



## **Blake Street: report and recommendations**

Rail Safety and Standards Board (RSSB) has published the formal inquiry report into the circumstances that led a Class 66 locomotive to run away from a worksite at Blake Street, Birmingham and derail at Alrewas on the 7 August 2005.

The formal inquiry was convened under independent chairmanship and included representatives on the panel from the involved parties. As with all such inquiries the panel's task was to establish the immediate and underlying causes of the accident and make recommendations to prevent or reduce the risk of recurrence.

### **Sequence of events**

In the early hours of the morning of Sunday 7 August 2005, an engineering train had arrived at Blake Street Station on the Sutton Coldfield and Lichfield Line to assist with relaying work between there and Butlers Lane Station later in the day. It had a Class 66 locomotive at either end.

At about 0215 hrs a site shunter de-coupled the locomotive which had brought the train to site and which was standing at the northern end of the train on the Up Line. The driver applied the locomotive parking brake, shut the locomotive down, secured the train and returned to his home depot (Bescot) by taxi.

At 1015 hrs a report was received by the Engineering Supervisor (ES) of the worksite at Butlers Lane that a loose locomotive had been observed running in a north-easterly direction out of the worksite wrong road towards Lichfield. At approximately 1026 hrs, the signaller on duty at Lichfield Trent Valley High Level (TVHL) Signalbox reported to Network Rail Control that he had witnessed the locomotive passing his box.

Having passed through a second worksite, and a total of seven road and four pedestrian level crossings, at none of which any injuries or fatalities occurred, the locomotive was finally derailed at trap points near Alrewas Signalbox on the South Staffordshire Line. It had run a total distance of 11.7 miles, and was estimated to have reached a maximum speed of around 45mph.

### **Conclusions**

#### **Immediate Cause**

An incomplete application of the parking brake permitted the locomotive to run away from the site where it had been stabled on a 1 in 100 falling gradient, after the straight air brake application had leaked off.

#### **Underlying Causes**

A lack of full compliance with the laid down operating instructions for the parking brake on EWS Class 66 locomotives.

An insufficiently clear and unambiguous display of information to the driver on the current status of the parking brake system.



A parking brake application system which requires a driver to hold a button depressed for a period of at least five seconds, with the potential for operational complications if this is not observed.

A parking brake system whose indications are contrary to similar ones in use on other UK locomotives.

A failure to appreciate the extent of mal-operation of the Class 66 parking brakes by drivers as logged in the fault archives on the locomotives.

## Recommendations

The report makes recommendations for improvements in a number of key areas and these are summarised as follows.

- Revise the parking brake control/indication system on Class 66 locomotives, including:
  - a) A major reduction in the latching time for the parking brake motor contactors.
  - b) Providing positive indications of the latching of motor contactors, and of the brake being On or Off on the driver's console.
  - c) Amending the Dowty indication to display the chevrons whenever the parking brake status is indeterminate or in transition.
  - d) Maintain the electrical supply to the parking brake motor after operation of the battery isolation switch, for a sufficient time to allow application/release of the parking brake to be completed.

EWS and other Class 66 locomotive operators

- Drivers stabling locomotives detached from trains should draw clear of the trains by a specified minimum distance. – EWS and other Train Operating Companies operating locomotives
- Put in place a comprehensive procedure for reviewing and dealing with fault messages logged by the EM2000 system. - EWS
- Undertake a risk assessment of the practice of leaving unmanned locomotives stabled in possessions/worksites. - Network Rail.
- Initiate a review of the standard GM/RT2042 (*Braking System Requirements and Performance for Traction Units*) relating to cab indications of parking brake status. - EWS
- Review the company procedures relating to the use of GO/RT3350 (*Communication of Urgent Operational Advice*) and GE/RT8250 (*Safety Performance Monitoring and Defect Reporting of Rail Vehicles, Plant and Machinery*) reporting standards. - EWS
- Include risks arising from train disposal in future risk assessments for the business. - EWS
- Review the use of RT3189 (SPAD form) in the circumstances of Blake Street. - Network Rail



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RSSB has issued a full copy of the report to each member of the Railway Group and the other organisations involved in the accident. All recipients of the report need to review the findings and recommendations and take actions where appropriate to address identified deficiencies within their own systems. RSSB will track the industry's response to this report.