SAFETY ALERT #323

Dated: Sunday, 6th SEPTEMBER 2009

Title: WHEEL EJECTED FROM TRUCK TRAILER

What Happened: Wheel ejected from trailer body of cement wagon

Description of Incident: After the collection of surplus cement from ███ site ███████ Cement wagon left the Bg Block. A few KM from the block one of the vehicles rear-nearside wheels broke free from the axle, the vehicle was able to stop in a controlled manner, but when parked the road was partly restricted necessitating intervention. The location was highlighted with safety signs and maintenance work commenced the following day.

On investigation it was established that some of the retaining nuts were loose, it is suggested that this could be attributed to vibration during road use. In addition it needs to be considered that previously nuts had been tightened directly to the wheel boss. In either case this established chamfering wear at the stud orifice applying additional load which increased over time until the studs failed. Closer inspection also revealed that there was a mix between star plates and washers indicating an inconsistent approach to maintenance.

Classification:

Actual Severity: 5A

Potential Severity: C 4A

Missing back washer

Example of wear

Missing nuts & wear

different washer types

Standard (stars) / Non-standard (washer)

Actions to prevent recurrence

- Inspect wheels to confirm standards meet with manufacturers recommendations
- Communicate inspection and maintenance standards to mechanics and drivers
- Improve awareness of 'non-compliance actions & failure consequences'
- Reinforce Journey Management pre-departure checklist, HSSE & Driver Supervision to periodically check compliance against JM & Maintenance checklists
- ███████████████████████
- Review overall maintenance practices and address weaknesses
- Loose wheel nut indicators are to be installed
- █████████ to provide formal report detailing corrective actions & dates for completion

Root Causes and Failed Barriers

- Inconsistent maintenance practices & failure to recognise consequences of actions
- Inadequate inspection or failure to inspect
- Failure to recognise hazard

Check tyres for wear and tear as well as - blistering - bobbling - tread down to knuckle etc.