

NR/L3/SIG/11231 Signal Maintenance Testing Handbook		
NR/SMTH/Part 07		
Index		
Issue No. 02	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 document.

This section contains details of maintenance testing of signalling assets that are a like for like replacement but are part of pre-planned activities. Test plans relevant to this activity included in this section. Details of the processes to undertake the work are in NR/SMTH/Part 02.

Subject	Number	Issue
Renew Cables by Top Nutting	Part07/Appendix A	01
Status of Existing Cable Checksheet	Part07/Appendix A01	01
Cables Terminated on RHS Checksheet	Part07/Appendix A02	01
Cables Terminated on LHS Checksheet	Part07/Appendix A03	01
Top Nutted Cable on LHS Checksheet	Part07/Appendix A04	01
Top Nutted Cable on RHS Checksheet	Part07/Appendix A05	01
Cables on LHS Changeover Checksheet	Part07/Appendix A06	01
Cables on RHS Changeover Checksheet	Part07/Appendix A07	01
Isolation of TPWS Equipment at Simple Permanent Speed Restrictions (PSR)	Part07/AP51	01
Relocate a TPWS Buffer Stop Arming Loop	Part07/AP53	01
Top Nut an Existing Cable Test Plan	Part07/CA51	01
Change Over a Top Nutted Cable Test Plan	Part07/CA52	01
HABD Equipment: Phoenix MB Remove and Refit for Tamping Work	Part07/HD01	01
Replace a BR843 Level Crossing Barrier Pedestal	Part07/LD52	01
Replace a Level Crossing Filament Light Unit	Part07/LD58	01
Replace a Complete Point Machine	Part07/PC51	01
Replace a Filament Light Type Signal Head	Part07/SG51	01
Replace an Electro-Mechanical Signal	Part07/SG52	01
Replace an Electro-Mechanical Indicator	Part07/SG53	01
Replace a Fibre Optic Signal	Part07/SG54	01
Replace a Light Emitting Diode (LED) Signal	Part07/SG55	01
Missing Filament Lamp Signal Head	PartM07/SG51X	01

End

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NR/SMTH/Part 07/Appendix A		
Renewing Cables by Top-Nutting		
Issue No. 01	Issue Date: 05/03/11	Compliance Date: 03/09/11

1. Authority, Planning and Timescale Considerations

This work shall be classed as Pre-Planned work and shall follow the process described in Part 02 Section 8.

Authority to renew a cable using this process shall be given by the Section Manager (Signals).

Where cable sizes/ specification/ type will change, a set of temporary, updated site records shall be issued pending the final issue of updated site records.

The renewal process includes two specific activities:

- (i) Top-nutting the existing cable.
- (ii) Installation and changeover the new cable.

The maximum time limit between (i) and (ii) is 30 days.

2. Top-Nut the Existing Cable

Maintenance Test Plan Part 07/CA51 shall be used to top-nut the existing cable.

During the top-nutting process, check sheets Part 07/Appendix A01, Part 07/Appendix A02, Part 07/Appendix A03, Part 07/Appendix A04 and Part 07/Appendix A05 shall be endorsed as each core is changed over.

One copy of the completed check sheets Part 07/Appendix A01, Part 07/Appendix A02, Part 07/Appendix A03, Part 07/Appendix A04 and Part 07/Appendix A05 shall be attached to the circuit diagrams and the original set returned to the Section Manager (Signals) for record purposes.

3. Installing and Commissioning the New Cable

After the existing cable has been top-nutted, the replacement cable may be terminated and commissioned using Maintenance Test Plan Part 07/CA52.

As each activity is completed, check sheets Part 07/Appendix A06 and Part 07/Appendix A07 shall be endorsed.

After the new cable has been installed and tested, the old cable has been disconnected and the links restored, a CABLE FUNCTION TEST shall be carried out on all affected circuits.

4. Check Sheets

The following check sheets shall be used to record each stage of the cable renewal process:

Top-Nutting the Existing Cable

(included in Maintenance Test Plan Part 07/CA51)

Part 07/Appendix A01 - Status of existing cable

Part 07/Appendix A02 - Top-nut a cable from RHS to LHS (B-A)

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Part 07/Appendix A03 - Top-nut a cable from LHS to RHS (A-B)

Before Changeover is Started:

(included in Maintenance Test Plan Part 07/CA52)

Part 07/Appendix A04 - Original / existing cable top-nutted on LHS (A)

Part 07/Appendix A05 - Original / existing cable top-nutted on RHS (B)

Commissioning a Replacement Cable:

(included in Maintenance Test Plan Part 07/CA52)

Part 07/Appendix A06 - Original / existing cable top-nutted on LHS (A)

Part 07/Appendix A07 - Original / existing cable top-nutted on RHS (B)

5. Records

If the cable renewal has involved a change in cable size or type, or removal of jumpers, the site maintenance records shall be endorsed accordingly. Final updated records shall be arranged in accordance with NR/L3/SIG/10064/D031.

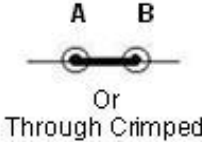
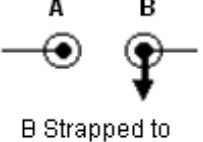
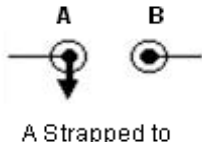
The cable database shall be updated to reflect the renewal.

Cable check sheets shall be returned to the Section Manager (Signals) with the Maintenance Test Log / Test Plan.

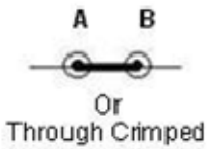
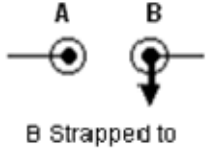
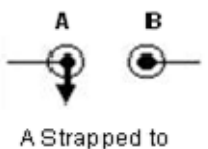
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NR/L3/SIG/11231 Signal Maintenance Testing Handbook		
NR/SMTH/Part 07/ Appendix A01		
Status of Existing Cable Checksheet		
Issue No.01	Issue Date: 05/03/11	Compliance Date: 03/09/11

Signal Box:		Cable Identification:	
Location/Equipment Room From:		Location/Equipment Room To:	
Name:		Date:	
Signature:		Company:	
Comments:			

Status of Existing Cable					
Cable Core No.	Wire Count			Red Dome Nuts	No Link Fitted
	Either	Or	Or		
					
01					
02					
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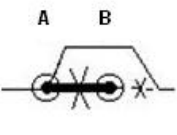
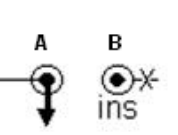
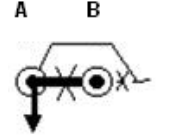
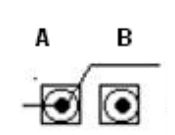
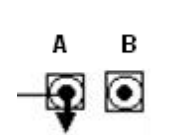
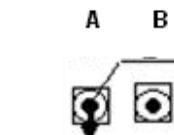
NR/L3/SIG/11231 Signal Maintenance Testing Handbook		
NR/SMTH/Part 07/ Appendix A01		
Status of Existing Cable Checksheet		
Issue No.01	Issue Date: 05/03/11	Compliance Date: 03/09/11

Status of Existing Cable					
Cable Core No.	Wire Count			Red Dome Nuts	No Link Fitted
	either	or	or		
					
23					
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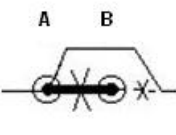
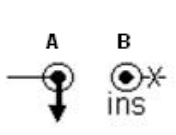
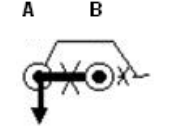
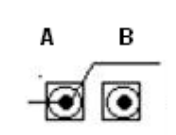
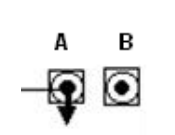
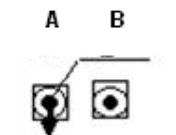
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NR/SMTH/Part 07/Appendix A02		
Cable Terminated on Right Hand Side Checksheet		
Issue No. 01	Issue Date: 05/03/11	Compliance Date: 03/09/11

Signal Box:		Cable Identification:	
Location/Equipment Room From:		Location/Equipment Room To:	
Name:		Date:	
Signature:		Company:	
Comments:			

Top Nut a Cable From Right Hand Side to Left Hand Side (B-A)						
Cable Core No.	Top Nutting Process			Final Wire Count		
	Normal Situation	Faulty Core	Diverted Core	Either	Or	Or
						
01						
02						
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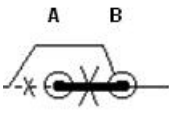
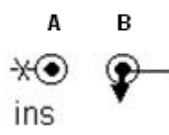
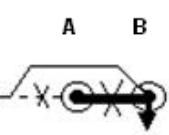
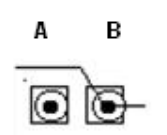
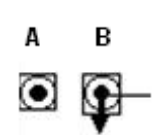
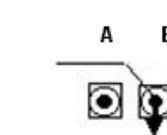
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Cable Terminated on Right Hand Side Checksheet		
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Top Nut a Cable From Right Hand Side to Left Hand Side (B-A)						
Cable Core No.	Top Nutting Process			Final Wire Count		
	Normal Situation	Faulty Core	Diverted Core	Either	Or	Or
						
23						
24						
25						
26						
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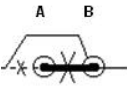
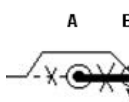
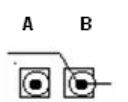
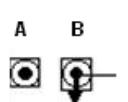
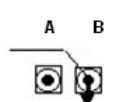
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NR/SMTH/Part 07/Appendix A03		
Cable Terminated on Left Hand Side Checksheet		
Issue No. 01	Issue Date: 05/03/11	Compliance Date: 03/09/11

Signal Box:		Cable Identification:	
Location/Equipment Room From:		Location/Equipment Room To:	
Name:		Date:	
Signature:		Company:	
Comments:			

Top Nut a Cable From Left Hand Side to Right Hand Side (A-B)						
Cable Core No.	Top Nutting Process			Final Wire Count		
	Normal Situation	Faulty Core	Diverted Core	Either	Or	Or
						
01						
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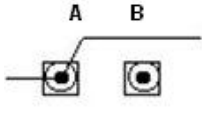
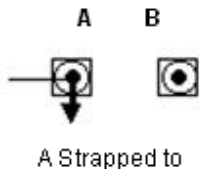
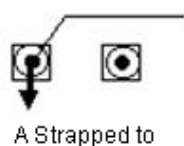
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NR/SMTH/Part 07/Appendix A03		
Cable Terminated on Left Hand Side Checksheet		
Issue No. 01	Issue Date: 05/03/11	Compliance Date: 03/09/11

Top Nut a Cable From Left Hand Side to Right Hand Side (A-B)						
Cable Core No.	Top Nutting Process			Final Wire Count		
	Normal Situation	Faulty Core	Diverted Core	Either	Or	Or
						
23						
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25						
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27						
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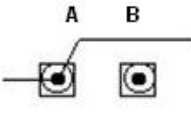
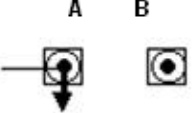
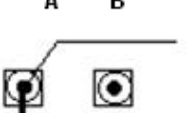
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NR/L3/SIG/11231 Signal Maintenance Testing Handbook		
NR/SMTH/Part 07/Appendix A04		
Top-Nutted Cable on Left Hand Side Checksheet		
Issue No. 01	Issue Date: 05/03/11	Compliance Date: 03/09/11

Signal Box:		Cable Identification:	
Location/Equipment Room From:		Location/Equipment Room To:	
Name:		Date:	
Signature:		Company:	
Comments:			

Original / Existing Cable Top-Nutted on Left Hand Side (A)				
Cable Core No.	Check and Wire Count			Cable Run and Insulation Tested
	Either	Or	Or	
				
01				
02				
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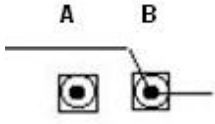
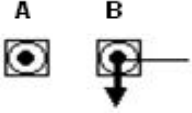
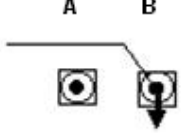
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NR/SMTH/Part 07/Appendix A04		
Top-Nutted Cable on Left Hand Side Checksheet		
Issue No. 01	Issue Date: 05/03/11	Compliance Date: 03/09/11

Original / Existing Cable Top-Nutted on Left Hand Side (A)				
Cable Core No.	Check and Wire Count			Cable Run and Insulation Tested
	Either	Or	Or	
		 A Strapped to	 A Strapped to	
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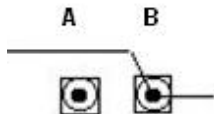
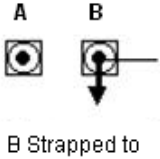
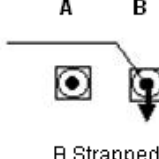
NR/L3/SIG/11231 Signal Maintenance Testing Handbook		
NR/SMTH/Part 07/Appendix A05		
Top-Nutted Cable on Right Hand Side Checksheet		
Issue No. 01	Issue Date: 05/03/11	Compliance Date: 03/09/11

Signal Box:		Cable Identification:	
Location/Equipment Room From:		Location/Equipment Room To:	
Name:		Date:	
Signature:		Company:	
Comments:			

Original / Existing Cable Top-Nutted on Right Hand side (B)				
Cable Core No.	Check and Wire Count			Cable Run and Insulation Tested
	Either	Or	Or	
		 B Strapped to	 B Strapped to	
01				
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NR/SMTH/Part 07/Appendix A05		
Top-Nutted Cable on Right Hand Side Checksheet		
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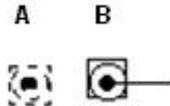
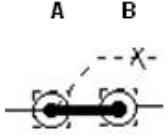
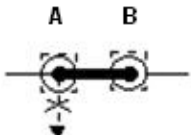
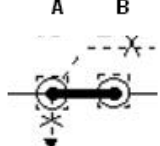
23			
24			
25			

Original / Existing Cable Top-Nutted on Right Hand side (B)				
Cable Core No.	Check and Wire Count			Cable Run and Insulation Tested
	Either	Or	Or	
				
26				
27				
28				
29				
30				
31				
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End

NR/L3/SIG/11231 Signal Maintenance Testing Handbook		
NR/SMTH/Part 07/Appendix A06		
Cable on Left Hand Side Changeover Checksheet		
Issue No. 01	Issue Date: 05/03/11	Compliance Date: 03/09/11

Signal Box:		Cable Identification:	
Location/Equipment Room From:		Location/Equipment Room To:	
Name:		Date:	
Signature:		Company:	
Comments:			

Original / Existing Cable Top Nuted on Left Hand Side (A)					
Cable Core No.	Cable Terminated & Insulation Tested	Cable Core Changeover			Cable Complete
		Either	Or	Or	
					
01					
02					
03					
04					
05					
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07					
08					
09					
10					
11					
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13					
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