



Certificate of Derogation from a Railway Group Standard

(in accordance with part 6 of the Railway Group Standards Code)

1. Type of deviation

Derogation

Deviation Number: **13/066/DGN**

2. Details of applicant:

Multiple Unit Fleet Engineer, First Great Western Limited, Milford House, 1 Milford Street, Swindon SN1 1HL.

3. Your reference number:

GW U13 011

4. Status of applicant:

Railway Undertaking, RSSB Member

5. Title of certificate:

FGW 150 Step 2 Sanding

6a. Details of Railway Group Standard (RGS):

RGS Number:	Issue No:	Issue Date:	Title:
GM/RT2461	One	August 2001	Sanding Equipment Fitted to Multiple Units and On-Track Machines

6b. RGS clause(s):

9.3.1

6c. RGS clause requirements:

"9.3.1 Braking mode

The sand deposition rate per rail during braking shall be such that the rear two axles of the multiple unit do not come to rest on sand laid at rate of 7.5 grams/metre or greater. The sand shall, as far as is reasonably practical, be evenly distributed

Calculation of the stopping distance shall take into account the effects of gradients and the expected deceleration rate with sand applied.

A recognised method of achieving the above is a laying rate approaching, but not exceeding, 2kg/minute per rail when using a full service or emergency brake application."

7. Scope of deviation:

This deviation applies Class 150 vehicles operated by First Great Western (FGW). Current fleet size is 78 fitted vehicles, and this would apply to any future Class 150 vehicles FGW may operate.

8. Impacts of complying with the current RGS requirement:

FGW 150 units have been operating with Step 2 sanding from 2008, this provided the Drivers with a consistent as provision of sanding when compared to the Class 158 and 166 also operated by FGW. When the classes 143 and 153 were fitted with sanders, these were also configured to step 2 sanding as soon as reasonably practicable (as authorised by 11/137/DGN).

Sand provision in step 3 and emergency is not compatible with the defensive driving techniques practiced by FGW Drivers. All FGW Diesel Multiple Unit (DMU) traction is currently able to apply sand in brake step 2; this consistency allows a driver to respond with confidence to a low adhesion incident and apply sand before an incident develops.

9. Proposed alternative actions:

The alternative action is to continue to have sand available to be discharged in brake step 2; this is now accepted practice and authorised by derogations 10/082/DGN, 11/054/DGN and temporary non-compliance 12/124/TNC and FGW's temporary non-compliance 12/090/TNC.

FGW propose to convert its existing temporary non-compliance for Class 150 Step 2 sanding to a permanent derogation.

10. Impacts of the alternative actions:

There is a theoretical risk of a unit coming to rest on a quantity of sand that could prevent the track circuit being shunted. However, since the introduction of step 2 sanding, there have been no Wrong Side Track Circuit Failure (WSTCF) attributed to step 2 sanding on Class 150 (or any other class operated by FGW with step 2 sanding). This monitoring has been conducted with Network Rail's Regional Fleet Engineer and Network Rail's Seasonal Specialist.

WSTCF has been reported for other reasons, including rail head contamination with sand deployed by Mobile Operations Managers (MOMs), leaf and cement from building works. These other reports give confidence that this is robust. These periodic meetings with Network Rail will continue.

11. What other options have been considered?

None.

12. Consultation with affected parties

Step 2 sanding has been a cross-Train Operating Company (TOC) initiative as demonstrated by combined applications for temporary non-compliances and derogations.

This work is a result of Adhesion Working Group that is attended by TOC and Network Rail representatives. As described above, Network Rail has been consulted and continuously communicated with locally as well as part of the other applications applicable to FGW and others.

13. Additional actions/observations:

03/06/2013

14. Method of elimination:

N/A

15. Start and end date:

N/A

16. Signature of applicant:

Multiple Unit Fleet Engineer

Date of application:

30/04/2013

17. Lead Standards Committee details:

Name of Committee:

Rolling Stock

Date of meeting

24/05/2013

Minute reference:

13/RST/05/141

Authorised by:

Signed by Cliff Cork on 03/06/2013

Date of Authorisation:

03/06/2013

Cliff Cork
Head of Delivery, Infrastructure and Rolling Stock