

Track – PL – Stone Blowing – Hand Held

Scope

Includes: Manual held mechanical consolidation, local repair of vertical and cross-level geometry
Excludes: S&C consolidation and geometry repair

Preparation

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

- Approved rail thermometers
- Lift jacks
- Shovels/forks
- Sighting boards
- Cross-level gauge
- Portable compressor
- Stoneblowing lance
- Detachable blowing nozzles
- Chipping canister
- Chipping hopper

Work planning considerations:

- Direction of working/sighting
- Evidence of voiding
- Technical survey/design to be undertaken
- Materials

Method

1. Ensure rail temperature is within safe working limits.
2. Ensure rail fastenings are correctly installed.
3. Lifting of track should normally be undertaken in the direction of traffic (from sighting board to target board).
4. Identify datum rail.
5. Identify datum rail “high spots” visually.
6. Place “Sighting Board” & “Target Board” on selected Datum Rail high spots.
7. Place “Intermediate Board” on the datum rail between the “Sighting” & “Target” boards, starting a maximum of 4 sleepers in from the “Sighting Board”
8. Open out ballast & insert a lift jack under the datum rail foot in the bay nearest the intermediate board.
9. Lift the datum rail (6mm overlift is required) using lift jacks until the required line of sight is achieved between the Sighting, target and intermediate boards.
10. Open out the ballast bay on the 4’ side of the Datum rail, to the width of one shovel, to expose the underside of the sleeper.
11. Inject chippings from the prepared bay under the sleeper until refusal.

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12. Remove lift jacks.
13. Check cross-level.
14. Where correction of cross level is required:
 - Open out ballast & insert a lift jack under the foot of the adjacent rail
 - Lift the rail using lift jacks until the required cross level is achieved
 - Open out the ballast bay on the 4' side of the rail, to the width of one shovel, to expose the underside of the sleeper.
 - Inject chippings under the sleeper until refusal.
 - Remove lift jacks
 - Ensure cross level is correct.
15. Box-in opened out bay.
16. Ensure the intermediate sleepers are similarly stone blown.
17. Repeat steps 8 to 16 for each group of sleepers (maximum 4) as the intermediate board is moved towards the target board and sightings taken.
18. On completion of the work ensure that track geometry is correct.

References

Supports Ellipse Standard job

- 009118 Track – PL – Stone Blowing – Hand Held

If applicable refer to the following associated documents:

- NR/SP/TRK/001 Inspection & Maintenance of Permanent Way
- NR/SP/TRK/0011 Continuous Welded Rail (CWR)
- NR/GN/TRK/7001/TWI2T025 How to carry out hand held stone blowing on plain line.
- Risk Control Sheets:
 - NR/L3/MTC/0002/TK000 Generic Track Risks
 - NR/L3/MTC/0002/TK412 Stone Blowing - Hand Held CWR Stressing