

TECHNICAL INSTRUCTION

TI 103
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NETWORK RAIL - SIGNAL ENGINEERING Electronic Wheel Sensors

Relevant Standards: NR/L3/SIG/10663 (SMS) & NR/L3/SIG/11231 (SMTH)

Purpose

This Technical Instruction is being issued to advise of the Signal Maintenance Specification requirements for the newly approved Siemens WSR Electronic Wheel Sensor, and GE Transportation Systems WDD Electronic Wheel Sensor and Treadle Replacement Unit, prior to these instructions being included in the 2009 issue as SMS TQ13 and SMS TQ14. This Technical Instruction also describes the process required for replacement of these sensors and associated component parts which will be mandated within the Signalling Maintenance Testing Handbook at its next update.

Scope

The new requirements shall be applied to all Siemens and GE Transportation Systems Electronic Treadle Replacement Systems that have been, or will be installed across the network.

Background

The new requirements have been developed following trial and development of both systems. The new SMS documentation incorporates the service requirements. The new SMTH documentation incorporates the equipment replacement process.

Compliance Requirements

This SMS and SMTH documentation shall be complied with on publication of this TI.

Action Required

Implementation of this Technical Instruction will be mandated until migration into the next issue of SMS and SMTH documentation is completed and published.

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NR/SMS/TQ13 – SIEMENS WHEEL SENSOR

Includes : Siemens WSR Sensor used with FREDDY Control Unit

Excludes: Any other use of the WSR Wheel Sensor

General

This specification covers the Siemens WSR wheel sensor when used with the FREDDY control unit. Live mobile phones or similar radio systems should not be taken within 2M of the units.

There should be no extraneous or loose metallic objects within 200mm of the sensor while maintenance or calibration is being performed.

Whenever the sensor is physically moved or adjusted, the operational test in this SMS must be performed. If this test fails, then the wheel sensor must be re-calibrated in accordance with Appendix A.

SERVICE A (Annual)

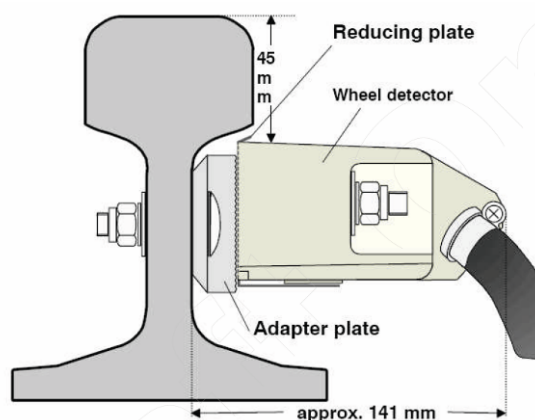


Figure 1 Wheel Sensor Mounted on Rail

1. Fixing To Rail

1.1 Clean the wheel sensor and Examine it and its fixings to the rail for damage and security.

1.2 Remove any metallic debris within 1 m of the wheel sensor.

1.3 Check the height from the top face of the wheel sensor to the rail surface is 45 mm +/- 1 mm. (See Figure 1) Adjust height as necessary. Tighten bolts using a torque wrench to 70-80 NM.

Note: Whenever the sensor is physically moved or adjusted, Appendix A must be carried out followed by the operational test.

1.4 Examine the cables for damage. Check that the connections are secure.

1.5 Check the disconnection box and tail cable connections for security.

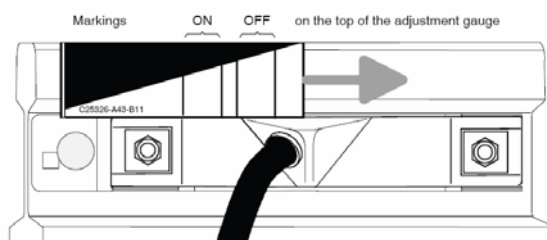


Figure 2 Placement of gauge on the rail