

Track – PL – Straighten Rail End

Scope

Includes: Bull head and flat bottom rail with fish-plated or welded joints

Excludes: Insulated block joints, glued joints, tight jointed fishplates, welds with dips in excess of 3mm and AMS rail

Preparation

Tools, equipment and plant items required but not limited to:

- Large and small fish bolt spanners
- 1metre straight edge
- Feeler or shim gauge
- Rail end straightening device
- Shovel or ballast fork
- Packing and measured shovel packing equipment
- Chippings
- Trolley
- Approved rail thermometers

Work planning considerations:

- Ultrasonic testing of the rail and bolt holes within 1m of the rail end before and after straightening
- Shimming of the rail joint, tightening of fishbolts and general joint condition
- Packing of sleepers under joint
- Associated work for expansion gap
- Associated work for worn or defective components
- Sleepers should be square to the rails and correctly spaced
- Carry out the operation on two adjacent joints at the same time

Method

1. Measure shovel pack or tamp the joints and shim prior to work commencing.
2. Check rail temperature.
3. Measure the rail dip approximately 20mm (3/4") from the rail ends.
4. Refer to the original equipment manufacturer's instructions for the actual methods of carrying out steps 4 -8.
5. Dig out bay below joint to full sleeper depth and approximately 300mm (1') either side of the rail.
6. Locate rail end straightener centrally over the joint.
7. Clamp machine firmly to the rail.
8. Set the required measured dip in accordance with manufacturer's instructions.
9. Apply lift force and hold for 10 seconds before lowering.

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10. Remove the rail end straightener.
11. Check the joint to ensure the correct over lift has been achieved.
12. Check joint condition and integrity.
13. Measured shovel pack sleepers.
14. Re-ballast the bay below the joint.
15. Pack a further two sleepers either side of the joint.
16. Remove all scrap materials from site.

References

Supports Ellipse Standard job

- 009114 Track – PL – straighten rail end

If applicable refer to the following associated documents:

- NR/SP/TRK/001 Inspection and Maintenance of Permanent Way
- NR/L3/TRK/002/F03 Track – PL – Renew Fishplates
- NR/L3/TRK/002/F04 Track – PL – Fit fishplate shims
- NR/L3/TRK/002/F05 Track – PL – Lubricate fishplates
- NR/L3/TRK/002/F20 Track – PL – Lift and pack joint
- NR/GN/TRK/7001/TWI2P026 How to carry out joint straightening

- Risk Control Sheets:
 - NR/L3/MTC/0002/TK000 Generic Track Risks
 - NR/L3/MTC/0002/TK409 Plain Line straighten rail end