

Trailer Steering Failure

What happened?

During transport of a turbine tower the trailer unit has become disconnected from the front prime mover after breaking the towing arm and then continued to veer left and off the sealed road surface into a ditch and then coming to rest with the trailer front left aspect buried into the adjacent roadside embankment and having flattened a section of paddock fencing.

The tapered pin that forms a pivot joint on the trailer's steering mechanism failed. Without the PIN or a secondary engineering control within Clevis housing to retain PIN in housing in event of failure, the PIN has dislodged, and the trailer unit did not steer as intended. With this loss of steering, the trailer unit did not follow the prime mover. This in turn has resulted in a jack-knife and secondary draw bar damage and damage to the trailer header.

North Island

What did we learn?

1. Additional inspection of equipment needs to take place and be verified by a competent person.
2. The pin had not been replaced since 2018, causing significant wear and tear of this component
3. The drawbar pins did not have the correct locking mechanism to secure it casing the top of the pin to dislodge at some point during the trip.
4. The draw bar was not certified as per NZ LT400 certification as it had been shipped from Australia and compliance not conducted.
5. Early acceleration out of turns while the trailer is not tracking straight have the potential to put additional dynamic forces into the trailer

