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## **Network Rail Safety Bulletin**

### **Derailments with Potential Track Contributory Factors**

This bulletin has been produced for awareness for track engineers across the business. Three derailments occurred last week that had potential track contributory factors. Detailed investigations are in progress, which will generate actions in due course. The facts that are currently known are summarised below.

1. Castle Donington (between Sheet Stores Junction and Stenson Junction) 21/01/2013
  - Freight only route, linespeed 50mph, straight CWR plain line
  - Three empty wagons derailed, four-wheeled short wheelbase type
  - Track geometry recording run on 05/11/2012 reported immediate action cyclic top in the vicinity. These were repaired manually, followed up by stoneblower, and inspected by a supervisor
  - Track geometry had deteriorated since the repair. Actionable cyclic top was present on the approach to the point of derailment
  - The derailment may be the result of the cyclic top fault, a fault on the wagon(s), or a combination of the two
  - Stoneblower is generally a durable treatment, but sites may need more than one treatment to stabilise geometry where the condition of the ballast and / or drainage is poor. Care must be taken where the ballast bed is not fully compacted. The root cause of the faults being treated needs to be identified for effective treatment to be planned
2. London Liverpool Street Station 23/01/2013
  - Complex S&C layout on timber bearers in the station throat
  - Switch diamond on a 125m radius curve
  - Three wheelsets on coaches in a loco propelled passenger train derailed and railed themselves
  - The point of derailment was between the heel of the switches and the common crossing
  - Immediate action wide gauge was found at the point of derailment
  - Routine track geometry measurement over most of the layout is carried out manually using a track recorder
  - Whilst the matter remains subject to investigation, initial reports indicate that wide gauge had not been identified during track geometry measurement, supervisor or basic visual track inspections
  - All track on running lines must be fully covered by track inspection and geometry measurement plans. This requires attention to detail, particularly in complex S&C layouts
3. Windsor Bridge South Junction (between Deansgate and Salford Crescent) 23/01/2013
  - Linespeed 30mph, curved jointed plain line on timber sleepers
  - Class 47 loco being hauled at the rear of an empty train derailed all wheels due to flange climb
  - The wheels on the loco had just been turned on a wheel lathe. It had only travelled a few miles from there
  - A short section of track in the vicinity was below 160m radius. It was not fitted with a check rail
  - Rail flange lubrication at the site was ineffective
  - The derailment may be the result of a fault on the loco, a fault with the carriages, ineffective lubrication, or a combination of them together with other factors
  - Effective rail flange lubrication on sharp curves is an essential risk control measure, not only to protect rails and train wheels from excessive wear, but also to reduce the risk of flange climb

Issued by Andy Jones, Professional Head [Track]