



ASSOCIATION OF TOURIST & HERITAGE RAIL AUSTRALIA

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ATHRA ALERT #29 – February 2007

UK Rail Accident Report – Loco Blowback – NYMR – 2006

The UK Rail Accident Investigation Branch (RAIB) has released its report into the blowback of a locomotive fire – BR Standard Class 4, No. 75029 at Grosmont - North Yorkshire Moors Railway.

On 16 April 2006, while hauling a passenger train, the locomotive suffered a blowback of its fire into the cab for between, 4 and 10 seconds. The locomotive driver suffered minor burns. The immediate cause of the accident was a loss of forward draft (from firebox to smokebox) at a time that the fire doors were open. This was the result of the failure, some time prior to the accident, of an undersized weld between the blastpipe base/saddle plate and long-term corrosion and erosion. The failure of a copper blower pipe that was not fully annealed over its length was observed as well. The RAIB has made nine recommendations as a result of its investigation. The report (36 pages, in pdf format) is available on the RAIB website at: http://www.raib.gov.uk/publications/investigation_reports/reports_2007/report042007.cfm

Key Messages

The factors identified in this investigation could conceivably arise on steam locomotives in Australia.

- Risks associated with the failure of critical welds not being fully appreciated, possibly due to an incident having not occurred before and /or a lack of understanding of the construction details.
- Risks associated with a locomotive type not being controlled as they have not been known to have occurred previously.
- Responsibility for inspections, especially when outsourced, not being clearly defined.
- Early warning signs of a problem within the smokebox not being fully appreciated,

Recommended Actions:

ATHRA groups operating steam locomotives are encouraged to:

- Make the RAIB report available to maintenance staff to raise awareness of the consequences of the issues involved.
- When developing maintenance and overhaul schedules, assess the hazards to operating staff and the public that the specific design of locomotive concerned presents and develop schedules to account for those hazards.
- When defining and agreeing outsourced works, ensuring that the scope of any provision of mechanical inspections are explicitly defined.
- Have procedures to ensure that boiler parts are maintained to appropriate standards and that these are followed.
- Ensure maintenance staff are aware of the signs of the hazard of steam leaks in the smokebox, whether blast pipe, blower pipe, steam pipes or superheater parts.