

TECHNICAL INSTRUCTION

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NETWORK RAIL - SIGNAL ENGINEERING

New Fine Packing Shim For Clamp Locks

Relevant Standard: NR/L2/SIG/11774, NR/SMS/PB11, NR/SMS/Test003.

Purpose

This TI is required to raise awareness of the availability of a new fine packing shim which is used during initial installation or during maintenance of Clamp Locks. This TI reminds staff of the importance of using the smallest possible fine packing increments to avoid tight lock failures.

Scope

All Clamp Lock installations, including the more recent In-bearer design, use fine packing shims which fit behind the locking piece as illustrated in figure one. The information within this TI applies to staff responsible for the installation and maintenance of the Clamp Lock mechanism.

Background

Originally there were two fine packing shims available, 0.6mm and 1.6mm. The introduction of a 0.3mm shim provides greater flexibility and reduces the risk of having a tight lock set-up, which can affect the performance of the Clamp Lock Mechanism.

New Fine Packing Arrangement

The fine packing is inserted behind the locking piece to prevent the drive lock slide from completing its travel when the 3.5mm Facing Point Lock (FPL) test is being carried out. If the FPL test fails, the fine packing is increased until the drive lock slide fails to complete its travel. In some cases, the original 0.6mm and 1.6mm packing shims have not provided enough flexibility, which has resulted in tight lock issues. The addition of the 0.3mm shim provides a greater range of packing as shown in the table.

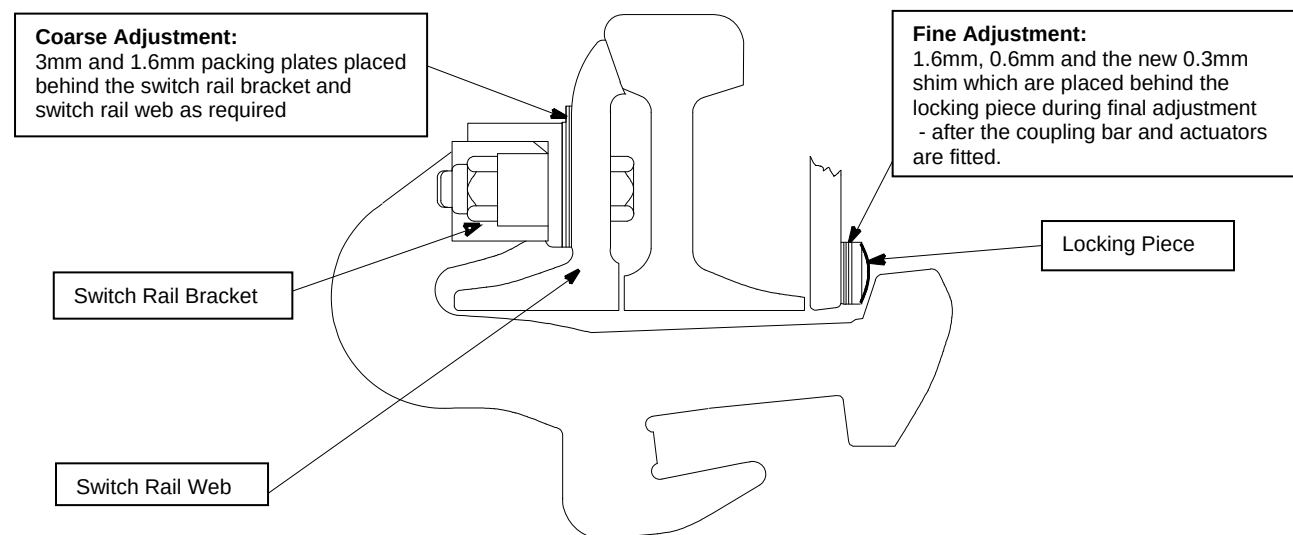


Figure One

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Fine Adjustment

The introduction of the new 0.3mm shim increases the number of possible increments as shown in **bold** in the following table. This table replaces the list published within the current Clamp Lock Handbook.

Incremental Thickness	Packing Arrangement
0.3mm	(1 x 0.3)
0.6mm	(1 x 0.6)
0.9mm	(1 x 0.6 & 1 x 0.3)
1.2mm	(2 x 0.6)
1.5mm	(2 x 0.6 & 1 x 0.3)
1.6mm	(1 x 1.6)
1.8mm	(3 x 0.6)
1.9mm	(1 x 1.6 & 1 x 0.3)
2.1mm	(3 x 0.6 & 1 x 0.3)
2.2mm	(1 x 1.6 & 1 x 0.6)
2.4mm	(4 x 0.6)
2.5mm	(1 x 1.6 & 1 x 0.6 & 1 x 0.3)

Incremental Thickness	Packing Arrangement
2.7mm	(4 x 0.6 & 1 x 0.3)
2.8mm	(1 x 1.6 & 1 x 0.6 & 2 x 0.3)
3.0mm	(5 x 0.6)
3.1mm	(1 x 1.6 & 2 x 0.6 & 1 x 0.3)
3.2mm	(2 x 1.6)
3.3mm	(5 x 0.6 & 1 x 0.3)
3.4mm	(1 x 1.6 & 3 x 0.6)
3.5mm	(2 x 1.6 & 1 x 0.3)
3.6mm	(6 x 0.6)
3.7mm	(1 x 1.6 & 3 x 0.6 & 1 x 0.3)
3.8mm	(2 x 1.6 & 1 x 0.6)
3.9mm	(6 x 0.6 & 1 x 0.3)

Note - The maximum amount of fine packing permitted remains the same at 4.0mm (1 x 1.6 & 4 x 0.6)

Action Required

The new 0.3mm shim has been added to the Clamp Lock supply list and it is advisable to obtain the new shim so that it can be utilised during the next planned installation or maintenance activity. The introduction of the new shim provides greater flexibility when carrying out NR/SMS/Test 003; however, it does not change the installation procedure as detailed within the Clamp Lock Handbook.

Part No.	Description	PADs No.
APSM506-3	0.3mm Fine Packing Shim	086/032143
APSM506-1	0.6mm Fine Packing Shim	086/032141
APSM506-2	1.6mm Fine Packing Shim	086/032142

Staff to be Briefed

Role	Responsible for Briefing
Head of Asset Management [S&T]	Principal Engineer S&C
Route Asset Managers (S&T)	Head of Asset Management [S&T]
Signal & Telecoms Maintenance Engineer	Route Asset Managers (S&T)
Section Manager (Signals)	Signal & Telecoms Maintenance Engineer
Signal Technicians Signalling Technical Support Staff	Section Manager (S&T)
Senior Programme Engineering Manager	Principal Engineer S&C

Expiry Date

This TI will expire when this information is transferred into the next publication of the Clamp Lock Handbook NR/L2/SIG/11774.

End