The 2mm Scale Association

Part Ref 2-353A

BR 2 or 4 Shoe Morton Brake Underframe For 16 Ton Mineral Wagon

Order of assembly – Two shoe unfitted 16T underframe

1. Detach and clean up main underframe etch.
2. Remove buffer beams if not required.
3. Ream bearing holes and holes in V hangers.
4. Bend up inner solebars/axleguards.
5. Solder in bearings.
6. Bend up inner buffer beams, if required.
7. Bend up and solder coupling plates, if required.
8. Detach, clean up, solder together cosmetic solebars.
9. Detach and assemble axlebox etches.
10. Attach axlebox etches to cosmetic solebars.
11. Detach and clean up brake unit.
12. Bend up Morton side of brake unit.
13. Remove non-clutch side of unit.
14. Cut cross shaft to length
15. Put cross shaft through both V hangers.
16. Solder cross shaft in place.
17. Attach cosmetic solebars to main underframe.
18. Attach full width buffer beams, if required.
19. Bend up and assemble brake lever/lever guard assembly.
20. Bend door bangers away from solebar.
21. Attach lever/lever guard assembly.
22. Attach wire stub to Morton clutch.
23. Bend door bangers to final shape.
24. Good scrub !

Additional points – not in any particular order
Attach axleboxes to cosmetic solebars before whole assembly is attached to main underframe – a difficult balancing act will ensue otherwise !
Door banger on Morton clutch side has to be bent temporarily up and away from the V hanger, otherwise it is almost impossible to attach the wire stub through the upper hole in the lever and V hanger.
I had to file a little of the end of the inner solebars to make the inner buffer beams stand vertical – this may not be necessary in every case.
I held the full width buffer beam in alignment with a 0.9mm drill through each buffer hole.
Suggest test underframe with wheels
a) after bearings put in
b) after brake units put in
All parts can be soldered using both multicore and cream, where appropriate.

Order of assembly – Four shoe vac fitted 16T underframe

25. Detach and clean up main underframe etch.
26. Remove buffer beams if not required.
27. Ream bearing holes and holes in V hangers.
28. Bend up inner solebars/axleguards.
29. Solder in bearings.
30. Bend up inner buffer beams, if required.
31. Bend up and solder coupling plates, if required.
32. Detach, clean up, solder together cosmetic solebars.
33. Detach and assemble axlebox etches.
34. Attach axlebox etches to cosmetic solebars.
35. Detach, clean up, bend up brake unit.
36. Attach brake cylinder.
37. Attach brake unit to main underframe.
38. Prepare vacuum cylinder to cross shaft operating link.
39. Put cross shaft through both V hangers and operating link.
40. Solder operating link to cylinder.
41. Remove cross shaft and cut to length.
42. Solder cross shaft in place.
43. Attach cosmetic solebars to main underframe.
44. Attach full width buffer beams, if required.
45. Bend up and assemble brake lever/lever guard assembly.
46. Bend door bangers away from solebar.
47. Attach lever/lever guard assembly.

48. Attach wire stub to Morton clutch.
49. Bend door bangers to final shape.
50. Good scrub !

Additional points – not in any particular order
Attach axleboxes to cosmetic solebars before whole assembly is attached to main underframe – a difficult balancing act will ensue otherwise !
Door banger on Morton clutch side has to be bent temporarily up and away from the V hanger, otherwise it is almost impossible to attach the wire stub through the upper hole in the lever and V hanger.
I had to file a little of the end of the inner solebars to make the inner buffer beams stand vertical – this may not be necessary in every case.
I held the full width buffer beam in alignment with a 0.9mm drill through each buffer hole.
Suggest test underframe with wheels
c) after bearings put in
d) after brake units put in
All parts can be soldered using both multicore and cream, where appropriate.

THE 2MM SCALE ASSOCIATION

INSTRUCTIONS
2 OR 4 SHOE MORTON CHASSIS - PART - 2-353A