or locked)
- make sure the coupling is reasonably clean and the lower bush (where the pin drops) is clean and free of debris
- check the release handle isn't obstructed, damaged, or hitting other components. It must freely travel to the locked pin position.

For repairers

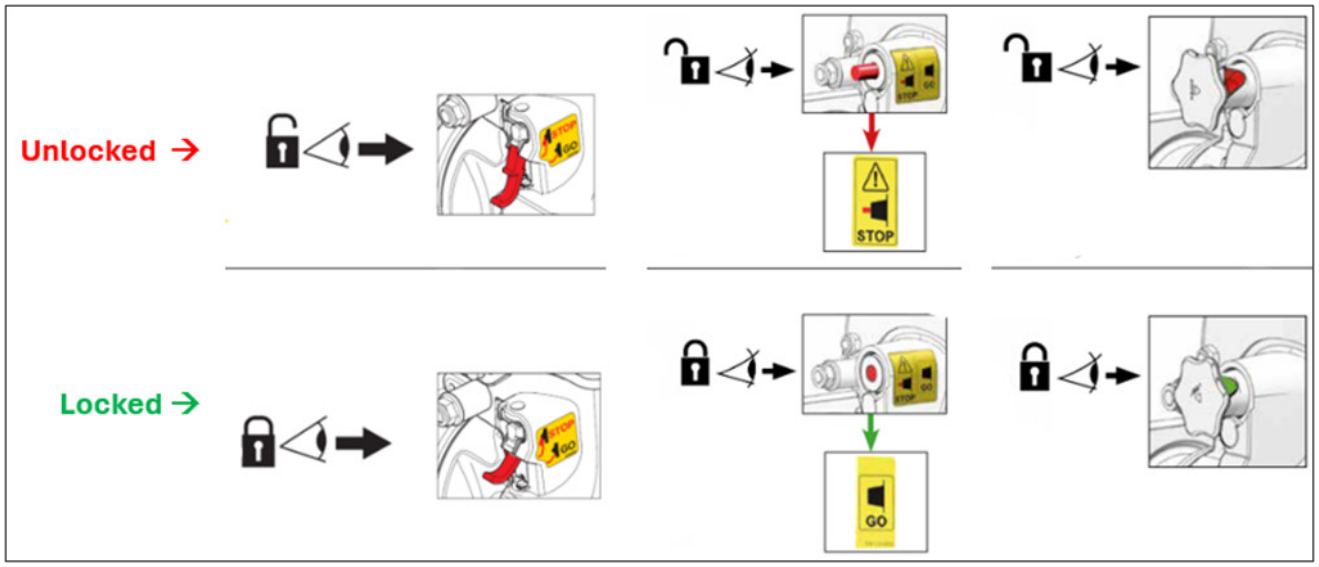
- Dropping pins must move freely and lock properly—don't allow anything to block or restrict them.
- Repairs must follow the coupling manufacturer's instructions and specifications.
- All components must meet the coupling manufacturer's wear specification/tolerances.
- Make sure release handles aren't obstructed or hitting components in all positions (locked and open).
- Ensure couplings are clean, especially in the lower bush which locates the dropping pin.
- Lubricate couplings correctly.
- Never allow a vehicle to be operated with an excessively worn or damaged trailer coupling.
- After any repair, test the coupling to confirm:
  - it works correctly
  - the release handle isn't obstructed in any position
  - the dropping pin correctly locates in its locked position
  - the locking indicator correctly indicates pin position and the couplings locked and unlocked status.

For certifiers

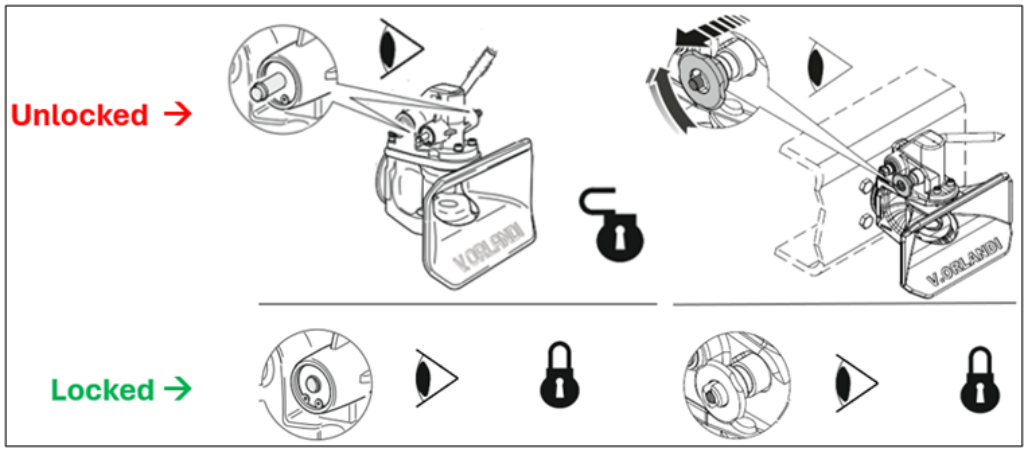
When inspecting a draw beam and coupling:

- check the coupling is installed according to the manufacturer's instructions
- check the coupling and locking indicator work correctly
- check the release handle isn't obstructed or hitting other components in all its positions. It must move freely to the locked pin position.

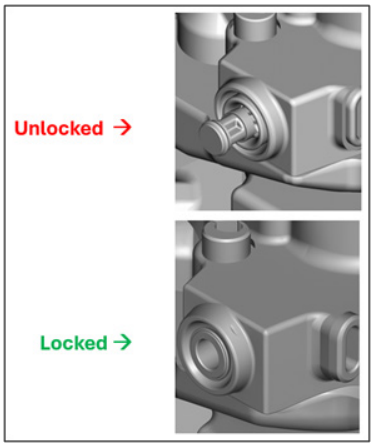
Examples of locking indicators



Common Ringfeder locking indicators



Common V Orlandi locking indicators



Common Rockinger locking indicators

Further information

You can find more detail on the websites of coupling manufacturers and their NZ distributors.

Ringfeder couplings information

- transpecs.co.nz/wp-content/uploads/rf50bnz-ringfeder-bulletin.pdf
- www.ringfeder-rf.com/en-nz/products/coupling
- transpecs.co.nz/products/ringfeder-coupling-products

Rockinger coupling information

- www.jostnz.co.nz/products/rockinger/towing-couplings
- www.jostnz.co.nz/pdf-downloads/rockinger-commercial-vehicles

Vorlandi coupling information

- www.vorlandi.com.au/en/download-area/category/20-installation-mainteannce-and-use-manuals.html?download=383:50mm-tow-couplings-preventive-maintenance-procedures (PDF)
- www.tohora.co.nz/wp-content/uploads/2019/03/19809-TD-Tates-A4 (PDF)
- www.orlandi.it/en/drawbar-couplings/pin-couplings/50-mm
- www.orlandi.it/en/download-area/category/33-automotive-products