Ref:	**NR/SMS/Part/R**
Issue:	15
Date:	02 December 2023
Compliance date:	02 March 2024

NR/L3/SIG/10663

NR/SMS/Part/R

Published and Issued by Network Rail, 2nd Floor, One Eversholt Street, London, NW1 2DN.

Care shall be taken with record cards stored in signal heads so that they do not obstruct any light output from the signal. They shall also not be stored behind the lamp as this could lead to a phantom aspect being displayed. Cards shall not be left in a position where the heat given out by a piece of equipment can pose a fire risk.

Maintenance record cards from any source other than those contained in NR/L3/SIG/10663 shall not be used to record NR/SMS tasks or tests.

Check previous information/data entered on a record card each time a new entry is made to see if there is any significant variation from previous entries or if there is a trend occurring in the readings.

This information may indicate a fault or problem starting which may be identified and rectified before the failure of the equipment.

Maintenance record cards are provided for each item of equipment where the task/test asks you to measure or record. There are also cards provided to enter information on particular equipment (e.g. lever frames).

Record cards are either paper or digital format and relate to the NR/SMS task/test named at the top of the sheet. They do not relate to any other maintenance system.

Enter details of all preventative or corrective maintenance test results on the appropriate maintenance record card.

Copies of each card will be available from your SM(S), My work app or they can be downloaded from Connect by clicking the ‘Network Rail Standards’ link on the Connect home page, then clicking ‘search’ and entering the standard number (10663) in the reference number box.

Enter your name and the company you work for on the card every time you enter details. If a measurement is taken using a meter or other test equipment, enter the identity and calibration details of the instrument(s).

If access to the asset is refused, fill in the record card and write the word ‘refused’ in the comments column.

Record cards shall be kept in the trackside apparatus case or equipment room information file if provided and practicable. If one of these is not provided or if it is not practicable, they shall be kept adjacent to the equipment they relate to. In both cases, they shall be protected by a plastic wallet.

Point system cards that relate to multiple ends of points shall be stored in the location nearest the ‘A’ end of the points to which they apply.

When a card is full, transfer the information and last data entry to a new card. If the old card is no longer needed on site, return it to your SM(S).

Record cards shall be reviewed and stored in accordance with local instructions.

INDEX OF NR/SMS MAITENANCE RECORD CARDS

All record card numbers start with NR/SMS/

INDEX

Card No.	Title
HO11 T087 RC01	HABD Equipment: GETS FÜES
HO12 RC01	HABD Equipment: Phoenix MB Sensor Temperature
IE29 RC01	Ansaldo-STS Interlocking System Colour Light Signalling System (SEI-CLSS)
IS15 RC01	Vital Harmon Logic Control
IS30 RC01	Harmon Crossing Processor (HXP-3)
IS35 RC01	WESTeX LCP3000 Crossing Predictor
LC09 RC01	Optex Redscan RLS3060 series LIDAR Record Card
LC50 T084 RC01	Power Operated Gate Opener (POGO)
LV11 - LV17 RC01	Lever Frame
MP01 RC01	SSI Panel Multiplexer: TEML41 (AN)
MP02 RC01	SSI Panel Multiplexer: WBS Type S2
MP03 RC01	SSI Panel Multiplexer: Vaughan Harmon
MP04 RC01	SSI Panel Multiplexer: GEC Type RM
PB18 RC01	Hydraulic Derailer
PF01 RC01	Point Fittings
PTS RC01	Point System (Hydraulic Pneumatic)
PTS RC02	Point System (Machine)
PTS RC03	Point System (Mechanical)
PTS RC04	Point System (HPSS)
PTS RC05	Point System Operating Current
PTS RC06	Point System Unistar HR
RC01 RC01	RC System: Type ‘R’ Reed FDM Test
RC01 RC02	Reed Point Detection (Transmitter)
RC01 RC03	Reed Point Detection (Receiver)
RC02 RC01	RC System: GEC Type ‘RR’ Reed FDM Test
RC03 RC01	RC System: Westone Non-Vital FDM Test
RC04 RC01	RC System: FDM69-NV Test
RC05 RC01	Siemens Westplex
RC07 RC01	RC System: GEC Type RM TDM Test

Card No.	Title
RC08 RC01	RC System: WBS Type TDM 69 Test
RC09 RC01	RC System: WBS Type S2 TDM Test
RC10 RC01	RC System: Westronic F1 TDM Test
RC11 RC01	RC System: Vaughan Harmon Type DM11 Test
RC12 RC01	RC System: Telecode 80 Test
RC13 RC01	RC System: AP Datalink TDM Test
RC16 RC01	RC System: Westronic 1024 TDM Test
SW20 T059 RC01	Severn Tunnel Pull Wire
T021 RC01	Junction Indicator and Position Light Signal - All Types
T021 RC02	Route Indicator - non LED
T021 RC03	Route Indicator - LED
T021 RC04	Signal - (Filament / Light Engine)
T021 RC05	Signal - LED
T021 RC06	Signal SMIS type
T026 RC01	Trainstop (Electro-Hydraulic) Calibration
T029 RC01	ATP (Chilterns)
T041 RC01	IRJ - DC & BR-WR Quick Release TC
T041 RC02	IRJ - DC & BR-WR Quick Release TC
T042 RC01	Axle Counter AzL70 Evaluator Single Rail Contacts
T042 RC02	Axle Counter AzL70 Evaluator Double Rail Contacts
T042 RC03	Axle Counter AzL70/30 Evaluator EAK30 Junction Box
T043 RC01	Track Circuit Aid (TCAID)
T044 RC01	Treadle Timing & Adjustment
T045 RC01	AzLM & AzLE Axle Counters
T046 RC01	Level Crossing CCTV Camera
T047 RC01	CCTV HF Tx System (Marconi/GEC 14.5MHz AM)
T047 RC02	CCTV HF Tx System (Philips FM)
T051 RC01	AC Busbar & Earth Test
T051 RC02	DC Busbar & Earth Test
T052 RC01	Dynamic Earth Test (Power Worked Points)

Card No.	Title
T052 RC02	Dynamic Earth Test (Level Crossing Barriers)
T053 RC01	Earth Leakage Detector Tests
T053 RC02	IR425 Record Card
T054 RC01	Cable Insulation Test
T054 RC02	Non-Intrusive Earth Test for FDM systems (method A)
T054 RC03	Non-Intrusive Earth Test for FDM systems (method B)
T055 RC01	Secondary Cell Test ALCAD - Vantage
T055 RC02	Secondary Cell Test - Cyclon
T055 RC03	Secondary Cell Test Lead Acid / Alkaline
T055 RC04	Secondary Cell Test Power Box - Modular
T056 RC01	Avel-Lindberg Static Inverter
T057 RC01	Uninterruptible Power Supply (Not TPWS UPS)
T057 RC02	Uninterruptible Power Supply (For TPWS Only)
T058 RC01	Primary Cells
T060 RC01	Emergency Signals On Control (ESOC)
T061 RC01	Relay Timers
T062 RC01	Line Protection Units
T063 RC01	RETB Radio Systems – Regular Tasks
T063 RC02	RETB Radio Systems – Service A
T063 RC03	RETB System (Six Monthly)
T064 RC01	RETB Fixed Site Power Supply Test – Service A
T064 RC02	RETB Fixed Site Power Supply Test – Service B
T065 RC01	RETB Fixed Site Antenna Systems – Service A
T065 RC02	RETB Fixed Site Antenna Systems – Service B
T066 RC01	RETB Fixed Site Radio and Interface Equipment (Pre-Site Visit)
T066 RC02	RETB Fixed Site Radio and Interface Equipment– Service A
T066 RC03	RETB Fixed Site Radio and Interface Equipment– Service B
T089 RC01	SSI Datalinks Health Check
T089 RC02	SSI Datalinks Baseband / LDT
T251 RC01	Track Circuit Tests - DC Track

Card No.	Title
T253 RC01	Track Circuit Tests - ET200 (M)
T253 RC02	Track Circuit Tests - ET200 (F)
T254 RC01	Track Circuit Tests - SF15 / Aster U
T255 RC01	Track Circuit Tests - HVI
T256 RC01	Track Circuit Tests - BR-WR Quick Release
T257 RC01	Track Circuit Tests - Reed Type RT
T258 RC01	Track Circuit Tests - Rectified AC (Diode)
T259 RC01	Track Circuit Tests - FS2600
T260 RC01	Track Circuit Tests - 50Hz AC
T261 RC01	Track Circuit Tests - Rail Circuit
T262 RC01	Track Circuit Test - DC Coded
T263 RC01	Track Circuit Tests - EBI Track 400 (M)
T263 RC02	Track Circuit Tests - EBI Track 400 (OL)
T263 RC03	Track Circuit Tests - EBI Track 400 (SA)
T302 RC01	Signal Visibility Check
TD11 RC01	Train Describer - Electro Mechanical
TD21 RC01	Train Describer - HP21MX 2100 Series
TD21 RC02	Train Describer - HP21MX 2108 Series
TD31 RC01	Train Describer - Vaughan Type 4M
TD32 RC01	Train Describer - Vaughan Type Small (Ex BR-WR)
TD37 RC01	Train Describer - GEC/GE Micro Processor Based
TD40 RC01	Train Describer - GETS Dual (NS)
TP11 RC01	Equipment Associated with Signals
TP11 RC02	Equipment Associated with PSR's & Buffer Stop
TP11 RC03	Self Powered OSS (SPOSS)
TP11 RC04	OSS+ Loops at TPWS+ Installations
TS20 RC01	Indusi Train Stops Magnetic Train Stop Associated with Stop Signals
TS20 RC02	Indusi Train Stops Magnetic Train Stop Associated with Speed Control
TS22 RC01	Trainstop - Manchester Metro

END

Network Rail	**ATP Equipment (GWML) Record Card (Front) NR/SMS/AP11**	**Form: NR/SMS/AP11/RC/01 Date: December 2009 Issue: 01**

Signal Box:	Signal Number:

Number		Loop	Enclosure								Ground Tester Tests		
		Infill Loop Resistance	Main Power Supply Fuses	Main Beacon Feedback	Infill Beacon Feedback	Additional Beacon Feedback	* Encoder LED's Flashing 50% duty cycle				Beacon Strength	Infill Loop Strength	Message Correct
	Units	Ohms	AC(V)	DC(V)	DC(V)	DC(V)							
	Limits	360 to 400	99 to 121	15 to 25	10 to 25	15 to 25					Number of bars above minimum		Yes / No
	Terms	3 & 4	2 & 3	27(+) 28(-)	31(+) 32(-)	40(+) 41(-)	AH1	AH2	BH1	BH2			
1													
2													
3													
4													
5													
6													
7													
8													

Number	Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					
5					
6					
7					
8					

*: Insert tick if LED indications are correct

Network Rail	**ATP Equipment (GWML)** **Record Card (Front)** **NR/SMS/AP11**	**Form: NR/SMS/AP11/RC/01** **Date: December 2009** **Issue: 01**

Number		Loop	Enclosure								Ground Tester Tests		
		Infill Loop Resistance	Main Power Supply Fuses	Main Beacon Feedback	Infill Beacon Feedback	Additional Beacon Feedback	* Encoder LED's Flashing 50% duty cycle				Beacon Strength	Infill Loop Strength	Message Correct
	Units	Ohms	AC(V)	DC(V)	DC(V)	DC(V)							
	Limits	360 to 400	95 to 125	15 to 25	10 to 25	15 to 25					Number of Bars Above Minimum		Yes / No
	Terms	3 & 4	2 & 3	27(+) 28(-)	31(+) 32(-)	40(+) 41(-)	AH1	AH2	BH1	BH2			
9													
10													
11													
12													
13													
14													
15													
16													
17													

Number	Comments	Test Equipment Identity	Signature	Name & Company	Date
9					
10					
11					
12					
13					
14					
15					
16					
17					

*: Insert tick if LED indications are correct

Network Rail	**AWS Test - Electro and Permanent** Maintenance Test	**Form: NRSMS/AW11/T024/RC01** **Date: 01/09/2018** **Issue: 03**

Signal Box / Interlocking:	Location:	Signal / AWS Number

No	Electro-Magnet								Permanent Magnet	
	SP Meter Reading		Voltage Reading			Height from rail top (mm)	Current when Signal at G (A)	Spark Quench Diode/ Resistor		
	Signal at R, Y or YY	Signal at G	Earth Test (V) (Magnet Energised)					Resista-nce (Ohms)	SP Meter Reading	Height from rail top (mm)
			B-E	N-E	BN					
1										
2										
3										
4										
5										
6										
7										
8										

No	S&P Meter Identity	Voltmeter Identity	Comments	Signature	Name & Company	Date
1						
2						
3						
4						
5						
6						
7						
8						

Network Rail	**AWS Test - Electro and Permanent** Maintenance Test	**Form: NRSMS/AW11/T024/RC01** **Date: 01/09/2018** **Issue: 03**

No	Electro-Magnet								Permanent Magnet	
	SP Meter Reading		Voltage Reading			Height from rail top (mm)	Current when Signal at G (A)	Spark Quench Diode/ Resistor		
	Signal at R, Y or YY	Signal at G	Earth Test (V) (Magnet Energised)					Resista-nce (Ohms)	SP Meter Reading	Height from rail top (mm)
			B-E	N-E	BN					
9										
10										
11										
12										
13										
14										
15										
16										
17										

No	S&P Meter Identity	Voltmeter Identity	Comments	Signature	Name &Company	Date
9						
10						
11						
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15						
16						
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Network Rail	**AWS Test - Suppressed Permanent and Electro-Magnet** Maintenance Test	**Form: NR/SMS/AW11/T024/RC02** **Date: 01/09/2018** **Issue: 03**

Signal Box / Interlocking:	Location:	Signal / AWS Number

No	Suppressed Permanent Magnet							Electro-Magnet							
	De-energised	Energised				Height from rail top (mm)	Spark Quench Diode/ Resistor	SP Meter Reading		Voltage Reading			Height from rail top (mm)	Current when Signal at G (A)	Spark Quench Diode/ Resistor
	SP Meter Reading	SP Meter Reading	Voltage Reading				Resistance (Ohms)	Signal at R, Y or YY	Signal at G	Earth Test (V) (Magnet Energised)					Resistance (Ohms)
			Earth Test (V)							B-E	N-E	BN			
			B-E	N-E	BN										
1															
2															
3															
4															
5															
6															
7															
8															

No	S&P Meter Identity	Voltmeter Identity	Comments	Signature	Name & Company	Date
1						
2						
3						
4						
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8						

Network Rail	**AWS Test - Suppressed Permanent and Electro-Magnet** Maintenance Test	**Form: NR/SMS/AW11/T024/RC02** **Date: 01/09/2018** **Issue: 03**

No	Suppressed Permanent Magnet							Electro-Magnet							
	De-energised	Energised				Height from rail top (mm)	Spark Quench Diode/ Resistor	SP Meter Reading		Voltage Reading			Height from rail top (mm)	Current when Signal at G (A)	Spark Quench Diode/ Resistor
	SP Meter Reading	SP Meter Reading	Voltage Reading Earth Test (V)				Resistance (Ohms)	Signal at R, Y or YY	Signal at G	Earth Test (V) (Magnet Energised)					Resistance (Ohms)
			B-E	N-E	BN					B-E	N-E	BN			
9															
10															
11															
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13															
14															
15															
16															
17															

No	S&P Meter Identity	Voltmeter Identity	Comments	Signature	Name & Company	Date
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17						

Network Rail	**AWS Test - Permanent Magnet Only** Maintenance Test	**Form: NRSMS/AW11/T024/RC03** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking:	Location:	Signal / AWS Number

SP Meter Reading	Height from rail top (mm)	SP Meter Identity	Comments	Signature	Name & Company	Date

Network Rail	**AWS Test - Permanent Magnet Only** Maintenance Test	**Form: NRSMS/AW11/T024/RC03** **Date: 01/09/2018** **Issue: 02**

SP Meter Reading	Height from rail top (mm)	SP Meter Identity	Comments	Signature	Name & Company	Date

NetworkRail	Siemens Axle Counter: AzS ZPD 43 Wheel Detector Equipment	Form: NR/SMS/AX28/RC01 Date: 02/12/2023 Issue: 02

Signal Box / Interlocking / Location:	Detection Point Name:	Axle Counter Section(s):

	Incoming Supply NS	Output Voltage	TX 1 Frequency Terminals 6 & 7	TX 2 Frequency Terminals 8 & 9	Receiver Voltage UE1 Terminals 1 & 2	Receiver Voltage UE2 Terminals 3 & 4
Desired Value	60V DC	Min 1V AC	43kHz	43kHz	-	-
Tolerance Range	30 to 72V	0.48 to 1.8V	41.5 to 44.5 kHz	41.5 to 44.5 kHz	60 to 150 mV	60 to 150 mV
01						
02						
03						
04						
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07						
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13						

NetworkRail	Siemens Axle Counter: AzS ZPD 43 Wheel Detector Equipment	Form: NR/SMS/AX28/RC01 Date: 02/12/2023 Issue: 02

No	P/way condition at head. Detail as per SMS AX28 Service A 1.3 & 1.5	Comments: *Adjustments, Condition Etc*	Head removed, replaced or renewed?	Meter(s) Identity	Name & Company	Date
01						
02						
03						
04						
05						
06						
07						
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11						
12						
13						

General Comments

NetworkRail	Siemens Axle Counter: AzS ZP 43 V Wheel Detector Equipment	Form: NR/SMS/AX29/RC01 Date: 02/12/2023 Issue: 03

Signal Box / Interlocking / Location:	Detection Point Name:	Axle Counter Section(S):

	Supply U60	Operating Voltage U24	Wheel Detector Frequency FS	Receiver Voltage UE1	Receiver Voltage UE2	Standard Voltage Ur1	Standard Voltage Ur2	Frequency F1	Frequency F2	Output Voltage UL
Desired Value	60V DC	22V DC	43kHz	-	-	5.5V DC	5.5V DC	3.60kHz	6.52kHz	Min 1.0 V AC
Tolerance Range	30 to 72V	21.3 to 22.4V	42.8 to 43.2 kHz	60mV to 150mV	60mV to 150mV	5.3V to 6.0 V	5.2V to 5.9 V	3.55 to 3.65 kHz	6.42 to 6.62kHz	0.48-1.8V
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NetworkRail	Siemens Axle Counter: AzS ZP 43 V Wheel Detector Equipment	Form: NR/SMS/AX29/RC01 Date: 02/12/2023 Issue: 03

No	Date	Name & Company	Meter(s) Identity	Comments:	Head removed, replaced, or renewed?	P/way condition at head
01						
02						
03						
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Network Rail	**Siemens Axle Counter – AzSM (E) Evaluator Record Card**	**Form: NR/SMS/AX30/RC01** **Date: 04/06/2022** **Issue: 03**

Signal Box / Interlocking:	Location	Evaluator Name:

	ZAN Ident																
	Head Ident																
Entry No	Date	Volts U1	Freq f1	Volts U2	Freq f2	Volts U1	Freq f1	Volts U2	Freq f2	Volts U1	Freq f1	Volts U2	Freq f2	Volts U1	Freq f1	Volts U2	Freq f2
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Network Rail	**Siemens Axle Counter – AzSM (E) Evaluator Record Card**	**Form: NR/SMS/AX30/RC01** **Date: 04/06/2022** **Issue: 03**

NO	Date	Name & Company	Meter(s) Identity	Comments:	Head removed/ replaced or renewed?	P/way condition at head
1						
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NetworkRail	Siemens Axle Counter: AzS 350U Evaluator	Form: NR/SMS/AX31/RC01 Date: 02/12/2023 Issue: 02

Signal / Interlocking / Location	ACE Location / Number

	VESBA Card Slot No				VESBA Card Slot No				VESBA Card Slot No			
	Detection Point Name				Detection Point Name				Detection Point Name			
	Voltage Ur1	Frequency F1	Voltage Ur2	Frequency F2	Voltage Ur1	Frequency F1	Voltage Ur2	Frequency F2	Voltage Ur1	Frequency F1	Voltage Ur2	Frequency F2
Desired Value	3V DC	3.6kHz	3V DC	6.52kHz	3V DC	3.6kHz	3V DC	6.52kHz	3V DC	3.6kHz	3V DC	6.52kHz
Tolerance Range	2.9 to 3.1 V	3.55 to 3.65kHz	2.9 to 3.1 V	6.42 to 6.62kHz	2.9 to 3.1 V	3.55 to 3.65kHz	2.9 to 3.1 V	6.42 to 6.62kHz	2.9 to 3.1 V	3.55 to 3.65kHz	2.9 to 3.1 V	6.42 to 6.62kHz
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NetworkRail	Siemens Axle Counter: AzS 350U Evaluator	Form: NR/SMS/AX31/RC01 Date: 02/12/2023 Issue: 02

	VESBA Card Slot No				VESBA Card Slot No							
	Detection Point Name				Detection Point Name							
	Voltage Ur1	Frequency F1	Voltage Ur2	Frequency F2	Voltage Ur1	Frequency F1	Voltage Ur2	Frequency F2	Date	Name & Company	Signature	Meter ID
Desired Value	3V DC	3.6kHz	3V DC	6.52kHz	3V DC	3.6kHz	3V DC	6.52kHz				
Tolerance Range	2.9 to 3.1 V	3.55 to 3.65kHz	2.9 to 3.1 V	6.42 to 6.62kHz	2.9 to 3.1 V	3.55 to 3.65kHz	2.9 to 3.1 V	6.42 to 6.62kHz				
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Network Rail

Wheel Sensor – RSR 123

Maintenance Tests

Form: NR/SMS/AX40-41/RC01
Date: 05/12/2020
Issue: 01

Signal Box / Interlocking / Equipment Room:

Location:

Detection Point / Name:

AEB/IMC ID:

FAdC EBI Gate 200 Vamos (#)

Cable Length:

No of Plug Couplers:

This Record Card is not mandated, as some systems have in built Data Recording Capabilities. You are only required to complete the sections of this card related to the service that you are undertaking

					AX40 **Periodic Task 3**				**AX41 LC70 LC71** **Service B**		**AX41** **Periodic Task 2**			
					Sensor Height		**Sensor Depth**		**Lifecycle Readings**		**Rail Sensor Torque Adjusted ?**			
Date	Name	Company	Signature	Meter ID	40-45mm	Adjusted	0 – 6mm	Adjusted	System 1 - 475 to 525mv	System 2 - 475 to 525mv	Allen Screws - 25Nm	M10 Nuts - 15Nm	M12 Nuts – 40Nm	Spring Washer in contact
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N
						Y / N		Y / N			Y / N	Y / N	Y / N	Y / N

(#) Indicate type of Use

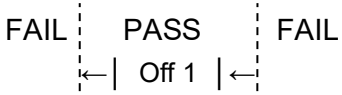
NetworkRail	**Siemens Axle Counter ACM 100,** **WSD Wheel Detector Record Card (Front)** **NR/SMS/AX51 - NR/SMS/Test/ 038, 039**	**Form: NR/SMS/AX51/ /RC/01** **Date: 03/03/18** **Issue: 01**

Signal Box / Interlocking:	**REB / Location**:	**WSD Identity**:	**WSD powered by ACM**:

WSD information used by ACM: **ACM Identity** **REB/Location**

NR/SMS/Test/039 – In Service Functional Test of the Wheel Detector	
1 – Mark a line to note the position of the centre marking in relation to "OFF 1" when current = 4.75mA to 5.25mA 2 - Mark a line to note of the centre marking in relation to "ON 1" when current = 1.3mA to 2.99mA	1 - Mark a line to note position of the centre marking in relation to "OFF 2" when current = 4.75mA to 5.25mA 2 - Mark a line to note position of the centre marking in relation to "ON 2" when current = 1.3mA to 2.99mA

Note: The acceptable "pass" area on the test block is marked by both the area within the two vertical lines and the full length of the marker arrows.



If outside this area – Check Height of WSD (43mm and 45mm from rail head throughout) – Check for Metal Debris – Check WSD Fixings.

If "fail" Recalibrate WSD – Follow NR/SMS/Test/038

Date	Technician Name	Off 1 Step 1.5	On 1 Step 1.6	Off 2 Step 1.10	On 2 Step 1.11	Recalibration Undertaken

		←| Off 1 |←	→| On 1 |→	→| Off 2 |→	←| On 2 |←	Yes/No
		←| Off 1 |←	→| On 1 |→	→| Off 2 |→	←| On 2 |←	Yes/No
		←| Off 1 |←	→| On 1 |→	→| Off 2 |→	←| On 2 |←	Yes/No
		←| Off 1 |←	→| On 1 |→	→| Off 2 |→	←| On 2 |←	Yes/No
		←| Off 1 |←	→| On 1 |→	→| Off 2 |→	←| On 2 |←	Yes/No
		←| Off 1 |←	→| On 1 |→	→| Off 2 |→	←| On 2 |←	Yes/No

NetworkRail	**Siemens Axle Counter ACM 100,** **WSD Wheel Detector Record Card (Rear)** **NR/SMS/AX51 - NR/SMS/Test/ 038, 039**	**WSD ID:**	**Form: NR/SMS/AX51/T038,039/RC/01** **Date: 03/03/18** **Issue: 01**

NR/SMS/Test/039 – In Service Functional Test of the Wheel Detector - Continued

Date	Technician Name	←| Off 1 |← Step 1.5	→| On 1 |→ Step 1.6	→| Off 2 |→ Step 1.10	←| On 2 |← Step 1.11	Recalibration Undertaken
		←| Off 1 |←	→| On 1 |→	→| Off 2 |→	←| On 2 |←	Yes/No
		←| Off 1 |←	→| On 1 |→	→| Off 2 |→	←| On 2 |←	Yes/No
		←| Off 1 |←	→| On 1 |→	→| Off 2 |→	←| On 2 |←	Yes/No

		←| Off 1 |←	→| On 1 |→	→| Off 2 |→	←| On 2 |←	Yes/No

NR/SMS/Test/038 – Calibration of Wheel Detector										
Date	Technician Name	Step 1.4. Record Current (1.3 - 7mA)	Step 1.5 Record Current (1.2 – 2.99mA)	Step 1.6. Record Current (4.75 – 5.25mA)	Pass / Fail	Step 1.9. Record Current (1.3 - 7mA)	Step 1.10. Record Current (1.2 – 2.99mA)	Step 1.11 Record Current (4.75 – 5.25mA)	Pass / Fail	Comments (e.g Is WSD Changed?)

NetworkRail	Train Entering Terminal Station (TETS) Record Card – Service B	Form: NR/SMS/AX99 - TETS Date: March 2018 Issue: 01

Site Name :	Mileage: m ch

No	Date		T1				T2			T3				T4				Supply Voltage (45-72 VDC)	Name / Signature
			Channel 1	Channel 2	Channel 3	Channel 4	Channel 1	Channel 2	Channel 3	Channel 4	Channel 1	Channel 2	Channel 3	Channel 4	Channel 1	Channel 2	Channel 3	Channel 4		
1		Lower																		
		Upper																		
2		Lower																		
		Upper																		
3		Lower																		
		Upper																		
4		Lower																		
		Upper																		
5		Lower																		
		Upper																		
6		Lower																		
		Upper																		
7		Lower																		
		Upper																		
8		Lower																		
		Upper																		
9		Lower																		
		Upper																		
10		Lower																		
		Upper																		

NetworkRail	**Control System: TEML41**	**Form: NR/SMS/CS02/RC01** **Date: 05/12/2020** **Issue: 01**

Signal Box:	Remote Control / Panel Multiplexer *Delete as appropriate*	PSB System Name*:	Interlocking Name*:

Service A Tests					
System Status Indications OK**	Outstanding Faults	Comments	Signature	Name & Company	Date

* For RC systems enter details to indicate system or interlocking

** Insert tick if all correct, problems to be listed in the comment's column

NetworkRail	**Control System: TEML41**	**Form: NR/SMS/CS02/RC01** **Date: 05/12/2020** **Issue: 01**

Number	Service B Tests																	
	Power Supply Voltages																	
	Supply 1						Supply 2						Dual Feed					
	Logic Shelve1		Logic Shelve2		Comms		Logic Shelve1		Logic Shelve 2		Comms		Logic Shelve1		Logic Shelve 2		Comms	
	DC Level	AC Ripple	DC Level	AC Ripple	DC Level	AC Ripple	DC Level	AC Ripple	DC Level	AC Ripple	DC Level	AC Ripple	DC Level	AC Ripple	DC Level	AC Ripple	DC Level	AC Ripple
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		

Number	Power Supply Voltages						Line Levels (dB)		Comments	Test Equipment Identity	Signature	Name & Company	Date
	Other Supplies												
	1:		2:		3:								
	DC Level	AC Ripple	DC Level	AC Ripple	DC Level	AC Ripple	Tx	Rx					
1													
2													
3													
4													
5													
6													
7													
8													

* Insert tick if all correct, problems to be detailed

NetworkRail	**Control System: GETS DM11**	**Form: NR/SMS/CS03/RC01** **Date: 05/12/2020** **Issue: 01**

PSB:	TDM/Pnmulx:	PSB System Name*:	Interlocking Name/SSI Location*:

Service A Tests															
Cubicle		Power Supplies						External Channel Counts			Comments	Meter Identity	Signature	Name & Company	Date
System Status Indications OK**	System C/over OK**	5V Logic		7V Logic		12V Interface									
		DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	ack	nak	No Response					

* Enter details as appropriate to system

** Insert tick if all correct, problems to be listed in the comment's column

NetworkRail	Control System: GETS DM11	Form: NR/SMS/CS03/RC01 Date: 05/12/2020 Issue: 01

Service B Tests (TDM systems Only)					Comments	Test Equipment Identity	Signature	Name & Company	Date
Line levels (dBm)		PSU O/P to TDM							
Tx	Rx	V (Max)	V (min)	Waveform*					

* Insert tick if all correct, problems to be detailed

General System Comments and Observations	Name	Company	Date

NetworkRail	**Control & Interface System: GETS Delphin 1024**	**Form: NR/SMS/CS04/RC01** **Date: 05/12/2020** **Issue: 01**

PSB:	Delphin1024 System*: RC/TDM PIIU PMUX TDMUX	PSB System Name**:	Interlocking Name/SSI Location**:

Service A Tests

Cubicle		Mains Surge Protectors			External Channel Counts			Comments	Signature	Name & Company	Date
System Status Indications OK***	System Change Over OK***	Status Indications ***									
		OK	Partial	Failed	ack	nak	No Response				

* Delete as appropriate

** Enter details as appropriate to system

*** Insert tick, problems to be listed in the comment's column

NetworkRail	Control & Interface System: GETS Delphin 1024	Form: NR/SMS/CS04/RC01 Date: 05/12/2020 Issue: 01

Service B Tests												
Line levels (dBm)		Power Supplies (DC Volts)**						PSU Comments	Test Equipment Identity	Signature	Name & Company	Date
Tx	Rx	7V Logic	12V interface	24 V Interface	12V External	24V External	48V External					

General System Comments and Observations	Name	Company	Date

** Enter details as appropriate to system

NetworkRail	**Control & Interface System: GETS Sapphire T48**	**Form: NR/SMS/CS05/RC01** **Date: 05/12/2020** **Issue: 01**

PSB:	Sapphire T48 System*: CBI Interface / TD Interface / SPAD Alert	PSB System Name**:	Remote Interlocking Name **:

Service A Tests											
Cubicle		Mains Surge Protectors			External Channel Counts			Comments	Signature	Name & Company	Date
System Status Indications OK***	System Change Over OK***	Status Indications ***									
		OK	Partial	Failed	ack	nak	No Response				

* Delete as appropriate

** Enter details as appropriate to system

*** Insert tick, problems to be listed in the comment's column

Service B Tests						
Power Supplies (DC Volts)**		Comments	Test Equipment Identity	Signature	Name & Company	Date
6V	5V					

Network Rail	**Wiring Degradation Record Card (Front) NR/SMS/EL21 - EL31**	**Form: NR/SMS/EL21/31/RC/01** **Date: August 2004** **Issue: 01**

Signal Box:	Equipment/ Relay Room Name/Number:	Location Name/Number:

Initial Inspection							
Degradation Type (Wet or Dry)	Wire Identity (Date and/or manufacture)	Wire Location (Rack, Relay etc)	Degree of Degradation#	Comments	Initial Inspection By	Company	Date

Maintenance Inspections				
Degree of Degradation#	Comments	Signature	Name & Company	Date

#: Insert a number between 1 and 5 (1 Normal; 2 Fair; 3 Poor; 4 severe; 5 extreme)

Network Rail	**Wiring Degradation Record Card (Rear) NR/SMS/EL21 - EL31**	**Form: NR/SMS/EL21/31/RC/01** **Date: August 2004** **Issue: 01**

Maintenance Inspections				
Degree of Degradation#	Comments	Signature	Name & Company	Date

#: Insert a number between 1 and 5 (1 Normal; 2 Fair; 3 Poor; 4 severe; 5 extreme)

Network Rail	**Relay Plugboard Checks Record Card (Front) NR/SMS/EL21 - EL31**	**Form: NR/SMS/EL21/31/RC/02** **Date: August 2004** **Issue: 01**

Signal Box:	Equipment/ Relay Room Name/Number:	Location Name/Number:	Location Conditions *Inland, Costal, Industrial etc*

Rack / Unit:	Row:	Number of Plugboards*:*	Percentage Sample:	Heating Provided: Yes / No *Delete as appropriate*

Maintenance Inspections						
Relay Function	Plugboard Colour	Plugboard Type	Comments *Including contamination type, internal conditions, action taken etc*	Signature	Name & Company	Date

Network Rail	**Relay Plugboard Checks Record Card (Rear) NR/SMS/EL21 - EL31**	**Form: NR/SMS/EL21/31/RC/02 Date: August 2004 Issue: 01**

Maintenance Inspections						
Relay Function	Plugboard Colour	Plugboard Type	Comments *Including contamination type, internal conditions, action taken etc*	Signature	Name & Company	Date

Network Rail	**Site Attendance Record Card** Location Case	**Form: NR/SMS/EL21/RC/01** **Date: Sept 2018** **Issue: 02**

Signal Box: Location Name/Number:

Date	Time	Name (Print)	Signature	Company	Reason For Visit #	Comments

: If applicable enter a code for the visit [1/Maintenance 2/Faulting 3/Inspection Visit 4/Engineering Work 5/Wire Degradation Checks 6/Siver Migration Checks]

Network Rail	**Site Attendance Record Card** **Location Case**	**Form: NR/SMS/EL21/RC/01** **Date: Sept 2018** **Issue: 02**

Date	Time	Name (Print)	Signature	Company	Reason For Visit #	Comments

: If applicable enter a code for the visit [1/Maintenance 2/Faulting 3/Inspection Visit 4/Engineering Work 5/Wire Degradation Checks 6/Siver Migration Checks]

Network Rail	**Site Attendance Record Card** Equipment Room	**Form: NR/SMS/EL31/RC/01** **Date: Sept 2018** **Issue: 03**

Signal Box: Location Name/Number:

Date	Time	Name (Print)	Signature	Company	Reason For Visit #	Temp On Arrival	Comments

: If applicable enter a code for the visit [1/Maintenance 2/Faulting 3/Inspection Visit 4/Engineering Work 5/Wire Degradation Checks 6/Siver Migration Checks]

Network Rail	**Site Attendance Record Card** Equipment Room	**Form: NR/SMS/EL31/RC/01** **Date: Sept 2018** **Issue: 03**

Date	Time	Name (Print)	Signature	Company	Reason For Visit #	Temp On Arrival	Comments

: If applicable enter a code for the visit [1/Maintenance 2/Faulting 3/Inspection Visit 4/Engineering Work 5/Wire Degradation Checks 6/Siver Migration Checks]

Network Rail	**Instead Signalling Event Recorder Record Card (Front) NR/SMS/ER11**	**Form: NR/SMS/ER11/RC/01 Date: August 2004 Issue: 01**

Signal Box / Interlocking:	Location:	Instead Type:	Identity Number:

Service A Tests*		Comments	Signature	Name & Company	Date
Correct Indications	Correct Time & Date				

*: Insert tick if correct

Network Rail	**Instead Signalling Event Recorder Record Card (Rear) NR/SMS/ER11**	**Form: NR/SMS/ER11/RC/01** **Date: August 2004** **Issue: 01**

Service B Tests						Comments	Signature	Name & Company	Date
Self Test Routine *	Disk Drive Cleaned **	Disk Interrogated **	Functions Operating **	Cyclon Battery Renewed **	Clock Battery Renewed **				

* Insert tick if correct **: Insert Yes / No as appropriate

Network Rail	**HABD Equipment: GETS FÜES Record Card (Front) NR/SMS/HO11 – T/087**	**Form: NR/SMS/HO11/T087/RC/01** **Date: April 2006** **Issue: 01**

Signal Box / Interlocking:	Location:

Number	Service A Tests							Service B Tests						
	Field End							Field End						
	REB Cubicle Checks *							REB Cubicle Voltage Tests [5.1]						
	Voltage Arresters [1.3]	Power Supplies [1.4]	Simplex/ Duplex Cards [1.5]	Wheel Sensor Cards [1.6]	UPS [1.7]	CAN Tool Tests [1.10]	Optical Deterioration [1.11]	+ 12V Measuring Head	-12v Measuring Head	+12v Cooler CAN	-12v CAN	+24 CAN	+5v CAN	UPS Test Note Max Batt. Capacity [5.2]
1														
2														
3														
4														
5														
6														
7														
8														

Number	Service B Tests										Meter Identity	Signature	Name & Company	Date
	Field End													
	Wheel Sensor Checks * [6.5]	Mirror Checks		Function Tests * [8.1]	Calibration (Appendix A) * [7.21]									
		Cleaned Yes/No	Recalibrated Yes/No [7.20]		Internal			External						
					HOAL	HOAR	FBOA	HOAL	HOAR	FBOA				
1														
2														
3														
4														
5														
6														
7														
8														

*: Insert tick if correct to NR/SMS steps Note: numbers in the [] brackets refer to the NR/SMS steps

Network Rail	**HABD Equipment: GETS FÜES Record Card (Rear) NR/SMS/HO11 – T/087**	**Form: NR/SMS/HO11/T087/RC/01 Date: April 2006 Issue: 01**

Number	**Service B Tests**																		
	Field End																		
	Sensor Alignment (Appendix B)												Wheel Sensor Alignment (Appendix C) *			Components Replaced			
	HOAL(Element)				HOAR(Element)				FBOA(Element)				Sensor RR	Sensor MK	Sensor GR	Component Details & Serial No	Signature	Name & Company	Date
	0	1	2	3	5	6	7	8	0	1	2	3							
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			

Number	Comments	Meter Identity	Signature	Name & Company	Date
1					
2					
3					
4					
5					
6					
7					
8					

*: Insert tick if correct to NR/SMS steps

Network Rail	**HABD Equipment: Phoenix MB Record Card - Accuracy Test**	**Form: NR/SMS/HO12** **Date: March 2018** **Issue: 01**

SCT	**Mileage: m ch**	**Serial No:**	**Software Version:**	**Track: From To**

	Nominal Values	**Actual Values**					
Accuracy of Sensors		HDB1 Left	HDB2 Right	HWB1 Left	HWB1 Right	HWB2 Left	HWB2 Right
Sensor Serial No:							
HBD Test temp.1	70ºC +- 3ºC						
HBD Test temp.2	120ºC +- 5ºC						
HWD Test temp.1	300ºC +- 10ºC						
HWD Test temp.2	400ºC +- 20ºC						
	Date						
	Signature & Initials						

	Nominal Values	**Actual Values**					
Accuracy of Sensors		HDB1 Left	HDB2 Right	HWB1 Left	HWB1 Right	HWB2 Left	HWB2 Right
Sensor Serial No:							
HBD Test temp.1	70ºC +- 3ºC						
HBD Test temp.2	120ºC +- 5ºC						
HWD Test temp.1	300ºC +- 10ºC						
HWD Test temp.2	400ºC +- 20ºC						
	Date						
	Signature & Initials						

	Nominal Values	**Actual Values**					
Accuracy of Sensors		HDB1 Left	HDB2 Right	HWB1 Left	HWB1 Right	HWB2 Left	HWB2 Right
Sensor Serial No:							
HBD Test temp.1	70ºC +- 3ºC						
HBD Test temp.2	120ºC +- 5ºC						
HWD Test temp.1	300ºC +- 10ºC						
HWD Test temp.2	400ºC +- 20ºC						
	Date						
	Signature & Initials						

	Nominal Values	**Actual Values**					
Accuracy of Sensors		HDB1 Left	HDB2 Right	HWB1 Left	HWB1 Right	HWB2 Left	HWB2 Right
Sensor Serial No:							
HBD Test temp.1	70ºC +- 3ºC						
HBD Test temp.2	120ºC +- 5ºC						
HWD Test temp.1	300ºC +- 10ºC						
HWD Test temp.2	400ºC +- 20ºC						
	Date						
	Signature & Initials						

	Nominal Values	**Actual Values**					
Accuracy of Sensors		HDB1 Left	HDB2 Right	HWB1 Left	HWB1 Right	HWB2 Left	HWB2 Right
Sensor Serial No:							
HBD Test temp.1	70ºC +- 3ºC						

	Nominal Values	**Actual Values**					
Accuracy of Sensors		HDB1 Left	HDB2 Right	HWB1 Left	HWB1 Right	HWB2 Left	HWB2 Right
Sensor Serial No:							
HBD Test temp.1	70ºC +- 3ºC						

HBD Test temp.2	120ºC +- 5ºC			▨	▨	▨	▨
HWD Test temp.1	300ºC +- 10ºC	▨	▨				
HWD Test temp.2	400ºC +- 20ºC	▨	▨				
	Date						
	Signature & Initials						

HBD Test temp.2	120ºC +- 5ºC			▨	▨	▨	▨
HWD Test temp.1	300ºC +- 10ºC	▨	▨				
HWD Test temp.2	400ºC +- 20ºC	▨	▨				
	Date						
	Signature & Initials						

Network Rail

HABD Equipment: Phoenix MB Record Card – Calibration Test

Form: NR/SMS/HO12
Date: March 2018
Issue: 01

Site Name :
Mileage: m ch
Serial No:
Software Version:
Track: From To

Date	**Temp Range**	**HBD1 (left)**	**HBD2 (right)**	**HDW1 (left, rail)**				**HWD1 (left, centre)**				**HWD2 (right, rail)**				**HWD2 (right, centre)**				**Signature**
				Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8	
	Lower																			
	Upper																			
	Lower																			
	Upper																			
	Lower																			
	Upper																			
	Lower																			
	Upper																			
	Lower																			
	Upper																			
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	Upper																			

	Lower																			
	Upper																			
	Lower																			
	Upper																			
	Lower																			
	Upper																			

NetworkRail	**Ansaldo-STS Interlocking System Colour Light Signalling System (SEI-CLSS)**	**Form: NR/SMS/IE29/RC/01** **Date: March 2018** **Issue: 01**

Signal Box / Interlocking:	Location:	

No.	Battery Serial No	Active Card	Installed Date	Expiry Date	Comments	Signature	Name & Company
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

Signal Box / Interlocking:	Location:	

No.	Battery Serial No	Spare Card	Installed Date	Expiry Date	Comments	Signature	Name & Company
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

Network Rail	**RETB Fixed Station Tests Record Card (Front) NR/SMS/IR11**	**Form: NR/SMS/IR11/RC/01 Date: August 2004 Issue: 01**

Signal Box:	Location / Site:	
Station Type*: CA /CB / SC / CD / CE	Adjacent Station (1):	Adjacent Station (2):

Number	Power Supply (V)				Aerial System (dBm)		Receiver Tests							Transmitter Tests		
	Battery Charger (Mains On)	Battery Charger (F/S on Key)	Internal 5V	Internal 24V	Signal Strength From Station (1)	Signal Strength From Station (2)	Rf Rx Frequency (MHz)	12dB SINAD	Squelch Threshold (dBm)	Af O/P @ 1.5KHz (dBm)	Rx Af Distortion (%)	3825Hz SAT Sensitivity (Hz)	3825Hz SAT Frequency B/W (Hz)	Rf Tx Frequency (MHz)	Tx O/P Power (W)	Peak Deviation (KHz)
1																
2																
3																
4																

Number	Transmitter Tests					Duplex Tests				Modem Tests				Duplexor Tests	
	Af level for 1.5KHz Deviation		Tx Af Distortion (%)	3825Hz SAT Level (KHz)	3825Hz SAT Frequency (Hz)	Through Level Deviation (Measured at)		Through Level Deviation (Adjusted to)		Data '1'		Data '2'		O/P from Tx Tray (dBm)	O/P from Duplexor (dBm)
	@1KHz	@1.5KHz				@1KHz	@1.5KHz	@1KHz	@1.5KHz	1200Hz Tx Level	1200Hz Rx Level	1800Hz Tx Level	1800Hz Rx Level		
1															
2															
3															
4															

Number	Duplexor Tests		Functional Tests*					Test Equipment Identities				Signature	Name & Company	Date
	12dB SINAD Tx Off (dBm)	12dB SINAD Tx On (dBm)	Monitor Panel	Token Exchange	Auto Test from SC	Disable/ Enable from SC	Block Bell to/from SC	Multi-Meter	Power Meter	2955A Test Set	Spectrum Analyser			
1			Pass / Fail	Pass / Fail	Pass / Fail	Pass / Fail	Pass / Fail							
2			Pass / Fail	Pass / Fail	Pass / Fail	Pass / Fail	Pass / Fail							
3			Pass / Fail	Pass / Fail	Pass / Fail	Pass / Fail	Pass / Fail							
4			Pass / Fail	Pass / Fail	Pass / Fail	Pass / Fail	Pass / Fail							

*: Delete as Applicable Note: Details to be filled in as applicable to the installation under test

Network Rail	**RETB Fixed Station Tests** **Record Card (Rear)** **NR/SMS/IR11**	**Form: NR/SMS/IR11/RC/01** **Date: August 2004** **Issue: 01**

Number	Comments
1	
2	
3	
4	

Network Rail	**Vital Harmon Logic Controller (VHLC)** Maintenance Record Card	**Form: NR/SMS/IS15/RC/VHLC** **Date: Sept 2018** **Issue: 02**

Signal Box:	**Location / Equipment Room:**	**Number of Vital Input / Output Modules:**

Date	Name /Company	Signature	Meter ID	PS Module + & - Terminals of TB1 (DC)	PS Module TP1 & TP2 (DC)	VLP Module TP1 & TP 2 (DC)	VLP Module TP1 & TP 2 (DC) minus PS Module TP1 & TP2 (DC)	ACP Module TP1 and TP2 (DC) Battery Voltage	NVIO Module TP1 & TP3 (DC) #	Comments

Interlocking Only

Network Rail	**Vital Harmon Logic Controller (VHLC)** Maintenance Record Card	**Form: NR/SMS/IS15/VHLC** **Date: Sept 2018** **Issue: 02**

Date	Name /Company	Signature	Meter ID	**PS Module** + & - Terminals of TB1 (DC)	**PS Module** TP1 & TP2 (DC)	**VLP Module** TP1 & TP 2 (DC)	**VLP Module** TP1 & TP 2 (DC) minus **PS Module** TP1 & TP2 (DC)	**ACP Module** TP1 and TP2 (DC) **Battery Voltage**	**NVIO Module** TP1 & TP3 (DC) #	Comments

Interlocking Only

NetworkRail	Harmon Crossing Processor (HXP-3)	NR/SMS/PartR/IS30/RC01	
		Date:	05/12/2020
		Issue No:	01

Signal Box:	Level Crossing:

No.	Service A Tasks																		
	Normal Standby Operation	Transfer Operation*		System Parameters (Current)								System Parameters (After any Adjustments)							
		MDR Failure	ISL Failure	RX-POT	RX	PHASE	TC	BC	P-COMP	FS	LP	RX-POT	RX	PHASE	TC	BC	P-COMP	FS	LP
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			

No.	Date	Name	Company	Comments
1				
2				
3				
4				
5				
6				
7				
8				
9				

* Insert tick if transfer operation is correct

Network Rail	WESTeX LCP3000 Crossing Predictor Record Card (Front) NR/SMS/IS35 and NR/SMS/Test/155	Form: NR/SMS/IS35/RC/01 Date: December 2016 Issue: 01

Signal Box:	Level Crossing:	Location Number:

Service A Test *(Required every 3 Months)*

No	Reading	T1		T2		Comments (Changes, Error Codes, Last WT/Det/Ave/Isl Speeds)
1	Status of EZ and EX	EZ=	EX=	EZ=	EX=	
	Ex at Highest EZ					
	EZ at Lowest EX					
	Transmit (Xmit) Volt/Cur	V	A	V	A	
	+/- 5v Power Supply					
	+/- 8v Power Supply					
	+/- 15v Power Supply					
No	**Reading**	**T1**		**T2**		**Comments (Changes, Error Codes, Last WT/Det/Ave/Isl Speeds)**
2	Status of EZ and EX	EZ=	EX=	EZ=	EX=	
	Ex at Highest EZ					
	EZ at Lowest EX					
	Transmit (Xmit) Volt/Cur	V	A	V	A	
	+/- 5v Power Supply					
	+/- 8v Power Supply					
	+/- 15v Power Supply					
No	**Reading**	**T1**		**T2**		**Comments (Changes, Error Codes, Last WT/Det/Ave/Isl Speeds)**
3	Status of EZ and EX	EZ=	EX=	EZ=	EX=	
	Ex at Highest EZ					
	EZ at Lowest EX					
	Transmit (Xmit) Volt/Cur	V	A	V	A	
	+/- 5v Power Supply					
	+/- 8v Power Supply					
	+/- 15v Power Supply					
No	**Reading**	**T1**		**T2**		**Comments (Changes, Error Codes, Last WT/Det/Ave/Isl Speeds)**
4	Status of EZ and EX	EZ=	EX=	EZ=	EX=	
	Ex at Highest EZ					
	EZ at Lowest EX					
	Transmit (Xmit) Volt/Cur	V	A	V	A	
	+/- 5v Power Supply					
	+/- 8v Power Supply					
	+/- 15v Power Supply					

No Above	Comments 1 to 4 (1) Maintenance (2) Faulting (3) Engineering Work (4) Other	Technicians Name	Company	Date

A Separate Record Card will be completed for each visit to this WESTeX LCP3000 Site (to cover Service B Tests)

Network Rail	WESTeX LCP3000 Crossing Predictor Record Card (Rear) NR/SMS/IS35 and NR/SMS/Test/155	Form: NR/SMS/IS35/RC/01 Date: January 2016 Issue: 01

Signal Box:	Level Crossing:	Location Number:

No:	Service B Test *(Required every 12 Months or After Significant Change to the Infrastructure with the LCP Approach Distances)*												
1	80012 TRANSCEIVER MODULE DC VOLTAGE READINGS AFTER CALIBRATION		CALIBRATION HISTORY EZ/EX VALUES TRACK UN-OCCUPIED		LINEARIZATION HISTORY HARDWIRED TEST SHUNT AT TERMINATION SHUNT			LINEARIZATION HISTORY HARDWIRED TEST SHUNT AT 50 PERCENT POINT OF TRACK APPROACH					
	T1	T2	EZ	EX	EZ VALUE (Test)	EX VALUE	EZ/2 VALUE (Calc) [Not for Sim Inductor] (A)	NO LINEARIZATION EZ (Test) (B)	EX	LINEARIZATION COMPLETE STEP +/- (A - B) x 2 = C (C)	EZ	EX	Step Value Entered into LCP
	Z1=	Z1=											
	Z2=	Z2=											
	TRACK 1 (UP)												
	TRACK 1 (DN)												
	TRACK 2 (UP)												
	TRACK 2 (DN)												

Warning Time Selected					Comments
	T1(Sec):		T1(Sec):		
	T2(Sec):		T2(Sec):		
Approach Distance → Selected	T1(Ft) :		T1(Ft) :		
	T2(Ft) :		T2(Ft) :		
Computed	T1(Ft) :		T1(Ft) :		
	T2(Ft) :		T2(Ft) :		
UAX1 Pickup Delay (UAX) (0=Off)					

Reading	T1	T2	Comments
Status of EZ and EX	EZ= EX=	EZ= EX=	
Ex at Highest EZ			
EZ at Lowest EX			
Transmit (Xmit) Voltage			
Transmit (Xmit) Current			
+/- 5v Power Supply			
+/- 8v Power Supply			
+/- 15v Power Supply			

Comments	Technicians Name	Company	Date

A Separate Record Card will be completed for each visit to this WESTeX LCP3000 Site (to cover Service B Tests)

Obstacle Detector

PA05/04485 LB Foster / Optex Redscan RLS3060 series LIDAR Record Card

Form: NR/SMS/LC09/RC01
Date: 07/03/2019
Issue: 3

	Date					
HL_____	Beam Height TOP of Beam	mm	mm	mm	mm	mm
	Beam Height BOTTOM of Beam	mm	mm	mm	mm	mm
HL_____	Beam Height TOP of Beam	mm	mm	mm	mm	mm
	Beam Height BOTTOM of Beam	mm	mm	mm	mm	mm

HL NDZ	m
LL NDZ	m

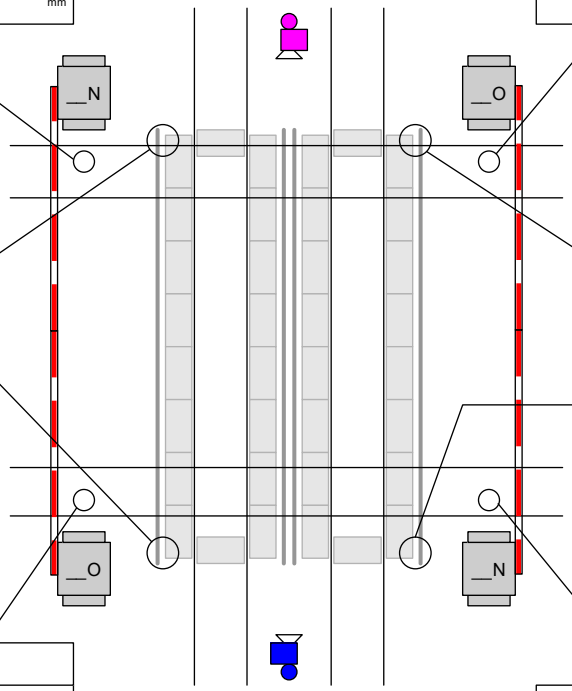
COD/SPOD_____

Flip_____

	Date					
HL_____	Beam Height TOP of Beam	mm	mm	mm	mm	mm
	Beam Height BOTTOM of Beam	mm	mm	mm	mm	mm
HL_____	Beam Height TOP of Beam	mm	mm	mm	mm	mm
	Beam Height BOTTOM of Beam	mm	mm	mm	mm	mm

Date					
LL____ Beam Height BoB	mm	mm	mm	mm	mm
LL____ Beam Height BoB	mm	mm	mm	mm	mm
LL____ Walk Test Distance	mm	mm	mm	mm	mm
LL____ Walk Test Distance	mm	mm	mm	mm	mm

Date					
LL____ Beam Height BoB	mm	mm	mm	mm	mm
LL____ Beam Height BoB	mm	mm	mm	mm	mm
LL____ Walk Test Distance	mm	mm	mm	mm	mm
LL____ Walk Test Distance	mm	mm	mm	mm	mm



Date					
LL____ Beam Height BoB	mm	mm	mm	mm	mm
LL____ Beam Height BoB	mm	mm	mm	mm	mm
LL____ Walk Test Distance	mm	mm	mm	mm	mm
LL____ Walk Test Distance	mm	mm	mm	mm	mm

Date					
LL____ Beam Height BoB	mm	mm	mm	mm	mm
LL____ Beam Height BoB	mm	mm	mm	mm	mm
LL____ Walk Test Distance	mm	mm	mm	mm	mm
LL____ Walk Test Distance	mm	mm	mm	mm	mm

	Date					
HL_____	Beam Height TOP of Beam	mm	mm	mm	mm	mm
	Beam Height BOTTOM of Beam	mm	mm	mm	mm	mm
HL_____	Beam Height TOP of Beam	mm	mm	mm	mm	mm
	Beam Height BOTTOM of Beam	mm	mm	mm	mm	mm

COD/SPOD_____

Flip_____

HL NDZ	m
LL NDZ	m

	Date					
HL_____	Beam Height TOP of Beam	mm	mm	mm	mm	mm
	Beam Height BOTTOM of Beam	mm	mm	mm	mm	mm
HL_____	Beam Height TOP of Beam	mm	mm	mm	mm	mm
	Beam Height BOTTOM of Beam	mm	mm	mm	mm	mm

Notes:

Beam height measurements are likely to be slightly different when measured each time because the exact spot can not be guaranteed each time. The purpose of the beam height check is to see if the LIDAR scanner has moved inside, therefore action is only required if ALL four beam height measurements indicate the scanner may have moved. Variances of beam height measurements up to 50mm are not uncommon.
This Record Card shows the normal beam height setting locations for LL and HL LIDAR, The Detection Area Diagram will show the shapes of each Detection Area segment and the beam height setting positions (which may be different to the default ones shown on this Record Card).

When measuring the Bottom of Beam lower LAC1 so it is out of the beam (no flashing LED) and raise until an LED flashes rapidly. Then measure to the SENSOR, not the LED (from the crossing surface). To measure the TOP of Beam, raise LAC1 above beam (no flashing LED) and lower into the beam until an LED flashes rapidly. Then measure to the SENSOR, not the LED (from the crossing surface).
BoB = Bottom of Beam.

Crossing	
Date	
Name	

Network Rail	**GateCare NR2 : Power Operated Gate Opener (POGO) Record Card NR/SMS/LC50-Test 084**	**Form: NR/SMS/LC50/T084/RC/01 Date: Sept 2014 Issue: 01**

Location / Site:	Signal Box Area:

				Gate One		Gate Two					
	Solar Array Output Volts DC	Sunlight level	Battery Voltage Volts DC	Dynamic Time Exceeded	Dynamic Time **Actual**	Dynamic Time Exceeded	Dynamic Time **Actual**	Force Meter Identity	Name	Signature	Date
1		Sunny / Cloudy / Dark		Yes / No		Yes / No					
2		Sunny / Cloudy / Dark		Yes / No		Yes / No					
3		Sunny / Cloudy / Dark		Yes / No		Yes / No					
4		Sunny / Cloudy / Dark		Yes / No		Yes / No					
5		Sunny / Cloudy / Dark		Yes / No		Yes / No					
6		Sunny / Cloudy / Dark		Yes / No		Yes / No					
7		Sunny / Cloudy / Dark		Yes / No		Yes / No					
8		Sunny / Cloudy / Dark		Yes / No		Yes / No					
9		Sunny / Cloudy / Dark		Yes / No		Yes / No					
10		Sunny / Cloudy / Dark		Yes / No		Yes / No					
12		Sunny / Cloudy / Dark		Yes / No		Yes / No					
13		Sunny / Cloudy / Dark		Yes / No		Yes / No					
14		Sunny / Cloudy / Dark		Yes / No		Yes / No					
15		Sunny / Cloudy / Dark		Yes / No		Yes / No					
16		Sunny / Cloudy / Dark		Yes / No		Yes / No					
17		Sunny / Cloudy / Dark		Yes / No		Yes / No					
18		Sunny / Cloudy / Dark		Yes / No		Yes / No					
19		Sunny / Cloudy / Dark		Yes / No		Yes / No					
20		Sunny / Cloudy / Dark		Yes / No		Yes / No					

Network Rail	**GateCare NR2 : Power Operated Gate Opener (POGO)** **Record Card** **NR/SMS/LC50-Test 084**	**Form: NR/SMS/LC50/T084/RC/01** **Date: Sept 2014** **Issue: 01**

Location / Site:	Signal Box Area:

				Gate One		Gate Two					
	Solar Array Output Volts DC	Sunlight level	Battery Voltage Volts DC	Dynamic Time Exceeded	Dynamic Time **Actual**	Dynamic Time Exceeded	Dynamic Time **Actual**	Force Meter Identity	Name	Signature	Date
1		Sunny / Cloudy / Dark		Yes / No		Yes / No					
2		Sunny / Cloudy / Dark		Yes / No		Yes / No					
3		Sunny / Cloudy / Dark		Yes / No		Yes / No					
4		Sunny / Cloudy / Dark		Yes / No		Yes / No					
5		Sunny / Cloudy / Dark		Yes / No		Yes / No					
6		Sunny / Cloudy / Dark		Yes / No		Yes / No					
7		Sunny / Cloudy / Dark		Yes / No		Yes / No					
8		Sunny / Cloudy / Dark		Yes / No		Yes / No					
9		Sunny / Cloudy / Dark		Yes / No		Yes / No					
10		Sunny / Cloudy / Dark		Yes / No		Yes / No					
12		Sunny / Cloudy / Dark		Yes / No		Yes / No					
13		Sunny / Cloudy / Dark		Yes / No		Yes / No					
14		Sunny / Cloudy / Dark		Yes / No		Yes / No					
15		Sunny / Cloudy / Dark		Yes / No		Yes / No					
16		Sunny / Cloudy / Dark		Yes / No		Yes / No					
17		Sunny / Cloudy / Dark		Yes / No		Yes / No					
18		Sunny / Cloudy / Dark		Yes / No		Yes / No					
19		Sunny / Cloudy / Dark		Yes / No		Yes / No					
20		Sunny / Cloudy / Dark		Yes / No		Yes / No					

Network Rail	**Lever Frame Record Card (Front) NR/SMS/LV11 to 17**	**Form: NR/SMS/LV11/17/RC/01 Date: August 2004 Issue: 01**

Signal Box:			Frame Make & Type:	
Date Installed: (If Known)	Date of Last Overhaul:	Number of Working Levers:	Number of Spare Levers:	Number of Out of Use Levers:

Lever Number	Comments *(Adjustments, Renewals, Loose or Oversize Pins etc)*	Signature	Name & Company	Date

Network Rail	**Lever Frame Record Card (Rear) NR/SMS/LV11 to 17**	**Form: NR/SMS/LV11/17/RC/01 Date: August 2004 Issue: 01**

Lever Number	Comments *(Adjustments, Renewals, Loose or Oversize Pins etc)*	Signature	Name & Company	Date

NetworkRail	SSI Panel Multiplexer: TEML41 (AN)	Form: NR/SMS/MP01/RC01 Date: 05/12/2020 Issue: 01

Location of Signallers Control Panel:

Number	Service A Tests									
	Indications						Power Supplies			
	System Status Panel		Signalling Panel**		Card Status		Main Supply		Duplicated Supply**	
	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	Within Spec*	Comments	Within Spec*	Comments
1										
2										
3										
4										
5										
6										
7										
8										

No.	General Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					
5					
6					
7					
8					

* Insert details of problem or tick if all correct
** If fitted to the system

NetworkRail	**SSI Panel Multiplexer: TEML41 (SY/AN)**	**Form: NR/SMS/MP01/RC01** **Date: 05/12/2020** **Issue: 01**

Number	Service B Tests						
	System Changeover						
	System in Use	Correct Indications*	Changeover Successful*	Correct Indications*	Route Setting Successful*	Panel Alarms ?	Panel Alarm Details
1	A / B						
2	A / B						
3	A / B						
4	A / B						

No.	General Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of problem or tick if all correct

NetworkRail	**SSI Panel Multiplexer: WBS Type S2**	**Form: NR/SMS/MP02/RC01** **Date: 05/12/2020** **Issue: 01**

Location of Signallers Control Panel:	Location of SSI Interlocking (If remote from Signallers Panel):

Number	Service A Tests											
	Indications										Power Supplies	
	Signallers Panel		Scanner Cards		DIP/DOP Cards		Fuse/Status Panel		Modems**		Duplicated Supply**	
	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	Within Spec*	Comments
1												
2												
3												
4												
5												
6												
7												
8												

No.	General Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					
5					
6					
7					
8					

* Insert details of problem or tick if all correct ** If fitted to the system

NetworkRail	**SSI Panel Multiplexer: WBS Type S2**	**Form: NR/SMS/MP02/RC01** **Date: 05/12/2020** **Issue: 01**

Number	Service B Tests					
	Duplicated PSU		Changeover Alarms		Line Levels**	
	Within Spec*	Comments	Correct Indications*	Comments	Within Spec*	Comments
1						
2						
3						
4						

No.	General Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of problem or tick if all correct ** If fitted to the system

NetworkRail	**SSI Panel Multiplexer: Vaughan Harmon**	**Form: NR/SMS/MP03/RC01** **Date: 05/12/2020** **Issue: 01**

Location of Signallers Control Panel:

Number	Service A Tests											
	Indications											
	System Status		On Line Processor		Off Line Processor		Digital Output		Digital Input		Power Supply	
	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments
1												
2												
3												
4												
5												
6												
7												
8												

No.	Service A Tests		General Comments	Test Equipment Identity	Signature	Name & Company	Date
	Power Supplies						
	Within Spec*	Comments					
1							
2							
3							
4							
5							
6							
7							
8							

* Insert details of problem or tick if all correct

NetworkRail	**SSI Panel Multiplexer: Vaughan Harmon**	**Form: NR/SMS/MP03/RC01** **Date: 05/12/2020** **Issue: 01**

Number	Service B Tests							
	System Changeover						Alarms	
	Correct Indications*	Changeover Successful*	Correct Indications*	Changeover Successful*	Correct Indications*	Comments	Correct Functions*	Comments
1								
2								
3								
4								

No.	General Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of problem or tick if all correct

NetworkRail	**SSI Panel Multiplexer: GEC Type RM**	**Form: NR/SMS/MP04/RC01** **Date: 05/12/2020** **Issue: 01**

Location of Signallers Control Panel:

Service A Tests						General Comments	Test Equipment Identity	Signature	Name & Company	Date
Indications				Power Supplies*						
System Status*		Cards*		Within Spec	Comments					
All Correct	Comments	All Correct	Comments							

* Insert details of problem or tick if all correct

NetworkRail	SSI Panel Multiplexer: GEC Type RM	Form: NR/SMS/MP04/RC01 Date: 05/12/2020 Issue: 01

Service B Tests		General Comments	Meter Identity	Signature	Name & Company	Date
AC Supply (V)	System Changeover					

* Insert tick if correct, problems to be entered in the comments column

NetworkRail	**Hydraulic Derailer** Maintenance Test	**Form: NR/SMS/PB18/RC01** **Date: September 2014** **Issue: 02**

Controlling Signal Box / Ground Frame:	Controlling Loc/Equip. Room:	De-railer Number	De-Railer Actuator Make / Model:	Configuration Comments:

Detection Test: 2mm gauge between derailer and rail head / 4 ft rest		Overload cut out time (6-9 secs)	Dynamic Earth Test (Y/N) NR/SMS/Test/052	Condition of Equipment / Mechanical / Electric / Pneumatic	Meter Identit y	Name	Signed	Date
N	R							

Network Rail	**Point Fittings: Gauge, Free Wheel Passage (FWP), Free Wheel Clearance (FWC), and Residual Switch Opening (RSO) Measurements Record Card (Front) NR/SMS/PF01**	**Form: NR/SMS/PF01/RC/01** **Date: December 2020** **Issue: 03**

Controlling Signal Box / Ground Frame:		Equipment Room / Location Case:	
Point Number:		Switch Type:		Stretcher Bar Type: Fixed Yellow (FY), Fixed Black (FB), Adjustable (AD) Tubular (TSB):	

Number	**Normal**					**Reverse**				
	Measurement from Last Stretcher Bar Towards the Switch Heel			Residual Switch Opening Throughout Planed Length		Measurement from Last Stretcher Bar Towards the Switch Heel			Residual Switch Opening Throughout Planed Length	
	Maximum Free Wheel Passage		Minimum Free Wheel Clearance			Maximum Free Wheel Passage		Minimum Free Wheel Clearance		
	Theoretical FBC check Pass /Fail	Actual	Actual	Max	Min	Theoretical FBC check Pass /Fail	Actual	Actual	Max	Min
01										
02										
03										
04										
05										
06										
07										

Number	Comments	Gauge Identity	Name	Signed	Company	Date
01						
02						
03						
04						
05						
06						
07						

Network Rail	**Point Fittings: Gauge, Free Wheel Passage (FWP), Free Wheel Clearance (FWC), and Residual Switch Opening (RSO) Measurements Record Card (Front) NR/SMS/PF01**	**Form: NR/SMS/PF01/RC/01** **Date: December 2020** **Issue: 03**

Number	**Normal**					**Reverse**				
	Measurement from Last Stretcher Bar Towards the Switch Heel			Residual Switch Opening Throughout Planed Length		Measurement from Last Stretcher Bar Towards the Switch Heel			Residual Switch Opening Throughout Planed Length	
	Maximum Free Wheel Passage		Minimum Free Wheel Clearance			Maximum Free Wheel Passage		Minimum Free Wheel Clearance		
	Theoretical FBC check Pass /Fail	Actual	Actual	Max	Min	Theoretical FBC check Pass /Fail	Actual	Actual	Max	Min
08										
09										
10										
11										
12										
13										
14										
15										
16										

Number	Comments	Gauge Identity	Name	Signed	Company	Date
08						
09						
10						
11						
12						
13						
14						
15						
16						

Point System - Hydraulic – Pneumatic

Maintenance Test

Form: NR/SMS/PTS/RC01
Date: 01/09/2018
Issue: 3

Controlling Signal Box / Ground Frame:	Controlling Loc/Equip. Room:	Point Actuator Make/Model:	Point Number:	Configuration Comments:

No.	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (L)= Lock (T)=Tappet [1st:RCPL, 2nd: IBCL, otherwise both types]							
								Left Hand Switch*				Right Hand Switch*			
				Normal*		Reverse*		Detection Broken		Detection Made		Detection Broken		Detection Made	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	4/5mm (L)	2mm (T)	2.5/3.5 mm (L)	1.5mm (T)	4/5mm (L)	2mm (T)	2.5/3.5 mm (L)	1.5mm (T)
1															

Supplementary Detection [bottom figure = SO]						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)									
Normal*		Reverse*		Flangeway Clearance (mm)		Corresp.**	Voltage Test				Resistance Test				
							Normal		Reverse		Normal		Reverse		
6mm 2mm	8mm 4mm	6mm 2mm	8mm 4mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg	

Comments	Meter Identity	Name	Signed	Company	Date

No.	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (L)= Lock (T)=Tappet [1st:RCPL, 2nd: IBCL, otherwise both types]							
								Left Hand Switch*				Right Hand Switch*			
				Normal*		Reverse*		Detection Broken		Detection Made		Detection Broken		Detection Made	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	4/5mm (L)	2mm (T)	2.5/3.5 mm (L)	1.5mm (T)	4/5mm (L)	2mm (T)	2.5/3.5 mm (L)	1.5mm (T)
2															

Supplementary Detection [bottom figure = SO]						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)									
Normal*		Reverse*		Flangeway Clearance (mm)		Corresp.**	Voltage Test				Resistance Test				
							Normal		Reverse		Normal		Reverse		
6mm 2mm	8mm 4mm	6mm 2mm	8mm 4mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg	

Comments	Meter Identity	Name	Signed	Company	Date

Complete sections as appropriate to system configuration *: Insert tick if correct **: Insert tick if all the point ends are in correspondence giving a N or R detection

Network Rail	**Point System - Hydraulic – Pneumatic** Maintenance Test	**Form: NR/SMS/PTS/RC01** **Date: 01/09/2018** **Issue: 3**

No.	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (L)= Lock (T)=Tappet [1st:RCPL, 2nd: IBCL, otherwise both types]							
								Left Hand Switch*				Right Hand Switch*			
				Normal*		Reverse*		Detection Broken		Detection Made		Detection Broken		Detection Made	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	4/5mm (L)	2mm (T)	2.5/3.5 mm (L)	1.5mm (T)	4/5mm (L)	2mm (T)	2.5/3.5 mm (L)	1.5mm (T)

3	Supplementary Detection [bottom figure = SO]						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)								
	Normal*		Reverse*		Flangeway Clearance (mm)		Corresp**.	Voltage Test				Resistance Test			
								Normal		Reverse		Normal		Reverse	
	6mm 2mm	8mm 4mm	6mm 2mm	8mm 4mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg

Comments	Meter Identity	Name	Signed	Company	Date

No.	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (L)= Lock (T)=Tappet [1st:RCPL, 2nd: IBCL, otherwise both types]							
								Left Hand Switch*				Right Hand Switch*			
				Normal*		Reverse*		Detection Broken		Detection Made		Detection Broken		Detection Made	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	4/5mm (L)	2mm (T)	2.5/3.5 mm (L)	1.5mm (T)	4/5mm (L)	2mm (T)	2.5/3.5 mm (L)	1.5mm (T)

4	Supplementary Detection [bottom figure = SO]						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)								
	Normal*		Reverse*		Flangeway Clearance (mm)		Corresp**.	Voltage Test				Resistance Test			
								Normal		Reverse		Normal		Reverse	
	6mm 2mm	8mm 4mm	6mm 2mm	8mm 4mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg

Comments	Meter Identity	Name	Signed	Company	Date

Complete sections as appropriate to system configuration *: Insert tick if correct **: Insert tick if all the point ends are in correspondence giving a N or R detection

Network Rail	**Point System - Machine** Maintenance Test	**Form: NR/SMS/PTS/RC02** **Date: 04/09/2021** **Issue: 3**

Controlling Signal Box / Ground Frame:	Controlling Loc/Equip. Room:	Point Actuator Make/Model:	Point Number:	Configuration Comments:

Number	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (except WRSL Style 63 Machines)				Detection Test (WRSL Style 63 Machines Only)					
				Normal*		Reverse*		Normal*		Reverse*		Contact Setting*		Normal*		Reverse*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	3.5mm	5mm	3.5mm	5mm	N	R	2mm	3.5mm	2mm	3.5mm
1																	

Supplementary Detection						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)									
Normal*		Reverse*		Freewheel Clearance (mm)		Corresp.**	Voltage Test				Resistance Test				
							Normal		Reverse		Normal		Reverse		
6mm	8mm	6mm	8mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg	

Comments	Meter Identity	Signature	Name/Company	Date

Number	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (expect WRSL Style 63 Machines)				Detection Test (WRSL Style 63 Machines Only)					
				Normal*		Reverse*		Normal*		Reverse*		Contact Setting*		Normal*		Reverse*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	3.5mm	5mm	3.5mm	5mm	N	R	2mm	3.5mm	2mm	3.5mm
2																	

Supplementary Detection						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)									
Normal*		Reverse*		Freewheel Clearance (mm)		Corresp.**	Voltage Test				Resistance Test				
							Normal		Reverse		Normal		Reverse		
6mm	8mm	6mm	8mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg	

Comments	Meter Identity	Signature	Name/Company	Date

Complete sections as appropriate to system configuration *: Insert tick if correct **: Insert tick if all the point ends are in correspondence giving a N or R detection

Network Rail	**Point System - Machine** Maintenance Test	**Form: NR/SMS/PTS/RC02** **Date: 04/09/2021** **Issue: 3**

Number	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (expect WRSL Style 63 Machines)				Detection Test (WRSL Style 63 Machines Only)					
				Normal*		Reverse*		Normal*		Reverse*		Contact Setting*		Normal*		Reverse*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	3.5mm	5mm	3.5mm	5mm	N	R	2mm	3.5mm	2mm	3.5mm
3																	

Supplementary Detection						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)									
Normal*		Reverse*		Freewheel Clearance (mm)		Corresp.**	Voltage Test				Resistance Test				
							Normal		Reverse		Normal		Reverse		
6mm	8mm	6mm	8mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg	

Comments	Meter Identity	Signature	Name/Company	Date

Number	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (expect WRSL Style 63 Machines)				Detection Test (WRSL Style 63 Machines Only)					
				Normal*		Reverse*		Normal*		Reverse*		Contact Setting*		Normal*		Reverse*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	3.5mm	5mm	3.5mm	5mm	N	R	2mm	3.5mm	2mm	3.5mm
4																	

Supplementary Detection						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)									
Normal*		Reverse*		Freewheel Clearance (mm)		Corresp.**	Voltage Test				Resistance Test				
							Normal		Reverse		Normal		Reverse		
6mm	8mm	6mm	8mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg	

Comments	Meter Identity	Signature	Name/Company	Date

Complete sections as appropriate to system configuration *: Insert tick if correct **: Insert tick if all the point ends are in correspondence giving a N or R detection

Network Rail	**Point System – Mechanical** Maintenance Test	**Form: NR/SMS/PTS/RC03** **Date: 01/09/2018** **Issue: 2**

Controlling Signal Box / Ground Frame:	Point Number:	Configuration Comments:

Number	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (Distant 'X' details are in NR/SMS/Test/012)					
								Signal Slide Locked				Signal Slide Free	
				Normal*		Reverse*		Distance 'X' in mm		5mm Gauge Between Stock/Slide Rail*		2mm Clearance on Blade*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	Normal	Reverse	Normal	Reverse	Normal	Reverse

Supplementary Detection						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)								
Normal*		Reverse*		Flangeway Clearance (mm)		Corresp.**	Voltage Test				Resistance Test			
							Normal		Reverse		Normal		Reverse	
6mm	8mm	6mm	8mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg

Comments	Meter Identity	Name	Signed	Company	Date

Number	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (Distant 'X' details are in NR/SMS/Test/012)					
								Signal Slide Locked				Signal Slide Free	
				Normal*		Reverse*		Distance 'X' in mm		5mm Gauge Between Stock/Slide Rail*		2mm Clearance on Blade*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	Normal	Reverse	Normal	Reverse	Normal	Reverse

Supplementary Detection						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)								
Normal*		Reverse*		Flangeway Clearance (mm)		Corresp.**	Voltage Test				Resistance Test			
							Normal		Reverse		Normal		Reverse	
6mm	8mm	6mm	8mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg

Comments	Meter Identity	Name	Signed	Company	Date

Complete sections as appropriate to system configuration *: Insert tick if correct **: Insert tick if all the point ends are in correspondence giving a N or R detection

Network Rail	**Point System – Mechanical** Maintenance Test	**Form: NR/SMS/PTS/RC03** **Date: 01/09/2018** **Issue: 2**

Number	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (Distant 'X' details are in NR/SMS/Test/012)					
				Normal*		Reverse*		Signal Slide Locked				Signal Slide Free	
								Distance 'X' in mm		5mm Gauge Between Stock/Slide Rail*		2mm Clearance on Blade*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	Normal	Reverse	Normal	Reverse	Normal	Reverse
3													

Supplementary Detection						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)									
Normal*		Reverse*		Flangeway Clearance (mm)		Corresp**.	Voltage Test				Resistance Test				
							Normal		Reverse		Normal		Reverse		
6mm	8mm	6mm	8mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg	

Comments	Meter Identity	Name	Signed	Company	Date

Number	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test (Distant 'X' details are in NR/SMS/Test/012)					
				Normal*		Reverse*		Signal Slide Locked				Signal Slide Free	
								Distance 'X' in mm		5mm Gauge Between Stock/Slide Rail*		2mm Clearance on Blade*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	Normal	Reverse	Normal	Reverse	Normal	Reverse
4													

Supplementary Detection						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)									
Normal*		Reverse*		Flangeway Clearance (mm)		Corresp**.	Voltage Test				Resistance Test				
							Normal		Reverse		Normal		Reverse		
6mm	8mm	6mm	8mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg	

Comments	Meter Identity	Name	Signed	Company	Date

Complete sections as appropriate to system configuration *: Insert tick if correct **: Insert tick if all the point ends are in correspondence giving a N or R detection

Point System - HPSS

Maintenance test

Form: NR/SMS/PTS/RC04
Date: 01/09/2018
Issue: 03

UPON ARRIVAL

HPSS Retracted					HPSS Extended					Comments
Retract Side mm From:			Extend Side mm From:		Retract Side mm From:			Extend Side mm From:		
Closed	Open		Closed	Open	Closed	Open		Closed	Open	
		Toe					Toe			
		Supp 1					Supp 1			
		Supp 2					Supp 2			

AFTER COMPLETION OF WORK

HPSS Retracted					HPSS Extended					Comments
Retract Side mm From:			Extend Side mm From:		Retract Side mm From:			Extend Side mm From:		
Closed	Open		Closed	Open	Closed	Open		Closed	Open	
		Toe					Toe			
		Supp 1					Supp 1			
		Supp 2					Supp 2			

HPSA FACING POINT LOCK TEST			TIME OF OPERATION TEST			
Meter Reading on KR Lines with 3.5mm gauge		Meter Reading on KR Lines with 8mm / 10mm gauge**	Record Time for Extend / Retract (Nominally 4 seconds)		Signal Box:	Handset No:
L/H Switch Closed*	R/H Switch Closed*	*L/H or R/H Switch Closed***	Extend	Retract	Location:	Signature: Date:
					Point ID:	
*Insert tick if outgoing KR voltage is not present					ECU Serial No:	
** Delete details of gauge not used *** Delete details of switch not tested						

UPON ARRIVAL

HPSS Retracted					HPSS Extended					Comments
Retract Side mm From:			Extend Side mm From:		Retract Side mm From:			Extend Side mm From:		
Closed	Open		Closed	Open	Closed	Open		Closed	Open	
		Toe					Toe			
		Supp 1					Supp 1			
		Supp 2					Supp 2			

AFTER COMPLETION OF WORK

HPSS Retracted					HPSS Extended					Comments
Retract Side mm From:			Extend Side mm From:		Retract Side mm From:			Extend Side mm From:		
Closed	Open		Closed	Open	Closed	Open		Closed	Open	
		Toe					Toe			
		Supp 1					Supp 1			
		Supp 2					Supp 2			

HPSA FACING POINT LOCK TEST			TIME OF OPERATION TEST			
Meter Reading on KR Lines with 3.5mm gauge		Meter Reading on KR Lines with 8mm / 10mm gauge**	Record Time for Extend / Retract (Nominally 4 seconds)		Signal Box:	Handset No:
L/H Switch Closed*	R/H Switch Closed*	* L/H or R/H Switch Closed***	Extend	Retract	Location:	Signature: Date:
					Point ID:	
*Insert tick if outgoing KR voltage is not present					ECU Serial No:	
** Delete details of gauge not used *** Delete details of switch not tested						

Network Rail	**Point System - HPSS** Maintenance test	**Form: NR/SMS/PTS/RC04** **Date: 01/09/2018** **Issue: 03**

USEFUL CHECKS TO BE CARRIED OUT FOLLOWING PERFORMANCE ISSUES

Track and Constriction Checks	**Further Action Required? (Y/N)**	**Electrical Components**	**Further Action Required? (Y/N)**
1. Check the switch and Stock rail for signs of lipping. This will indicate that tight gauge is having a detrimental effect.		16. Check the condition of the internal cables within the End Lid are free from damage, predominantly near to where the lid rests.	
2. Check the Switch for obvious signs of hogging, dipping or voiding.		17. Check all sensors are secure and smooth in operation. Check that the Drive Peg cannot be rotated by more than a few degrees.	
3. Check the Switch and Stock rail alignment for any variations or abnormal gapping throughout.		18. Check all links and wires are secure at the relays, dis-box and location case.	
4. Check Gauge consistency using a Track gauge, measure, starting at the Toe then at every bearer throughout up to the headcut.		19. Check the cable routing has been installed so that excess cable is looped inside the toughing route and not coiled up.	
5. Check the Switch Rail Toe travel using a rule. The system is designed for optimum performance at 113mm +/- 1mm.		20. Check that the sensor cables are kept away from heating elements, any excess shall be neatly tied from the element and moving parts.	
6. Measure the FWC at the headcut openings with a 'Bance' or 'Geismar' track gauge. (RT/NR60, 60–66mm, UIC54, 50-56mm).		21. Check the loop resistance of the power cables in accordance with the SMS cable loop resistance test.	
7. Check that all the Fastclips have been correctly fully inserted.		22. Observe the backdrive operation. Check for incorrect set up displayed by lifting, shuddering, laboured movement or gear box noise.	
8. Check the gap between the bearer tops and torque tube for high or trapped ballast.		23. Check the time of operation, ideally it should take approximately 4 seconds. If slower, Clean drive carriage slides.	
Mechanical Component Checks	**Further Action Required? (Y/N)**	**Useful detail to Note and Consider**	**Availability? (Y/N)**
9. Check all nuts and bolts fixings visually, paying particular attention to the stretcher bars, switch rail brackets and sensor brackets.		24. Obtain Information regarding when the tamping, welding and stressing was completed.	
10. Check that there is a minimum 2mm clearance between the Gearbox bush and casing.		25. Obtain Information regarding the installation and commissioning works. Is all documentation is correct, signed off and compliant.	
11. Check the roller height settings and positioning, All rollers should display a light wear mark and freely rotate by hand. (See Appendix of B of Installation Manual ER/R/1/0224)		26. It is advisable to have a known good ECU and LVDT as a spare to eliminate confusion following intermittent loss of detection faults.	
12. Check the stretcher and drive bar condition. Check the serrations are correctly aligned and free from debris.		27. If in doubt, consult with the appropriate installation and maintenance manuals and/or refer to the training documentation.	
13. Observe the drive component condition at the D link. Check the lock nuts are tightened on to the thimbles.		28. If spare parts are being sent back to the manufacturer for investigation it is important to complete the Product Return Form (See Appendix A of Installation Manual ER/R/1/0224).	
14. Check that all moving parts of the HPSA are clean and in good order. Pay particular attention to the Carriage Shafts.		29. You are reminded to record all faults with accuracy of date, time, symptom, point number, attendance, rectification, into a log book.	
15. Check all plug coupler connections for security, moisture, pin damage, corrosion and charring which can be caused by arcing.		30. Good housekeeping is vital, the removal of litter and foliage at each site visit is very important, especially at the sensors.	

Network Rail	**Point System - Operating Current** Maintenance Test	**Form: NR/SMS/PTS/RC05** **Date: 01/09/2018** **Issue: 2**

Controlling Signal Box / Ground Frame:	Controlling Loc/Equip. Room:	Point Actuator Make/Model:	Point Number:	Configuration Comments:

Operating Current (Amps)		Obstruction (points unable to complete travel)		Comments	Meter Identity	Name /Company	Signed	Date
N to R	R to N	Slip Current (Amps)	Cutout Operation (Sec)					

Network Rail	**Point System - Operating Current** Maintenance Test	**Form: NR/SMS/PTS/RC05** **Date: 01/09/2018** **Issue: 2**

Operating Current (Amps)		Obstruction (points unable to complete travel)		Comments	Meter Identity	Name /Company	Signed	Date
N to R	R to N	Slip Current (Amps)	Cutout Operation (Sec)					

NetworkRail	**Point System – Unistar HR** Maintenance Test	**Form: NR/SMS/PTS/RC06** **Date: 02/12/2023** **Issue: 01**

Controlling Signal Box / Ground Frame:	Controlling Loc/Equip. Room:	Point Actuator Make/Model:	Point Number:	Configuration Comments:

No.	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test			
				Normal*		Reverse*		Left Hand Switch*		Right Hand Switch*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	Detection Broken 3.5mm	Detection Made 1.5mm	Detection Broken 3.5mm	Detection Made 1.5mm

Supplementary Drive Detection						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)								
Normal*		Reverse*		Flangeway Clearance (mm)		Corresp.**	Voltage Test				Resistance Test			
							Normal		Reverse		Normal		Reverse	
2mm	4mm	2mm	4mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg

Comments	Meter Identity	Name	Signed	Company	Date

No.	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test			
				Normal*		Reverse*		Left Hand Switch*		Right Hand Switch*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	Detection Broken 3.5mm	Detection Made 1.5mm	Detection Broken 3.5mm	Detection Made 1.5mm

Supplementary Drive Detection]						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)								
Normal*		Reverse*		Flangeway Clearance (mm)		Corresp.**	Voltage Test				Resistance Test			
							Normal		Reverse		Normal		Reverse	
2mm	4mm	2mm	4mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg

Comments	Meter Identity	Name	Signed	Company	Date

Complete sections as appropriate to system configuration *: Insert tick if correct **: Insert tick if all the point ends are in correspondence giving a N or R detection

NetworkRail	**Point System - Unistar** Maintenance Test	**Form: NR/SMS/PTS/RC06** **Date: 02/12/2023** **Issue: 01**

No.	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test			
				Normal*		Reverse*		Left Hand Switch*		Right Hand Switch*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	Detection Broken	Detection Made	Detection Broken	Detection Made
								3.5mm	1.5mm	3.5mm	1.5mm

1	Supplementary Drive Detection						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)								
	Normal*		Reverse*		Flangeway Clearance (mm)		Corresp.**	Voltage Test				Resistance Test			
								Normal		Reverse		Normal		Reverse	
	2mm	4mm	2mm	4mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg

Comments	Meter Identity	Name	Signed	Company	Date

No.	Condition of Equipment & Track	Switch Opening (mm)		FPL Tests				Detection Test			
				Normal*		Reverse*		Left Hand Switch*		Right Hand Switch*	
		N	R	3.5mm	1.5mm	3.5mm	1.5mm	Detection Broken	Detection Made	Detection Broken	Detection Made
								3.5mm	1.5mm	3.5mm	1.5mm

2	Supplementary Drive Detection]						Detection Loop (Only one entry required for this test on multiple point ends, note in comments)								
	Normal*		Reverse*		Flangeway Clearance (mm)		Corresp.**	Voltage Test				Resistance Test			
								Normal		Reverse		Normal		Reverse	
	2mm	4mm	2mm	4mm	Normal	Reverse		Feed End	Relay End	Feed End	Relay End	+Ve Leg	-Ve Leg	+Ve Leg	-Ve Leg

Comments	Meter Identity	Name	Signed	Company	Date

Complete sections as appropriate to system configuration *: Insert tick if correct **: Insert tick if all the point ends are in correspondence giving a N or R detection

NetworkRail	**RC System: Type 'R' Reed FDM Test**	**Form: NR/SMS/RC01/RC01** **Date: 05/12/2020** **Issue: 01**

Power Signal Box:	End Function:	Location:	Line Amplifier Locations:

Number	System	Line Amplifier (1)			Line Amplifier (2)			Line Amplifier (3)			Line Amplifier (4)			Line Amplifier (5)			Line Amplifier Comments
		Feedback Setting	Voltages		Feedback Setting	Voltages		Feedback Setting	Voltages		Feedback Setting	Voltages		Feedback Setting	Voltages		
			T7/T8 (AC or DC)	Amp O/P (AC)		T7/T8 (AC or DC)	Amp O/P (AC)		T7/T8 (AC or DC)	Amp O/P (AC)		T7/T8 (AC or DC)	Amp O/P (AC)		T7/T8 (AC or DC)	Amp O/P (AC)	
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	

Number	Function	Transmitter End					Receiver End							Comments	Meter Identity	Signature	Name & Company	Date
		Power Supply			Transmitter		Power Supply			Receiver								
		Voltages			Voltages (AC)		Voltages			Voltages (DC)								
					Tx O/P					Rx O/P		Reed Follower						
		AC I/P	DC O/P	AC Ripple	Tx'ing	Not Tx'ing	AC I/P	DC O/P	AC Ripple	Rx'ing	Not Rx'ing	Rx'ing	Not Rx'ing					
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		

NetworkRail	RC System: Type 'R' Reed FDM Test	Form: NR/SMS/RC01/RC01 Date: 05/12/2020 Issue: 01

Number	System	Line Amplifier (1)			Line Amplifier (2)			Line Amplifier (3)			Line Amplifier (4)			Line Amplifier (5)			Line Amplifier Comments
		Feedback Setting	Voltages		Feedback Setting	Voltages		Feedback Setting	Voltages		Feedback Setting	Voltages		Feedback Setting	Voltages		
			T7/T8 (AC or DC)	Amp O/P (AC)		T7/T8 (AC or DC)	Amp O/P (AC)		T7/T8 (AC or DC)	Amp O/P (AC)		T7/T8 (AC or DC)	Amp O/P (AC)		T7/T8 (AC or DC)	Amp O/P (AC)	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	

Number	Function	Transmitter End					Receiver End							Comments	Meter Identity	Signature	Name & Company	Date
		Power Supply			Transmitter		Power Supply			Receiver								
		Voltages			Voltages (AC)		Voltages			Voltages (DC)								
					Tx O/P					Rx O/P		Reed Follower						
		AC I/P	DC O/P	AC Ripple	Tx'ing	Not Tx'ing	AC I/P	DC O/P	AC Ripple	Rx'ing	Not Rx'ing	Rx'ing	Not Rx'ing					
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		

NetworkRail	**Reed Point Detection (Transmitter)**	**Form: NR/SMS/RC01/RC02** **Date: 05/12/2020** **Issue: 01**

Signal Box:	Point End Number:	Normal Channel Number:	Reverse Channel Number

	Power Supply		Transmitter End						Comments	Meter Identity	Signature	Name & Company	Date
	Local Supply I/P	PSU O/P	Points Normal Transmitter		Output Links	Points Reverse Transmitter		Output Links					
			Input	Output		Input	Output						
Units	AC(V)	DC(V)	DC(V)	AC(mV)	AC(mV)	DC(V)	AC(mV)	AC(mV)					
Limits	99-121	11.5-	11.5-13.5	350-400	350-400	11.5-13.5	350-400	350-400					
Terms			D3(+) A3(-)	D2 A1		D3(+) A3(-)	D2 A1						
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

NetworkRail	Reed Point Detection (Transmitter)	Form: NR/SMS/RC01/RC02 Date: 05/12/2020 Issue: 01

	Power Supply		Transmitter End						Comments	Meter Identity	Signature	Name & Company	Date
	Local Supply I/P	PSU O/P	Points Normal Transmitter		Output Links	Points Reverse Transmitter		Output Links					
			Input	Output		Input	Output						
Units	AC(V)	DC(V)	DC(V)	AC(mV)	AC(mV)	DC(V)	AC(mV)	AC(mV)					
Limits	99-121	11.5-13.5	11.5-13.5	350-400	350-400	11.5-13.5	350-400	350-400					
Terms			D3(+) A3(-)	D2 A1		D3(+) A3(-)	D2 A1						
21													
22													
23													
24													
25													
26													
27													
28													
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30													
31													
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33													
34													
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36													
37													
38													
39													
40													
41													
42													
43													

NetworkRail	**Reed Point Detection (Receiver)**	**Form: NR/SMS/RC01/RC03** **Date: 05/12/2020** **Issue: 01**

Signal Box:	Point End Number:	Normal Channel Number:	Reverse Channel Number

	Power Supply		Receiver End						Comments	Meter Identity	Signature	Name & Company	Date
	Local Supply I/P	PSU O/P	Points Normal		Input Links	Points Reverse		Input Links					
			NKR Coil	RKR Coil		NKR Coil	RKR Coil						
Units	AC(V)	DC(V)	DC(V)	DC(mV)	AC(mV)	DC(mV)	DC(V)	AC(mV)					
Limits	99-121	11.5-13.5	11.5-16.5	<0.1	350-400	<0.1	11.5-16.5	350-400					
Terms			R1(+) R2(-)	R1(+) R2(-)		R1(+) R2(-)	R1(+) R2(-)						
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

NetworkRail	Reed Point Detection (Receiver)	Form: NR/SMS/RC01/RC03 Date: 05/12/2020 Issue: 01

	Power Supply		Receiver End						Comments	Meter Identity	Technicians SSM Name	Company	Date
	Local Supply I/P	PSU O/P	Points Normal		Input Links	Points Reverse		Input Links					
			NKR Coil	RKR Coil		NKR Coil	RKR Coil						
Units	AC(V)	DC(V)	DC(V)	DC(mV)	AC(mV)	DC(mV)	DC(V)	AC(mV)					
Limits	99-121	11.5-13.5	11.5-16.5	<0.1	350-400	<0.1	11.5-16.5	350-400					
Terms			R1(+) R2(-)	R1(+) R2(-)		R1(+) R2(-)	R1(+) R2(-)						
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
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35													
36													
37													
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39													
40													
41													
42													
43													

NetworkRail	RC System: GEC Type 'RR' Reed FDM Test	Form: NR/SMS/RC02/RC01 Date: 05/12/2020 Issue: 01

Power Signal Box:	RR Reed Type:	End Function:	Location:	Line Amplifier Locations:

Service A Tests

Number	System	Line Amplifiers										Line Amplifier Comments
		Line Amplifier (1)		Line Amplifier (2)		Line Amplifier (3)		Line Amplifier (4)		Line Amplifier (5)		
		Voltages		Voltages		Voltages		Voltages		Voltages		
		Amp I/P (AC)	T10/T11 (AC or DC)	Amp I/P (AC)	T10/T11 (AC or DC)	Amp I/P (AC)	T10/T11 (AC or DC)	Amp I/P (AC)	T10/T11 (AC or DC)	Amp I/P (AC)	T10/T11 (AC or DC)	
1												
2												
3												
4												
5												
6												
7												

Service A Tests

Number	Function	Transmitter End					Receiver End							Comments	Meter Identity	Signature	Name & Company	Date
		Power Supply			Transmitter		Power Supply			Receiver								
		Voltages			Voltages (AC)		Voltages			Voltages (DC)								
					Tx O/P					Rx O/P		Reed Follower*						
		AC I/P	DC I/P	DC O/P	Tx'ing	Not Tx'ing	AC I/P	DC I/P	DCO/P	Rx'ing	Not Rx'ing	Rx'ing	Not Rx'ing					
1																		
2																		
3																		
4																		
5																		
6																		
7																		

* Vital Systems Only

NetworkRail	RC System: GEC Type 'RR' Reed FDM Test	Form: NR/SMS/RC02/RC01 Date: 05/12/2020 Issue: 01

Number	System	Line Amplifiers										Line Amplifier Comments
		Line Amplifier (1)		Line Amplifier (2)		Line Amplifier (3)		Line Amplifier (4)		Line Amplifier (5)		
		Voltages		Voltages		Voltages		Voltages		Voltages		
		Amp I/P (AC)	T10/T11 (AC or DC)	Amp I/P (AC)	T10/T11 (AC or DC)	Amp I/P (AC)	T10/T11 (AC or DC)	Amp I/P (AC)	T10/T11 (AC or DC)	Amp I/P (AC)	T10/T11 (AC or DC)	
8												
9												
10												
11												
12												

Service A Tests																	
Number	Function	Transmitter End					Receiver End							Comments	Meter Identity	Signature	Name & Company	Date
		Power Supply			Transmitter		Power Supply			Receiver								
		Voltages			Voltages (AC)		Voltages			Voltages (DC)								
					Tx O/P					Rx O/P		Reed Follower*						
		AC I/P	DC I/P	DC O/P	Tx'ing	Not Tx'ing	AC I/P	DC I/P	DCO/P	Rx'ing	Not Rx'ing	Rx'ing	Not Rx'ing					
8																		
9																		
10																		
11																		
12																		

Service B Tests*								
Line Levels (mV)				Comments	Test Equipment Identity	Signature	Name & Company	Date
High Frequency		Low Frequency						
Line	Dummy Amp/Rx	Line	Dummy Amp/Rx					

NetworkRail	**RC System: Westone Non-Vital FDM Test**	**Form: NR/SMS/RC03/RC01** **Date: 05/12/2020** **Issue: 01**

Power Signal Box:	Remote Interlocking:	System No:

Number	Service A Tests									
	Signal Box & Equipment Rooms (all)									
	Power Supplies						Line Levels		Functions	
	I/Ps (AC)*	Comments	O/Ps (DC)*	Comments	Ripple (AC)*	Comments	(mV)*	Comments	Correct Operation*	Comments
1										
2										
3										
4										
5										

Number	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					
5					

* Insert details of problems or tick if all correct

NetworkRail	**RC System: Westone Non-Vital FDM Test**	**Form: NR/SMS/RC03/RC01** **Date: 05/12/2020** **Issue: 01**

Number	Service A Tests									
	Signal Box & Equipment Rooms (all)									
	Power Supplies						Line Levels		Functions	
	I/Ps (AC)*	Comments	O/Ps (DC)*	Comments	Ripple (AC)*	Comments	(mV)*	Comments	Correct Operation*	Comments
6										
7										
8										
9										
10										
11										

Number	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
6					
7					
8					
9					
10					
11					

* Insert details of problems or tick if all correct

NetworkRail	RC System: FDM69-NV Test	Form: NR/SMS/RC04/RC01 Date: 05/12/2020 Issue: 01

Power Signal Box:	Remote Interlocking:	System No:

Service A Tests							Comments	Test Equipment Identity	Signature	Name & Company	Date
Signal Box & Equipment Rooms											
Power Supplies			Transmitter Levels		Receiver Levels						
I/Ps (AC)	O/Ps (DC)	Ripple (AC)	Tx	Not Tx	Rx	Not Rx					

	RC System: FDM69-NV Test	**Form: NR/SMS/RC04/RC01** **Date: 05/12/2020** **Issue: 01**

Service A Tests							Comments	Test Equipment Identity	Signature	Name & Company	Date
Signal Box & Equipment Rooms											
Power Supplies			Transmitter Levels		Receiver Levels						
I/Ps (AC)	O/Ps (DC)	Ripple (AC)	Tx	Not Tx	Rx	Not Rx					

NetworkRail	**Siemens Westplex** Maintenance Test	**Form: NR/SMS/RC05/RC01** **Date: 05/12/2020** **Issue: 01**

Signal Box / Interlocking:	Locations:	System:	IP Addresses:

LED's #	Line 1		Line 2		Signature	Name & Company	Date
	Signal / Noise (dB)	Loop Attenuation (dB)	Signal / Noise (dB)	Loop Attenuation (dB)			
	(Greater than 35) *	(Less than 10) *	(Greater than 35) *	(Less than 10) *			

* Record obtained value # Insert tick if correct

NetworkRail	**Siemens Westplex** Maintenance Test	**Form: NR/SMS/RC05/RC01** **Date: 05/12/2020** **Issue: 01**

LED's #	Line 1		Line 2		Signature	Name & Company	Date
	Signal / Noise (dB) (Greater than 35) *	Loop Attenuation (dB) (Less than 10) *	Signal / Noise (dB) (Greater than 35) *	Loop Attenuation (dB) (Less than 10) *			

* Record obtained value # Insert tick if correct

NetworkRail	**RC System: GEC Type RM TDM Test**	**Form: NR/SMS/RC07/RC01** **Date: 05/12/2020** **Issue: 01**

Power Signal Box:	Number of Remote Interlockings:	Remote Interlocking (1):	Remote Interlocking (2):
Remote Interlocking (3):	Remote Interlocking (4):	Remote Interlocking (5):	Remote Interlocking (6):

Number	Office Tests				Field Tests (All Interlockings)			
	Indications		Power Supplies		Indications		Power Supplies	
	Correct Functions*	Comments	Within Specification*	Adjustment Details	Correct Functions*	Comments	Within Specification*	Adjustment Details
1								
2								
3								
4								

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					

NetworkRail	**RC System: GEC Type RM TDM Test**	**Form: NR/SMS/RC07/RC01** **Date: 05/12/2020** **Issue: 01**

Number	Service B Tests											
	Office Tests						Field Tests (All Interlockings)					
	Power Supplies		System Changeover**		Line Levels		Power Supplies		System Changeover**		Line Levels	
	Within Spec.*	Adjustment Details	Correct Functions*	Comments	Within Spec.*	Adjustment Details	Within Spec.*	Adjustment Details	Correct Functions*	Comments	Within Spec.*	Adjustment Details
1												
2												
3												
4												

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of supply/system requiring adjustment or tick if all correct **: Dual systems Only

NetworkRail	**RC System: WBS Type TDM 69 Test**	**Form: NR/SMS/RC08/RC01** **Date: 05/12/2020** **Issue: 01**

Power Signal Box:	Number of Remote Interlockings:	Remote Interlocking (1):	Remote Interlocking (2):
Remote Interlocking (3):	Remote Interlocking (4):	Remote Interlocking (5):	Remote Interlocking (6):

Number	Office Tests				Field Tests (All Interlockings)			
	Indications		High/Low Voltage Tests		Indications		High/Low Voltage Tests	
	All Correct*	Comments	Correct Functions*	Comments	All Correct*	Comments	Correct Functions*	Comments
1								
2								
3								
4								

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of indication/supply not to specification or tick if all correct

NetworkRail	RC System: WBS Type TDM 69 Test	Form: NR/SMS/RC08/RC01 Date: 05/12/2020 Issue: 01

Number	Service B Tests											
	Office Tests											
	Individual Bit Test		Line Connection Units		Received Signal Levels		Line Levels		Voltage Tests		Insulation / Noise Tests	
	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments
1												
2												

Number	Service B Tests											
	Field Tests (all interlockings)											
	Individual Bit Test		Line Connection Units		Received Signal Levels		Line Levels		Voltage Tests		Insulation / Noise Tests	
	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments	All Correct*	Comments
1												
2												

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					

* Insert details of indication/supply not to specification or tick if all correct

NetworkRail	**RC System: WBS Type S2 TDM Test**	**Form: NR/SMS/RC09/RC01** **Date: 05/12/2020** **Issue: 01**

Power Signal Box:	Number of Remote Interlockings:	Remote Interlocking (1):	Remote Interlocking (2):
Remote Interlocking (3):	Remote Interlocking (4):	Remote Interlocking (5):	Remote Interlocking (6):

Number	Office Tests				Field Tests (All Interlockings)			
	Indications		Power Supplies		Indications		Power Supplies	
	Correct Functions*	Comments	Within Specification*	Adjustment Details	Correct Functions*	Comments	Within Specification*	Adjustment Details
1								
2								
3								
4								

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of supply/system requiring adjustment or tick if all correct

NetworkRail	**RC System: WBS Type S2 TDM Test**	**Form: NR/SMS/RC09/RC01** **Date: 05/12/2020** **Issue: 01**

Number	Service B Tests											
	Office Tests						Field Tests (All Interlockings)					
	Power Supplies		Line Levels		System Changeover**		Power Supplies		Line Levels		System Changeover**	
	Within Spec.*	Adjustment Details	Within Spec.*	Adjustment Details	Correct Functions*	Comments	Within Spec.*	Adjustment Details	Within Spec.*	Adjustment Details	Correct Functions*	Comments
1												
2												
3												
4												

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of supply/system requiring adjustment or tick if all correct
** Dual Systems Only

NetworkRail	**RC System: Westronic F1 TDM Test**	**Form: NR/SMS/RC10/RC01** **Date: 05/12/2020** **Issue: 01**

Power Signal Box:	Number of Remote Interlockings:	Remote Interlocking (1):	Remote Interlocking (2):
Remote Interlocking (3):	Remote Interlocking (4):	Remote Interlocking (5):	Remote Interlocking (6):

Number	Office Tests						Field Tests (All Interlockings)			
	Indications		Power Supplies		Line Changeover**		Indications		Power Supplies	
	Correct Functions*	Comments	Within Specification*	Adjustment Details	Correct Function*	Comments	Correct Functions*	Comments	Within Specification*	Adjustment Details
1										
2										
3										
4										

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of supply/system requiring adjustment or tick if all correct

** If provided

NetworkRail	**RC System: Westronic F1 TDM Test**	**Form: NR/SMS/RC10/RC01** **Date: 05/12/2020** **Issue: 01**

Number	Service B Tests											
	Office Tests								Field Tests (All Interlockings)			
	Alarms		Marginal Voltage		Line Proving (main)**		Line Proving (standby)**		Alarms		Marginal Voltage	
	Within Spec.*	Adjustment Details	Within Spec.*	Adjustment Details	Correct Functions*	Comments	Correct Functions*	Comments	Within Spec.*	Adjustment Details	Within Spec.*	Adjustment Details
1												
2												
3												
4												

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of supply/system requiring adjustment or tick if all correct

NetworkRail	**RC System: Vaughan Harmon Type DM11 Test**	**Form: NR/SMS/RC11/RC01** **Date: 05/12/2020** **Issue: 01**

Power Signal Box:	Number of Remote Interlockings:	Remote Interlocking (1):	Remote Interlocking (2):
Remote Interlocking (3):	Remote Interlocking (4):	Remote Interlocking (5):	Remote Interlocking (6):

Number	Office Tests				Field Tests (All Interlockings)			
	Indications		Power Supplies		Indications		Power Supplies	
	Correct Functions*	Comments	Within Specification*	Adjustment Details	Correct Functions*	Comments	Within Specification*	Adjustment Details
1								
2								
3								
4								

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of supply/system requiring adjustment or tick if all correct

NetworkRail	**RC System: Vaughan Harmon Type DM11 Test**	**Form: NR/SMS/RC11/RC01** **Date: 05/12/2020** **Issue: 01**

Number	Service B Tests											
	Office Tests						Field Tests (All Interlockings)					
	Power Supplies		System Changeover		Line Levels		Power Supplies		System Changeover		Line Levels	
	Within Spec.*	Adjustment Details	Correct Functions*	Adjustment Details	Within Spec.*	Comments	Within Spec.*	Adjustment Details	Correct Functions*	Adjustment Details	Within Spec.*	Comments
1												
2												
3												
4												

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of supply/system requiring adjustment or tick if all correct

NetworkRail	**RC System: Telecode 80 Test**	**Form: NR/SMS/RC12/RC01** **Date: 05/12/2020** **Issue: 01**

Power Signal Box:	Number of Remote Interlockings:	Remote Interlocking (1):	Remote Interlocking (2):
Remote Interlocking (3):	Remote Interlocking (4):	Remote Interlocking (5):	Remote Interlocking (6):

Number	Office Tests				Field Tests (All Interlockings)			
	Indications		Power Supplies		Indications		Power Supplies	
	Correct Functions*	Comments	Within Specification*	Adjustment Details	Correct Functions*	Comments	Within Specification*	Adjustment Details
1								
2								
3								
4								

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					

NetworkRail	**RC System: Telecode 80 Test**	**Form: NR/SMS/RC12/RC01** **Date: 05/12/2020** **Issue: 01**

Number	Service B Tests											
	Office Tests											
	Power Supplies		Standby Battery Test #		Line Levels		Alarms		Transmission Test		System Changeover	
	Within Spec.*	Adjustment Details	Correct Functions*	Adjustment Details	Within Spec.*	Comments	Correct Functions*	Adjustment Details	Correct Functions*	Adjustment Details	Within Spec.*	Comments
1												
2												

Number	Service B Tests											
	Field Tests (all interlockings)											
	Power Supplies		Standby Battery Test #		Line Levels		Alarms		Transmission Test		System Changeover #	
	Within Spec.*	Adjustment Details	Correct Functions*	Adjustment Details	Within Spec.*	Comments	Correct Functions*	Adjustment Details	Correct Functions*	Adjustment Details	Within Spec.*	Comments
1												
2												

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					

* Insert details of supply/system requiring adjustment or tick if all correct

Where fitted

NetworkRail	**RC System: AP Datalink TDM Test**	**Form: NR/SMS/RC13/RC01** **Date: 05/12/2020** **Issue: 01**

Power Signal Box:	Number of Remote Interlockings:	Remote Interlocking (1):	Remote Interlocking (2):
Remote Interlocking (3):	Remote Interlocking (4):	Remote Interlocking (5):	Remote Interlocking (6):

Number	Office Tests				Field Tests (All Interlockings)			
	Alarms		Power Supplies		Alarms		Power Supplies	
	Correct Functions*	Comments	Within Specification*	Adjustment Details	Correct Functions*	Comments	Within Specification*	Adjustment Details
1								
2								
3								
4								

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					
3					
4					

* Insert details of supply/system requiring adjustment or tick if all correct

NetworkRail	RC System: AP Datalink TDM Test	Form: NR/SMS/RC13/RC01 Date: 05/12/2020 Issue: 01

Number	Service B Tests											
	Office Tests											
	Carrier Tx Levels		Carrier Rx Levels		Mark-Space Ratio		Line Change Over		Alarms		Battery Supply Units	
	Within Spec.*	Comments	Within Spec.*	Comments	Within Spec.*	Comments	Correct Functions*	Adjustment Details	Correct Functions*	Adjustment Details	Within Spec.*	Comments
1												
2												

Number	Service B Tests											
	Field Tests (all interlockings)											
	Carrier Tx Levels		Carrier Rx Levels		Mark-Space Ratio		Line Change Over		Alarms		Battery Supply Units	
	Within Spec.*	Adjustment Details	Within Spec.*	Adjustment Details	Within Spec.*	Comments	Correct Functions*	Adjustment Details	Correct Functions*	Adjustment Details	Within Spec.*	Comments
1												
2												

No.	General Comments	Test Equipment Identity(s)	Signature	Name & Company	Date
1					
2					

* Insert details of supply/system requiring adjustment or tick if all correct

NetworkRail	**RC System: Westronic 1024 TDM Test**	**Form: NR/SMS/RC16/RC01** **Date: 05/12/2020** **Issue: 01**

Power Signal Box (Office):	Remote Interlocking (Field):	Office / Field**

SERVICE B TESTS

Tests*		Voltages		Comments	Meter Identity	Signature	Name & Company	Date
Indications Correct?	System Changeover Successful?	PSU 5V (DC)	Ripple (AC)					

*: Insert tick if all correct, enter problems in the comment's columns **: Delete as appropriate

NetworkRail	RC System: Westronic 1024 TDM Test	Form: NR/SMS/RC16/RC01 Date: 05/12/2020 Issue: 01

SERVICE B TESTS								
Tests*		Voltages		Comments	Meter Identity	Signature	Name & Company	Date
Indications Correct?	System Changeover Successful?	PSU 5V (DC)	Ripple (AC)					

* Insert tick if all correct, enter problems in the comment's columns

** Delete as appropriate

GENERAL COMMENTS

Network Rail	**Severn Tunnel Pull Wire Record Card NR/SMS/SW20/Test 059**	**Form: NR/SMS/SW20/T059/RC01** **Date: April 2006** **Issue: 02**

Service B Tests*				**Comments**	**Signature, Name & Company**	**Date**
Key Identit	**Correct Indications**	**Key Identit**	**Correct Indications**			
1		33				
2		34				
3		35				
4		36				
5		37				
6		38				
7		39				
8		40				
9		41				
10		42				
11		43				
12		44				
13		45				
14		46				
15		47				
16		48				
17		49				
18		50				
19		51				
20		52				
21		53				
22		54				
23		55				
24		56				
25		57				
26		58				
27		59				
28		60				
29		61				
30		62				
31		63				
32						
*: Insert tick if correct						

Network Rail	**Junction Indicator and Position Light Signal – All types** Maintenance Test	**Form: NR/SMS/T021/RC01** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking / Equipment Room:	**Location:**	**Signal Number:**

					Lamp / SLM Voltage								
Date	Name	Company	Signature	Meter Identity	PLS Pivot	PLS Bottom LED	PLS Top	Jct Indicator Position 1	Jct Indicator Position 2	Jct Indicator Position 3	Jct Indicator Position 4	Jct Indicator Position 5	Jct Indicator Position 6

Network Rail

Route Indicator – non LED

Maintenance Test

Form: NR/SMS/T021/RC02
Date: 01/09/2018
Issue: 02

Signal Box / Interlocking / Equipment Room:	**Location:**	**Signal Number:**

Type of Signal: (Circle)				**Manufacturer: (Circle)**				
MARI	SARI	PRI	Other	Dorman	VMS	Signalhouse		

					Indication Displayed			**Indication Displayed**			**Indication Displayed**			**Indication Displayed**		
Date	Name	Company	Signature	Meter ID	Main (V)	Aux (V)	Lamp changed (#)	Main (V)	Aux (V)	Lamp changed (#)	Main (V)	Aux (V)	Lamp changed (#)	Main (V)	Aux (V)	Lamp changed (#)
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N
							Y / N			Y / N			Y / N			Y / N

(#) Circle as required

Network Rail	**Route Indicator - LED** Maintenance Test	**Form: NR/SMS/T021/RC03** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking / Equipment Room:	**Location:**	**Signal Number:**

Type of Signal: (Circle)				**Manufacturer:** (Circle)				
MARI	SARI	PRI	Other	Dorman	VMS	Signalhouse		

					Indication Displayed		**Indication Displayed**		**Indication Displayed**		**Indication Displayed**		**Indication Displayed**	
Date	Name	Company	Signature	Meter ID	SLM Voltage	Module changed (#)	SLM Voltage	Module changed (#)	SLM Voltage	Module changed (#)	SLM Voltage	Module changed (#)	SLM Voltage	Module changed (#)
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N

(#) Circle as required

Network Rail

Signal - (Filament / Light Engine)

Maintenance Test

Form: NR/SMS/T021/RC04
Date: 01/06/2019
Issue: 05

Signal Box / Interlocking / Equipment Room:	**Location:**	**Signal Number:**

Type of Signal: (Circle)					**Illumination Type: (Circle)**		**Lens Type: (Circle)**		**Type of Lamp (Circle)**						**Other Type**
Multi-Aspect	Searchlight	Semaphore	Banner	SPAD	Approach Lit	Continuously Lit	Normal	Spreadlit/ Short Range	SL35 8000hr	Light Engine	SL18	10V Halogen	10V 6000hr Halogen	12V Halogen	

Aspect Details	Red	Yellow	Green	Top Yellow / Top Red (SPAD)	Searchlight
Lens Material : Glass = G Polycarbonate = P (Enter type codes into the appropriate boxes)					
Alignment of Centre Line of Hot Strip: (Enter the position using clock face indication method)					

				Red / Searchlight / Banner / Semaphore				**Yellow**				**Green**				**Top Yellow / Top Red (SPAD)**				**SMS Test Completed (tick)**	
				Filament (V)		Lamp Change	Lens Change	Filament (V)		Lamp Change	Lens Change	Filament (V)		Lamp Change	Lens Change	Filament (V)		Lamp Change	Lens Change		
Date	Name	Company	Meter ID	Main	Aux *			Main	Aux *			Main	Aux *			Main	Aux *			Test 21	Test 22
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		
						Y / N	Y / N			Y / N	Y / N			Y / N	Y / N			Y / N	Y / N		

* For Double Filament Lamps Only

Network Rail

Signal - LED

Maintenance Test

Form: NR/SMS/T021/RC05
Date: 01/06/2019
Issue: 03

Signal Box / Interlocking / Equipment Room:	**Location:**	**Signal Number:**

Type of Signal: (Circle)			**Manufacturer:** (Circle)					**Illumination Type:** (Circle)		**Lens Type:** (Circle)	
Multi-Aspect	Searchlight	Semaphore	Dorman	VMS	Signalhouse			Approach Lit	Continuously Lit	Normal	Spreadlit/ Short Range

					Red / White (Semaphore)		Yellow		Double Yellow		Green		Double Red (SPAD)	
Date	Name	Company	Signature	Meter ID	SLM Voltage	Module changed (#)	SLM Voltage	Module changed (#)	SLM Voltage	Module changed (#)	SLM Voltage	Module changed (#)	SLM Voltage	Module changed (#)
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N
						Y / N		Y / N		Y / N		Y / N		Y / N

(#) Circle as required

Network Rail	**Signal - SIMIS-W Interlocking Areas Only** Maintenance Test	**Form: NR/SMS/T021/RC06** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking / Equipment Room:	**Location:**	**Signal Number:**

Type of Signal: (Circle)			**Illumination Type:** (Circle)		**Lens Type:** (Circle)		**Type of Lamp** (Circle)							**Other Type** (Specify Type and Voltage)
Multi-Aspect	Searchlight	Semaphore	Approach Lit	Continuously Lit	Normal	Spreadlit/ Short Range	SL35	SL35 8000hr	Light Engine	SL18	10V Halogen	10V 6000hr Halogen	12V Halogen	

Aspect Details	Red	Yellow	Green	Top Yellow	Searchlight
Lens Material : Glass = G Polycarbonate = P (Enter type codes into the appropriate boxes)					
Alignment of Centre Line of Hot Strip: (Enter the position using clock face indication method)					

			Red						**Yellow**						**Green**						**Top Yellow**					
			Filament (V)		TX I/P Current (mA)	Transformer Settings		SSC Code	Filament (V)		TX I/P Current (mA)	Transformer Settings		SSC Code	Filament (V)		TX I/P Current (mA)	Transformer Settings		SSC Code	Filament (V)		TX I/P Current (mA)	Transformer Settings		SSC Code
Date	Name	Meter ID	Main	Aux *		I/P	O/P		Main	Aux*		I/P	O/P		Main	Aux*		I/P	O/P		Main	Aux*		I/P	O/P	

* For Double Filament Lamps Only

			Red						Yellow						Green						Top Yellow					
			Filament (V)		TX I/P Current (mA)	Transformer Settings		SSC Code	Filament (V)		TX I/P Current (mA)	Transformer Settings		SSC Code	Filament (V)		TX I/P Current (mA)	Transformer Settings		SSC Code	Filament (V)		TX I/P Current (mA)	Transformer Settings		SSC Code
Date	Name	Meter ID	Main	Aux *		I/P	O/P		Main	Aux*		I/P	O/P		Main	Aux*		I/P	O/P		Main	Aux*		I/P	O/P	

* For Double Filament Lamps Only

Network Rail	**Trainstop (Electro-Hydraulic) Calibration Test Record Card (Front) NR/SMS/Test/026**	**Form: NR/SMS/T026/RC/01** **Date: August 2004** **Issue: 01**

Signal Box:	Location:	Train Stop Number:	Train Stop Type:

Stop Arm & Motor Cut Out Settings (mm)					Comments	Signature	Name & Company	Date
Arm Fully Raised	On Detection Lost	Off Detection Made	Arm Fully Lowered	Motor Cut Out				

Network Rail	**Trainstop (Electro-Hydraulic) Calibration Test Record Card (Rear) NR/SMS/Test/026**	**Form: NR/SMS/T026/RC/01** **Date: August 2004** **Issue: 01**

Stop Arm & Motor Cut Out Settings (mm)					Comments	Signature	Name & Company	Date
Arm Fully Raised	On Detection Lost	Off Detection Made	Arm Fully Lowered	Motor Cut Out				

Network Rail	**ATP (Chilterns)** Maintenance Test	**Form: NR/SMS/T029/RC01** **Date: June 2019** **Issue: 03**

Signal Number:	Loop ID:	Loop Length (M):	Line Speed:	Gradient:	Distance to Loop (M)

Date	Name & Company	Signed	Meter Identity	Current Probe Identity	Power Supply Voltage	Loop Cable Current (µA)	Comments *Adjustments etc*

*: Insert tick if correct **: Insert tick if fitted and details in the comments column

Network Rail

Insulated Rail Joint (IRJ) - DC & BR-WR Quick Release TC's

Maintenance Test

Form: NR/SMS/T041/RC01
Date: 01/09/2018
Issue: 02

Signal Box / Interlocking:	Adjacent Track Circuits:	Line: Up / Down Rail: Six Foot / Cess *Delete as Appropriate*

Voltages (V)					Meter Identity	220 Ohm Shunt Identity	Comments *Joint Condition, Pway Condition etc*	Signature	Name & Company	Date
Rail to Rail	Inner Plate to Rail		Outer Plate to Rail							
V1	V2	V3	V2	V3						

Network Rail	# Insulated Rail Joint (IRJ) - DC & BR-WR Quick Release TC's Maintenance Test	**Form: NR/SMS/T041/RC01** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking:	Adjacent Track Circuits:	Line: Up / Down Rail: Six Foot / Cess *Delete as Appropriate*

Voltages (V)					Meter Identity	220 Ohm Shunt Identity	Comments *Joint Condition, Pway Condition etc*	Signature	Name & Company	Date
Rail to Rail	Inner Plate to Rail		Outer Plate to Rail							
V1	V2	V3	V2	V3						

Network Rail	**Insulated Rail Joint Test (IRJ) - 50Hz AC TC's** Maintenance Test	**Form: NR/SMS/T041/RC/02** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking:	Adjacent Track Circuits:	Line: Up / Down Rail: Six Foot / Cess *Delete as Appropriate*

Resistance (Ohms)																Meter Identity	Comments *Joint Condition, Pway Condition etc*	Signature	Name & Company	Date
Rails to Inner Plate		Rail to Inner Plate Bolts						Rails to Outer Plate		Rail to Outer Plate Bolts										
1	2	1	2	3	4	5	6	1	2	1	2	3	4	5	6					

Network Rail	**Insulated Rail Joint Test (IRJ) - DC & 50Hz AC TC's** Maintenance Test	**Form: NR/SMS/T041/RC/02** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking:	Adjacent Track Circuits:	Line: Up / Down Rail: Six Foot / Cess *Delete as Appropriate*

Resistance (Ohms)																Meter Identity	Comments *Joint Condition, Pway Condition etc*	Signature	Name & Company	Date
Rails to Inner Plate		Rail to Inner Plate Bolts						Rails to Outer Plate		Rail to Outer Plate Bolts										
1	2	1	2	3	4	5	6	1	2	1	2	3	4	5	6					

Axle Counter - AzL70

Evaluator & Single Rail Contacts Record Card

Form: NR/SMS//T042/01
Date: March 2018
Issue: 02

Signal Box / Interlocking:	Location:	Axle Counter Section:

Count In Letter/Number:	Count Out (1) Letter/Number:	Count Out (2) Letter/Number:	Rail Contact Type:

Number	**Evaluator**																	**Lineside Junction Box (EAK)**				
	Voltages (V)								Wavefor	System Tests*								Voltages (V & mV)				
	DC Supply	DC Stabilised Supply	BUPL Jacks						Square Wave * (optional)	Eval uato					LED's/Relay Indications/Positions		Power Supply			DC Supply	DC Stabilised	Signal Generator	Channel 1 SK1	Channel 1 SK2
			1a	1b	2a	2b	3a	3b		Count In	Count Out	System Reset	Count Indication	SVA Card Removal	Section Clear	Section Occupied	Charger Current	Standby Functional					
1																						
2																						
3																						
4																						
5																						
6																						
7																						

Number	**Rail Contacts**												**General Information**				
	Voltage (mV) at AL4/3-4 For SK1 & AL4/1-2 for SK2																
	Without Dummy Wheel						With Dummy Wheel										
	Count In		Count Out (1)		Count Out (2)		Count In		Count Out (1)		Count Out (2)						
	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2	Comments	Date	Meter ID	Name & Company	Signature
1																	
2																	
3																	
4																	
5																	
6																	
7																	

*: Insert tick if functions/indications/tests are correct to RT/SMS steps

Axle Counter - AzL70

Evaluator & Double Rail Contacts Record Card **(Front)**

Form: NR/SMS/T042/02
Date: March 2018
Issue: 01

Signal Box / Interlocking:	Location:	Axle Counter Section:

Count In Letter/Number:	Count Out (1) Letter/Number:	Count Out (2) Letter/Number:	Rail Contact Type:

Number	**Evaluator**																	
	Voltages (V)								Waveforms	System Tests*								
	DC Supply	DC Stabilised Supply	BUPL Jacks						Square Wave * (Optional)	Evaluator Functions					LED's/Relay Indications/Positions		Power Supply	
			1a	1b	2a	2b	3a	3b		Count In	Count Out	System Reset	Count Indication	SVA Card Removal	Section Clear	Section Occupied	Charger Current	Standby Functional
1																		
2																		
3																		
4																		

Number	**Rail Contacts Tests**																						
	Voltage (mV)														Output Voltage & Frequency Checks										
	Phase Reversal Tests [MESSAB 1 (10) for SK1 & MESSAB 2 (12) for SK2]												PEGUE 1 (11)	PEGUE 2 (13)	No Dummy Wheel		Dummy Wheel over SK1			Dummy Wheel over SK2			Dummy Wheel over SK1 & SK2	
	Without Dummy Wheel						With Dummy Wheel																	
	Count In		Count Out 1		Count Out 2		Count In		Count Out 1		Count Out 2				LED's *	LTG1 (mV)	LED's *	LTG1 (mV)	Freq (kHz)	LED's *	LTG1 (mV)	Freq (kHz)	LED's *	LTG1 (mV)
	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2												
1																								
2																								
3																								
4																								

Number	Lineside Junction Box (EAK) Tests											Comments *Adjustments etc*	Meter Identity	Signature	Name & Company	Date
	Voltages (mV & V)							Tx Outputs								
	Incoming Supply	Stabilised Supply 1 (3)	Stabilised Supply 2 (4)	MESSAB 1 (10)	MESSAB 2 (12)	PEGUE 1 (11)	PEGUE 2 (13)	SK1		SK2						
								Volts (AC)	Freq (kHz)	Volts (AC)	Freq (kHz)					
1																
2																
3																
4																

*: Insert tick if LED indications are correct to RT/SMS steps Note: Numbers in brackets refer to the test box switch positions

Axle Counter - AzL70 (Thales)

Evaluator & Double Rail Contacts Record Card **(Back)**

Form: NR/SMS//T042/AzL 70 Double
Date: March 2018
Issue: 02

Number	Evaluator																		
	Voltages (V)								Waveforms	System Tests*									
	DC Supply	DC Stabilised Supply	BUPL Jacks						Square Wave * (Optional)	Evaluator Functions					LED's/Relay Indications/Positions		Power Supply	
			1a	1b	2a	2b	3a	3b		Count In	Count Out	System Reset	Count Indication	SVA Card Removal	Section Clear	Section Occupied	Charger Current	Standby Functional
5																		
6																		
7																		
8																		
9																		

Number	Rail Contacts Tests																								
	Voltage (mV)														Output Voltage & Frequency Checks										
	Phase Reversal Tests [MESSAB 1 (10) for SK1 & MESSAB 2 (12) for SK2]												PEGUE 1 (11)	PEGUE 2 (13)	No Dummy Wheel		Dummy Wheel over SK1			Dummy Wheel over SK2			Dummy Wheel over SK1 & SK2	
	Without Dummy Wheel						With Dummy Wheel																		
	Count In		Count Out 1		Count Out 2		Count In		Count Out 1		Count Out 2				LED's *	LTG1 (mV)	LED's *	LTG1 (mV)	Freq (kHz)	LED's *	LTG1 (mV)	Freq (kHz)	LED's *	LTG1 (mV)
	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2													
5																									
6																									
7																									
8																									
9																									

Number	Lineside Junction Box (EAK) Tests											Comments : *Adjustments etc*	Meter Identity	Signature	Name & Company	Date
	Voltages (mV & V)							Tx Outputs								
								SK1		SK2						
	Incoming Supply	Stabilised Supply 1 (3)	Stabilised Supply 2 (4)	MESSAB 1 (10)	MESSAB 2 (12)	PEGUE 1 (11)	PEGUE 2 (13)	Volts (AC)	Freq (kHz)	Volts (AC)	Freq (kHz)					
5																
6																
7																
8																
9																

*: Insert tick if LED indications are correct to RT/SMS steps Note: Numbers in brackets refer to the test box switch positions

Network Rail	**Axle Counter - AzL70/30 & AzL70/30s** Evaluator & Rail Contacts Record Card (Front)	**Form: NR/SMS//T042/03** **Date: March 2018** **Issue: 01**

Signal Box / Interlocking:	Location:	Axle Counter Section:	System Type: 70/30 70/30S (Circle)
Count In Letter/Number:	Count Out (1) Letter/Number:	Count Out (2) Letter/Number:	Rail Contact Type:

Number	**Evaluator**																					
	Voltages (V)												Waveform	System Tests*								
	DC Supply	DC Stabilised Supply	BUPL Terminals				BUPL Jacks						Square Wave * (Optional)	Evaluator Functions					LED's/Relay Indications/Positions		Power Supply	
			2nd	4th	5th	6th	1a	1b	2a	2b	3a	3b		Count In	Count Out	System Reset	Count Indication	SVA Card Removal	Section Clear	Section Occupied	Charger Current	Standby Functional
1																						
2																						
3																						
4																						

Number	**Rail Contacts Tests**																						
	Voltage (mV)														Output Voltage & Frequency Checks									
	Phase Reversal Tests [MESSAB 1 (10) for SK1 & MESSAB 2 (12) for SK2]												PEGUE 1 (11)	PEGUE 2 (13)	No Dummy Wheel		Dummy Wheel over SK1			Dummy Wheel over SK2			Dummy Wheel over SK1 & SK2	
	Without Dummy Wheel						With Dummy Wheel																	
	Count In		Count Out 1		Count Out 2		Count In		Count Out 1		Count Out 2				LED's *	LTG1 (mV)	LED's *	LTG1 (mV)	Freq (kHz)	LED's *	LTG1 (mV)	Freq (kHz)	LED's *	LTG1 (mV)
	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2												
1																								
2																								
3																								
4																								

Number	**Lineside Junction Box (EAK) Tests**											Comments *Adjustments etc*	Meter Identity	Signature	Name & Company	Date
	Voltages (mV & V)							Tx Outputs								
	Incoming Supply	Stabilised Supply 1 (3)	Stabilised Supply 2 (4)	MESSAB 1 (10)	MESSAB 2 (12)	PEGUE 1 (11)	PEGUE 2 (13)	SK1		SK2						
								Volts (AC)	Freq (kHz)	Volts (AC)	Freq (kHz)					
1																
2																
3																
4																

*: Insert tick if LED indications are correct to RT/SMS steps Note: Numbers in brackets refer to the test box switch positions

Axle Counter - AzL70 (Thales)

Evaluator & Double Rail Contacts Record Card (Back)

Form: NR/SMS//T042/AzL70 /30
Date: March 2018
Issue: 02

Number	Evaluator																					
	Voltages (V)												Waveform	System Tests*								
	DC Supply	DC Stabilised Supply	BUPL Terminals				BUPL Jacks						Square Wave * (Optional)	Evaluator Functions					LED's/Relay Indications/Positions		Power Supply	
			2nd	4th	5th	6th	1a	1b	2a	2b	3a	3b		Count In	Count Out	System Reset	Count Indication	SVA Card Removal	Section Clear	Section Occupied	Charger Current	Standby Functional
5																						
6																						
7																						
8																						
9																						

Number	Rail Contacts Tests														Output Voltage & Frequency Checks									
	Voltage (mV)																							
	Phase Reversal Tests [MESSAB 1 (10) for SK1 & MESSAB 2 (12) for SK2]												PEGUE 1 (11)	PEGUE 2 (13)	No Dummy Wheel		Dummy Wheel over SK1			Dummy Wheel over SK2			Dummy Wheel over SK1 & SK2	
	Without Dummy Wheel						With Dummy Wheel																	
	Count In		Count Out 1		Count Out 2		Count In		Count Out 1		Count Out 2				LED's *	LTG1 (mV)	LED's *	LTG1 (mV)	Freq (kHz)	LED's *	LTG1 (mV)	Freq (kHz)	LED's *	LTG1 (mV)
	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2	SK1	SK2												
5																								
6																								
7																								
8																								
9																								

Number	Lineside Junction Box (EAK) Tests											Comments : *Adjustments etc*	Meter Identity	Signature	Name & Company	Date
	Voltages (mV & V)							Tx Outputs								
								SK1		SK2						
	Incoming Supply	Stabilised Supply 1 (3)	Stabilised Supply 2 (4)	MESSAB 1 (10)	MESSAB 2 (12)	PEGUE 1 (11)	PEGUE 2 (13)	Volts (AC)	Freq (kHz)	Volts (AC)	Freq (kHz)					
5																
6																
7																
8																
9																

*: Insert tick if LED indications are correct to RT/SMS steps Note: Numbers in brackets refer to the test box switch positions

Network Rail	**Track Circuit Aid (TCAID) Test Record Card (Front) NR/SMS/Test/043**	**Form: NR/SMS/T043/RC/01** **Date: August 2004** **Issue: 01**

Signal Box / Interlocking:	Location:	TC Number / Letter:

TC Start (Miles/Yds):	TC Finish (Miles/Yds):	Number of TCAIDS on TC:	Usage: Continuous / Seasonal *Delete as appropriate*

No.	TCAID								
	Serial No.	Position (Miles/Yds)	Type (& direction if D)	Installed Date	Commissioned Date	De-Commissioned Date	Comments	Signature	Name & Company
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

Network Rail	**Track Circuit Aid (TCAID) Test Record Card (Rear) NR/SMS/Test/043**	**Form: NR/SMS/T043/RC/01** **Date: August 2004** **Issue: 01**

Number	Tests															
	Test 1				Test 2				Test 3				Test 4			
	Test OK*	Battery Renewed	Signature Date	Company	Test OK*	Battery Renewed	Signature Date	Company	Test OK*	Battery Renewed	Signature Date	Company	Test OK*	Battery Renewe	Signature Date	Company
1		Yes/No				Yes/No				Yes/No				Yes/No		
2		Yes/No				Yes/No				Yes/No				Yes/No		
3		Yes/No				Yes/No				Yes/No				Yes/No		
4		Yes/No				Yes/No				Yes/No				Yes/No		
5		Yes/No				Yes/No				Yes/No				Yes/No		
6		Yes/No				Yes/No				Yes/No				Yes/No		
7		Yes/No				Yes/No				Yes/No				Yes/No		
8		Yes/No				Yes/No				Yes/No				Yes/No		
9		Yes/No				Yes/No				Yes/No				Yes/No		
10		Yes/No				Yes/No				Yes/No				Yes/No		
11		Yes/No				Yes/No				Yes/No				Yes/No		
12		Yes/No				Yes/No				Yes/No				Yes/No		
13		Yes/No				Yes/No				Yes/No				Yes/No		
14		Yes/No				Yes/No				Yes/No				Yes/No		
15		Yes/No				Yes/No				Yes/No				Yes/No		
16		Yes/No				Yes/No				Yes/No				Yes/No		
17		Yes/No				Yes/No				Yes/No				Yes/No		
18		Yes/No				Yes/No				Yes/No				Yes/No		
19		Yes/No				Yes/No				Yes/No				Yes/No		
20		Yes/No				Yes/No				Yes/No				Yes/No		

* Insert tick if activate and de-activate voltages are correct

Network Rail	**Treadle Timing and Adjustment** Maintenance Test	**Form: NR/SMS/T44/Treadle Timing** **Date: June 2019** **Issue: 04**

Signal Box / Equipment Room:	Location:	Treadle Number:	Treadle Type: 59 / 69 Treadle Arm: Single / Double

Actuating Arm Gauge				Arm Return Timing		Meter Identity	Gauge Type Plump Weight & Step Gauge Reading in (mm) / Treadle Gauge Insert Pass / Fail	Comments *Adjustments, Fluid top up etc*	Signature & Initials	Date
Single Arm		2nd Arm (*)		Single Arm	2nd Arm (*)					
Rail to Arm gap (mm) Pass / Fail	Height below rail level (mm) Pass / Fail	Rail to Arm gap (mm) Pass / Fail	Height below rail level (mm) Pass / Fail	Time (Sec)	Time (Sec)					

(*) Style 69 double arm treadles only

Network Rail	**Axle Counter - AzLM & AzLE** Detection Points Record Card	**Form: NR/SMS /T045/01** **Date: September 2018** **Issue: 05**

Signal Box / Interlocking:	Location:	Detection Point Name:	EAK Type	H	K
			Contact Type	H	K

Detection point Shared between ACEs?	Yes	No	ACE(s) Identity/Location	Power by: ACE: …….. OR LOCAL POWER: Location ……

Power Channel		MASSAB 1 (10) mVDC			MASSAB 2 (12) mVDC			SK1		SK2						
CH 1 (3) VDC	CH 2 (4) VDC	Without Dummy Wheel (+)	With Dummy Wheel (-)	PEGUE 1 (11) mVDC	Without Dummy Wheel (+)	With Dummy Wheel (-)	PEGUE 2 (13) mVDC	Voltage VAC	Freq KHz	Voltage VAC	Freq KHz	Comments	Meter Identity	Signature	Name & Company	Date

Network Rail	**Thales AzLM & AzLE Axle Counter** Detection Points Record Card	**Form: NR/SMS /T045/01** **Date: September 2018** **Issue: 05**

Power Channel		MASSAB 1 (10) mVDC			MASSAB 2 (12) mVDC			SK1		SK2						
CH 1 (3) VDC	CH 2 (4) VDC	Without Dummy Wheel (+)	With Dummy Wheel (-)	PEGUE 1 (11) mVDC	Without Dummy Wheel (+)	With Dummy Wheel (-)	PEGUE 2 (13) mVDC	Voltage VAC	Freq KHz	Voltage VAC	Freq KHz	Comments	Meter Identity	Signature	Name & Company	Date

Network Rail	**Level Crossing CCTV Camera Test Record Card (Front) NR/SMS/Test/046**	**Form: NR/SMS/T046/RC/01** **Date: August 2004** **Issue: 01**

Monitoring Signal Box:	Level Crossing:	Camera Types:	
Fisheye Lenses Fitted?:	CCU Fitted?:	VRTU Fitted?:	Location of VRTU:

Number	Camera 1												
	Operation & Settings*				Picture Resolution*		Picture Content*				Waveforms & Voltages (V)		
	In Use Ind'tion	Shutter	Iris	Wiper	Centre of Picture	Edges of Picture	Complete & No Skyline	Un-obstructed	Stop Lines Visible	No Streaking/ Flaring etc	Composite Video (Pk-Pk)	Black Level	Video Content Adjustment Comments
1													
2													
3													
4													

Number	Camera 2												
	Operation & Settings*				Picture Resolution*		Picture Content*				Waveforms & Voltages (V)		
	In Use Ind'tion	Shutter	Iris	Wiper	Centre of Picture	Edges of Picture	Complete & No Skyline	Un-obstructed	Stop Lines Visible	No Streaking/ Flaring etc	Composite Video (Pk-Pk)	Black Level	Video Content Adjustment Comments
1													
2													
3													
4													

Number	General Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					

*: Insert tick if correct to NR/SMS steps

Network Rail	**Level Crossing CCTV Camera Test Record Card (Rear) NR/SMS/Test/046**	**Form: NR/SMS/T046/RC/01** **Date: August 2004** **Issue: 01**

Number	Camera 1												
	Operation & Settings*				Picture Resolution*		Picture Content*				Waveforms & Voltages (V)		
	In Use Ind'tion	Shutter	Iris	Wiper	Centre of Picture	Edges of Picture	Complete & No Skyline	Un-obstructed	Stop Lines Visible	No Streaking/ Flaring etc	Composite Video (Pk-Pk)	Black Level	Video Content Adjustment Comments
5													
6													
7													
8													
9													
10													

Number	Camera 2												
	Operation & Settings*				Picture Resolution*		Picture Content*				Waveforms & Voltages (V)		
	In Use Ind'tion	Shutter	Iris	Wiper	Centre of Picture	Edges of Picture	Complete & No Skyline	Un-obstructed	Stop Lines Visible	No Streaking/ Flaring etc	Composite Video (Pk-Pk)	Black Level	Video Content Adjustment Comments
5													
6													
7													
8													
9													
10													

Number	General Comments	Test Equipment Identity	Signature	Name & Company	Date
5					
6					
7					
8					
9					
10					

*: Insert tick if correct to NR/SMS steps

Network Rail	**CCTV Tx Systems (Marconi/GEC 14.5MHz AM) Tests** Maintenance Test	**Form: NR/SMS/T047/RC/01** **Date: 01/09/2018** **Issue: 2**

Monitoring Signal Box:	Level Crossing:	Number of Repeaters:

Number	Transmission End							Repeater (1)						Repeater (2)					
	Power Supply O/P (V)					Waveforms**		Power Supply O/P (V)				Waveforms**		Power Supply O/P				Waveforms**	
	To Modulator			To Launch Amp*		O/P from Modulator	O/P from Launch Amp*	To Line Amp		To Launch Amp*		O/P from Modulator	O/P from Launch Amp*	To Line Amp		To Launch Amp*		O/P from Modulator	O/P from Launch Amp*
	DC +ve	DC -ve	AC Ripple	DC +ve	AC Ripple			DC +ve	AC Ripple	DC +ve	AC Ripple			DC +ve	AC Ripple	DC +ve	AC Ripple		
1																			
2																			
3																			
4																			

Number	Repeater (3)				Waveforms**		Repeater (4)				Waveforms**		Receiver End				
	Power Supply O/P (V)						Power Supply O/P						Power Supply O/P		Waveforms**	Received Picture**	
	To Line Amp		To Launch Amp*		O/P from Modulator	O/P from Launch Amp*	To Line Amp		To Launch Amp*		O/P from Modulator	O/P from Launch Amp*	To Demodulator		O/P from Demodulator	Satisfactory Resolution	Satisfactory Content
	DC +ve	AC Ripple	DC +ve	AC Ripple			DC +ve	AC Ripple	DC +ve	AC Ripple			DC +ve	AC Ripple			
1																	
2																	
3																	
4																	

Number	Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					

*: If fitted to the system **: Insert tick if correct

Network Rail	**CCTV Tx Systems (Marconi/GEC 14.5MHz AM) Tests** Maintenance Test	**Form: NR/SMS/T047/RC/01** **Date: 01/09/2018** **Issue: 2**

Number	Transmission End							Repeater (1)						Repeater (2)					
	Power Supply O/P (V)					Waveforms**		Power Supply O/P (V)				Waveforms**		Power Supply O/P				Waveforms**	
	To Modulator			To Launch Amp*		O/P from Modulator	O/P from Launch Amp*	To Line Amp		To Launch Amp*		O/P from Modulator	O/P from Launch Amp*	To Line Amp		To Launch Amp*		O/P from Modulator	O/P from Launch Amp*
	DC +ve	DC -ve	AC Ripple	DC +ve	AC Ripple			DC +ve	AC Ripple	DC +ve	AC Ripple			DC +ve	AC Ripple	DC +ve	AC Ripple		
5																			
6																			
7																			
8																			
9																			

Number	Repeater (3)						Repeater (4)						Receiver End				
	Power Supply O/P (V)				Waveforms**		Power Supply O/P				Waveforms**		Power Supply O/P		Waveforms**	Received Picture**	
	To Line Amp		To Launch Amp*		O/P from Modulator	O/P from Launch Amp*	To Line Amp		To Launch Amp*		O/P from Modulator	O/P from Launch Amp*	To Demodulator		O/P from Demodulator	Satisfactory Resolution	Satisfactory Content
	DC +ve	AC Ripple	DC +ve	AC Ripple			DC +ve	AC Ripple	DC +ve	AC Ripple			DC +ve	AC Ripple			
5																	
6																	
7																	
8																	
9																	

Number	Comments	Test Equipment Identity	Signature	Name & Company	Date
5					
6					
7					
8					
9					

Network Rail	**CCTV Tx Systems (Philips FM System) Tests** Maintenance Test	**Form: NR/SMS/T047/RC/02** **Date: 01/09/2018** **Issue: 02**

Monitoring Signal Box:	Level Crossing:	Number of Repeaters:

Number	Transmission End				Repeater (1)					Repeater (2)				
	Power Supply		Waveforms**		Coaxial Cable		Waveforms		Video	Coaxial Cable		Waveforms		Video
	DC Voltage	AC Ripple	Modulator O/P (carrier Only)	Launch Amp O/P (Multiburst)*	Loop Resistance (Ohms)	Insulation Resistance (Ohms)	Video O/P (Multiburst)	FM signal O/P Level (Modulated)	Picture Quality	Loop Resistance (Ohms)	Insulation Resistance (Ohms)	Video O/P (Multiburst)	FM signal O/P Level (Modulated)	Picture Quality
1														
2														
3														
4														

Number	Repeater (3)					Repeater (4)					Receiver End			
	Coaxial Cable		Waveforms		Video	Coaxial Cable		Waveforms		Video	Power Supply		Waveforms	Video
	Loop Resistance (Ohms)	Insulation Resistance (Ohms)	Video O/P (Multiburst)	FM signal O/P Level (Modulated)	Picture Quality	Loop Resistance (Ohms)	Insulation Resistance (Ohms)	Video O/P (Multiburst)	FM signal O/P Level (Modulated)	Picture Quality	DC Voltage	AC Ripple	Modulated Carrier I/P	Picture Quality (Processed Video O/P)
1														
2														
3														
4														

Number	Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					

CCTV Tx Systems (Philips FM System) Tests

Maintenance Test

Form: NR/SMS/T047/RC/02
Date: 01/09/2018
Issue: 02

Number	Transmission End				Repeater (1)					Repeater (2)				
	Power Supply		Waveforms**		Coaxial Cable		Waveforms		Video	Coaxial Cable		Waveforms		Video
	DC Voltage	AC Ripple	Modulator O/P (carrier Only)	Launch Amp O/P (Multiburst)*	Loop Resistance (Ohms)	Insulation Resistance (Ohms)	Video O/P (Multiburst)	FM signal O/P Level (Modulated)	Picture Quality	Loop Resistance (Ohms)	Insulation Resistance (Ohms)	Video O/P (Multiburst)	FM signal O/P Level (Modulated)	Picture Quality
5														
6														
7														
8														
9														

Number	Repeater (3)					Repeater (4)					Receiver End			
	Coaxial Cable		Waveforms		Video	Coaxial Cable		Waveforms		Video	Power Supply		Waveforms	Video
	Loop Resistance (Ohms)	Insulation Resistance (Ohms)	Video O/P (Multiburst)	FM signal O/P Level (Modulated)	Picture Quality	Loop Resistance (Ohms)	Insulation Resistance (Ohms)	Video O/P (Multiburst)	FM signal O/P Level (Modulated)	Picture Quality	DC Voltage	AC Ripple	Modulated Carrier I/P	Picture Quality (Processed Video O/P)
5														
6														
7														
8														
9														

Number	Comments	Test Equipment Identity	Technicians SSM Name	Company	Date
5					
6					
7					
8					
9					

*: If fitted to the system **: Insert tick if correct

Network Rail	**AC Busbar & Earth Test** Maintenance Test	**Form: NR/SMS/T051/RC01** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking:	Location / Equipment Room

Busbar:				Busbar:				Busbar:				Meter Identity	AC Busbar Earth Test Adapter Identity	Signature	Name & Company	Date
Busbar Voltage	V1	V2	Vb	Busbar Voltage	V1	V2	Vb	Busbar Voltage	V1	V2	Vb					

Network Rail

AC Busbar & Earth Test

Maintenance Test

Form: NR/SMS/T051/RC01
Date: 01/09/2018
Issue: 02

Busbar:				Busbar:				Busbar:				Meter Identity	AC Busbar Earth Test Adapter Identity	Signature	Name & Company	Date
Busbar Voltage	V1	V2	Vb	Busbar Voltage	V1	V2	Vb	Busbar Voltage	V1	V2	Vb					

Network Rail	**DC Busbar & Earth Test** Maintenance Test	**Form: NR/SMS/T051/RC02** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking:	Location / Equipment Room

Busbar:			Busbar:			Busbar:			Busbar:			Meter Identity	Meter Shunt Identity	Signature	Name & Company	Date
Busbar Voltage	V1 B - E	V2 N - E	Busbar Voltage	V1 B - E	V2 N - E	Busbar Voltage	V1 B - E	V2 N - E	Busbar Voltage	V1 B - E	V2 N - E					

Network Rail

DC Busbar & Earth Test

Maintenance Test

Form: NR/SMS/T051/RC02
Date: 01/09/2018
Issue: 02

Busbar:			Busbar:			Busbar:			Busbar:			Meter Identity	Meter Shunt Identity	Signature	Name & Company	Date
Busbar Voltage	V1 B - E	V2 N - E	Busbar Voltage	V1 B - E	V2 N - E	Busbar Voltage	V1 B - E	V2 N - E	Busbar Voltage	V1 B - E	V2 N - E					

Network Rail	**Dynamic Earth Test (Power Worked Points)** Maintenance Test	**Form: NR/SMS/T052/RC01** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking:	Location / Equipment Room	Point Number:	Number of Ends:

Maximum Drive Voltage B to Earth		Maximum Drive Voltage N to Earth		Detection Voltage Across Busbar	Detection Voltage B to Earth		Detection Voltage N to Earth		Meter Identity	Comments	Signature	Name & Company	Date
N-R	R-N	N-R	R-N		N	R	N	R					

Network Rail

Dynamic Earth Test (Power Worked Points)

Maintenance Test

Form: NR/SMS/T052/RC01
Date: 01/09/2018
Issue: 02

Maximum Drive Voltage B to Earth		Maximum Drive Voltage N to Earth		Detection Voltage Across Busbar	Detection Voltage B to Earth		Detection Voltage N to Earth		Meter Identity	Comments	Signature	Name & Company	Date
N-R	R-N	N-R	R-N		N	R	N	R					

Network Rail	**Dynamic Earth Test (Level Crossing Barriers)** Maintenance Test	**Form: NR/SMS/T052/RC/02** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking:	Level Crossing Type:	Level Crossing Name:

B24 (Barr) Voltage Across Busbar	Maximum B24 (Barr) Voltage During Xing Cycle		Meter Identity	Comments	Signature	Name & Company	Date
	Positive to Earth	Negative to Earth					

Dynamic Earth Test (Level Crossing Barriers)

Maintenance Test

Form: NR/SMS/T052/RC/02
Date: 01/09/2018
Issue: 02

B24 (Barr) Voltage Across Busbar	Maximum B24 (Barr) Voltage During Xing Cycle		Meter Identity	Comments	Signature	Name & Company	Date
	Positive to Earth	Negative to Earth					

Network Rail

Earth Leakage Detector – 930 / P and IR145

Function Test

Form: NR/SMS/T053/RC01
Date: June 2019
Issue: 02

Signal Box:	Interlocking:	Location:	ELD Name:

Function Test

Date	Name	Signature	Meter ID	Weather 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Busbar 1: Name / ID				Busbar 2: Name / ID				Busbar 3: Name / ID			
					Busbar Voltage	Indication on ELD*	If Fault Cleared OK**	ELD Test OK**	Busbar Voltage	Indication on ELD*	If Fault Cleared OK**	ELD Test OK**	Busbar Voltage	Indication on ELD*	If Fault Cleared OK**	ELD Test OK**
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N
						C / F	Y / N	Y / N		C / F	Y / N	Y / N		C / F	Y / N	Y / N

*: Clear/Fault, Circle as Appropriate **: Yes/No, Circle as Appropriate

Network Rail	**Earth Leakage Detector – 930 / P / and IR145** Calibration Test	**Form: NR/SMS/T220/RC/01** **Date: June 2019** **Issue: 02**

Calibration Test

Date	Name	Signature	Meter ID	Weather 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	22Ω Resistor Value	Busbar 1: Name / ID			Busbar 2: Name / ID			Busbar 3: Name / ID		
						Busbar Voltage	B or BX* Correct	N or NX* Correct	Busbar Voltage	B or BX* Correct	N or NX* Correct	Busbar Voltage	B or BX* Correct	N or NX* Correct
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N
							Y / N	Y / N		Y / N	Y / N		Y / N	Y / N

*: Yes/No, Circle as Appropriate

Earth Leakage Detector – IR425

Function Test

Form: NR/SMS/T053/RC02
Date: March 2020
Issue: 01

Signal Box:	Interlocking:	Location:	ELD Name:

Function Test

Date	Name	Company	Signature	Meter ID	Weather 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Alarm Status on arrival		Manual Test		Comments
						Alarm 1	Alarm 2	ELD Test OK**	If “NO” Error Code	
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		
						CLR/LIT	CLR/LIT	Y / N		

*: Yes/No, Circle as Appropriate

Network Rail

Earth Leakage Detector – IR425

Calibration Test

Form: NR/SMS/T053/RC/02
Date: March 2020
Issue: 01

	Calibration Test											
			Status on Arrival			Busbar 1: Name / ID		Busbar 2: Name / ID		Busbar 3: Name / ID		
Date	Name & Company	Signature	Alarm Indications Clear	Displayed Resistance	22Ω Resistor Value	Alarm 1 Lit	Alarm 2 Lit	Alarm 1 Lit	Alarm 2 Lit	Alarm 1 Lit	Alarm 2 Lit	Comments
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N		Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
			Y / N	Ω	Ω	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	

*: Yes/No, Circle as Appropriate

Network Rail	**Cable Insulation** Maintenance Record	**Form: NR/SMS/T054/Cable Insulation** **Date: March 2018** **Issue: 03**

Signal Box / Interlocking:	Cable Name/Number:	Cable From:	Cable To:
Cable Length:	Cable Type*: Lineside / Tail	Test Type*: Maintenance / Full	Cable Installation/Commissioning Date(s):
Cable Core Size:	Number of Cores:	Number of Joints:	Type/Condition of Cable Route:
Cable Carrying Reed FDM Transmissions*: Yes / No	Weather Conditions:	Meter Identity:	Voltage Tested To:
Megger Identity#1:	Reed Cable Adaptor Identity#1:	Reed Earth Leakage Tester Identity#1:	Cable Running Parallel to FS2600 TC's or Routes Carrying Class 92 or 373 Trains*#2: Yes/No
Tested By:	Testers Signature:	Company:	Date:

#1: Fill in details as applicable to type of cable test #2: Applicable to cables carrying Reed FDM Transmissions only *: Delete as applicable

1st Reference Core Number:	2nd Reference Core Number:	Polarity Correct: Yes / No / NA

Insulation Resistance				Loop Resistance		
Core to Earth		Core to Core		Core to Core		
Core No.	M Ohms	Core No's.	M Ohms	Core No's.	Ohms	Cable Core Function

Insulation Resistance				Loop Resistance		
Core to Earth		Core to Core		Core to Core		
Core No.		Core No's.	M Ohms	Core No's.	Ohms	Cable Core Function

Network Rail	**Cable Insulation** Maintenance Record	**Form: NR/SMS/T054/Cable Insulation** **Date: March 2018** **Issue: 03**

Insulation Resistance				Loop Resistance		
Core to Earth		Core to Core		Core to Core		
Core No.	M Ohms	Core No's.	M Ohms	Core No's.	Ohms	Cable Core Function

Insulation Resistance				Loop Resistance		
Core to Earth		Core to Core		Core to Core		
Core No.	M Ohms	Core No's.	M Ohms	Core No's.	Ohms	Cable Core Function

General Comments or Remarks:

Network Rail	**Non-Intrusive Earth Leakage for FDM Systems Test (Method A)** Maintenance Record Card	**Form: NR/SMS/T054/RC02** **Date: 01/09/2018** **Issue: 03**

Earth Leakage			Line Resistance	Weather Conditions	Comments	Adaptor Identity	Meter Identity	Signature	Name & Company	Date
V1 Voltage	V2 Voltage*	Resistance to Earth								

*: Record reading when V2 is lower than V1

Network Rail	**Non-Intrusive Earth Leakage for FDM Systems Test (Method A)** Maintenance Record Card	**Form: NR/SMS/T054/RC02** **Date: 01/09/2018** **Issue: 03**

Earth Leakage			Line Resistance	Weather Conditions	Comments	Adaptor Identity	Meter Identity	Signature	Name & Company	Date
V1 Voltage	V2 Voltage*	Resistance to Earth								

*: Record reading when V2 is lower than V1

Network Rail	**Non-Intrusive Earth Leakage for FDM Systems (Method B)** Maintenance Record Card	**Form: NR/SMS/T054/RC03** **Date: 01/09/2018** **Issue: 02**

Power Signal Box:	System:	Location From:	Location To:

Meter Reading (0-Red)	Resistance to Earth (Ohms)	Weather Conditions	Comments	Meter Identity	Signature	Name & Company	Date

Network Rail	**Non-Intrusive Earth Leakage for FDM Systems (Method B)** Maintenance Record Card	**Form: NR/SMS/T054/FDM (B)** **Date: March 2018** **Issue: 02**

Meter Reading (0-Red)	Resistance to Earth (Ohms)	Weather Conditions	Comments	Meter Identity	Signature	Name & Company	Date

Network Rail	**Secondary Cell Test - ALCAD - Vantage** Maintenance Record Card	**Form: NR/SMS/T055/RC01** **Date: 1st September 2018** **Issue: 02**

Signal Box / Interlocking:			Location:
Battery Name:	Capacity:	Number of Cells:	Date Installed:

Date	Name & Company	Signature	Meter Number	Charger On		Charger Off		Adjustments, Topping up Etc
				Full Battery Voltage	Average Cell Voltage*	Full Battery Voltage	Time on load (mins)	

Average cell voltage = lowest reading plus highest reading divided by the number of cells

Network Rail	**Secondary Cell Test - ALCAD - Vantage** Maintenance Record Card	**Form: NR/SMS/T055/RC01** **Date: 1st September 2018** **Issue: 02**

Date	Name & Company	Signature	Meter Number	Charger On		Charger Off		Adjustments, Topping up Etc
				Full Battery Voltage	Average Cell Voltage*	Full Battery Voltage	Time on load (mins)	

Average cell voltage = lowest reading plus highest reading divided by the number of cells

Network Rail	**Secondary Cell Test (Cyclon)** Maintenance Record Card	**Form: NR/SMS/T055/RC/Cyclon** **Date: 1st September 2018** **Issue: 03**

Signal Box / Interlocking:			Location:
Battery Name:	Capacity:	Number of Cells:	Date Installed:

Date	Name & Company	Signature	Meter Number	Charger On Full Battery Voltage	Charger Off Full Battery Voltage	Charger On Voltage rise when charger	Comments

*: Insert tick if correct, record any deficiencies in the comments column Note: Full battery voltage = 2.35x number of cells)

Network Rail	**Secondary Cell Test (Cyclon)** Maintenance Record Card	**Form: NR/SMS/T055/RC/Cyclon** **Date: 1st September 2018** **Issue: 03**

Date	Name & Company	Signature	Meter Number	Charger On Full Battery Voltage	Charger Off Full Battery Voltage	Charger On Voltage rise when charger	Comments

*: Insert tick if correct, record any deficiencies in the comments column Note: Full battery voltage = 2.35x number of cells)

Network Rail	**Secondary Cell Test - Lead Acid / Alkaline** Maintenance Record Card	**Form: NR/SMS/T055/RC03** **Date: 1st September 2018** **Issue: 03**

Signal Box / Interlocking:		Location:
Battery Name:	Battery Type:	Manufacturer:
Capacity:	Number of Cells:	Date Installed:

Date	Name & Company	Signature	Meter Identity	Charger Off / Battery on Load				Charger On	Comments *Adjustments, Gassing, Sediment, Topping up, Etc*
				Lowest Obtained Reading			Full Battery Voltage	Cell voltage increase when charger switched on? Tick if correct	
				Cell No.	Volts	Specific Gravity*			

*: Lead Acid Cells Only (see NR/SMS/Test/055, task 1.4)

Network Rail	**Secondary Cell Test - Lead Acid / Alkaline** Maintenance Record Card	**Form: NR/SMS/T055/RC03** **Date: 1st September 2018** **Issue: 03**

Date	Name & Company	Signature	Meter Identity	Charger Off / Battery on Load				Charger On	Comments *Adjustments, Gassing, Sediment, Topping up, Etc*
				Lowest Obtained Reading			Full Battery Voltage	Cell voltage increase when charger switched on? Tick if correct	
				Cell No.	Volts	Specific Gravity*			

*: Lead Acid Cells Only (see NR/SMS/Test/055, task 1.4)

Network Rail	**Secondary Cell Test - Power Box - Modular** Maintenance Record Card	**Form: NR/SMS/T055/RC04** **Date: 1st September 2018** **Issue: 01**

Signal Box / Interlocking:			Location:
Battery Name:	Capacity:	Number of Cells:	Date Installed:

Date	Name & Company	Signature	Meter Number	Charger On Full Battery Voltage Red 1 – Black 5	Charger Off Full Battery Voltage Red 1 – Black 5	Charger On Time on Load	Charger On Voltage rise when charger on?	Comments

Network Rail

Secondary Cell Test - Power Box - Modular

Maintenance Record Card

Form: NR/SMS/T055/RC04
Date: 1st September 2018
Issue: 01

				Charger On	Charger Off	Charger On		
Date	Name & Company	Signature	Meter Number	Full Battery Voltage Red 1 – Black 5	Full Battery Voltage Red 1 – Black 5	Time on Load	Voltage rise when charger on?	Comments

Network Rail	**Avel-Lindberg Static Invertor Tests Record Card (Front) NR/SMS/Test/056**	**Form: NR/SMS/T56/RC/01 Date: August 2004 Issue: 01**

Signal Box / Interlocking:	Location:	Inverter Identity:

Number	Battery Tests				Invertor Tests							
	Charger Off			Charger On	Off Load	On Load						
	Cell Average Readings		Total Battery Voltage	Trickle Charge Current	Indications (Insert tick if correct)	Indications (Insert tick if correct)	Voltages (On Load Take-Up)			Voltages (After 1hr on Load)		
	Voltage	Specific Gravity					I/P to Switch Cab. (DC)	O/P to Equip. (AC)	BX110 Busbar	I/P to Switch Cab. (DC)	O/P to Equip. (AC)	BX110 Busbar
1												
2												
3												
4												
5												
6												
7												
8												

Number	Generator Tests			Comments	Meter Identity	Signature	Name & Company	Date
	On Load							
	Indications (Insert tick if correct)	Voltages						
		O/P to Equip. (AC)	BX110 Busbar					
1								
2								
3								
4								
5								
6								
7								
8								

Network Rail	**Avel-Lindberg Static Invertor Tests Record Card (Rear) NR/SMS/Test/056**	**Form: NR/SMS/T056/RC/01 Date: August 2004 Issue: 01**

Number	Battery Tests				Invertor Tests							
	Charger Off			Charger On	Off Load	On Load						
	Cell Average Readings		Total Battery Voltage	Trickle Charge Current	Indications (Insert tick if correct)	Indications (Insert tick if correct)	Voltages (On Load Take-Up)			Voltages (After 1hr on Load)		
	Voltage	Specific Gravity					I/P to Switch Cab. (DC)	O/P to Equip. (AC)	BX110 Busbar	I/P to Switch Cab. (DC)	O/P to Equip. (AC)	BX110 Busbar
9												
10												
11												
12												
13												
14												
15												
16												
17												

Number	Generator Tests			Comments	Meter Identity	Signature	Name & Company	Date
	On Load							
	Indications (Insert tick if correct)	Voltages						
		O/P to Equip. (AC)	BX110 Busbar					
9								
10								
11								
12								
13								
14								
15								
16								
17								

Network Rail	**Uninterruptible Power Supply - Not TPWS UPS** Maintenance Test	**Form: NR/SMS/T057/RC01** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking:	Location:	Minimum UPS O/P Voltage at end of expected load period:

UPS Off Load	UPS On Load					UPS Off Load		Comments	Meter Identity	Signature	Name & Company	Date
Indications *	Indications *	Time on Load (min/secs)	O/P Voltages (V) Start of Load Period	Middle of Load Period	End of Load Period	Indications *	Batteries** Charging					

*: Insert tick if correct **: Were batteries are external to the UPS

Network Rail	**Uninterruptible Power Supply - Not TPWS UPS** Maintenance Test	**Form: NR/SMS/T057/RC01** **Date: 01/09/2018** **Issue: 02**

UPS Off Load	UPS On Load					UPS Off Load		Comments	Meter Identity	Signature	Name & Company	Date
Indications *	Indications *	Time on Load (min/secs)	O/P Voltages (V)			Indications *	Batteries**					
			Start of Load Period	Middle of Load Period	End of Load Period		Charging					

*: Insert tick if correct **: Were batteries are external to the UPS

Network Rail	**Uninterruptible Power Supply - (for TPWS only)** Maintenance Test	**Form: NR/SMS/T057/RC02** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking:	Location:	TPWS / Signal Name / Number:

Heaters		UPS Off Load	UPS On Load							Comments	PowerView Control Unit Identity	Signature	Name & Company	Date
Working *	Thermostat setting (°C)	Indications *	Indications *	Voltages (V)		Currents (A)		Freq (Hz)	TPWS Working correctly *					
				I/P	O/P	I/P	O/P	O/P						

*: Insert tick if correct

Network Rail	**Uninterruptible Power Supply - (for TPWS only)** Maintenance Test	**Form: NR/SMS/T057/RC02** **Date: 01/09/2018** **Issue: 02**

Heaters		UPS Off Load	UPS On Load							Comments	PowerView Control Unit Identity	Signature	Name & Company	Date
Working *	Thermostat setting (°C)	Indications *	Indications *	Voltages (V)		Currents (A)		Freq (Hz)	TPWS Working correctly *					
				I/P	O/P	I/P	O/P	O/P						

*: Insert tick if correct

Network Rail	**Primary Cell Test Record Card (Front)** **NR/SMS/Test/058**	**Form: NR/SMS/T058/RC/01** **Date: August 2004** **Issue: 01**

Signal Box:

Location:

Battery Name:

Battery Type:

Number of Cells:

Voltages (V)		Cells Renewed	Comments	Meter Identity	1 Ohm Shunt Identity	Signature	Name & Company	Date
With 1 Ohm Shunt	Without 1 Ohm Shunt							
Average Cell Reading	Total Battery Voltage							
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						

Average cell voltage = lowest reading plus highest reading divided by the number of cells

Network Rail

Primary Cell Test Record Card (Rear) NR/SMS/Test/058

Form: NR/SMS/T058/RC/01
Date: August 2004
Issue: 01

Voltages (V)		Cells Renewed	Comments	Meter Identity	1 Ohm Shunt Identity	Signature	Name & Company	Date
With 1 Ohm Shunt	Without 1 Ohm Shunt							
Average Cell Reading	Total Battery Voltage							
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						
		Yes / No						

Average cell voltage = lowest reading plus highest reading divided by the number of cells

Network Rail	**Emergency Signals on Control (ESOC) Test Record Card (Front)** **NR/SMS/Test/060**	**Form: NR/SMS/T060/RC/01** **Date: August 2004** **Issue: 01**

Signal Box:

ESOC Test			Comments	Signature	Name & Company	Date
Interlocking	LED Indications Correct	Relay Energisation Time (secs)				
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					

Network Rail	**Emergency Signals on Control (ESOC) Test Record Card (Rear) NR/SMS/Test/060**	**Form: NR/SMS/T060/RC/01 Date: August 2004 Issue: 01**

ESOC Test			Comments	Signature	Name & Company	Date
Interlocking	LED Indications Correct	Relay Energisation Time (secs)				
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					
	Yes / No					

Network Rail	**Relay Timer Test Record Card** Maintenance Test	**Form: NR/SMS/T061/RC01** **Date: 01/09/2018** **Issue: 02**

Signal Box / Interlocking:		Location:		Relay Function:
Relay Type:	Relay Serial No:	Pin Code:	Last Service Date:	Design Time (sec):

Relay Function	Function Test				Comments	Signature	Name & Company	Date
	Actual Time (sec)	Adjustment Made	Time After Adjustment (sec)	Adjustment Aperture Sealed				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				

Network Rail

Relay Timer Test Record Card

Maintenance Test

Form: NR/SMS/T061/RC01
Date: 01/09/2018
Issue: 02

Relay Function	Function Test				Comments	Signature	Name & Company	Date
	Actual Time (sec)	Adjustment Made	Time After Adjustment (sec)	Adjustment Aperture Sealed				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				
		Yes / No		Yes / No				

Network Rail	**Line Protection Units Record Card (Front) NR/SMS/Test/062**	**Form: NR/SMS/T062/RC/01 Date: August 2004 Issue: 01**

Signal Box:	Start of Line Equipment Room / Trackside Apparatus Case *:	End of Line Equipment Room / Trackside Apparatus Case *:
Equipment at Start of Line:	Equipment at End of Line:	Line Protection Equipment Type:

Unit Identity	Line Protection Unit Tests**			Comments	Test Equipment Identity	Signature	Name & Company	Date
	LED Indications #	Ohms Reading						
		Low Voltage	High Voltage					

*: Enter details appropriate to location **: Use columns appropriate to equipment type #: Tick if indications are correct, cross if not and enter details in comments column

Network Rail	**Line Protection Units Record Card (Rear) NR/SMS/Test/062**	**Form: NR/SMS/T62/RC/01 Date: August 2004 Issue: 01**

Unit Identity	Line Protection Unit Tests**			Comments	Test Equipment Identity	Signature	Name & Company	Date
	LED Indications #	Ohms Reading						
		Low Voltage	High Voltage					

*: Enter details appropriate to location **: Use columns appropriate to equipment type #: Tick if indications are correct, cross if not and enter details in comments column

Network Rail	**RETB Radio Systems** Regular Tasks	Form: NR/SMS/T063/RC/01 Date: 03/03/18 Issue: 02

Signal Box / System	

Test 1 Signallers Control Console – Observations. (Inc any changes made)	**NAME**	**INITIAL**	**DATE**

Network Rail	**RETB Radio Systems** Regular Tasks	Form: NR/SMS/T063/RC/01 Date: 03/03/18 Issue: 02

Test 2 2Wire Dial-up Interfaces – Observations. (Inc any changes made. Confirm all 2&4 wire connections))	**NAME**	**INITIAL**	**DATE**

Test 5 System Current Issues Checks – Observations. (Inc any action taken and changes made)	**NAME**	**INITIAL**	**DATE**

Network Rail	**RETB Radio Systems – Service A** Maintenance Tests	Form: NR/SMS/T063/RC/02 Date: 03/03/18 Issue: 02

Signal Box / System	

Test 3&4 **Basic and Extended Radio Rack Checks – Observations. (Inc any changes made)**	**NAME**	**INITIAL**	**DATE**

Network Rail	**RETB Radio Systems – Service A** Maintenance Tests	Form: NR/SMS/T063/RC/02 Date: 03/03/18 Issue: 02

Signal Box / System	

Test 6 Network Data Integrity tests					**NAME**	**INITIAL**	**DATE**
Source ID	**Sink ID**	**Bits sent**	**Errors**	**Observations. (Inc any repeats or further investigations)**			

Network Rail	**RETB System (Six Monthly) Tests** **Record Card (Front)** **NR/SMS/Test/063**	**Form: NR/SMS/T063/RC/03** **Date: August 2004** **Issue: 01**

Signal Box:

Token Data Levels Test							
Site / Location	Token Data Level		Comments	Test Equipment Identity	Signature	Name & Company	Date
	1200Hz	1800Hz					

RETB System (Six Monthly) Tests
Record Card (Rear)
NR/SMS/Test/063

Form: NR/SMS/T063/RC/03
Date: August 2004
Issue: 01

Signal Box:

Validity of Data Telegrams

Site / Location	Validity Tests		Comments	Signature	Name & Company	Date
	Telegram Bits	Handshakes				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				
	Pass / Fail	Pass / Fail				

Network Rail	RETB Fixed Site Power Supply Test – Service A Record Card (Sheet 1) NR/SMS/Test/064	Form: NR/SMS/T064/RC/01 Date: 03/03/18 Issue: 02

Signal Box / System		Site	

Test 2 & 3 PSU Checks								NAME / INITIAL	DATE
2.1 - 2.3 Visual OK?	2.4 Site I/F Volt (V)	3.2 Mains Alarm Rec'd?	3.3 / 3.4 LEDs correct?	3.5 Site I/F Voltage (V)	3.2 Mains Clear Rec'd?	3.8 / 3.9 LEDs correct?	Observations. (Inc any repeats or further investigations)		

Network Rail	RETB Fixed Site Power Supply Test – Service B Record Card (Sheet 1) NR/SMS/Test/064	Form: NR/SMS/T064/RC/02 Date: 03/03/18 Issue: 02

Signal Box / System		Site	

Test 4,5 & 6 Battery and Charger Tests								NAME / INITIAL	DATE
4.3 / 5.3 Batt 1 Volts (V)	4.5 / 5.5 Batt 1 Int Res (mΩ)	4.5 / 5.5 Batt 1 Int Res OK?	5.3 Batt 2 Volts (V)	5.5 Batt 2 Int Res (mΩ)	5.5 Batt 2 Int Res OK?	6.2 DRU1 Volts (V)	6.2 DRU2 Volts (V)		
Observations									
Observations									
Observations									
Observations									
Observations									

Network Rail	RETB Fixed Site Antenna Systems – Service A Record Card (Sheet 1) NR/SMS/Test/065	Form: NR/SMS/T065/RC/01 Date: 03/03/18 Issue: 02

Signal Box / System	

Test 1 Antenna System Inspection – Observations. (Inc Fixtures, Fittings, Mast Feeder and Antenna.)	NAME	INITIAL	DATE

Network Rail	RETB Fixed Site Antenna – Service B Record Card (Sheet 1) NR/SMS/Test/065	Form: NR/SMS/T065/RC/02 Date: 03/03/18 Issue: 02

Signal Box / System		Site	

Test 2 Antenna VSWR Measurements									NAME / INITIAL	DATE
Antenna 1. ID (Cell, Link 1, etc..)			Antenna 2 ID (Cell, Link 1, etc..)			Antenna 3 ID (Cell, Link 1, etc..)				
Fwd Power (W)	Rev Power (W)	VSWR Ratio	Fwd Power (W)	Rev Power (W)	VSWR Ratio	Fwd Power (W)	Rev Power (W)	VSWR Ratio		
Observations.										
Observations										
Observations										
Observations										
Observations										
Observations										

Network Rail	RETB Fixed Site Radio and Interface Equipment (Pre-Site Visit) Record Card (Sheet 1) NR/SMS/Test/066	Form: NR/SMS/T066/RC/01 Date: 03/03/18 Issue: 02

Signal Box / System	

Test 1 & 2 Pre-Visit 4 and 2 wire line level checks.						NAME / INITIAL	DATE
Site Name	1.3 4Wire Rack Rx Level.	1.3 4Wire FSI RX Level	2.3 2Wire Rack Rx Level.	2.3 2Wire FSI RX Level	Observations. (Inc any repeats or adjustments required.)		

Network Rail	RETB Fixed Site Radio and Interface Equipment (Pre-Site Visit) Record Card (Sheet 2) NR/SMS/Test/066	Form: NR/SMS/T066/RC/01 Date: Aug 2017 Issue: 02

Signal Box / System	

Test 3&4 Pre-Visit Site Interface and Radio Parameter Checks		NAME	INITIAL	DATE
Site Name	Observations. (Inc. any changes made or required)			

Network Rail	RETB Fixed Site Radio and Interface Equipment– Service A (On-Site Checks) Record Card (Sheet 1) NR/SMS/Test/066	Form: NR/SMS/T066/RC/02 Date: 03/03/18 Issue: 02

Signal Box / System		Site	

Test 5 & 6 Installation & FSI LED Checks – Observations. (Inc. any changes made or required)	NAME	INITIAL	DATE

Network Rail	RETB Fixed Site Radio and Interface Equipment– Service A (On-Site Checks) Record Card (Sheet 2) NR/SMS/Test/066	Form: NR/SMS/T066/RC/02 Date: Aug 2017 Issue: 02

Signal Box / System		Site	

Test 7 FSI Line Level Adjustment			NAME / INITIAL	DATE
7.3 Rx Power	7.3 Reported Tx Power	Observations. (Inc any repeats or adjustments required.)		

Network Rail	RETB Fixed Site Radio and Interface Equipment– Service A (On-Site Checks) Record Card (Sheet 3) NR/SMS/Test/066	Form: NR/SMS/T066/RC/02 Date: Aug 2017 Issue: 02

Signal Box / System		Site	

Test 8 Reported Parameter (checking for Normal Operation) – Observations. (Inc. any changes made or required)	NAME	INITIAL	DATE

Network Rail	RETB Fixed Site Radio and Interface Equipment – Service B Record Card (Sheet 1) NR/SMS/Test/066	Form: NR/SMS/T066/RC/03 Date: 03/03/18 Issue: 02

Signal Box / System		Site	
Transceiver Type (delete)	CELL / LINK1 / LINK 2 / LINK 3	Transceiver ID#	

Test 8 Reported Parameters										NAME	INITIAL	DATE
Supply (V)		Supply (A)		VSWR	Temp (^{0}C)		Indicators (ON / OFF)					
Idle	Key	Idle	Key	(1:?)	Int.	PA	Tx Dis	Poor VSWR	Tx Protect			

Network Rail	RETB Fixed Site Radio and Interface Equipment – Service B Record Card (Sheet 2) NR/SMS/Test/066	Form: NR/SMS/T066/RC/03 Date: Aug 2017 Issue: 02

Signal Box / System		Site	

Test 9 Tx Output Power									NAME / INITIAL	DATE
Antenna 1 (*delete) (CELL / LINK1 / LINK 2 / LINK 3*)			Antenna 2 (*delete) (CELL / LINK1 / LINK 2 / LINK 3*)			Antenna 3 (*delete) (CELL / LINK1 / LINK 2 / LINK 3*)				
Fwd Power (W)	Fwd Power (dBm)	Rev Power (W)	Fwd Power (W)	Fwd Power (dBm)	Rev Power (W)	Fwd Power (W)	Fwd Power (dBm)	Rev Power (W)		
Observations.										
Observations										
Observations										
Observations										
Observations										

W	5	6	8	10	13	16	20	25	32	40	50
dBm	37	38	39	40	41	42	43	44	45	46	47

Network Rail	RETB Fixed Site Radio and Interface Equipment – Service B Record Card (Sheet 3) NR/SMS/Test/066	Form: NR/SMS/T066/RC/03 Date: Aug 2017 Issue: 02

Signal Box / System		Site	
Radio Path Under Test: *(This Site – Neighbouring Site)* *(eg Banavie Cell – Locheilside Link 1 or Dingwall Link 1 – Garve Cell)*		This Site Transceiver ID#	
		Neighbouring Site Transceiver ID#	

Test 10 Received Signal Strength (dBm)	Test 11 Received Signal Strength @ Neighbour (dBm)	Observations.	NAME	INITIAL	DATE

Network Rail	**SSI Datalinks: Health Check Tests** **Record Card (Front)** **NR/SMS/Test/089**	**Form: NR/SMS/T089/RC/01** **Date: August 2004** **Issue: 01**

Signal Box:	Interlocking:	Identity:	Datalink:

Blip Detection Blips per Hour	Comments	Test Equipment Identity	Signature	Name & Company	Date

Network Rail	**SSI Datalinks: Health Check Tests Record Card (Rear) NR/SMS/Test/089**	**Form: NR/SMS/T089/RC/01 Date: August 2004 Issue: 01**

Telegram Error Detection		Comments	Test Equipment Identity	Signature	Name & Company	Date
Telegram Errors per Hour	Telegram Errors per 24 Hours					

Network Rail	**SSI Datalinks: Baseband / LDT Tests** **Record Card (Front)** **NR/SMS/Test/089**	**Form: NR/SMS/T089/RC/02** **Date: August 2004** **Issue: 01**

Signal Box:	Interlocking:	Identity:	Datalink:

Baseband Tests						Comments	Test Equipment Identity	Signature	Name & Company	Date
DLM Identity	Telegram Tx Amplitude (V)	Telegram Tx Asymmetry (mV)	Telegram Tx Overshoot (mV)	Noise Level Between Telegrams (mV)	Telegram Amplitude Variation (%)					

Network Rail	**SSI Datalinks: Baseband / LDT Tests** **Record Card (Rear)** **NR/SMS/Test/089**	**Form: NR/SMS/T089/RC/02** **Date: August 2004** **Issue: 01**

Signal Box:	Interlocking:	Identity:	Datalink:

LDT Tests						Comments	Test Equipment Identity	Signature	Name & Company	Date
LDT Identity	Telegram Tx Amplitude (V)	Telegram Tx Asymmetry (mV)	Telegram Tx Overshoot (mV)	Noise Level Between Telegrams (mV)	Telegram Amplitude Variation (%)					

Network Rail	**Track Circuit Test - DC Track** Maintenance Test Record Card	**Form: NR/SMS/T251/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:

Feed End				Relay End			Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Meter Identity	Train Shunt Identity	Comments *If a full test has been undertaken, the relevant details shall also be recorded*	Signature	Name & Company	Date
Voltages (V)		Train Shunt on Links (Ohms)		Voltage (V)	Train Shunt on Links (Ohms)								
Rail to Rail	TFR Coil*	Drop Shunt*	Pick Up Shunt*	TR Coil	Drop Shunt	Pick Up Shunt							

* Installations Fitted **With** Track Feed Relays Only

Network Rail	**Track Circuit Test - DC Track** Full Test	**Form: NR/SMS/T251/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:

No.	Feed End									Relay End				Track Circuit Extremities **	Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded
	Settings		Voltages (V)					Train Shunt Across Rails (Ohms)		Voltages (V)		Train Shunt Across Rails (Ohms)		T/Shunt Across Rails set at 0.5 Ohms	
	Feed Unit#	Resistor #	PSU I/P#	PSU O/P#	Battery #	Rail to Rail	TFR Coil*	Drop Shunt*	Pick Up Shunt*	Rail to Rail	TR Coil	Drop Shunt	Pick Up Shunt	All Extremities (tick if correct)	
1															
2															
3															
4															
5															
6															
7															

No.	Residual Voltage Tests**			Meter Identity	Train Shunt Identity	Comments *Transfer of the relevant details to the maintenance test columns shall also be undertaken*	Signature	Name & Company	Date
	D/Away (V)	P/Up (V)	Res Voltage after 120s (V)						
1									
2									
3									
4									
5									
6									
7									

* Installations Fitted **With** Track Feed Relays Only ** Installations **Without** Track Feed Relays

* # Complete Details Appropriate to the Installation

NetworkRail	**Track Circuit Test – EBI Track 200** **Maintenance Test**	**Form: NRSMS/T253/RC01** **Date: 01/09/18** **Issue: 06**

Signal Box / Interlocking:			**Track Circuit ID:**
Equipment Room/Location:		TC length (Tx to Rx) m	TC Frequency:
Tx Serial No.		Rx Serial No.	
Normal Power / Low Power / Low Power Plus / Single Rail (delete as appropriate)			

				1	2	3	4	5
Relay (Rx) End	Voltages (V) & Current (A)	Rail Connections (Rail to Rail Volts) #1	X (Pole)					
			Y (Tx / Rx : Zero)					
			TZ Ratio #2					
		Rail Current measured in the rail with Rocoil (mA)						
		1Ω Resistor Voltage Drop OR Inow AV (Ave. Current) ☒						
	Train Shunt on Rails (Ω)	Drop Shunt						
		Pick Up Shunt						
Side Band Ratio								
Ballast: 1. Wet, 2. Damp, 3. Dry, 4 .Frozen, 5. Flooded								
Comments: Transfer of the relevant details to the maintenance test columns shall also be undertaken.								
Meter Identities								
Train Shunt Identity								
Name								
Company								
Date								

Note : ☒ Readings to be taken from Tx/Rx display.

* Where Fitted, fill in details appropriate to the position and number of bonds
#1: X: EBI Track 200 under test Y: Adjacent EBI Track 200 TC (Additionally note whether this is the Tx or Rx end)
#2: Calculate TZ Ratio (Pole/Zero) and Record whether at Commissioning.

NetworkRail	**Track Circuit Test – EBI Track 200** **Full Test**	**Form: NRSMS/T253/RC02** **Date: 01/09/18** **Issue: 06**

Signal Box / Interlocking:		**Track Circuit ID:**
Equipment Room/Location:	TC length (Tx to Rx) m	TC Frequency:
Tx Serial No.	Rx Serial No.	
Normal Power / Low Power / Low Power Plus / Single Rail (delete as appropriate)		

				1	2	3	4	5
DETERMINING RECEIVER SET-UP SHUNT VALUE								
Irail (Max at Tx end)								
Irail (Min at Rx end)								
Irail ratio as % (Min at RX End ÷ Max Tx end)				%	%	%	%	%
Ballast Impedance Ωkm				Ω	Ω	Ω	Ω	Ω
Commissioning Drop Shunt Value Used to set Ith (1Ω, 1.5Ω etc.)				Ω	Ω	Ω	Ω	Ω
Feed (Tx) End Voltages (V) & Current (A)	Power Supply	IP V (AC)						
		OP V (DC)						
		O/P A (DC)						
		O/P A (AC+DC)						
	TX	TX O/P						
	Rail Connections (Rail to Rail Volts) #1	X (Pole)						
		Y (Tx / Rx : Zero)						
		TZ Ratio #2						
	Rail Current measured in the rail with Rocoil (mA)							
Impedance Bond(s) *	Voltages (V)	Rail To Rail	1					
			2					
			3					
		Across Aux or Tuning Coil*	1					
			2					
			3					
	Impedance (Ω)		1					
			2					
			3					
Relay (Rx) End	Voltages (V) & Current (A)	Power Supply	I/P V (AC)					
			O/P V (DC) (Vpsu)					
			O/P A (DC)					
			O/P A (AC+DC)					
		Rail Connections (Rail to Rail Volts) #1	X (Pole)					
			Y (Tx / Rx : Zero)					
			TZ Ratio #2					
		Rail Current measured in the rail with Rocoil (mA)						

* Where Fitted, fill in details appropriate to the position and number of bonds
#1: X: EBI Track 200 under test Y: Adjacent EBI Track 200 TC (Additionally note whether this is the Tx or Rx end)
#2: Calculate TZ Ratio (Pole/Zero) and Record whether at Commissioning.

NetworkRail	**Track Circuit Test – EBI Track 200** **Full Test**	**Form: NRSMS/T253/RC02** **Date: 01/09/18** **Issue: 06**

Relay (Rx) End	1Ω Resistor Voltage Drop OR Inow AV (Ave. Current) ☒						
	Track Relay	Coils V (DC) ☒					
	Train Shunt on Rails (Ω)	Drop Shunt					
		Pick Up Shunt					
	Settings	Rx gain / Ith Threshold ☒					
	Straps (SMS Table D1)	1					
		2					
		I/P 1					
		I/P 2					
	Side Band Ratio						
Drop Shunt of Extremities (No RX) Tested (Yes/No)							
Ballast: 1. Wet, 2. Damp, 3. Dry, 4 .Frozen, 5. Flooded							
Interference Test (mV)							
Comments: Transfer of the relevant details to the maintenance test columns shall also be undertaken.							
Meter Identities							
Train Shunt Identity							
Name							
Company							
Date							

Note : ☒ Readings to be taken from Tx/Rx display.

* Where Fitted, fill in details appropriate to the position and number of bonds
#1: X: EBI Track 200 under test Y: Adjacent EBI Track 200 TC (Additionally note whether this is the Tx or Rx end)
#2: Calculate TZ Ratio (Pole/Zero) and Record whether at Commissioning.

Network Rail

Track Circuit Test - SF15 / Aster U

Maintenance Test

Form: NR/SMS/T254/RC01
Date: 07/03/2020
Issue: 05

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:	Frequency (Hz):

Date	Name & Company	Signature	Relay (Rx) End Voltages (V)				Meter Identity	Drop Shunt (Ω)	Pick-Up Shunt (Ω)	Train Shunt Identity	Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Comments
			Power Supply		Receiver Unit T1-T2 (AC)	Relay Coils (DC)						
			Input (AC)	Output (DC)								

Network Rail	**SF15 / Aster U Track Circuit** Full Test	**Form: NR/SMS/T254/RC01** **Date: 07/03/2020** **Issue: 05**

General Information						**Transmitter (Tx) End**				
						Power Supply (V)		Voltages (V)		
								Tx Unit		Tuning Unit
Date	Name & Company	Signature	Meter Identity	Train Shunt Identity	Comments	Input (AC)	Output (DC)	1-2/3 (AC)	T1-T2 (AC)	T1-T2 (AC)

Receiver (Rx) End														Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded
Power Supply (V)		Receiver Taps & Strapping			Voltages (V)				Train Shunt Rails		Train Shunt TU T1-T2		Track Circuit Extremities Checked (Tick)	Interference Test Completed (Tick)	
					Rx Unit	Tuning Unit		Relay Coils							
Input (AC)	Output (DC)	Rec.1	Rec.2	Strap/s	T1-T2 (AC)	T1-T2 (AC)	I/P T1- T2 (AC)	R1/2 (DC)	Drop	Pick Up	Drop	Pick Up			

Network Rail	**Track Circuit Test - HVI** Maintenance Test	**Form: NR/SMS/T255/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:	Traction Supply (Delete as appropriate): 3rd Rail DC / AC OHL / DC OHL / Dual / None

Relay End						Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Meter Identity	Train Shunt Identity	Comments *If a full test has been undertaken, the relevant details shall also be recorded*	Signature	Name & Company	Date
Train Shunt Across Track Transformer Track Terminals	Voltages (V)											
T1	T3		T4		T5							
Drop Shunt (Ohms)	Track Relay Coils (DC)		Track Transformer		Load Test (DC)							
	V1	V2	+Ve	-Ve								

Network Rail	**Track Circuit Test - HVI** Maintenance Test	**Form: NR/SMS/T255/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:	Traction Supply (Delete as appropriate): 3rd Rail DC / AC OHL / DC OHL / Dual / None

Number	Relay End							Feed End						Relay/Feed Ends	
	Train Shunt Across Track Transformer Track Terminals	Train Shunt Across Relay End Rails	Voltages (V)					Voltages (V)					Pulse Rate	External Interference Voltages (V)	
	T1	T2	T3		T4		T5	T6		T7	T8		T9	T10	T11
	Drop Shunt (Ohms)	Drop Shunt (Ohms)	Track Relay Coils (DC)		Track Transformer		Load Test (DC)	Power Supply		Transmitter Power (DC)	Track Transformer		No. of Pulses in Seven Seconds	Un-shunted Interference Test (DC)	Shunted Interference Test (DC)
			V1	V2	+Ve	-Ve		Volts (AC)	Current (AC)		+Ve	-Ve			
1															
2															
3															
4															
5															
6															

Number	Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Meter Identity	Train Shunt Identity	Comments *Transfer of the relevant details to the maintenance test columns shall also be undertaken*	Signature	Name & Company	Date
1							
2							
3							
4							
5							
6							

Network Rail	**Track Circuit Test - BR-WR Quick Release** Maintenance Test	**Form: NR/SMS/T256/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Interlocking / Equipment Room:	Location:	Length of Track Circuit (Meters):	TC Number / Letter:

Relay End				Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Last Full Test Number	Meter Identity	Train Shunt Identity	Comments *If a full test has been undertaken, the relevant details shall also be recorded*	Signature	Name & Company	Date
Train Shunt Across Rails*	Train Shunt Across Relay End Links (Remote TR)*		Voltages (V)								
Drop Shunt (Ohms)	Drop Shunt (Ohms)	Drop Away Voltage Across Relay Coils (DC)	Relay Coil (DC)								

* Use Appropriate Column for Method of Test Used

Network Rail	**Track Circuit Test - BR-WR Quick Release** Full Test	**Form: NR/SMS/T256/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Interlocking / Equipment Room:	Location:	Length of Track Circuit (Meters):	TC Number / Letter:

Number	Feed End				Relay End				Track Circuit Extremities	Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded
	Voltages (V)			Feed Unit O/P Strapping	Voltages (V)		Train Shunt Across Rails (Ohms)		T/Shunt Across Rails set at 0.5 Ohms	
	Power Supply		Rail to Rail (AC)							
	I/P (AC)	O/P (AC)			Rail to Rail (AC)	Track Relay Coil (DC)	Drop Shunt	Pick Up Shunt	All Extremities (tick if correct)	
1										
2										
3										
4										
5										
6										
7										
8										

Number	Meter Identity	Train Shunt Identity	Comments *Transfer of the relevant details to the maintenance test columns shall also be undertaken*	Signature	Name & Company	Date
1						
2						
3						
4						
5						
6						
7						
8						

Network Rail	**Track Circuit Test - Reed Type RT** Maintenance Test	**Form: NR/SMS/T257/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:

Jointed / Jointless #	Single Rail / Double Rail #	Centre Feed#? Yes / No	Number of Intermediate Receivers*:
Number of Impedance Bonds*:	Impedance Bond Type*:	Channel/Frequency:	Intermediate RX / End RX#

Relay (Rx) End				Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Meter Identity	Train Shunt Identity	Comments *If a full test has been undertaken, the relevant details shall also be recorded*	Signature	Name & Company	Date
Train Shunt Across Incoming TC Terminations	Voltages (V)									
Drop Shunt (Ohms)	RT7202 / RT7212 (AC)	Dummy Amp. (AC)*	Track Relay Coils (DC)							

*: If Fitted #: Delete as Applicable

Network Rail	**Track Circuit Test - Reed Type RT** Full Test	**Form: NR/SMS/T257/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:

Jointed / Jointless #	Single Rail / Double Rail #	Centre Feed#? Yes / No	Number of Intermediate Receivers*:
Number of Impedance Bonds*:	Impedance Bond Type*:	Channel/Frequency:	Intermediate RX / End RX#

Number	Impedance Bonds*									Feed (Tx) End					Intermediate / End Relay (Rx)				
	Voltages (V) Rail to Rail			Torque (Nm)			Voltage Fall/Rise as resonating Cct disconnected /Connected (tick if correct)			Voltages (V) & Currents (A)					Voltages (V)				
										NT1202 I/P (AC)	PA I/P (DC)	RT5001 I/P (DC)	Current at TF Links (AC)		RR9121 I/P (AC)	RR2002 I/P (DC)	RT7202 RT7212 (AC)*	Dummy Amp (AC)*	Track Relay Coils (DC)
	1	2	3	1	2	3	1	2	3				SC	OC					
1																			
2																			
3																			
4																			
5																			

Number	Intermediate / End Relay (Rx)		Track Circuit Extremities	Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Meter Identity	Train Shunt Identity	Comments *Transfer of the relevant details to the maintenance test columns shall also be undertaken*	Signature	Name & Company	Date
	Train Shunt Across Rails (Ohms)		T/Shunt Across Rails All Extremities (tick if correct)**							
	Drop Shunt	Pick Up Shunt								
1										
2										
3										
4										
5										

* if Fitted ** 0.5 Ohms Without Impedance Bond / 0.3 Ohms With Impedance Bond #: Delete as Appropriate

Network Rail	**Track Circuit Test - Rectified AC (Diode)** Maintenance Test	**Form: NR/SMS/T258/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Equipment Room:	TC Number / Letter:

Feed/Relay (Near) End															
Feed Resister Strapping			Voltages (V)					Train Shunt Across TC Links		Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Meter Identity	Train Shunt Identity	Signature	Name & Company	Date
I/P	O/P	Straps	Across Feed Resister (AC)	Relay Coils		Rail to Rail		Drop Shunt	Pick Up Shunt						
				AC	DC	AC	DC								

Network Rail	**Track Circuit Test - Rectified AC (Diode)** Full Test	**Form: NR/SMS/T258/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Equipment Room:	TC Number / Letter:

Number	Feed/Relay (Near) End										Diode (Remote) End						Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded
	Feed Resister Strapping			Voltages (V)				Train Shunt Across Rails (Ohms)			Voltages (V)		Currents (A)		Train Shunt Across Rails (Ohms)		
	I/P	O/P	Straps	Across Feed Resister (AC)	Relay Coils		Rail to Rail		Drop Shunt	Pick Up Shunt	Rail to Rail		Dis'ed Diode to Term.		Drop Shunt	Pick Up Shunt	
					AC	DC	AC	DC			AC	DC	AC	DC			
1																	
2																	
3																	
4																	
5																	
6																	
7																	

Number	Meter Identity	Train Shunt Identity	Comments *Transfer of the relevant details to the maintenance test columns shall also be undertaken*	Signature	Name & Company	Date
1						
2						
3						
4						
5						
6						
7						
8						

Network Rail	**Track Circuit Test - FS2600** Maintenance Test	**Form: NR/SMS/T259/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:

Date	Name & Company	Signature	Train shunt Identity	Meter Identity	Feed (Tx) End		Intermediate Impedance Bond*		Relay (Rx) End						Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded
					Torques (Nm)		Torques (Nm)		Torques (Nm)		LED indications (tick if correct)		Voltages (V) at Monitor Point		
					Rail Leads	Bonds #	Rail Leads	Bonds	Rail Leads	Bonds #	Track Clear	Track Shunted $	Track Clear	Track Shunted $	

Where Fitted $ Train shunt set to 0.6 ohms

Network Rail	**Track Circuit Test - FS2600** Maintenance Test	**Form: NR/SMS/T259/RC01** **Date: 01/09/2018** **Issue: 04**

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:
Length of Track Circuit (Tx to Rx):	Channel Number	Number & Type of Impedance Bonds:

No.	Feed (TX) End										Intermediate Impedance Bond*					Relay (RX) End	
	Torque (Nm)		Power Supply		Transmitter Outputs				Impedance Bond		Torque (Nm)		Voltages (V)		Rail to Rail voltage falls when S/C or O/C applied to tuning Capacitor tick if correct	Torque (Nm)	
	Rail Leads	Bonds*	I/P V (AC)	Tapping T11 to	Term Settings		Voltages (V) TX O/P (AC)	Voltages (V) Rail to Rail (AC)	Voltages (V) Rail to Rail #1	#2	Rail Leads	Bonds	Rail to Rail	Across Aux Coil		Rail Leads	Bonds*
1																	
2																	
3																	
4																	

No.	Relay (Rx) End																	Ballast 1. Wet 2. Damp 3. Dry 4.Frozen 5.Flooded
	LED indications (tick if correct)		Receiver Unit						Rx Impedance Bond*			Rx Unit Set Up						
			Supply	Monitor Point Voltages		Train Shunt (Ohms) #3		Track Circuit Extremities	Voltages (V)		Rail to Rail voltage falls when S/C applied to tuning capacitor tick if correct	Ratio (V)	Monitor Point (V) #4	Rx Input Settings (Links)				
	Track Clear	Track Shunted	I/P V (AC)	Track Clear	Track Shunted	Drop Shunt	Pick Up Shunt	T/Shunt Across Rails tick if correct #4	Rail to Rail	Across Aux coil				A	B	C	D	
1																		
2																		
3																		
4																		

No	Phase Stagger Details	Meter Identity	Train Shunt Identity	Set Up Box Identity	Comments *Transfer of the relevant details to the maintenance test columns shall also be undertaken*	Signature	Name & Company	Date
1								
2								
3								
4								

* Where Fitted #1: With S/C across tuning capacitor #2: Without S/C across tuning capacitor #3: Across rails with impedance bond / At Rx unit if no bond #4: Train Shunt set to 0.6 Ohms

Network Rail	**Track Circuit Test - 50Hz AC** Maintenance Test	**Form: NR/SMS/T260/RC01** **Date: 04/06/2022** **Issue: 05**

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:	Single Rail / Double Rail #

Relay End								Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Meter Identity	Train Shunt Identity	Phase Angle Meter Identity	Comments *If a full test has been undertaken, the relevant details shall also be recorded*	Signature	Name & Company	Date
Control Voltage / Phase Angle / Stagger					Train Shunt Across Rails (Ohms)		VT1(SP) Relays only								
TR Control Coil (V)	Phase Angle (°)	Lead or Lag	Stagger		Relay End	Stub Ends **	Time Delay (seconds)								
			Needle Position	2x Lights #2											

* * Single rail configurations only with the shunt set to 0.5ohm, tick if correct # : Delete as Appropriate #2: Insert tick if correct

Network Rail	**Track Circuit Test - 50Hz AC** Full Test	**Form: NR/SMS/T260/RC01** **Date: 03/09/2022** **Issue: 05**

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:	Single Rail / Double Rail #
Length of Track Circuit:	Number of Impedance Bonds:	Type of Impedance Bonds:	

No.	Feed End						Feed End Impedance Bonds				Intermediate Impedance Bond No.1				Intermediate Impedance Bond No.2			
	Voltages (V)			Current (A)	Capacitor		Voltage (V)	Torque (Nm)	Voltage Ratio #2	Phasing #2	Capacitor		Voltage Ratio #2	Torque (Nm)	Capacitor		Voltage Ratio #2	Torque (Nm)
	Supply I/P	Across Links/S Arrester	Rail to Rail	To Track	Voltage Across	Value	Across Aux Coil				Voltage Across	Value			Voltage Across	Value		
1																		
2																		
3																		
4																		

No.	Relay End Impedance Bond*							Relay End												
	Voltages (V)	Capacitor			Torque (Nm)	Voltage Ratio#2	Phasing #2	Voltages (V)				Current (A)	Control Resistor Setting (% of max)	Phase Angle / Stagger				Train Shunt Across Rails (Ohms)		
	Across Aux Coil	Voltage Across	Value	Stability Check				Rail to Rail	Across Links/S Arrester	TR Local Coil	TR Control	From Track		Phase Angle (°)	Lead or Lag	Stagger		Drop Shunt	Pick Up Shunt	Stub Ends #1
																Needle Position	2x Lights #2			
1																				
2																				
3																				
4																				

No	Ballast 1. Wet 2. Damp 3. Dry 4. Frozen 5. Flooded	Meter Identity	Train Shunt Identity	Phase Angle Meter Identity	Details of Stagger of other Block Joints within the Track circuit	Comments *Transfer of the relevant details to the maintenance test columns shall also be undertaken*	Signature	Name & Company	Date
1									
2									
3									
4									

Where Fitted #: Delete as Appropriate #1: Single rail configurations only with the shunt set to 0.5ohm, tick if correct #2: Insert tick if correct

Network Rail	**Track Circuit Test - Rail Circuit** Maintenance Test	**Form: NR/SMS/T261/RC01** **Date: 01/09/2018** **Issue: 04**

Location/Equipment	TC Number / Letter:

General Information					**Run In End**				**Run Off End**				
Date	Name & Company	Signature	Meter ID	Shunt ID	Relay Energised (Tick)	Relay Voltage (V)	Relay De-energies (Ω)	Relay Voltage (V)	Relay Energised (Tick)	Relay Voltage (V)	Relay De-energies (Ω)	Relay Voltage (V)	Comments

Network Rail	**Track Circuit Test - DC Coded** Maintenance Test	Form: NR/SMS/T262/RC01 Date: 01/09/2018 Issue: 03

Signal Box / Interlocking / Equipment Room:	Location:	TC Number / Letter:

				Feed End		**Relay End**							
				Voltages (V)		Voltages (V)				Train Shunt on Links		Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	
				Rail to Rail		Rail to Rail		CFR Coil					
Date	Name	Meter ID	Train Shunt ID	Min	Max	Min	Max	Max	Min	Drop Away (Ω)	Pick-up (Ω)		Comments

Network Rail	**Track Circuit Test - DC Coded** Full Test	Form: NR/SMS/T262/RC01 Date: 01/09/2018 Issue: 03

				Feed End							Relay End						Ballast 1.Wet 2.Damp 3.Dry 4.Frozen 5.Flooded	Track Extremities Checked (Tick)	Comments
				Resister Settings		Voltages (V)					Voltages (V)				Shunt Across				
						PSU		Battery (DC)	Rail To Rail		Rail to Rail		CFR						
Date	Name	Meter ID	Train Shunt ID	TZO	TO	Input (AC)	Output (DC)		Min	Max	Min	Max	Min	Max	Drop Away	Pick Up			

NetworkRail	**Track Circuit Test - EBI Track 400** Maintenance Test	**Form:** T263/RC01 **Date:** 01/09/2018 **Issue:** 06

Signal Box / Interlocking:		**Track Circuit ID:**
Equipment Room/Location:	TC length (Tx to Rx) m	TC Frequency:
Tx Serial No.	Rx Serial No.	
Open Line / Station Area (delete as appropriate)	Double Rail / Single Rail (delete as appropriate)	

				1	2	3	4	5
Receiver 1 (Rx1 End)	Voltages (V) & Current (A)	Rail Connections (Rail to Rail Volts) #1	X (Pole)					
			Y (Tx / Rx : Zero)					
			TZ Ratio #2					
		Rail Current measured in the rail with a Rocoil (mA)						
		Ith (mA) Threshold Current ☒						
		Inow AV (mA) (Average Current) ☒						
	Train Shunt on Rails (Ω)	Drop Shunt						
		Pick Up Shunt						
Receiver 2 (Rx2 End)	Voltages (V) & Current (A)	Rail Connections (Rail to Rail Volts) #1	X (Pole)					
			Y (Tx / Rx : Zero)					
			TZ Ratio #2					
		Rail Current measured in the rail with a Rocoil (mA)						
		Ith (mA) Threshold Current ☒						
		Inow AV (mA) (Average Current) ☒						
	Train Shunt on Rails (Ω)	Drop Shunt						
		Pick Up Shunt						
Ballast: 1. Wet, 2. Damp, 3. Dry, 4 .Frozen, 5. Flooded								
Comments: Transfer of the relevant details to the maintenance test columns shall also be undertaken.								
Meter Identities								
Train Shunt Identity								
Name								
Company								
Date								

Note : ☒ Readings to be taken from Tx/Rx display.

* Where Fitted, fill in details appropriate to the position and number of bonds
#1: X: ET400 under test (Pole), Y: Adjacent ET400 TC (Zero) (Additionally note whether this is the Tx or Rx end)
#2: Calculate TZ Ratio (Pole/Zero) and Record whether at Commissioning.

NetworkRail	**Track Circuit Test - EBI Track 400** **Full Test Open Line**	**Form: T263/RC02** **Date: 01/09/20182018** **Issue: 06**

Track Circuit ID		Frequency / Code /
Equipment location		
TC length m	Tx to TU/ETU distance m	Ambient Temp. C
Tx Serial No.		Rx Serial No.

		1	2	3
	Date :			
	Set up / measurements signature :			
	Checked signature :			

DETERMINING RECEIVER SET-UP SHUNT VALUE	1st Rx	2nd Rx	1st Rx	2nd Rx	1st Rx	2nd Rx
Irail (Max at Tx end)						
Irail (Min at Rx end)						
Irail ratio as % (Min at RX End ÷ Max Tx end)	%	%	%	%	%	%
Ballast Impedance Ωkm	Ω	Ω	Ω	Ω	Ω	Ω
Commissioning Drop Shunt Value Used to set Ith (1Ω, 1.5Ω etc.)	Ω	Ω	Ω	Ω	Ω	Ω

	Test Ref.	Measurement	Units						
PSU (TX)	2.5	AC signalling power supply voltage	V						
	2.6 (B)	Tx power supply voltage (Vpsu) ☒	V						
	2.7 (A)	Tx power supply current	A						
TRANSMITTER	2.8 (C)	Tx output voltage across TM1/TM2	V RMS						
	2.9	OM setting (Step Setting Set to 0R)	Y/N						
	2.10 (D)	OM O/P voltage (Vout) ☒	V						
	2.11 (E1)	LMU(TU) I/P Voltage (Meter)	V						
	2.12 (E3)	Tx TU/ETU I/P voltage (Meter)	V						
	2.13 (G)	Tx TU/ETU Pole (X) track (rail to rail) voltage (Meter)	V						
	2.14	Rail Current measured in the rail with a Rocoil	mA						
	2.15 (H)	Tx Companion TU Zero (Y) (rail to rail) voltage (Meter)	V						
	2.15 (H)	Tuned Zone Ratio – Pole/Zero (X/Y) #2	Ratio						
				1st Rx	2nd Rx	1st Rx	2nd Rx	1st Rx	2nd Rx
PSU (RX)	2.28	AC signalling power supply voltage	V						
	2.29 (B)	Rx power supply voltage	V						
	2.30 (A)	Rx power supply current (Relay Up)	A						

#1: X: ET400 under test (Pole), Y: Adjacent ET400 TC (Zero) (Additionally note whether this is the Tx or Rx end)
#2: Calculate TZ Ratio (Pole/Zero) and Record whether at Commissioning.

NetworkRail	**Track Circuit Test - EBI Track 400** **Full Test Open Line**	**Form:** T263/RC02 **Date:** 01/09/20182018 **Issue:** 06

					1st Rx	2nd Rx	1st Rx	2nd Rx	1st Rx	2nd Rx
RECEIVER(S)	2.32 (K)	Rx TU/ETU O/P voltage (Meter)		V						
	2.33(G)	Rx TU Pole (X) track (rail to rail) voltage (Meter)		V						
	2.34	Rail Current measured in the rail with a Rocoil		mA						
	2.35 (H)	Rx Companion TU Zero (Y) (rail to rail) voltage (Meter)		V						
	2.35 (H)	Tuned Zone Ratio – Pole/Zero (X/Y) #2		V						
	2.36 (N)	Rx I/P current - clear current (Inow AV) ☒		mA						
	2.37	Rx threshold setting (Ith) ☒		mA						
	2.38 (S)	ITOT measured at the Rx ☒		mA						
	2.39	Rx Quality Factor (QUAL) ☒		-						
	2.40 (L)	Rx Output voltage (relay voltage) ☒		V						
	2.41 (M)	Track Drop Shunt on the rails		Ω						
	2.41 (M)	Track Pick Up Shunt on the rails		Ω						
	2.44 (P)	Cross Talk and Feed through (Interference)		P/F						
EXTREMITIES	2.45	Shunt at Tx extremity (Pole)		P/F						
	2.45	Shunt at Rx extremity (Pole)		P/F						
	2.45	Shunt at non Rx extremity (Non detected spur)		P/F						

Test Ref.	Measurement			Units			
	IRJ Insulation			P/F			
Q	Earth Continuity Tests			P/F			
R	Surge Arrestor Integrity			P/F			
	IRJ Inspection / Test			P/F			
IMPEDANCE BOND(S) ⌘ 2.18	Voltages (V)	Rail To Rail	1	V			
			2	V			
			3	V			
2.19	Voltages (V)	Across Aux or Tuning Coil	1	V			
			2	V			
			3	V			
2.21 to 2.25	Impedance (Ω)		1	Ω			
			2	Ω			
			3	Ω			
Ballast: 1. Wet, 2. Damp, 3. Dry, 4 .Frozen, 5. Flooded							
Remarks At Commissioning?							
Meter Identities							
Train Shunt Identity							
Name							
Company							
Date							

Note: ☒ Readings to be taken from Tx/Rx display.
⌘ Where Fitted, fill in details appropriate to the position and number of bonds

#1: X: ET400 under test (Pole), Y: Adjacent ET400 TC (Zero) (Additionally note whether this is the Tx or Rx end)
#2: Calculate TZ Ratio (Pole/Zero) and Record whether at Commissioning.

NetworkRail	**Track Circuit Test - EBI Track 400** Full Test - Station Area	**Form:** T263/RC03 **Date:** 10/09/2018 **Issue:** 06

Track Circuit ID		Frequency / Code /
Equipment location		
TC length m	Tx to SATU/CU distance m	Ambient Temp. C
Tx Serial No.		Rx Serial No.
Set-Up Drop Shunt Value Used (1.5 ohm etc.) Ω (Ohms)		

				1		2		3	
		Date :							
		Set up / measurements signature :							
		Checked signature :							
Test Ref.		**Measurement**	**Units**						
PSU (TX)	2.5	AC signalling power supply voltage	V						
	2.6 (B)	Tx power supply voltage (Vpsu) ☒	V						
	2.7 (A)	Tx power supply current	A						
TRANSMITTER	2.8 (C)	Tx output voltage across TM1/TM2	V RMS						
	2.9	OM setting (Step Setting, 48R/0R) 48R for TC feed<750m, 0R for TC feed>750m to 2km	Y/N						
	2.10 (D)	OM O/P voltage (Vout) ☒	V						
	2.12 (E)	Tx SATU/CU I/P voltage (Meter)	V						
	2.13 (G)	Tx SATU/CU Pole (X) track (rail to rail) voltage (Meter)	V						
	2.14	Rail Current measured in the rail with a Rocoil	mA						
	2.15 (H)	Tx Companion SATU Zero (Y) (rail to rail) voltage (Meter)	V						
	2.15 (H)	Tuned Zone Ratio – Pole/Zero (X/Y) #2	Ratio						
				1st Rx	**2nd Rx**	**1st Rx**	**2nd Rx**	**1st Rx**	**2nd Rx**
PSU (RX)	2.28	AC signalling power supply voltage	V						
	2.29 (B)	Rx power supply voltage	V						
	2.30 (A)	Rx power supply current (Relay Up)	A						
RECEIVER(S)	2.32 (K)	Rx SATU/CU O/P voltage (Meter)	V						
	2.33(G)	Rx SATU/CU Pole (X) track (rail to rail) voltage (Meter)	V						
	2.34	Rail Current measured in the rail with a Rocoil	mA						
	2.35 (H)	Rx Companion TU Zero (Y) (rail to rail) voltage (Meter)	V						
	2.35 (H)	Tuned Zone Ratio – Pole/Zero (X/Y) #2	V						
	2.36 (N)	Rx I/P current - clear current (Inow AV) ☒	mA						
	2.37	Rx threshold setting (Ith) ☒	mA						
	2.38 (V)	ITOT measured at the Rx ☒	mA						
	2.39	Rx Quality Factor (QUAL) ☒	-						
	2.40 (L)	Rx Output voltage (relay voltage) ☒	V						
	2.41 (M)	Track Drop Shunt on the rails	Ω						
	2.41 (M)	Track Pick Up Shunt on the rails	Ω						

#1: X: ET400 under test (Pole), Y: Adjacent ET400 TC (Zero) (Additionally note whether this is the Tx or Rx end)
#2: Calculate TZ Ratio (Pole/Zero) and Record whether at Commissioning.

NetworkRail	**Track Circuit Test - EBI Track 400** Full Test - Station Area	**Form:** T263/RC03 **Date:** 10/09/2018 **Issue:** 06

					1st Rx	2nd Rx	1st Rx	2nd Rx	1st Rx	2nd Rx
	2.44 (P)	Cross Talk and Feed through (Interference)		P/F						
EXTREMITIES	2.45 (S)	RX I/P (Inow AV) with 0.2Ω Shunt at Tx extremity (Pole) ☒		mA						
	2.45 (S)	RX I/P (Inow AV) with 0.2Ω Shunt at centre point ☒		mA						
	2.45 (S)	RX I/P (Inow AV) with 0.2Ω Shunt at Rx extremity (Pole) ☒		mA						
	2.45 (S)	RX I/P (Inow AV) with 0.2Ω Shunt at non Rx extremity (Non detected spur) ☒		mA						
	2.46 (T)	TX Tuned Zone Impedance ☒		Ω		(TX end)		(TX end)		(TX end)
	2.46 (U)	RX Tuned Zone Impedance ☒		Ω						
Test Ref.		**Measurement**		**Units**						
		IRJ Insulation		P/F						
	Q	Earth Continuity Tests		P/F						
	R	Surge Arrestor Integrity		P/F						
		IRJ Inspection / Test		P/F						
IMPEDANCE BOND(S) ⌘	2.18	Voltages (V)	Rail To Rail	1	V					
				2	V					
				3	V					
	2.19	Voltages (V)	Across Aux or Tuning Coil	1	V					
				2	V					
				3	V					
	2.21 to 2.25	Impedance (Ω)		1	Ω					
				2	Ω					
				3	Ω					
Ballast: 1. Wet, 2. Damp, 3. Dry, 4 .Frozen, 5. Flooded										
Remarks At Commissioning?										
Meter Identities										
Train Shunt Identity										
Name										
Company										
Date										

Note: ☒ Readings to be taken from Tx/Rx display.
⌘ Where Fitted, fill in details appropriate to the position and number of bonds

#1: X: ET400 under test (Pole), Y: Adjacent ET400 TC (Zero) (Additionally note whether this is the Tx or Rx end)
#2: Calculate TZ Ratio (Pole/Zero) and Record whether at Commissioning.

Network Rail	**Signal Visibility** Routine Maintenance	**Form: NR/SMS/T302/Signal Visibility** **Date: September 2018** **Issue: 02**

Signal Box / Interlocking / Equipment Room:	Location:	Signal Number:

				Method Used to Check Visibility (#)				Un-Obscured	Partially Obscured	Totally Obscured	
Date	Name	Company	Signature	1	2	3	4				Actions Taken

(#) for Method used refer to SMS Test 302 content.

Network Rail	**Train Describer Electro Mechanical Record Card (Front)** **NR/SMS/TD11**	**Form: NR/SMS/TD11/RC/01** **Date: August 2004** **Issue: 01**

Signal Box (Main / Fringe*): **Delete as Appropriate*	If Fringe, Main Signal Box Name:

Service A Tasks						Comments	Meter Identity	Signature	Name & Company	Date
Power Supplies										
50V DC		18V DC		12V AC	6V AC					
DC Voltage	AC Ripple	DC Voltage	AC Ripple	Voltage	Voltage					

Network Rail	Train Describer Electro Mechanical Record Card (Rear) NR/SMS/TD11	Form: NR/SMS/TD11/RC/01 Date: August 2004 Issue: 01

Service A Tasks						Comments	Meter Identity	Signature	Name & Company	Date
Power Supplies										
50V DC		18V DC		12V AC	6V AC					
DC Voltage	AC Ripple	DC Voltage	AC Ripple	Voltage	Voltage					

Network Rail	**Train Describer Hewlett Packard 21MX (2100 series)** **Record Card (Front)** **NR/SMS/TD21**	**Form: NR/SMS/TD21/RC/01** **Date: August 2004** **Issue: 01**

Signal Box (Main / Fringe*): **Delete as Appropriate*	If Fringe, Main Signal Box Name:

Service A Tasks																		
Power Supplies (C4 & C8 Cubicle)										Modem 1				Comments	Test Equipment Identity	Signature	Name & Company	Date
5.5V		-24V		-24V		-24V		-24V										
DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	Stab 1	Stab 2	Stab 3	Stab 4					

Network Rail	**Train Describer Hewlett Packard 21MX (2100 series) Record Card (Rear) NR/SMS/TD21**	**Form: NR/SMS/TD21/RC/01 Date: August 2004 Issue: 01**

Number	Service B Tasks																
	Computer Voltages														Standby	Modem Other Types Enter Details as Appropriate	
	+30V		+20V		+12V		+4.5V		-2V		-12V		-20V				
	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	Voltages	Indications*
1																	
2																	
3																	
4																	
5																	
6																	
7																	

Number	Service B Tasks													
	Modems Pye D200E (Enter amount & readings in the appropriate columns)								Common Service Modules					
	-24V		+12V		-6V		+6V		Switch Position					
									100V		180V		2kV	
	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	Voltage	Ripple	Voltage	Ripple	Voltage	Ripple
1														
2														
3														
4														
5														
6														
7														

No	Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					
5					
6					
7					

Network Rail	**Train Describer Hewlett Packard 21MX (2108 series)** **Record Card (Front)** **NR/SMS/TD21**	**Form: NR/SMS/TD21/RC/02** **Date: August 2004** **Issue: 01**

Signal Box (Main / Fringe*): **Delete as Appropriate*	If Fringe, Main Signal Box Name:

Number	Service A Tasks																	
	Power Supplies																	
	C1 Cubicle								C4 to C8 Cubicle								C5 to C7 Cubicle	
	Advance +5vL		Advance+5vR		WBS +24vL		WBS+24vR		WBS+6V		WBS+9.5V		WBS+18V		WBS+24V		Advance+5V	
	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Number	Service A Tasks																			
	Power Supplies										AVS									
	C5 to C7 Cubicle						C6 Cubicle								Comments	Test Equipment Identity	Signature	Name & Company	Date	
	Advance +12V		Advance –12V		WBS+5VReg		WBS+5VReg		WBS+12VReg		Stab 1	Stab 2	Stab 3	Stab 4						
	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Voltage	AC Ripple										
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Network Rail	**Train Describer Hewlett Packard 21MX (2108 series) Record Card (Rear) NR/SMS/TD21**	**Form: NR/SMS/TD21/RC/02 Date: August 2004 Issue: 01**

Number	Service B Tasks													
	Computer Voltages												Standby Battery Module	
	TP1 –12V		TP3 +12V		TP4 –2.3V		TP6 +5V(m)		TP9 +12V(m)		TP10 –12V(m)		Charge Voltage	Discharge Voltage
	DC Voltage	AC Ripple	DC Voltage	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple		
1														
2														
3														
4														
5														
6														

Number	Service B Tasks								Test Equipment Identity	Signature	Name & Company	Date
	HP Battery Module C5/C7		Common Service Modules									
	Charge Voltage	Battery Voltage	Switch Position									
			100V		180V		2kV					
			Voltage	Ripple	Voltage	Ripple	Voltage	Ripple				
1												
2												
3												
4												
5												
6												

No	Comments
1	
2	
3	
4	
5	
6	

Network Rail	**Train Describer Vaughan Type 4M Record Card (Front) NR/SMS/TD31**	**Form: NR/SMS/TD31/RC/01 Date: August 2004 Issue: 01**

Signal Box (Main / Fringe*): **Delete as Appropriate*	If Fringe, Main Signal Box Name:

Number	Service A Tasks																			
	Power Supplies									Line Levels										
	I/P	+5V		+12V		+12V I/F		-12V I/F		Link 1		Link 2		Link 3		Link 4		Link 5		
	AC Volts	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				

No	Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					
5					
6					
7					
8					
9					

Network Rail	**Train Describer Vaughan Type 4M Record Card (Rear) NR/SMS/TD31**	**Form: NR/SMS/TD31/RC/01 Date: August 2004 Issue: 01**

Number	Service A Tasks																			
	Power Supplies									Line Levels										
	I/P	+5V		+12V		+12V I/F		-12V I/F		Link 1		Link 2		Link 3		Link 4		Link 5		
	AC Volts	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				

No	Comments	Test Equipment Identity	Signature	Name & Company	Date
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					

Network Rail	**Train Describer Vaughan Type Small (Ex BR-WR) Record Card (Front) NR/SMS/TD32**	**Form: NR/SMS/TD32/RC/01 Date: August 2004 Issue: 01**

Signal Box (Main / Fringe*): **Delete as Appropriate*	If Fringe, Main Signal Box Name:

Number	Service A Tasks																			
	Power Supplies									Line Levels										
	I/P	+5V		+12V		+12V I/F		-12V I/F		Link 1		Link 2		Link 3		Link 4		Link 5	
	AC Volts	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			

No	Comments	Test Equipment Identity	Signature	Name & Company	Date
1					
2					
3					
4					
5					
6					
7					
8					
9					

Network Rail	**Train Describer Vaughan Type Small (Ex BR-WR) Record Card (Rear) NR/SMS/TD32**	**Form: NR/SMS/TD32/RC/01 Date: August 2004 Issue: 01**

Number	Service A Tasks																			
	Power Supplies									Line Levels										
	I/P	+5V		+12V		+12V I/F		-12V I/F		Link 1		Link 2		Link 3		Link 4		Link 5		
	AC Volts	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				

No	Comments	Test Equipment Identity	Signature	Name & Company	Date
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					

Network Rail	**Train Describer GEC/GE Micro Processor Based Record Card (Front) NR/SMS/TD37**	**Form: NR/SMS/TD37/RC/01** **Date: August 2004** **Issue: 01**

Signal Box (Main / Fringe*): **Delete as Appropriate*	If Fringe, Main Signal Box Name:

Number	Service A Tasks																
	Equipment Room & CIS																
	Power Supplies (+5V)								Power Supplies (Other)								Voltage drop across PSU diodes Tick if all correct
	+5V (1)		+5V (2)		+5V (3)		+5V (4)		+12V		-12V		+24V		+50V		
	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	
1																	
2																	
3																	
4																	

Number	Service A Tasks																	
	SB Operating Floor																	
	Power Supplies (1)						Power Supplies (2)						Power Supplies (3)					
	+5V		+12V		-12V		+5V		+12V		-12V		+5V		+12V		-12V	
	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC volts	AC Ripple	DC Volts	AC Ripple
1																		
2																		
3																		
4																		

Number	Service A Tasks						Comments	Test Equipment Identity	Signature	Name & Company	Date
	SB Operating Floor										
	Power Supplies (4)										
	+5V		+12V		-12V						
	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple					
1											
2											
3											
4											

Network Rail	**Train Describer GEC/GE Micro Processor Based Record Card (Rear) NR/SMS/TD37**	**Form: NR/SMS/TD37/RC/01** **Date: August 2004** **Issue: 01**

Number	Service A Tasks Equipment Room & CIS																Voltage drop across PSU diodes Tick if all correct
	Power Supplies (+5V)								Power Supplies (Other)								
	+5V (1)		+5V (2)		+5V (3)		+5V (4)		+12V		-12V		+24V		+50V		
	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	
5																	
6																	
7																	

Number	Service A Tasks SB Operating Floor																	
	Power Supplies (1)						Power Supplies (2)						Power Supplies (3)					
	+5V		+12V		-12V		+5V		+12V		-12V		+5V		+12V		-12V	
	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC volts	AC Ripple	DC Volts	AC Ripple
5																		
6																		
7																		

Number	Service A Tasks SB Operating Floor						Comments	Test Equipment Identity	Technicians SSM Name	Company	Date
	Power Supplies (4)										
	+5V		+12V		-12V						
	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple					
5											
6											
7											

Service B Tasks							Comments	Test Equipment Identity	Signature	Name & Company	Date
PSU Fringe Boxes Only	Earth Continuity Checks (Ohms): *Enter details of earthing in the appropriate columns*										
AC I/P Volts	One:	Two:	Three:	Four:	Five:	Six:					

Network Rail	**Train Describer GETS Dual Record Card (Front) NR/SMS/TD40**	**Form: NR/SMS/TD40/RC/01** **Date: August 2004** **Issue: 01**

Signal Box (Main / Fringe*): **Delete as Appropriate*	If Fringe, Main Signal Box Name:

Number	Service A Tasks																			
	Power Supplies																			
	3AC-AP/SP Modules												6PP-B Modules							
	A						B						A						B	
	12V Logic		+12V Interface		-12V Interface		12V Logic		+12V Interface		-12V Interface		12V Logic		+12V Interface		-12V Interface		12V Logic	
	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple
1																				
2																				
3																				
4																				

Number	Service A Tasks																		Test Equipment Identity
	Power Supplies																		
	6PP-B Modules				6PP-C Modules												AP-H Module		
	B				A						B								
	+12V Interface		-12V Interface		5V logic		7V Logic		12V Interface		5V Logic		7V Logic		12V Interface				
	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	
1																			
2																			
3																			
4																			

No	Comments	Signature	Name & Company	Date
1				
2				
3				
4				

Network Rail	**Train Describer GETS Dual Record Card (Rear) NR/SMS/TD40**	**Form: NR/SMS/TD40/RC/01** **Date: August 2004** **Issue: 01**

Number	Service A Tasks																			
	Power Supplies																			
	3AC-AP/SP Modules												6PP-B Modules							
	A						B						A						B	
	12V Logic		+12V Interface		-12V Interface		12V Logic		+12V Interface		-12V Interface		12V Logic		+12V Interface		-12V Interface		12V Logic	
	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple
5																				
6																				
7																				
8																				
9																				

Number	Service A Tasks																		Test Equipment Identity
	Power Supplies																		
	6PP-B Modules				6PP-C Modules												AP-H Module		
	B				A						B								
	+12V Interface		-12V Interface		5V logic		7V Logic		12V Interface		5V Logic		7V Logic		12V Interface				
	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	DC Volts	AC Ripple	
5																			
6																			
7																			
8																			
9																			

No	Comments	Signature	Name & Company	Date
5				
6				
7				
8				
9				

Network Rail	**TPWS Test: Equipment Associated with Signals Record Card (Front)** **NR/SMS/TP11 –Test/025**	**Form: NR/SMS/TP11/T25/RC/01** **Date: December 2009** **Issue: 02**

Signal Box / Interlocking:	Signal Number	Normal / Opposite Direction *Delete as appropriate*

Number	Transmitter Loops and Module Indications																Over Speed Sensor (OSS)										
	Train Stop Sensor (TSS)																										
	Centre Point to Signal (± 0.1m) #	Loop Centre Line in Spec #		Loop Height #		Main Signal Off Sub Signal On**					Main Signal On Sub Signal On**						Arming to Trigger loop(± 0.5m) #	Trigger Loop to Signal (± 25m)	Loop Centre Line in Spec #		Loop Height #		Main Signal Off Sub Signal On**				
		Arm	Trig	Arming	Trigger	LED' s #	Arming Loop		Trigger Loop		LED' s #	Arming Loop			Trigger Loop				Arm	Trig	Arming	Trigger	LED' s #	Arming Loop		Trigger Loop	
							O/P(mV)*		O/P(mV)*			f. (kHz)	O/P(mV)*		f. (kHz)	O/P(mV)*								O/P (mV)		O/P (mV)	
							CJ	MJ	CJ	MJ			CJ	MJ		CJ	MJ							CJ	MJ	CJ	MJ
1																											
2																											
3																											
4																											
5																											

Number	Over Speed Sensor (OSS)							Location Equipment							S/Box Equipment**		Meter Identity	Test Aerial Identity	Technicians / Supervisors Name	Company	Date
	Main Signal On Sub Signal On**							Modules Voltage Inputs (V)			Module Voltage Outputs (V)				Module Voltage Outputs (V)						
	LED' s #	Arming Loop			Trigger Loop			SIM	Main Sig	Sub Sig Supp **	TSS		OSS		LED' s #	BN1 2 (V)					
		f. (kHz)	O/P(mV)		f. (kHz)	O/P(mV)					Arming Loop (V)	Trigger Loop (V)	Arming Loop (V)	Trigger Loop (V)							
			CJ	MJ		CJ	MJ														
1																					
2																					
3																					
4																					
5																					

* CJ: Commissioning Jig used / MJ: Maintenance Jig Used (Fill in voltages in the appropriate column for the type of jig used) ** If fitted to the installation # Insert tick if correct
Frequencies to be entered to five digit resolution. All voltages to one tenth of a volt / millivolt as applicable. Trigger loops always 65.x50 kHz. Loop frequencies max deviation + or - 0.010kHz.

Network Rail	**TPWS Test: Equipment Associated with Signals Record Card (Rear) NR/SMS/TP11-Test/025**	**Form: NR/SMS/TP11/T25/RC/01** **Date: December 2009** **Issue: 02**

Number	Transmitter Loops and Module Indications																														
	Train Stop Sensor (TSS)																	Over Speed Sensor (OSS)													
	Centre Point to Signal (± 0.1m) #	Loop Centre Line in Spec #		Loop Height #		Main Signal Off Sub Signal On**					Main Signal On Sub Signal On**							Arming to Trigger loop(± 0.5m) #	Trigger Loop to Signal (± 25m)	Loop Centre Line in Spec #		Loop Height #		Main Signal Off Sub Signal On**							
		Arm	Trig	Arming	Trigger	LED's #	Arming Loop		Trigger Loop		LED's #	Arming Loop			Trigger Loop					Arm	Trig	Arming	Trigger	LED's #	Arming Loop		Trigger Loop			
							O/P(mV)*		O/P(mV)*			f. (kHz)	O/P(mV)*		f. (kHz)	O/P(mV)*									O/P (mV)		O/P (mV)			
							CJ	MJ	CJ	MJ			CJ	MJ		CJ	MJ								CJ	MJ	CJ	MJ		
6																															
7																															
8																															
9																															
10																															
11																															

Number	Over Speed Sensor (OSS)							Location Equipment							S/Box Equipment**		Meter Identity	Test Aerial Identity	Technicians/ Supervisors Name	Company	Date
	Main Signal On Sub Signal On**							Modules Voltage Inputs (V)			Module Voltage Outputs (V)				Failure Indication Unit (FIU)						
	LED's #	Arming Loop			Trigger Loop			SIM	Main Sig	Sub Sig Supp **	TSS		OSS		LED's #	BN12 (V)					
		f. (kHz)	O/P(mV)		f. (kHz)	O/P(mV)					Arming Loop (V)	Trigger Loop (V)	Arming Loop (V)	Trigger Loop (V)							
			CJ	MJ		CJ	MJ														
6																					
7																					
8																					
9																					
10																					
11																					

* CJ: Commissioning Jig used / MJ: Maintenance Jig Used (Fill in voltages in the appropriate column for the type of jig used) ** If fitted to the installation # Insert tick if correct

Frequencies to be entered to five digit resolution. All voltages to one tenth of a volt / millivolt as applicable. Trigger loops always 65.x50 kHz. Loop frequencies max deviation + or - 0.010kHz.

Network Rail	**TPWS Test: Equipment Associated with PSR's & Buffer Stops Record Card (Front)** **NR/SMS/TP11-Test/025**	**Form: NR/SMS/TP11/T025/RC/02** **Date: August 2004** **Issue: 01**

Signal Box / Interlocking:	TPWS Identity	Normal / Opposite Direction *Delete as appropriate*

Transmitter Loops and Module Indications													Location Equipment			S/Box Equipment**		Meter Identity	Test Aerial Identity	Technicians SSM Name	Company	Date
Over Speed Sensor (OSS)													Module Voltage Inputs	Module Voltage Outputs (V)		Failure Indication Unit (FIU)*						
Arming to Trigger loop(± 0.5m) #	Trigger Loop to Board/Buffers (±25m) #	Loop Centre Line in Spec #		Loop Height #		Loops Energised																
							Arming Loop			Trigger Loop												
		Arming	Trigger	Arming	Trigger	LED's #	f.3 (kHz)	O/P(mV)*		f.2 (kHz)	O/P(mV)*		To SIM	To Arming Loop	To Trigger Loop	LED's #	BN12 (V)					
								CJ	MJ		CJ	MJ										

* CJ: Commissioning Jig Used / MJ: Maintenance Jig Used (Fill in voltages in the appropriate column for the type of jig used) ** If fitted to the installation # Insert 4if correct

Network Rail	**TPWS Test: Equipment Associated with PSR's & Buffer Stops Record Card (Rear) NR/SMS/TP11-Test/025**	**Form: NR/SMS/TP11/T025/RC/02 Date: August 2004 Issue: 01**

Transmitter Loops and Module Indications													Location Equipment			S/Box Equipment**		Meter Identity	Test Aerial Identity	Technicians SSM Name	Company	Date
Over Speed Sensor (OSS)													Module Voltage Inputs	Module Voltage Outputs (V)		Failure Indication Unit (FIU)*						
Arming to Trigger loop(± 0.5m) #	Trigger Loop to Board/Buffers (± 0.25m) #	Loop Centre Line in Spec #		Loop Height #		Loops Energised																
		Arming	Trigger	Arming	Trigger	LED's #	Arming Loop			Trigger Loop			To SIM	To Arming Loop	To Trigger Loop	LED's #	BN12 (V)					
							f.3 (kHz)	O/P(mV)*		f.2 (kHz)	O/P(mV)*											
								CJ	MJ		CJ	MJ										

* CJ: Commissioning Jig Used / MJ: Maintenance Jig Used (Fill in voltages in the appropriate column for the type of jig used) ** If fitted to the installation # Insert tick if correct

Network Rail	**TPWS Test: Self Powered OSS (SPOSS) Record Card (Front) NR/SMS/TP11-Test/025**	**Form: NR/SMS/TP11/T025/RC03 Date: August 2004 Issue: 01**

Signal Box / Interlocking:		TPWS Identity / PSR Identity-Name:
Distance from Treadle Arm to Arming Loop (± 0.5m):	Distance from Arming to Trigger Loop (± 0.5m):	Distance from Trigger Loop to PSR (± 25m):
Height of Arming Loop Below Rail Level (60-100mm):		Height of Trigger Loop Below Rail Level (60-100mm):

Transmitter Loops												Location Equipment							Technicians SSM Name	Company	Date
Over Speed Sensor (OSS)												Indication Fault	Arming Loop Fault	Trigger Loop Fault	Battery Fault (Batt 1)	Battery Fault (Batt 2)	Treadle Checked	Battery Changed			
Arming to Trigger loop(± 0.5m) #	Trigger Loop to Board I(±25m) #	Loop Centre Line in Spec #		Loop Height #		Loops Energised															
		Arming	Trigger	Arming	Trigger	Arming Loop			Trigger Loop												
						f.3(kHz)	O/P(mV)*		f.2(kHz)	O/P(mV)*											
							CJ	MJ		CJ	MJ										
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			

* CJ: Commissioning Jig Used / MJ: Maintenance Jig Used (Fill in voltages in the appropriate column for the type of jig used) # Insert tick if correct

Network Rail	TPWS Test: Self Powered OSS (SPOSS) Record Card (Rear) NR/SMS/TP11-Test/025	Form: NR/SMS/TP11/T025/RC/03 Date: August 2004 Issue: 01

Transmitter Loops												Location Equipment							Technicians SSM Name	Company	Date
Over Speed Sensor (OSS)												Indication Fault	Arming Loop Fault	Trigger Loop Fault	Battery Fault (Batt 1)	Battery Fault (Batt 2)	Treadle Checked	Battery Changed			
Arming to Trigger loop(± 0.5m) #	Trigger Loop to Board I(±25m) #	Loop Centre Line in Spec #		Loop Height #		Loops Energised															
		Arming	Trigger	Arming	Trigger	Arming Loop			Trigger Loop												
						f.3(kHz)	O/P(mV)*		f.2(kHz)	O/P(mV)*											
							CJ	MJ		CJ	MJ										
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			
												Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N			

* CJ: Commissioning Jig Used / MJ: Maintenance Jig Used (Fill in voltages in the appropriate column for the type of jig used) ** If fitted to the installation # Insert tick if correct

Network Rail	**TPWS Test: OSS+ Loops at TPWS+ Installations** **Record Card (Front)** **NR/SMS/TP11/Test 025**	**Form: NR/SMS/TP11/T025/RC04** **Date: 07/03/2020** **Issue: 02**

Signal Box / Interlocking:	TPWS Identity	Normal / Opposite Direction *Delete as appropriate*

Transmitter Loops and Module Indications													Location Equipment			S/Box Equipment**		Meter Identity	Test Aerial Identity	Technicians SSM Name	Company	Date
Over Speed Sensor (OSS+)													Module Voltage Inputs	Module Voltage Outputs (V)		Failure Indication Unit (FIU)*						
Arming to Trigger loop(± 0.5m) #	Trigger Loop to Board/Buffers (±25m) #	Loop Centre Line in Spec #		Loop Height #		Loops Energised							To SIM	To Arming	To Trigger Loop	LED's #	BN12 (V)					
		Arming	Trigger	Arming	Trigger	LED's #	Arming Loop			Trigger Loop												
							f.3 (kHz)	O/P(mV)*		f.2 (kHz)	O/P(mV)*											
								CJ	MJ		CJ	MJ										

* CJ: Commissioning Jig Used / MJ: Maintenance Jig Used (Fill in voltages in the appropriate column for the type of jig used) ** If fitted to the installation # Insert tick if correct

Network Rail	**TPWS Test: OSS+ Loops at TPWS+ Installations** **Record Card (Rear)** **NR/SMS/TP11/Test 025**	**Form: NR/SMS/TP11/T025/RC/04** **Date: 07/03/2020** **Issue: 02**

Transmitter Loops and Module Indications													Location Equipment			S/Box Equipment**		Meter Identity	Test Aerial Identity	Technicians SSM Name	Company	Date
Over Speed Sensor (OSS+)													Module Voltage Inputs	Module Voltage Outputs (V)		Failure Indication Unit (FIU)*						
Arming to Trigger loop(± 0.5m) #	Trigger Loop to Board/Buffers +/-25m) #	Loop Centre Line in Spec #		Loop Height #		Loops Energised							To SIM	To Arming Loop	To Trigger Loop	LED's #	BN12 (V)					
		Arming	Trigger	Arming	Trigger	LED's #	Arming Loop f.3 (kHz)	Arming Loop O/P(mV)* CJ	Arming Loop O/P(mV)* MJ	Trigger Loop f.2 (kHz)	Trigger Loop O/P(mV)* CJ	Trigger Loop O/P(mV)* MJ										

* CJ: Commissioning Jig Used / MJ: Maintenance Jig Used (Fill in voltages in the appropriate column for the type of jig used) ** If fitted to the installation # Insert tick if correct

Network Rail

Indusi Trainstops: Magnetic Trainstop (Associated with Stop Signals) Record Card (Front)
NR/SMS/TS20

Form: NR/SMS/TS20/RC/01
Date: December 2009
Issue: 01

Signal / Indusi Magnet Name / Number:

Magnet Position (mm)		Magnet Current (Strom) Readings (mA)				Comments	Trainstop Magnet Tester Identity	Signature	Name & Company	Date
Rail edge to centre of magnet	Top of Magnet to Crest of Rail	Signal at Stop (2000Hz)		Signal at Proceed (1000Hz)						
		1000Hz	2000Hz	2000Hz	1000Hz					

Network Rail	**Indusi Trainstops: Magnetic Trainstop (Associated with Stop Signals)** **Record Card (Rear)** **NR/SMS/TS20**	**Form: NR/SMS/TS20/RC/01** **Date: December 2009** **Issue: 01**

Magnet Position (mm)		Magnet Current (Strom) Readings (mA)				Comments	Trainstop Magnet Tester Identity	Signature	Name & Company	Date
Rail edge to centre of magnet	Top of Magnet to Crest of Rail	Signal at Stop (2000Hz)		Signal at Proceed (1000Hz)						
		1000Hz	2000Hz	2000Hz	1000Hz					

Network Rail	**Indusi Trainstops: Magnetic Trainstop (Associated with Speed Control) Record Card (Front)** **NR/SMS/TS20**	**Form: NR/SMS/TS20/RC/02** **Date: December 2009** **Issue: 01**

Indusi Magnet Name / Number:	Indusi Speed Control Time (secs):

Magnet Position (mm)		Time (secs)	Magnet Current (Strom) Readings (mA)				Comments	Trainstop Magnet Tester Identity	Signature	Name & Company	Date
Rail edge to centre of magnet	Top of Magnet to Crest of Rail	Treadle Operation to Magnet Change of State	Speed Control Active (2000Hz)		Speed Control Inactive (1000Hz)						
			1000Hz	2000Hz	2000Hz	1000Hz					

Network Rail

Indusi Trainstops: Magnetic Trainstop (Associated with Speed Control) Record Card (Rear)
NR/SMS/TS20

Form: NR/SMS/TS20/RC/02
Date: December 2009
Issue: 01

Magnet Position (mm)		Time (secs)	Magnet Current (Strom) Readings (mA)				Comments	Trainstop Magnet Tester Identity	Signature	Name & Company	Date
Rail edge to centre of magnet	Top of Magnet to Crest of Rail	Treadle Operation to Magnet Change of State	Speed Control Active (2000Hz)		Speed Control Inactive (1000Hz)						
			1000Hz	2000Hz	2000Hz	1000Hz					

NetworkRail	**Train Stop – Manchester Metro** Maintenance Record Card	**Form: NR/SMS/TS22/Trainstop MM** **Date: March 2018** **Issue: 01**

Location Case:	Beacon Number:	Beacon Serial Number:

Date	Name	Company	Signature	Meter Identity	Beacon Secure (Tick)	Beacon Volts (DC)	Beacon Current (DC mA)	Comments