

RAILWAY SAFETY

Working for a safer railway

SAFETY JUSTIFICATION**ISSUE: 1****DOCUMENT INFORMATION**

Document Title:	Sanding Equipment Fitted to Multiple Units	
Document No:	GM/RT2461	Issue: 1
Primary Subject Committee:	Traction & Rolling Stock	
Other Subject Committee input/ involvement:	Operations Safety, Plant	
Proposed Date of Submission to Subject Committee:	29/6/01 (Final review T&RS)	
Submitted by:	Dean Benson	Date: 26/09/2000
Standards Project Manager Reviewed by:	Sally Brearley	Date: 17/10/2000
Controller, Safety, Strategy and Planning Approved by:	Brian Alston	Date: 12/10/2000
Controller, Railway Group Standards		

PART 1 – SCOPE OF SAFETY JUSTIFICATION

The scope of this safety justification describes the rationale behind the proposed issue of a new Railway Group Standard (RGS) GM/RT2461 "Sanding Equipment Fitted to Multiple Units". The Safety Justification addresses the following specific issues:

- activation of sanders
- controls to maintain track circuit activation
- technical specification for sanders
- reliability and maintenance requirements
- design and fitting of cab controls
- deployment and operational arrangements

PART 2 – RISKS BEING CONTROLLED

Application of this standard will improve braking performance in low adhesion conditions and therefore reduce the risk of overruns, signals passed at danger, derailments and collisions. However, the use of sanders creates additional risk in that protection of trains from collision could be compromised through degradation of track circuit integrity or derailment through the inappropriate use of sanding equipment.

PART 3 SUMMARY OF CONTROLS

The primary control mandated by this standard is the limitation on the rate of sand application to maintain integrity of track circuit activation. Other controls address the requirement of design and installation to a defined performance based specification and operational arrangements for use of sanding equipment.

PART 4 – COSTS AND BENEFITS

Compliance with this standard is likely to add marginal costs to train operators, as the standard mandates the fitting of sanders to new multiple units. A detailed cost/benefit has been carried out to support this (see attached summary). The standard does not mandate the retrofitting of sanding equipment to existing multiple units.

The benefits of compliance with the requirements of this standard, combined with other measures (eg Wheel Slide Protection) is the reduction in the risks of overruns, signals passed at danger, derailments and collisions.

PART 5- CONCLUSIONS

The introduction of this standard would, in conjunction with other measures, improve braking performance in low adhesion conditions. The benefits of fitting sanders to new multiple units outweigh the costs.