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Special Inspection Notice

Risk Based Campaign for the Installation of Tubular Stretcher Bars

Endorsement and Authorisation

Endorsed by:



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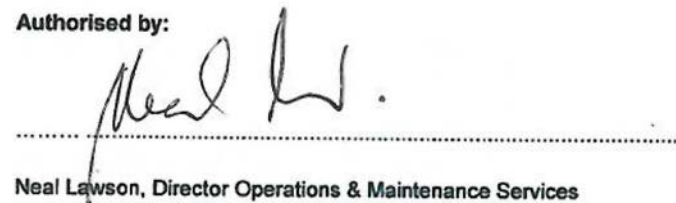


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Issue record

Issue	Date	Comments
1	12 th February 2014	First Issue
2	17 th July 2015	Revised completion dates and updated tubular stretcher bar selection guides

Compliance

This Special Inspection Notice (SIN) is mandatory and shall be complied with by Network Rail (and its contractors if applicable) as detailed below:

- Remedial works mandated by this SIN are to be completed within the timescales specified in Clause 6.7.
- SINACs (see Appendix A) confirming completion of remedial works associated with this SIN is to be submitted to Professional Head (Signalling & Controls) in accordance with the timescales shown in Clause 9.

Reference documentation

NR/L2/TRK/6100	The Installation & Maintenance of Stretcher Bars
NR/L2/SIG/10072	Special Inspection Notices (SINS)
NR/L2/SIG/11772	Supplementary Point Drives and Detection
RE/PW/721	Fixed Stretcher Bar assemblies for plain lead full depth switches.
RE/PW/814	Adjustable 35mm square section Stretcher Bar Assembly for Shallow Depth Switches
RE/PW/823	Adjustable 35mm square section Stretcher Bar Assembly for Shallow Depth Switch Diamonds
RE/PW/586	35mm Adjustable square section Stretcher Bar Assembly for Full Depth switches (plain leads), general arrangement & type one brackets
RE/PW/3000	Tubular stretcher bar general assembly

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1 Purpose

This SIN covers the installation of the new tubular stretcher bar in existing switches as part of a programme to reduce risk.

The tubular stretcher bar has been developed to replace both 'fixed' and 'adjustable' stretcher bars in new and existing installations.

The majority of switches on Network Rail infrastructure use either 'fixed' full depth stretcher bars (known as 'black' or 'yellow' bars) or 35mm square 'adjustable' bars (often referred to as an '814 or 'adjustable' bar).

Fixed and adjustable stretcher bars are known to suffer from accelerated failure when subjected to repeated flange back contact or high drive forces usually as a result of overdriving with electro-mechanical Point Operating Equipment (POE). The tubular stretcher bar has been designed to eliminate these failures and reduce risk.

The more modern types of POE such as Hy-drive and HPSS have their own designs of stretcher bars and are outside the scope of this SIN. NR/L2/TRK/6100 specifies the use of the tubular stretcher bar in S&C renewals and maintenance tasks such as the replacement of half sets of switches, re-gauging or when replacing defective stretcher bars.

2 Scope

This SIN applies to all switches that fall within the phases of work shown in section 2.1 and the scope of sections 2.2 & 2.3.

2.1. Scope - Phases of work

There are two phases of work within this SIN as detailed in the table below. Due to late availability of shallow depth designs of tubular stretcher bar it is acceptable to substitute phase 2 switches for phase 1 switches to achieve the overall volume of fitments required to complete phase 1.

The switch configurations listed below shall be fitted with tubular stretcher bars at the specified positions by **31st July 2017**

Phase	Rail F (full depth) S (shallow depth)	Switch Size /Type	Types of POE	Direction of traffic	Facing direction linespeed	Bars to be changed	Complete By
1a	F & S	F - H	HW Style 63	Facing	All	All drive positions	31/12/2015
1b	F & S	switch diamond s*	HW Style 63 Clamplock	All	All	All	31/12/2015
1c	S	CVS & DVS	HW Style 63	Facing	≥40mph	All drive positions	31/12/2015
2	F & S	A - E	HW Style 63	Facing	≥40mph	All drive positions	31/7/2017

2.1.1 Phase 1

Phase 1 shall be completed by 31st December 2015. Phase 1 is complete when the volume of completed installations (which can include phase 2 switches) matches the volume identified in the scope of 1a, 1b and 1c.

2.2. Scope of this SIN – Design of S&C

The Tubular stretcher bar is compatible with the following designs of switch:

1. Vertical Full Depth

(manufactured from BS110A, BS113A or CEN56 rail) – plain leads (switch sizes AV to HV) in turnouts, crossovers, double junctions, scissors crossovers and switch diamonds.

2. Vertical Shallow Depth

(manufactured from BS113A/UIC54B or CEN56/CEN54E1A1 rail) – plain leads (switch sizes BVS to HVS) in turnouts, crossovers, double junctions, scissors crossovers and switch diamonds.

3. RT60

Plain leads (switch sizes C to G) in turnouts, crossovers and double junctions.

4. BR Inclined

(manufactured from BR109lb, BS110A, BS113A or CEN56 rail) – plain leads (switch sizes A to G) in turnouts, crossovers, double junctions, scissors crossovers and switch diamonds.

2.3. Scope of this SIN – Type of Points Operating Equipment

The Tubular stretcher bar is compatible with the following types of POE.

1. Rail Point Clamp Lock (Mk1, Mk2 & In-Bearer) - within scope of the SIN where fitted to switch diamonds.
2. HW (family) - excluding points fitted with Torsional Drives
3. Type 63 - excluding points fitted with Torsional Drives

Other types of POE (not listed) require testing to confirm compatibility with the tubular stretcher bar and will remain outside the scope of the SIN.

3 Roles and responsibilities

3.1 Head of Signalling and Head of Track

The Head of Signalling and Head of Track are required to brief this SIN to Directors of Route Asset Management (DRAM), Route Asset Managers (Signalling) (RAM (S)), Route Asset Managers (Track) (RAM(T)), IP Head of Engineering (Signalling) and IP Head of Engineering (Track).

3.2 Director Route Asset Management

DRAMs shall arrange for the switches on their area, within the scope of this SIN, to be actioned in accordance with this SIN and this work shall be completed as required in clause 6.

The DRAM is responsible for :

- a work programme to comply with this SIN
- arranging delivery of the work programme to comply with this SIN
- ensuring that records of works completed under this SIN are recorded in ELLIPSE.
- confirm completion of the works and submission of the SINAC within the timescales stated in clause 9.
- ensure that staff that install and maintain the tubular stretcher bar obtain competence 39.04.

3.3 Route Asset Managers (Signalling) and Route Asset Managers (Track)

RAM(S) and RAM(T) are required to brief out this SIN to Route Works Delivery Managers (or equivalent), Signal & Telecoms Maintenance Engineers (S&TME), Track Maintenance Engineers (TME), Infrastructure Maintenance Engineers (IME) and Infrastructure Maintenance Delivery Managers (IMDM).

The RAM(S) is accountable for:

- the review of the Scope Register for their area in order to confirm the correct identification of switches within the scope of this SIN. The RAM(S)s shall arrange for any required corrections to Ellipse asset data to be completed by 30th April 2014.
- raising Ellipse work orders against all switches within the scope of this SIN for phase 1 works by 7th May 2014. New standard jobs have been created for this purpose (see clause 7).
- advising the Project Manager, Programme Delivery of any changes in use of assets which affect whether they fall within the scope of the SIN.

3.4 Signal & Telecoms Maintenance Engineers (S&TME)

The S&TMEs are required to brief out this SIN to Signal Section Managers and Signal Technicians.

The S&TMEs shall support the RAM(S) with the review of the Scope Register.

3.5 Track Maintenance Engineers (TME)

The TMEs are required to brief out this SIN to Track Section Managers and Track Patrollers for awareness only.

3.6 Project Manager, Programme Delivery, Safety Technical and Engineering (STE).

The Project Manager shall:

- create a populated Scope Register based upon current Ellipse asset data and distribute to RAM(S) for review by 14th February 2014.
- compile a national Scope Register from Ellipse data and forward to the Head of Signalling, Head of Track & the Head of Switches & Crossings.
- monitor and report upon progress of the remedial works.