



## SAFETY ALERT

### SKID PLATE FAILURES ON REFRIGERATED SEMI-TRAILERS

This safety alert has been issued by the NZ Transport Agency following an on-road incident where the skid plate on a MaxiTRANS refrigerated semi-trailer failed due to internal structural cracks, resulting in the semi-trailer partially separating from the towing vehicle.

**This safety alert applies to all refrigerated semi-trailers.**

In modern refrigerated semi-trailers, much of the strength comes from the monocoque body itself, not from traditional chassis rails. Accordingly, in these semi-trailers, the skid plate/king pin assembly does not have chassis rails to provide additional support. Depending on the design, high cyclic loading can eventually cause fatigue cracks.

The development of fatigue cracks can be difficult to identify without careful inspection. Because of this, there is the risk of a sudden and unforeseen failure.

Fatigue cracks develop from cyclic loading and often only present themselves after a trailer has been in service for several hundred thousand kilometres. The Transport Agency highly recommends operators increase the frequency of periodic inspections of their trailers' skid plate assemblies starting at approximately 300,000kms.

While advance stages of failure may reveal themselves through cracks around the king pin itself (visible after a thorough steam cleaning), in most cases, to identify structural failures, it may be necessary to create inspection ports and use a borescope.

Several ports are needed to allow inspections in each separate chamber (separated by welded-in reinforcements). The trailer manufacturer will provide specific instructions on where the inspection ports are to be located.



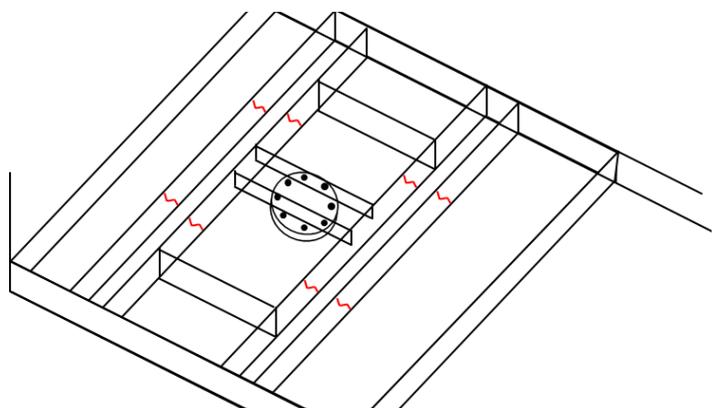
Structural cracks on a cross-member in the skid plate / king pin assembly of a refrigerated trailer (found after the flooring was removed to reveal an internal chamber).



Failure of the internal cross members can lead to externally-visible cracks around the welds between the king pin retention plate and the skid plate.

#### Action required

- Contact the trailer manufacturer/specialist certifier with your refrigerated semi-trailer's VIN. They will be able to provide you with specific instructions on where your maintenance personnel can safely add inspection ports. Please keep in mind that incorrectly positioned inspection ports may be detrimental.
- After 300,000kms, borescope inspections by skilled maintenance personnel should be performed at intervals of every 50,000kms travelled.
- If there is any sign of cracking, do not use the trailer and contact the manufacturer or a specialist certifier.
- Do not attempt to repair the cracks as the skid plate assembly must be replaced.
- Questions related to this should be directed to the manufacturer or the Transport Agency on 0800 699 000.



Cracks form on cross-members in the skid plate / king pin assembly. Because the welded-in cross members are 'sandwiched' between the skid plate and the trailer floor, cracks are often impossible to identify without using a borescope through an inspection port.