

Certificate of Derogation from a Notified National Technical Rule

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

1. Type of deviation

Deviation Number: 12/127/DGN

Derogation

2. Details of applicant:

Southern Chief Engineer, Southern Railway Limited, Selhurst Traincare Depot, Selhurst Road, London, SE25 6LJ

3. Your reference number:

NC-29

4. Status of applicant:

Railway Undertaking, RSSB Member

5. Title of certificate:

AWS alarm audibility

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

RGS Number:	Issue No:	Issue Date:	Title:
GE/RT8035	Two	March 2012	AWS alarm audibility

6b. RGS clause(s):

2.6.4.1 b)

6c. RGS clause requirements:

"2.6.4.1 Each driving cab shall be fitted with an AWS audible indicator that is capable of providing a 'warning' indication and a 'clear' indication. These two indications shall meet all the following requirements:

- a) Be distinguishable from all other audible indications in the cab.
- b) Have a sound level at least 10 dBA above the expected ambient noise level, subject to a minimum of 65 dBA and a maximum of 95 dBA, at a distance of 1 m from the front of the equipment, measured as installed in the driving cab.
- c) Be audible from all applicable driving positions and in all driving conditions."

7. Scope of deviation:

Class 377/6 (26 five-car trains / 52 cabs) plus a contract option for additional 40 vehicles.

8. Impacts of complying with the current RGS requirement:

To comply with this clause, it would be necessary to raise the volume of the AWS from that set for all other Class 377s. This would make the Class 377/6 units inconsistent and could cause complaints from drivers due to the AWS being uncomfortably loud.

There would also be considerable cost with re-designing the AWS installation and re-validating the new volume.

9. Proposed alternative actions:

It is proposed to use the same AWS installation as existing Class 377s. This includes a 'standard' AWS audible indicator, with a baffle fitted to reduce the volume.

This design achieves an AWS volume of 80 dB (A). The background noise in an Electrostar cab was measured at 71 dB (A) and hence there is a 9 dB (A) difference.

10. Impacts of the alternative actions:

The non-compliance is considered to have no negative impact. Extensive testing and service experience has shown that the proposed level is effective and is tolerable for drivers. The safety of the railway is unaffected as, in the event of the driver failing to hear the audible indication and respond accordingly, the brakes automatically apply.

11. What other options have been considered?

No further options have been considered.

12. Consultation with affected parties

Network Rail does not object.

13. Additional actions/observations:

Upon receipt, the applicant is required to identify affected, interfacing parties and copy this certificate, together with supporting information, to those parties.

The Class 37x AWS installation has been altered to reduce the volume on Classes 375, 376 and in-service 377s. This was achieved by insertion of a baffle in front of the audible indicator. Derogations 03/301/DGN and 09/193/DGN were granted on the grounds that the levels specified in GE/RT8035 were uncomfortable for drivers and extensive testing found the quieter audible warning to be clearly audible.

The quieter indication has been in service on these Electrostars for a number of years. In this time, there have been no reports (either NIRs or through an internal incident reporting system) of drivers not hearing the alarm.

Attachments:

• Proposed TPWS Solution and Risk Assessment Ref. 3EER400017-1076 – Southern 377/06.

14. Method of elimination:

N/A

15. Start and end date:

N/A

16. Signature of applicant:

Southern Chief Engineer

Date of application: 26/07/2012

17. Status in respect of National Technical Rules:

GE/RT8035 Issue 2 is currently on the list of National Technical Rules under the:

- Control Command and Signalling (published) Conventional Rail TSI
- Control Command and Signalling (published) High Speed Rail TSI.

18. Status in respect of National Safety Rules:

GE/RT8035 Issue 2 is not on the list of the proposed National safety Rules under the Conventional or High Speed Rail TSIs.

19. Lead Standards Committee details:

Name of Committee:	Date of meeting	Minute reference:
Control Command and Signalling	16/08/2012	12/CCS/08/158
Authorised by:		Date of Authorisation:

Signed by Jeff Allan on 17/09/2012

17/09/2012

Jeff Allan Head of Delivery, Control Command & Signalling, and Energy