
A stylized graphic of a rail track, consisting of two parallel horizontal lines with vertical cross-ticks, positioned on the left side of the slide.

National Signal
Maintenance
Standards Briefing

A stylized graphic of a rail track, consisting of two parallel horizontal lines with vertical cross-ticks, positioned on the right side of the slide.

June 2022

Technical Authority

Briefing Reminders

1. Line Managers are reminded of their responsibility to ensure that the Standard Changes in this briefing are cascaded to all relevant staff.
2. Line Managers are required to record details of all your staff that have received this brief.
3. If you are sharing a screen, will need to advise us *now* of your attendance to this brief to ensure you are included in the attendance record.
4. This confirmation also needs to sent to the meeting organiser, they will inform you *now* if this needs to be done.
5. There is a limit to how much information people can absorb in a session, please tailor this presentation to the audience if you onward brief.
6. The meeting organiser may wish to start recording *now* to assist with onward briefings.



The National Briefing Program

Route	Date	Delivery Method
Wales & Western - Wales	24 May	MS Teams
Wales & Western - Western	25 May	MS Teams
Eastern - EM	11 August	MS Teams
Southern - Wessex	12 May	MS Teams
North West & Central & West Coast	16 May	MS Teams
Scotland's Railway	18 May	MS Teams
Signalling DRG	19 May	MS Teams
Technical Authority	07 June	Via BBT
Suppliers & Contractors	15 June	MS Teams
Eastern – NE & EC	No response	MS Teams
Southern – Kent & Sussex	26 May	MS Teams
Eastern - Anglia	11 May	MS Teams
STEF	19 July	MS Teams
Training Org	26 May	MS Teams

Headline Statistics

37	New documents
74	Amended / updated documents
51	Minor Changes or Typo corrections
63	Reformatted documents with no technical changes
02	Withdrawn documents
227	Total number of document changes

Documents changes are “side barred” for ease of identification except where changes have been made throughout.



Scope

The following documents are included within the scope of this briefing:

NR/L3/SIG/10663 - SMS

NR/L3/SIG/11231 - SMTH

NR/L3/SIG/10661 - Task Intervals

NR/L3/SIG/10665 - RoSE

NR/L3/SIG/10064 - General Instructions to staff working on S&T Equipment



Managing the Transition between App Versions

The current version of the S&T Maintenance App is:



SigMaint 2021/2

The new S&T Maintenance App is now available:



SigMaint 2022/1

It is Region/Route decision when to make the transition from 2021/2 to 2022/1
All colleagues must have transitioned to SigMaint 2022/1 by 03 September 2022.





Vehicle Identification System

Asset Description

Vehicle Identification System used in the Sheffield Tram-Train Project Network Rail mainline infrastructure, between the Sheffield Supertram network and Parkgate Tram Stop.

New Documentation

SMS Tasks

PartC VS30

[Vehicle Identification System](#)

PartB Test025

[Vehicle Identification Loops \(VIS\) Loop Tuning Setup](#)

SMTH Test Plans

Part10 FF25

[Faulting Guide: Vehicle Identification Loops \(VIS\)](#)





Flex Level Crossing System

Asset Description

Level Crossing System.

New Documentation

SMS Tasks/Tests

[PartC LC73](#)

[Flex Crossing System](#)

[PartB Test0161](#)

[Flex - Operational Sequence Tests](#)

[PartD LX79](#)

[Flex Level Crossing System](#)

SMTH Test Plans

[Part04 LF01](#)

[Replace a Flex Crossing - Sub-Components – Power](#)

[Part04 LF02](#)

[Replace a Flex Crossing - Sub-Component – Control](#)

[Part04 LF03](#)

[Replace a Flex Crossing - Sub-Component – Modules](#)

[Part04 LF04](#)

[Replace a Flex Crossing - Sub-Components – Relay and Temperature](#)

[Part08 T024](#)

[Wrong Side Failure Test Guide: Flex Crossing System](#)





VAMOS Level Crossing System

Asset Description

Level Crossing System.

Documentation

SMS Tasks/Tests

PartC LC71(04) **VAMOS Crossing System** – Clause 6.2 bullets b) & c) to record the lowest (sys 1) & highest reading (sys 2).

PartB Test0157(04) **Frauscher : RSR 123 Wheel Sensor Adjustment - associated with IMC Boards** – In clause 3.3, an absolute requirement has been added: In the case of a VAMOS strike-in wheel sensor, Sys1 - Sys2 shall be in the direction of the strike-in.

PartB Test0159(02) **VAMOS: Sequence Tests** – Changes have been made to steps relating to the 'other post', 'On-Demand' options, LED indications and clarifications.

PartD LX78(02) **VAMOS Level Crossing System** – Following feedback from the Project, there are approx. 20 changes to the annual test form, all have been side barred.



VAMOS Level Crossing System - Cont

Documentation

SMTH Test Plans

[Part04 LE22\(02\)](#) [Replace a Vamos Crossing System Sub-Component \(Power Equipment\) - Circuit Breaker TCP section removed.](#)

[Part04 LE23\(02\)](#) [Replace a Vamos Crossing System Sub-Component \(Modular Equipment\) – Under the telemetry module, steps have been added when to remove & replace the SIM card. Also to attach a suitable Laptop loaded with the MTC Program and add the crossing details and Dogfish reporting number.](#)

[Part04 LE24\(02\)](#) [Replace a Vamos / Flex Crossing System Sub-Component \(External Equipment\) - Change in title and change of figure 4 image of 'On-Demand' Button.](#)

[Part08 T021\(02\)](#) [Wrong Side Failure Test Guide: Vamos Crossing System - Following feedback from the Project and end users, there are 5 changes to the WSF form.](#)





Train Detection

Documentation

[PartC TC91\(07\) Track Circuit Assister Interference Detector \(TCAID\)](#) – Amended following Introduction of Mod3 unit.

[PartB Test0159\(02\) TCAID Test](#) - Additional step 1.1 to isolate the TC supply when preparing for testing and updated to include MOD3 unit.

[Part04 TC08\(07\) Replace a Track Circuit Aid \(TCAID\) Unit](#) - Amended following Introduction of Mod3 unit.

[PartC TC03\(05\) Track Circuits: DC Low Voltage](#) – Periodic Task 2 has been added to allow the Residual Voltage Bonding check to be captured.

[PartC TC04\(05\) Track Circuits: DC Medium Voltage](#) – Periodic Task 2 has been added to allow the Residual Voltage Bonding check to be captured.



Train Detection - Cont

Documentation

[PartC TC12\(06\) Track Circuits: HVI \(High Voltage Impulse\)](#) – New task 5.2 Visually examine the track relay for excessive corrosion or contamination. New task 7.1 Carry out a 0.5 Ohms drop shunt at each extremity.

[PartC TC16\(05\) Track Circuits: EBI Track 200](#) – Updated by the EBI Tracker working group
II changes to Clause 8.9 b) for remote maintenance process.

[PartC AX41\(09\) Frauscher : RSR123 Wheel Sensors](#) – PT2, Clause 3.2 (Head Sensor Security, the requirement to replace spring washer every time has been removed.

[Part04 TC03\(02\) Testing Track Circuits After IRJ Renewal](#) - IRJ Clearance Point check added.

[Part05 ModS04\(02\) Wrong Side Failure Testing Procedure](#) - Clause 2.4 amended to show the correct TS11 reference. New Flow Chart and new clause 3.13 for Track Section Boundary Transition.





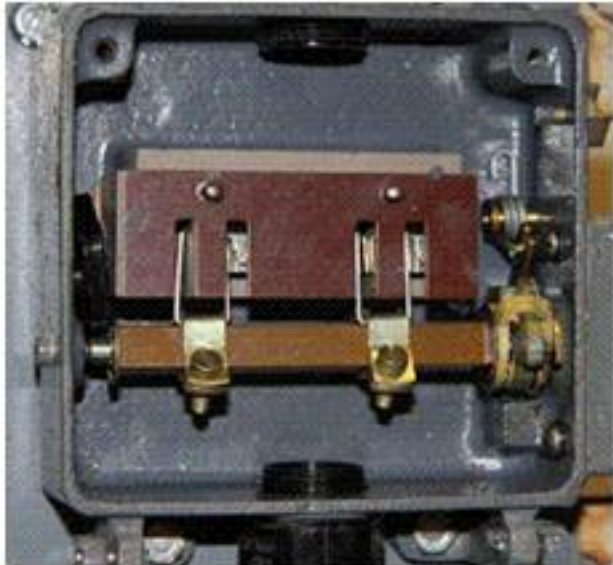
Swing Bridges

SMS Documentation

[PartC BR11\(05\)](#) [Swing Bridges](#) – Clauses 2.4 and 2.5 have been clarified and split out for the limit switch operating arm roller.

[PartC BR12\(02\)](#) [Swing Bridges \(Banavie\)](#) – Clauses 2.4 and 2.5 have been clarified and split out for the limit switch operating arm roller.





Signals

SMS Documentation

PartC SG02(02) **Signal Post and Signal Box Replacement Switches** – Service A & B combined into one service (B) and RE service is no longer required. The Norm frequency for the Service B is now set at 0091 and the Maximum now set at 1456.

PartC SG14(02) **Position Light Signal** – Service R1 removed (should have been withdrawn Dec 2021).





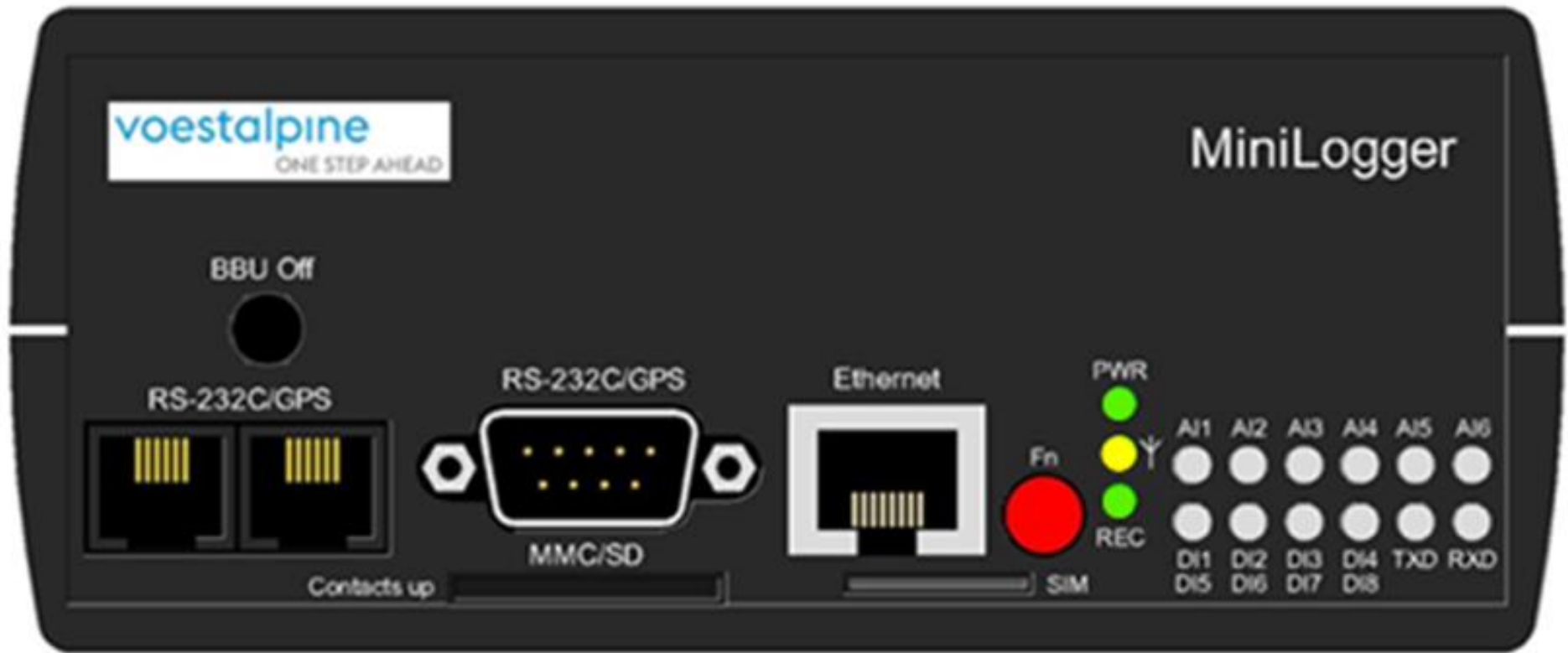
Apparatus Case

SMS Documentation

PartC EL21(02) Trackside Apparatus Case – Clause 6.12 amended to reinstate the requirement **not** to carry out test 054 on double cut lineside cables if not monitored by a busbar test. Clause 9.2 amended to include monitored data links and those maintained by others.

PartC EL32(01) Electronic Equipment Cabinet – Includes: Any electronic equipment cabinets (located in an equipment room), which do not have an associated SMS which contains cabinet maintenance as a task. Such as: ElectroloGIX. Excludes: Any electronic equipment cabinets (located in an equipment room), which have an associated SMS, which contains cabinet maintenance.





Intelligent Infrastructure

SMS Documentation

[PartC ER00\(03\) Logging Systems \(General\)](#) – Table 1 (Findlay Irvine DCU 390M Normal Indications), heading has been amended.

[PartC ER22\(03\) Atlas Data Logging System](#) – Updated to clarify Atlas, Legacy mini and web based systems.





Interlockings

SMS Documentation

[PartC IS12\(04\) Westrace Electronic Interlockings](#) – The WESTLOCK Trackside Equipment (Zone Controller) moved here from IS13.

[PartC IS13\(05\) Westlock Electronic Interlocking](#) – WESTLOCK Trackside Equipment (Zone Controller) moved to IS12.





BR998 Detector

SMS Documentation

PartC PD01(06)
are tight.

BR998 Detector – Additional requirement added to check tappet lock nuts





Cables

SMTH Documentation

The cable test plans (CAXX series) in the SMTH had not been reviewed for a number years and were next in line of subject matters to be technically reviewed. A working group was formed to review and update the documents. The following changes have been carried out:

1. Make clear in the titles what the test plans apply to by updating the titles and the includes and excludes boxes
2. Updated to reflect today's standards style writing
3. RAG'd
4. Removal of any steps which were deemed un-necessary and in some cases adding in steps
5. Steps written in logical order in line with the task(s)
6. Splitting out and creating separate new test plans to make the test more relevant to the required testing scenarios.

The requirements of the test plan process remain unchanged, and users are encouraged to read through these to familiarise themselves with the test plans especially the new documents.



Cables

SMTH Documentation

Important: Before carrying out a cable test, check that you are applying the correct and latest version of the test plan.

The following slides show the titles of the new/amended SMTH cable test plans and the inclusions and exclusions.



Cables

SMTH Documentation

CA01(08) Remove and Refit a Cable Core or Wire

Includes: A single cable core or wire.

This includes a previously disconnected core or wire (proceed from step 6).

Excludes: A broken wire or cable core (CA13), Line Wires (Telegraph) (CA31) and Telecoms cables (CAB001).

CA02(07) Renew a Lineside Multi-Core Cable

Includes: Multicore signalling cables

- Excludes:**
- a) Renewing a cable with intermediate terminations, links or contacts.
 - b) Refitting any removed or broken cable core(s)/wires that are not correctly labelled.
 - c) Telecom cables (see Part 06).
 - d) Plug coupled cables.





Cables - Cont

CA03(09)

Includes:

Renew a Cable or Wire

Internal wiring between terminals and/or equipment.

- b) External single core cables between terminals and/or equipment.
- c) Track circuit jumper cables.

Excludes:

- a) Renewing a cable/wire with intermediate terminations, links or contacts.
- b) Refitting any removed or broken cable core(s)/wires.
- c) Telecoms tail cables (see Part 06).
- d) Plug coupled cables.

CA04(07)

Includes:

Joint or Add a Length of Cable or Line Wire

All multicore, tail, and track cables, requiring jointing after damage or where additional length is now required.

- 2. Plug Coupled Cables mid-section only.

Excludes:

- 1. Plug Coupled Cables where a connector is involved.
- 2. Telecoms tail cables (see CAB001).
- 3. Jointing or adding length to single core internal wire (wire shall be renewed).



Cables - Cont

CA05(08) Divert a Faulty Cable Core

Includes: Faulty cable diversion, one core at a time

Excludes: Telecoms tail cables

CA06(07) Renew a Plug Coupled Cable (“interconnect”) with a Non-Certified Replacement

Includes: 1. MIL5015 Plug Coupled Cables without a valid Certificate of Conformance (including missing environmental caps) or which cannot be certified/tested prior to use.

2. Where a cable has been laid out in preparation for installation and left unattended for a period of 28 days or more.
3. Where a cable is to be pulled through a UTX/URX.

Excludes:

1. MIL5015 Supplier Certified Plug Coupled Cables (“interconnects”).
2. Unsealed Plug Coupled Cables or without a certificate which have been tested in accordance with instructions from your line manager.
3. Cables with plug couplers on only one end (“leads”)(use CA08).



Cables - Cont

CA07(02)

Includes:1.

Renew a Plug Coupled Cable (“interconnect”) with a Certified Replacement Supplier Certified Plug Coupled Cables (“interconnects”).

2. Unsealed Plug Coupled Cables or without a certificate which have been tested in accordance with instructions from the SM(S).

Excludes:

1. Plug Coupled Cables without a valid Certificate of Conformance (including missing environmental caps) or which cannot be certified/tested prior to use (use CA06 for uncertified cables).

2. Where a cable has been laid out in preparation for installation and left unattended for a period of 28 days or more.

3. Where a cable is to be pulled through a UTX/URX (use Plan CA06) Cables with plug couplers on only one end (“leads”) (use CA08).

4. Cables with plug couplers on only one end (“leads”).

CA08(03)

Includes:a)

Replacing one end of a damaged “interconnect” cable

Replacing one end of a plug coupled damaged cable (“interconnect”).

Excludes:

a) Adding a section of cable between two plug coupled ends. (see Plan CA04)

b) Telecoms Tail cables (see part 06).

Cables - Cont

CA09(03)

Includes:a)

Replace a panel mounted wired receptacle or plug (Non-Cert) MIL5015 panel mounted receptacles or plugs with prewired harness without a valid Certificate of Conformance or with missing environmental caps.

Excludes:

- a) MIL5015 Sealed Supplier Certified panel mounted receptacles or plugs with prewired harness.
- b) MIL5015 Non-Supplier Certified panel mounted receptacles or plugs, with prewired harness which have been pre-tested in accordance with instructions from your Line Manager.
- c) All other types of Receptacles and plugs.





Cables - Cont

CA10(02)

Includes:

Replace a panel mounted wired receptacle or plug (Certified Replacement)

Sealed Supplier Certified panel mounted receptacles or plugs with prewired harness.

- b) Non-Supplier Certified panel mounted receptacles or plugs, with prewired harness which have been pre-tested in accordance with instructions from your SM(S) AND
- c) The replacement panel mounted wired receptacle or plug is undamaged and the environmental seals (end caps) are fitted correctly.

Excludes:

- a) Panel mounted receptacles with missing environmental caps, or damage is suspected.
- b) All other types of receptacles and plugs.

CA12(01)

Includes:

Remove and Refit a Cable Core or Wire

Tail cable and Multi-core cables.

- b) This includes a previously disconnected core or wire (proceed from step 6).

Excludes:

- a) Single cable cores or wires (CA01).
- b) Cable cores or wires that are Broken (CA13).
- c) Telecoms cables (CAB001).



Cables - Cont

CA13(01)

Includes:a)

Re-termination of a Broken Existing Cable Core or Wire

A single cable core or wire which has broken or pulled loose from a crimp.

Excludes:

- a) Any re-termination where the reconnection point cannot be proved by use of the diagrams and/or tracing or electrical proving the circuit.
- b) Any disconnection that has been made in a controlled way and is labelled.

CA21(01)

Includes:a)

Renew a Single Ended Plug Coupled Cable (“lead”) with a Certified Replacement

Supplier Certified Single Ended Plug Coupled Cable (“lead”)

- b) Unsealed Plug Coupled Cables or without a certificate which have been tested in accordance with instructions from your SM(S).

Excludes:

- a) Single Ended Plug Coupled Cable (“lead”) without a valid Certificate of Conformance (including missing environmental caps) or which cannot be certified/tested prior to use (use CA22 for uncertified cables).
- b) Where a cable has been laid out in preparation for installation and left unattended for a period of 28 days or more.
- c) Single Ended Plug Coupled Cable which are not fitted with a MIL5015 Specification plug or receptacle. (e.g. TPWS, Point machine, SSI cables etc.



Cables - Cont

CA22(01) Renew a Single Ended Plug Coupled Cable (“lead”) with a Non-Certified Replacement

- Includes:**
- a) Single Ended Plug Coupled Cable (“lead”) without a valid Certificate of Conformance (including missing environmental caps) or which cannot be certified/tested prior to use.
 - b) Where a cable has been laid out in preparation for installation and left unattended for a period of 28 days or more.
 - c) Single Ended Plug Coupled Cable which are not fitted with a MIL5015 Specification plug or receptacle. (eg TPWS, Point machine, SSI cables etc.
- Excludes:**
- a) Supplier Certified Single Ended Plug Coupled Cable (“lead”)
 - b) Unsealed Plug Coupled Cables or without a certificate which have been tested in accordance with instructions from your line manager.

CA31(01) Renew a Telegraph Line Wire

- Includes:**
- a) Telegraph Line wires (on Pole Routes).
- Excludes:**
- a) All other type of Wire or Cable.



Cables - Cont

CA32(01)

Includes:

Excludes:

Remove and Refit a Telegraph Line Wire

- a) Telegraph Line wires (on Pole Routes).
- a) All other type of Wire or Cable.

CA40(01)

Includes:

Excludes:

Replace a Frauscher Concentrator 'Hotlink' Crossover Cable

- a) Frauscher Concentrator 'Hotlink' Crossover Cable.
- a) All other Patch Cables.

SMTH: Part 01 References and Definitions & Part 02 Introduction and Overview



SMTH Part 01 & 02

SMTH Documentation

[Part01 Mod04\(02\)](#) [Competency of Staff](#) – The requirements to make and check alterations clarified.

[Part02 Form 15\(02\)](#) [Wire Count Grid Sheet - Bus Bar and Terminal Wire](#) – A user has provided a better sheet than that published and a guide on how to complete has been added.

[Part02 Form 16\(02\)](#) [Wire Count Grid Sheet – BR930 Series Relay Base](#) – A user has provided a better sheet than that published and a guide on how to complete has been added.

[Part02 Form 17\(02\)](#) [Wire Count Grid Sheet - Cable Core](#) – A user has provided a better sheet than that published and a guide on how to complete has been added.

[Part02 Form 19\(01\)](#) [Cable Function Test Planning Sheet](#) – A user has provided a new sheet for inclusion.

[Part02 Form 20\(01\)](#) [Wire Count Grid Sheet - WAGO Terminations](#)– Same as Form 19.



SMTH: Part 03 Defined Checks





NR/L3/SIG/11231 Signal Maintenance Testing Handbook		
NR/SMTH/Part/03		
Index – Defined Checks and Tests		
Issue No: 10	Issue Date: 04/09/2021	Compliance Date: 04/12/2021

INDEX

Number	Subject
Part03	Defined Checks and Tests
Check A01	Defined Check: Check for Correct Type
Check A02	Defined Check: Check for Damage
Check A03	Defined Check: Check for Safe Insulation
Check A04	Defined Check: Check for Correct Installation
Check A05	Defined Check: Check for Correct Isolation
Check A06	Defined Check: Check for Correct Labelling
Check A07	Defined Check: Correlation Check



Defined Checks

SMTH Documentation

The Defined Checks in the SMTH had not been reviewed for a number years and were second in line of subject matters to be technically reviewed. A working group was formed to review and update the documents. The following changes have been carried out:

1. Updated to reflect today's standards style writing
2. RAG'd

The requirements of the Defined Checks remain unchanged, with the documents being 'refreshed'.



SMTH Part 04 - Test Plans



New/Amended SMTH Test Plans

Document	Title	Change
EL10(07)	Replace an Audible Unit	Steps added for correct fitment of jumper, the correct message is being given for both the normal passage of a train and the “Another Train Coming” warning. Appendix added containing additional details from NB133.
EL44(01)	Replace a Phoenix Contact - Battery Management Module Unit	New
EL45(01)	Replace a Phoenix Contact - Power Supply Unit	New
EL46(01)	Replace a Phoenix Contact - Quint DC-UPS Unit	New
EL48(01)	Replace a Meanwell - Power Supply Unit	New
EL52(01)	Replace a STEGO Heater	New



New/Amended SMTH Test Plans

Document	Title	Change
EL53(01)	Replace a Hygrotherm	New
HD03(01)	Remove and Replace an EPOS HABD - Rail Sensor	New
HD04(01)	Remove and replace an EPOS HABD - Sensor Module	New
IS16(01)	Replace a HIMatrix Programmable Logic Controller (PLC) F30 and F3	New
IS17(01)	Download Data to a HIMatrix Programmable Logic Controller (PLC) F30 and F3	New
LD61(01)	Replace an LCSS Cincoze DS-1200 – Maintenance PC	New



SMTH Part 05 – WSF and Incident Investigation



SMTH Part 05

SMTH Documentation

NRSMTH Part05 Module S06 Wrong Side Failure Testing Procedure

Amended to include a requirement raised in Notice Board 107 - not to influence technicians thinking by L2 & L3, the clause now states:

1.8 It is important that those exercising L2 and L3 sign-off of investigations, confirm that the way a failure is reported to the Technicians carrying out the investigation, has not influenced their thinking about what needs to be disproved.



SMTH Part 10 – Faulting Guides



SMTH Part 10

SMTH Documentation

[NRSMTH Part10 FF28](#) [Faulting Guide: HIMatrix Programmable Logic Controller \(PLC\) F30 & F3](#)

New

[NRSMTH Part10 FF29](#) [Faulting Guide: HIMatrix Manually Controlled Barrier Level Crossing](#)

New





Telecoms

SMTH/SMS Documentation

Last year, a number of telecoms documents were removed from SMS and SMTH and users redirected to the source telecoms documents from where the contents derived from. This caused a number of issues as users did not download the required documents and caused further confusion with competence of using telecoms documents. Subsequently NB207 was issued to reinstate these documents.

In this update, the SMS/SMTH documents relating to telecoms equipment have been reinstated with updates and some renumbering.



SMS Documentation

NR/L3/TEL/30181(2)

Maintenance of Operational Telephones

This document was published 05/03/2022 with a compliance date of 04/06/2022 and changes were made as telephones being maintained too frequently – trackside visits just to check telephone. The document contains the following changes:

1. Frequency of maintenance of telephones changed to align with same frequency as associated signalling asset e.g SPT/Signal, PZT/POE – maximum interval of 4 yearly.
2. Inclusion of Magneto type telephones at signal boxes (dropped from previous issue).
3. Combining of Service A and B into one service.
4. Removed requirement to test inductive loop.
5. Corrections to reference to task numbers



Telecoms

SMS Documentation

NRSMS PartT TE01(1) Operational Telephones

Includes: Lineside Telephones such as, Signal Post Telephones, Crossing Telephones, Point Zone Telephones. Operational building telephones, including, signal boxes (Magneto telephones only), token huts, GF huts and shunters cabins etc.

Excludes: Phones located in the following places: · Non-operational rooms situated in operational buildings. · PETS units in Signalling/Operating Centres. · Lineside plug points and telephones connected to Tunnel Emergency Communication Systems. · GSM/GSM-R Crossing Phones. · GSM-R HMI's. · Concentrator HMI's.

See table 5 of NR/L3/SIG/10661 for the amended frequency of operational telephones. Both signalling and telecoms documents now align.



Telecoms

SMS/SMTH Documentation

[NRSMS PartT TE02\(1\)](#) [Inspection and Minor Maintenance of Lineside S&T Cable Routes](#)
Formerly TEL/30069.

[NRSMTM Part06 TEL001\(1\)](#) [Replace an Operational Telephones](#)

Includes: Lineside Telephones such as, Signal Post Telephones, Crossing Telephones, Point Zone Telephones. Operational building telephones, including, signal boxes (Magneto telephones only), token huts, GF huts and shunters cabins etc

Excludes: Phones located in the following places: · Non-operational rooms situated in operational buildings. · PETS units in Signalling/Operating Centres. · Lineside plug points and telephones connected to Tunnel Emergency Communication Systems. · GSM/GSM-R Crossing Phones. · GSM-R HMI's. · Concentrator HMI's.

[NR/SMTH/Part06/TELTFI001\(1\) Operational Telephones](#)
WSF Guide.



Telecoms

SMTH/SMS Documentation

NR/SMTH/Part06/CAB001(01) Replace or Repair a Telecoms Tail Cable
Reinstated.

NR/SMTH/Part06/A001(01)

Overview of the Use of Telecoms Test Plans and Failure
Investigation Guides

Withdrawn.

NR/SMTH/PartT/A001(01)

Overview of Telecoms Maintenance Specifications

Withdrawn.



NR/L3/SIG/10661



Interval Changes



SMS	Change
AX40	Frauscher Advanced Axle Counter - Service PT3 interval for Rail Sensor Height Check has been extended to 9999 from 0728. This is subject to the consideration of understanding rail wear and needs to be done in conjunction with the TME before making change to the interval.
LC73	Flex Crossing System (new) – Scheduled at 0364.
SG02	Signal Post and Signal Box Replacement Switches – Only one service B now, interval extended to 1456 (service should match the frequency of the parent asset or telephone) (no risk assessment needed).
TC03	Track Circuits: DC Low Voltage - There are now two PT tasks, normal interval 0364 maximum interval 2184.
TC04	Track Circuits: DC Medium Voltage – There are now two PT tasks, normal interval 0364 maximum interval 2184.
VS30	Vehicle Identification System (new) – RT Service 0028 and Service A 0364
LX79	Flex Level Crossing System (new) - Scheduled at 0364
TE01	Intervals for operational telephones have changed, see table 5 in 10661.

NR/L3/SIG/10665



Changes

Clause	Change
7.17	Track Circuit additional bonding check - correction of notes numbering.
9.2	Signal Post Replacement Switch, Signal Box Replacement Switch - Only one service B now, interval extended to 1456 (service should match the frequency of the parent asset or telephone).
9.6	Main Colour light signals - LED Signals - clarification made that the PT service shall continue to be scheduled.
9.17	Banner - Filament and Fibre Optic – clarification made.
9.20	Indicators Signals – Filament Type Head – title corrected.



NR/L3/SIG/10064



Changes

Module	Change
NR/L3/SIG/10064	Index updated.
NR/GI/B001	Work that Could Affect the Operation of Signalling Equipment, but can be Carried out Between Trains - Clause 1.6 amended to say "does not need to be carried out".
NR/GI/B002	Disconnections – During Failures or to Work on S&T Equipment or the Release of Controls - 10 f) amended to say section 11.
NR/GI/T001	Testing – General - Flowchart symbols updated.
NR/GI/U033	Use of Monitoring and Test Equipment - Clause j) corrected to direct to SMTH/Part01/14 (prev 13).
NR/GI/U034	Management and Control of Temporary Straps - Was previously written for NR maintenance only, now applies to all.



Minor/Reformat Changes



Minor Amendments

Document	Title	Change
NRSMS PartD LX94	Miniature Stop Light Crossing (MSL) - (RCM)	Clause 3.1 was a repeat of 2.1 Clause removed
NRSMTH Part04 EL34	Replace a Miniature Circuit Breaker	Added Schneider type MCB
NRSMTH Part04 NW11	Replace a Network / Ethernet Switch	CISCO C9300L and MOXA N Port 6650 switches added
NRSMTH Part04 WL07	Replace a Siemens Zone Controller Module	Amended to include PIM50 and ROM50 modules
NRSMS Appendix 05	General information on Mil Spec 5015 Plug Couplers	Additional steps added following reformat, clarify Figures 2 & 3
NRSMS Appendix 06	Unipart : Plug & Play “Break Out Box” Guidance Notes	Tidy up of document
NRSMS Appendix 11	General information on Siemens Westlock interlocking and zone controller	Reformatted



Minor Amendments

Document	Title	Change
NRSMS PartB 003	Facing Point Lock Tests (Clamp lock)	Amended table of shim sizes - 4mm combination added
NRSMS PartB 230	Train Protection and Warning System (TPWS) Tests	Size 277.7 KB Amended 2.6 from Z03 - Z08 (SM300)
NRSMS PartB 259	FS 2600 Track Circuit Test	Corrected 2.29
NRSMS PartC CE03	Battery Maintenance	Amended to highlight Maintenance free cell requirement
NRSMS PartC LC31	Barrier Machine: AHB Mk.1 (Penguin)	Clarified Clause 8 - Test and Final checks
NRSMS PartC PB11	Clamp Lock Hydraulic Points	Removed the reference to closed switch in PB11 Service R1 step 18.4. as the related tasks do not just refer to the closed switch



Minor Amendments

Document	Title	Change
NRSMS PartC PC05	Point Machine HW Style	Amended to check plug couplers are tight
NRSMS PartC SG03	Signal Sighting - Cab Rides	Service RB removed as no longer required
NRSMS PartC SG07	Main Colour Light Signals – Dorman Lite	Amended clause 6.1 - added 'as required'
NRSMS PartC SG09	Main Colour Light Signal - Integrated Lightweight Signal (iLS)	Service C - 9. added the words (Modular signal enclosure unit only)
NRSMS PartC SG11	Main Colour Light Signal - Filament Type Head	The word replace changed to renew
NRSMS PartC SG21	Signal Lens - Clean	Removed the Excludes
NRSMS PartD LX70-1	Automatic Half Barrier (AHBC) - RCM	Typo corrected in 3.17



Minor Amendments

Document	Title	Change
NRSMS PartE HO14	Hot Axle Box Detector - Wheel Sensor	Changed wording to Wheel Sensor
NRSMS PartR AX30 RC01	Siemens Axle Counter – AzSM (E) Evaluator	amended to shown correct details
NRSMS PartR T260 RC01	Track Circuit Tests - 50Hz AC	Amended to remove "* These tests are optional on this service" this is incorrect
NRSMTH Part01 Module 10	Completion of the SMTH Log sheet	Corrected figure Nos in Clause 4
NRSMTH Part01 Module 12	The Diversion of a Circuit/Relay Contact or Emergency Equipment Relocation	amendment to clarify the disconnection of binding posts
NRSMTH Part01 Module 14	Site and Testing Records	Amend Clause 1.3
NRSMTH Part01 Module 16	Action Definitions	additional definitions added



Minor Amendments

Document	Title	Change
NRSMTH Part03Test B08	Defined Test: Point Detection and Correspondence Test	Corrected Clause 6, Step g)
NRSMTH Part04 AX40	Replace a Frauscher wheel sensor RSR123	Updated to include when used with a SATWAS system
NRSMTH Part04 AX42	Replace a COM-AdC and/or COM-WNC Board	Additional note added to Step 2 related to the CF Card
NRSMTH Part04 CE01	Replace a Secondary Cell or Battery	Step 3 the word changing replaced with charging
NRSMTH Part04 CE02	Replace a Primary Cell or Battery	Amended to include TCAID Battery changes. TCAID only test added.
NRSMTH Part04 EL22	Replace a Howells LED SL35 Light Engine	Amended Asterisks added
NRSMTH Part04 EL49	Replace a Lineside Disconnection Box	Step 3 amended to say Existing not replacement



Minor Amendments

Document	Title	Change
NRSMTH Part04 HD02	Remove and Refit EPOS HABD Equipment (for Tamping Work)	Hyperlink to HO13 corrected to HO13. Rail Sensor changed to Wheel Sensor
NRSMTH Part04 IH03	Replace an ElectroLogIXS Communication Input/Output Protocol Converter (PCA) Module	Amended following feed back from KT and Andy Mash (Atkins)
NRSMTH Part04 IM01	Replace a Smartlock SmartIO COM Module	Corrected Title ('a' missing)
NRSMTH Pat04 IM02	Replace a Smartlock SmartIO Configuration Key	Corrected Title ('a' missing)
NRSMTH Part04 IM07	Replace a SmartIO Redundant or Non-Service Critical Device	Corrected Title ('a' missing)
NRSMTH Part04 IM08	Replace a SmartIO Service Critical Device or Cable	Corrected Title ('a' missing)
NRSMTH Part04 LD50	Replace a Digital Barriers X-Net Unit	Step 9. amended "to For Decoder and Encoder, carry out configuration as shown in ASM Configuration Documentation."



Minor Amendments

Document	Title	Change
NRSMTH Part04 PT01	Replace a Hydro-Pneumatic Unit	Detection test reference corrected to Test018
NRSMTH Part04 TQ03	Replace a GETS or Siemens Electronic Wheel Sensor	Missing requirements added
NRSMTH Part08 T020	Wrong Side Failure Test Guide: EBI Gate 200 Level Crossing System	Duplicated Step N11 removed
NRSMTH Part10 FF12	Faulting Guide: Train Protection Warning System (TPWS)	Figure 2 corrected with new photo



Reformat

Document	Title	Change
NRSMS Appendix 12	General information on DC Coded Tracks	Reformat
NRSMS PartA A06	Materials	Reformat
NRSMS PartA A08	Items for Renewal	Reformat
NRSMS PartA A09	Lubrication	Reformat
NRSMS PartA A11	Maintenance Diagrams	Reformat
NRSMS PartA A13	Reinstating Flooded or Water Affected Equipment	Reformat
NRSMS PartA A14	Environmental Issues	Reformat



Reformat

Document	Title	Change
NRSMS PartA A16	Reference Documents	Reformat
NRSMS PartB 001	Facing Point Lock Tests (Machine)	Reformat
NRSMS PartB 002	Facing Point Lock Tests (Mechanical)	Reformat
NRSMS PartB 004	Facing Point Lock Tests (HPSS)	Reformat
NRSMS PartB 005	Facing Point Lock Tests (T72 with VCC Lock)	Reformat
NRSMS PartB 059	Emergency Pull Cable System Tests	Reformat
NRSMS PartB 158	Interrogation of the Vamos Crossing System SD Card	Reformat



Reformat

Document	Title	Change
NRSMS PartC IE21	Cambrian ERTMS: Remote Object Controller Cabinet	Reformat
NRSMS PartC IE22	Cambrian ERTMS: Radio Block Centre (RBC) Cabinet	Reformat
NRSMS PartC IE24	Cambrian ERTMS: Maintenance Aid Equipment (SAM)	Reformat
NRSMS PartC IE25	Cambrian ERTMS: Interlocking Train Control System (SEI Cabinet)	Reformat
NRSMS PartC IE28	Cambrian ERTMS: Cambrian Applicative Training Simulator (CATS)	Reformat
NRSMS PartC LC81	Level Crossing Gates	Reformat
NRSMS PartC PB18	Hydraulic Derailer: Type BRB 817	Reformat



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Document	Title	Change
NRSMS PartC SG90	Rock Fall Detection Apparatus - Pass of Brander	Reformat
NRSMS PartC TD33	Train Describer – Scottish Type	Reformat
NRSMS PartC TW02	Airport Trip Wires – Scotland	Reformat
NRSMTH Part03 A001	Defined Checks and Tests	Reformat
NRSMTH Part04 AX20	Replace a Siemens AzS 350 U Axle Counter Card (VESBA)	Reformat
NRSMTH Part04 AX21	Replace a Siemens AzS 350 U Axle Counter Card (SIRIUS2, STEU, VAU)	Reformat
NRSMTH Part04 AX22	Replace a Siemens AzS 350 U Axle Counter Card (BLEA12)	Reformat



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Document	Title	Change
NRSMTH Part04 AX27	Replace a Siemens Axle Counter ZP 43 PCB Card	Reformat
NRSMTH Part04 AX31	Replace a Siemens WSD Wheel Detector secured with Rail Clamp (ACM 100 Axle Counter)	Reformat
NRSMTH Part04 AX41	Replace an Advanced Evaluation Board AEB	Reformat
NRSMTH Part04 AX45	Replace a Power Supply Board (Crowbar)	Reformat
NRSMTH Part04 AX46	Replace an Input/Output Extension Board IO-EXB	Reformat
NRSMTH Part04 IE06	Cambrian ERTMS: Replace an Item of Plug and Play Equipment	Reformat
NRSMTH Part04 IE07	Cambrian ERTMS: Replace a Non-Vital Programmable Device	Reformat



Reformat

Document	Title	Change
NRSMTH Part04 IE09	Cambrian ERTMS: Replace a Plug in Power Supply	Reformat
NRSMTH Part04 IE15	Cambrian ERTMS: Replace an ISDN/V24 Converter	Reformat
NRSMTH Part04 IE16	Cambrian ERTMS: Replace a Fibre Optic or LAN Patch Cord	Reformat
NRSMTH Part04 LD21	Replace GateCare NR2 Power Operated Gate Opener (POGO) Sub-Components	Reformat
NRSMTH Part04 LV08	Replace a Microswitch sub-component within Ultra circuit Controller	Reformat
NRSMTH Part04 MS02	Replace an Invensys Rail Object Controller TPWS, or Points Equipment Panel	Reformat
NRSMTH Part04 MS05	Replace a Surge Protection Unit, Surge Suppression Unit	Reformat



Reformat

Document	Title	Change
NRSMTH Part04 MS07	Replace a Battery Pack	Reformat
NRSMTH Part04 MS11	Replace a Power Box Temperature Sensor	Reformat
NRSMTH Part04 MS13	Replace a Rextron KAG12 Switch	Reformat
NRSMTH Part04 MS14	Replace an Object Controller	Reformat
NRSMTH Part04 MS15	Replace a Feeder Pillar	Reformat
NRSMTH Part04 MS16	Replace a Power Box	Reformat
NRSMTH Part04 OD01	Replace an MCB-OD RADAR Scanner	Reformat



Reformat

Document	Title	Change
NRSMTH Part04 OD03	Replace an MCB-OD RADAR Scanner Replaceable Component	Reformat
NRSMTH Part04 PA02	Replace or Adjust a Point Stretcher Bar	Reformat
NRSMTH Part04 PA04	Replace or Adjust a Tubular Stretcher Bar	Reformat
NRSMTH Part04 PB07	Replace A Break Out Device As Used Within Hy-Drive System	Reformat
NRSMTH Part04 PB18	Remove and Refit Hydraulic Derailer Unit	Reformat
NRSMTH Part04 PC09	Replace a HW Style Point Machine Gearbox	Reformat
NRSMTH Part04 SL01	Replace a SMARTLOCK CIXL I/O Subsystem Module	Reformat



Reformat

Document	Title	Change
NRSMTH Part04 SL02	Replace a SMARTLOCK CIXL Computing Subsystem Module	Reformat
NRSMTH Part04 SL03	Replace a SMARTLOCK CIXL Main PSU	Reformat
NRSMTH Part04 SL04	Replace a SMARTLOCK TICC Front End Module	Reformat
NRSMTH Part04 SL05	Replace a SMARTLOCK TICC GW Module	Reformat
NRSMTH Part04 SL06	Replace a SMARTLOCK SSys Component	Reformat
NRSMTH Part04 SL07	Replace a SMARTLOCK SSys Client PC	Reformat



“Tail Light”

That's all Folks!

Any questions?

For future changes or queries please e-mail your requests to
signalengineers@networkrail.co.uk

