

Insulated Block Joint (Dry)- Renew

Scope

Includes: Dry Insulated Block Joints
Excludes: Glued Insulated Block Joints

Preparation

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

- Spanners
- Hammers
- Cold bolt expansion equipment
- Disc Cutter
- Magnetic Wand/Mats
- Hand Tools
- Rail Jacks
- Torque Wrench
- Chisel
- File
- Pad scraper

Work planning considerations:

- Isolation requirements
- Availability of insulated joint kits
- Traction requirements
- Signalling requirements

Method

1. Remove existing insulated joint fishplates and end post.
2. Ensure rail ends are square: grind, file or cut as required removing any burrs and loose metal from rail ends.
3. Clean rail surfaces.
4. Ensure rail ends are supported, in line and level.
5. Rail adjustment may be necessary to achieve the require rail end gap.
6. Fit the end post.
7. For ease of assembly joints with loose liners should be pre-assembled.
8. Liners/fishplates shall be offered up to check alignment of bolt holes.
9. If required inside/outside bushes should be inserted.
10. Offer up insulated fishplate to rail.
11. Fit steel washers and insulating washers to bolts.
12. Insert bolts through insulated fishplate.
13. Offer up other insulated fishplate to rail.
14. Fit insulated and steel washers.
15. Fit and tighten nuts with running on spanner.

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16. Tighten bolts using torque wrench. Values as detailed in NR/SP/TRK/102 and as detailed below:
 - Black bolts: 475 Nm (350 ft-lb)
 - High-tensile 1 inch: 880 Nm (650 ft-lb)
 - High-tensile 1 ¹/₈ inch: 1020 Nm (750 ft-lb)
17. Check alignment and fit of components.
18. Remove any excess plastic from end post.
19. Remove continuity bonds.
20. Ensure an electrical resistance test is carried out.
21. Remove any scrap material from site.

References

Supports Ellipse Standard job

- 009078 Insulated block joint - renew

If applicable refer to the following associated documents:

- NR/L3/TRK/002/F06 Adjust Rail Expansion Gaps
- NR/GN/TRK/7001/TWI2G032 How to replace and maintain an insulated joint in jointed track
- NR/GN/TRK/7001/TWI2G040 How to repair lipping
- Risk Control Sheets:
- NR/L3/MTC/0002/TK000 Generic Track Risks
- NR/L3/MTC/0002/TK402 Insulated block joint (Dry) - Renew