

NR/L3/SIG/11231 Signal Maintenance Testing Handbook		
NR/SMTH/Part 06		
Index		
Issue No. 01	Issue Date: 05/03/11	Compliance Date: 03/09/11



The issue status of each SMT is detailed in the NR/L3/SIG/11231 section and in the header of the individual SMT.

This section contains telecom maintenance test plans that might be undertaken by Signal Technicians

Subject	Number	Issue
Telecoms Maintenance Testing and Fault Investigation	Part 06	01
Telecom Maintenance Test Plan: Replace or Repair a Telecoms Tail Cable	Part 06/CAB001	01
Telecom Maintenance Test Plan: Replace a Telephone	Part 06/TEL001	01
Telecom Maintenance Test Plan: Replace a Selective Telephone	Part 06/TEL002	01
Telecom Maintenance Test Plan: Replace a Telephone Handset/Cord	Part 06/TEL008	01
Telecom Maintenance Test Plan: Missing Telephone, Telephone Handset or Handset Cord	Part M06/MISS001	01
Telecom Maintenance Test Plan: Missing Loud Sounding or Extension Bell	Part M06/MISS002	01
Telecom Maintenance Test Plan: Missing Telecoms Tail Cable	Part M06/MISS003	01
Telecoms Failure Investigation Test Guide: Telephones	Part 06/TELTFI001	01

End

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NR/SMTH/Part 06		
Telecoms Maintenance Testing and Fault Investigation		
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General

Just as Signalling has its Maintenance Testing Handbook (NR/SMTH), so Telecommunications Engineering uses an equivalent document: NR/L2/TEL/31001, Operational Telecommunications – Maintenance Testing and Failure Investigation Process (TMT&FIP) for reinstating previously working Telecommunications equipment to service and for thorough investigation of safety related failures.

Signalling Technicians in many parts of Network Rail do carry out first line maintenance on certain items of Telecommunications equipment on behalf of their Telecommunications Engineering colleagues. Where this happens, restoration work and safety failure investigation shall be undertaken to the Telecommunications Maintenance Testing Handbook (NR/TMTH). However, the equipment covered by the Telecommunications Handbook is considerably broader in scope than the few items Signalling Technicians are authorised to maintain. Accordingly, an extract of NR/TMTH is included in this section. Contents are in [Part 06/Index](#).

The Test Plans and Failure Investigation Test Guide cover the only Telecommunications equipment that Signalling Technicians are allowed to maintain, unless the Technicians are also qualified in the full Telecommunications Maintenance Testing and Failure Investigation Handbook

Telecom Failure Investigation

Note that SMTH documentation is used to record the outcome of testing / investigations undertaken by Signalling Technicians using the above Test Plans.

Guidance on when to use the telecom failure investigation guide [Part 06/TELTFI001](#) is given in the guide itself.

If in doubt that the failure falls within the criteria listed above, it shall be escalated through the normal procedures.



NR/L2/TEL/31001 (NR/TMTH) is the primary standard for telecoms maintenance testing and supersedes the extracts contained in this section (Part 06) of NR/SMTH.

End

NR/L3/SIG/11231 Signal Maintenance Testing Handbook		
NR/SMTH/Part 06/CAB001		
Telecom Maintenance Test Plan: Replace or Repair a Telecoms Tail Cable		
Issue No. 01	Issue Date: 05/03/11	Compliance Date: 03/09/11

Includes:	Telecoms tail cables having a maximum of 4 conductors and of a telecoms type construction.
Excludes:	Any other type of tail cable.

***** INDEPENDENCE EXEMPT *****

Before Installation Work

1. Check identity of existing cable by physically tracing or alternative methods.
2. Check for intermediate breakout points or terminations.
3. Check cable terminations are Not Damaged and Correctly Labelled.
4. Check that the replacement cable is Not Damaged and is Correct Type.
5. Check that tail cable to be worked on is fully Isolated.
6. Where cables are to be jointed, Check that all joint enclosure component parts are available and appropriate to the work.

After Installation Work

7. Check that the cable is Not Damaged, is Correctly Installed and protected to the appropriate standards.
8. Check all physical connections. Check that all cable connections are firm, robust and mechanically sound.
9. CONTINUITY TEST all cable conductors.
10. INSULATION TEST all cable conductors.
11. Check the cable has been adequately secured.
12. Check that the replacement tail cable has been Correctly Labelled.
13. Check any line fuses or links are replaced and any lightning protection is restored.
14. The Maintenance Test Plan/s for the equipment fed by the cable/s should be checked and any requirement marked with an asterisk “*” carried out.

End

NR/L3/SIG/11231 Signal Maintenance Testing Handbook		
NR/SMTH/Part 06/TEL001		
Telecom Maintenance Test Plan: Replace a Telephone		
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Includes:	Direct line telephones used for box to box, signal post, point testing and level crossing applications..
Excludes:	STC selective and former Western Region sequence switch units, Any other type of telephone application

***** INDEPENDENCE EXEMPT *****

Before Installation Work

1. Check that the replacement part is Correct Type (compatible with the telephone system) and is Not Damaged.
2. Check the mountings, brackets and fixings are in good operational condition.
3. Check the condition of all equipment, wiring and connectors.
4. Check the condition of any weatherproofing/protection used.
5. Check any telephone specific configuration settings are correct for application.

After Installation Work

6. Check that any replacement component is Correctly Installed (securely fixed/safely mounted and electrically connected).
7. Check the telephone handset cord is Correctly Installed (properly secured and not in a position to be fouled).
8. Check any tail cable is Correctly Installed (properly secured and that all insulation is sound and the line jack connection box is properly secured).
- * 9. Check all physical connections are correct and mechanically sound.
10. Check correct operation of call set-up in accordance with calling instructions pertinent to the telephone.
11. Check correct operation of engaged tone by calling a telephone that is already in use if appropriate to the system.
- * 12. Check correct operation of sounder/bell by receiving a test call.
- * 13. Check speech quality to ensure that speech level is acceptable.
- * 14. Check that there is no noise or unwanted interference or excessive sidetone.
15. Check functionality for all telephones associated with the same service. This is essential at level crossings and point zones where multiple telephones are used.
- * 16. Check that the telephone is Correctly Labelled.

Additionally for ETD Telephones

- * 17. Check 999 call operation by making a test call.

End