

Ref:	NR/L2/CTM/012/044
Issue:	1
Date:	06 March 2010
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NR/L2/CTM/012/044 Competence & Training in Signal Engineering

SMTH: Confirm that signalling systems have been tested to Signal Maintenance Testing Handbook requirements following maintenance /defect repair or renewal.

1 Purpose.

This competence standard defines the requirements for persons required to carry out testing of signalling equipment in accordance with Signal Maintenance Testing Handbook to confirm that signalling equipment is fit to return to service.

2 Scope.

This Competence Standard applies in circumstances where any person is required to apply Signal Maintenance Testing procedures on any signalling equipment on Network Rail managed infrastructure.

The level and extent of responsibility will include their own safety and that of others who might be affected by their work. The person will be expected to refer to others for authorisation when required, will be responsible for the implementation of the instructions and will work within set procedures and specifications. The person is responsible for the quality of their completed work.

3 Competence Standard.

This Competence Standard comprises four elements.

- Element 1 Plan the activities and requirements for signal maintenance testing.
- Element 2 Undertake defined tests and checks of signalling equipment.
- Element 3 Use test plans to confirm the operational safety of signalling equipment.
- Element 4 Return tested signalling equipment to full operational status.

To prove your competence in this unit, you will demonstrate your ability to identify the requirement for testing and the scope of the testing work required. You will demonstrate your ability to undertake testing of the repaired / renewed equipment prior to returning it to operational service. You will show you can follow recording procedures and can follow reporting and escalation procedures. You may only test & return that equipment to operational status where you are authorised to undertake corrective & preventative maintenance on that equipment.

4 Assessment.

4.1 Initial Assessment

Where the SMTH competence is new to the person's area of responsibility the evidence requirements defined in each element apply. Due to the difficulty in collecting evidence, performance evidence may come from a variety of sources and will include evidence derived from surveillance (direct observation) by an approved assessor. Evidence will also include detailed questioning and may additionally be supported by performance reports from the person's line manager.

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4.2 Re-Assessment

Re-assessment shall be completed in accordance with the applicable requirements set out in 7.2 of NR/L2/CTM/012.

4.3 Knowledge Evidence that is common to the whole unit.

You shall have knowledge and understanding of:

- a) Signalling interlocking principles.
- b) The interpretation of route labelling/nomenclature - including the different classes of route, and how they relate to the trackside equipment.
- c) The different types of signalling equipment which make up the operational signalling systems in the candidate's geographical area of responsibility.
- d) How to interpret basic signalling terminology with relationship to the control and location of trackside equipment.
- e) How to use and apply industry rules for working on equipment which is in service.
- f) How to use and apply industry rules and regulations for making disconnections to signalling apparatus.
- g) How to use general diagnostic tools & equipment (e.g. multimeters, drop shunts, insulation testers) ensuring calibration prior to use.
- h) What procedures need to be followed to demonstrate operational and personal safety is maintained during the work.
- i) How to avoid personal injury during the work.
- j) What the limits of your responsibility and authority are.
- k) Who is responsible for taking the equipment out of operational service and handing the equipment back the equipment to operational service.
- l) Reporting lines and escalation procedures.
- m) Industry protocols relating to communicating important safety information.