

**Subject** [Rolling Stock - axles](#)

**Equipment** FEA-A wagon fitted with Y33 bogies

**Description** At 14:21 hrs on Monday 14 August 2017, the rear 12 wagons of a freight train carrying containers derailed at Ely West Junction on the line between Ely and March in Cambridgeshire. The train was travelling at 41 mph (66 km/h) at the time of the derailment. It ran derailed for approximately 350 metres, causing significant damage to the infrastructure.

The first wagon to derail was an FEA-A wagon fitted with Y33 bogies. The derailment occurred because the damping on the bogies of this wagon was ineffective. The damping had become ineffective because the damping components, which had been on the wagon since it was built in 2003, had been managed to incorrect maintenance limits. The limits did not account for future wear in the period before the next maintenance intervention and were also not compatible with the design intent of the damping system.

In addition, the maintenance interventions since a General Repair in 2010 (the last time when these components had been measured) were ineffective in identifying the worn state of the components. It is also probable that the company responsible for the maintenance of the wagon did not appropriately validate the General Repair maintenance specification used in 2010 to confirm that it would ensure continued safe operation up to the next planned General Repair due in 2017.

The fleet of wagons has since gone through General Repair and all of the damping components have been replaced.

The UK NIB (RAIB) has made one recommendation to the company responsible for the maintenance of the wagons to review its maintenance documentation to ensure that the bogies on its freight wagons remain adequately damped at all times.

In addition, RAIB has identified three learning points:

1. People in charge of preparing and revising maintenance instructions are reminded that declared 'repair limits' should not be used as 'maintenance limits' for wearing components as this may provide no useful future life and does not guarantee safe operation to the next maintenance intervention.
2. Entities in Charge of Maintenance are reminded of their obligation to ensure that the vehicles for which they are in charge of maintenance are in a safe state of running by means of an appropriately validated system of maintenance.
3. Maintainers of Y-series bogies are reminded that some of the bogies are fitted with an inspection window which enables a visual assessment of the effectiveness of the damping system.

The UK NSA consider the learning from this incident to be relevant to other NSAs

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