Technical Note:
TN – 040
Issue Three

ROLLING STOCK ASSESSMENT - TECHNICAL NOTE

Subject: **GSM-R fitment to railway vehicles**

Advice to: VAB/CCBs, ROSCOs, Railway Undertakings

Reference: Standard: GM/RT2000 Issue: 3

Applies when: Using a Vehicle Acceptance Body (VAB) to provide written endorsements associated with the fleet fitment of GSM-R equipment to railway vehicles.

Note's Purpose: To provide clarification on the use of existing VAB/CCB processes, defined in GM/RT2000 and associated Technical Notes, and to permit the fleet fitment of GSM-R to railway vehicles, once relevant Conventional Rail Control Command & Signalling TSI requirements have been verified, to be considered as a minor modification as defined in TN – 029, Minor Modifications.

Background: Following consultation with industry, it was agreed that a pragmatic approach is required to enable verification of the fleet fitment of GSM-R to railway vehicles by VABs to be completed outside of the normal processes defined in GM/RT2000 and associated Technical Notes. This is primarily to avoid certification costs which are out of proportion with the overall costs and complexity of the modification.

Requirements: Fitment of the GSM-R (as an Interoperability Constituent) to railway vehicles is specifically detailed in the Conventional Rail Control Command & Signalling TSI (CR CCS TSI), Clause 7.2.2.3. The CR CCS TSI and related documents referenced therein require that Notified Body EC verification tests shall be performed to demonstrate that the components of the assembly have been correctly interconnected and interfaced to the train to ensure that the required functionality and performance for that application of the assembly is achieved. Checks are also needed to ensure other vehicle systems are not adversely affected.

The CR CCS TSI is silent on all interfaces relevant to the fitment of the GSM-R system onto the sub-system Rolling Stock and declares all issues to be open points. GE/RT8080 (notified as a National Technical Rule) only describes the functionality of the system and is also silent on all physical interface issues of the fitment. Such requirements would be addressed through mandatory requirements set out in other relevant Railway Group Standards (RGS).

Where the Railway Undertaking (RU) elects to utilise the VAB process defined in GM/RT2000 to verify the fitment of GSM-R the following steps are required:

- Assessment of the design of the installation of the radio system on railway vehicles, including consideration of, for example, gauging, structures, bonding, fire performance, EMC, supplier competence etc. against applicable RGS

requirements. The CCB declaring conformance through the issuing of design conformance certificates.

- Assessment of the physical installation of the radio system on railway vehicles including consideration of, for example gauging, structures, bonding, fire performance, EMC, supplier competence etc, against RGS requirements. The CCB declaring conformance through the issuing of construction conformance certificates
- Notification of individual vehicle operational fitment for the purpose of updating the Rolling Stock Library being undertaken by a VAB working in accordance with TN – 041, Registering the fitment of GSM-R to railway vehicles on the Rolling Stock Library.

Where the RU elects to utilise a Notified Body or Competent Person, as defined within their Safety Management System, to notify the operational fitment of GSM-R, this can be carried out in accordance with TN - 041.

Contact:

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