

S&C Change Concrete Bearer

Scope

Includes: All Concrete S&C Bearers
Excludes: Timber Bearers and Plain Line Concrete Sleepers.

Preparation

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

- Generators
- Spanner
- Shovel
- Pan Puller
- Keying Hammer
- Jacks
- Approved rail thermometer
- Sleeper Tongs
- Heel/Slewing Bar
- Set Square
- Track Gauge
- Impact Wrench
- RRV with lifting beam

Work planning considerations:

- Bearer Type and Size
- Method of bearer removal to be adopted;
 1. slide out
 2. slue and slide
 3. remove railsor a combination of the 3 above.
- Manual or Machine Assisted Installation
- Lifting Plan
- Layout Stressing Requirements
- Follow up Tamp
- Signalling requirement
- Traction bonding requirements
- Changes to CRTs

Method 1 – Slide Out

1. Check the area the bearer is to be pulled through to is suitable.
2. Check the new bearer is of the correct type and size, and is not damaged.
3. Open out the ends and cribs either side of the bearer to be changed.
4. Dig out one adjacent crib to 50mm below bearer bottom.
5. Release all chairs, baseplates and/or fastenings from the bearer.
6. Release all fastenings from 5 bearers either side of the bearer to be changed.
7. Insert sufficient jacks and lift the rails ensuring adjacent bearers remain on their beds.

S&C Change Concrete Bearer

8. Taking care not to disturb the existing bed, move the bearer into the lowered adjacent bed.
9. Taking care not to disturb the existing bed, slide out the bearer.
10. Taking care not to disturb the existing bed, slide the new bearer into the lowered bed.
11. Taking care not to disturb the existing bed, move the new bearer into the correct position.
12. Lower jacks.
13. Fasten all rails to all bearers.
14. Measure gauge and check alignment.
15. Where applicable, ensure all chairs or baseplates are tightened.
16. Pack new bearer.
17. Back fill all cribs and re-instate correct ballast profile.
18. Check Top and Line.
19. Remove waste and materials from site.

Method 2 – Slue and Slide

20. Check the new bearer is of the correct type and size, and is not damaged.
21. Determine the number of bearers that require moving to allow the removal of the bearer to be changed.
22. Open out the ends and cribs of the designated bearers.
23. Mark the position of all bearers on all rails.
24. Release all chairs, baseplates and/or fastenings from the designated bearers.
25. Insert sufficient jacks and lift the rails ensuring adjacent bearers remain on their beds.
26. Taking care not to disturb the existing beds move the designated bearers to allow the extraction of the bearer to be changed.
27. Remove the bearer to be changed.
28. Insert new bearer and position correctly.
29. Taking care not to disturb the existing beds move the remaining bearers back to their correct positions.
30. Lower jacks.
31. Fasten all rails to all bearers.
32. Measure gauge and check alignment.
33. Where applicable, ensure all chairs or baseplates are tightened.
34. Check Top and Line; pack all bearers.
35. Back fill all cribs and re-instate correct ballast profile.
36. Check Top and Line.