THOMPSON A1/1 'GREAT NORTHERN' INSTRUCTIONS.

This kit caters for 'Great Northern' as she ran from 12/48 onwards with the more appropriate deeper cab sides and smoke deflectors.

Please read through the instructions before starting.

Due to difficulty sourcing 16BA nuts and screws they have now been replaced by 14BA. These are best fitted the opposite way round, i.e. with the head facing outwards.

FIG. 1.

Cut out the running plate (1) and the valances (2). Do not remove the valance frames. The frame will hold the valance in shape while you are forming the running plate, and will hold everything firm while you are fitting the cab and boiler. File all the tabs off of the edges.

Fold the front end of the running plate down at 90°. Form the front curve (leaving the centre section flat) using the valances as a template (the front of the valances will have to be kinked in at the front). Once happy with the front curve form the centre running plate curve by folding down at 90° and then forming the curve to match the valances. When the valances fit into the front curve and centre curve you can tack them into their recesses. Start from the front and go right back to the reverse curves.

The reverse curves can now be formed. This is quite simple compared with the front curve, Using a piece of dowel simply push against the running plate and force it into the concave "second" curve in the valance. This should automatically form both the curves and you can tack solder them in place. Solder along the seams to form a rigid structure.

Solder the rear drag beam (3) into the recess at the rear of the running plate and the bufferbeam (4) into the recess at the front end.

Do not remove the valance frames just yet. Check that the rear dragbeam and the bufferbeam line up square. Make any adjustments by twisting the running plate gently.

Solder an 8BA screw into the hole at the front end and two 10BA screws into the holes at the back end.

Solder the smokebox saddle front (5) into the recesses in the front section of the running plate and the saddle rear (6) into its slots. Solder the saddle sides (7) between the front and rear. If the fixing screw protrudes above the lowest part of the saddle curve file it down. Form the saddle top (8) to shape with the half etched lines facing up and solder it onto the saddle sides.

Solder the front frame extensions (10) into the recesses in the top of the running plate. Fold the valve chest (9) at 90° and solder between the frame extensions. Solder the riveted valve chest overlay (11) onto the valve chest. Solder the two small steps (12) into the slots in the front running plate curve (Note they are R/H & L/H).

Now turn to the cab. Solder the cab sides (14 &15) into their slots (you will have to file the tabs down as the valances interfere with them) making sure that they are an even distance from the rear drag beam. Solder the cab front (16) into the three slots and then along the joint between

the front and the sides. File off any overlap. Solder the cab side overlays (19 & 20) onto the cab sides. Solder the cab floor support (17) in place. Solder the cab floor (18) onto the support.

Curve the cab roof (21) to match the cab front profile. You may need to file away a little bit of the cab front to get a better fit. Hold the roof in position and tack solder it in place at the front and then at the corners. Check it sits square and level. When satisfied with this solder around the seams. Check the level again and alter it if necessary.

Solder the riveted roof overlay (22) to the centre rear of the roof. Curve the front canopy (24) and solder it onto the roof. Solder the double roof (26) shutters onto the canopy. Note which way round they go.

FIG. 2.

Glue the cab backhead (28) inside the cab. Glue the cab platforms (29 & 30) on the left and right of the cab floor. Glue the reversing screw (31) in place on the left hand platform. Glue the cab seats (32 & 33) either side of the cab.

FIG. 2. Cab Detailing.

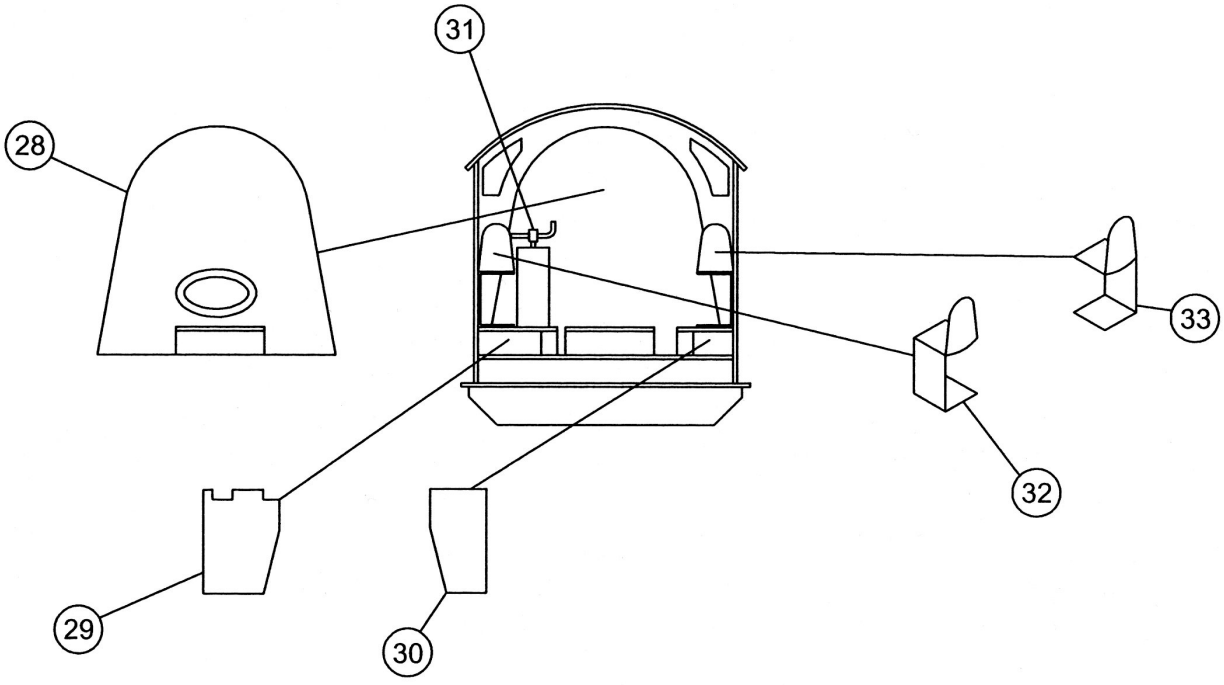


FIG. 3.

Clean up the Boiler (34) removing any lines that may be there. Lightly rough the surface of the resin otherwise it will not be easy to paint (A fibre polishing pen is ideal for this). Remove the smokebox wrapper (35) from the fret and rough up the inside surface. Gently roll it around a piece of dowel or brass approx 15mm in diameter until it is slightly smaller than the boiler diameter, this will prevent it springing open. Hold the wrapper in position around the boiler. Make sure it is lined up correctly and is square. Run superglue along the edges so that it is tacked in place. Check again that everything is square and then glue firmly in place. Push the smokebox door in place but **DO NOT** glue in. This prevents the edges from being damaged.

Fit the underboiler casting (36). Bear in mind that you have to fit a motor and you may have to cut some of the back end away.

Now recheck the fit of the boiler onto the running plate. When you have the boiler sitting centrally tack it in place with superglue. Check it again and then secure it with epoxy resin. Leave it for a few hours, at least, to harden off. Check that the smokebox door is level and glue in place. Refer to the diagram, mark the holes for the handrail knobs and ejector pipe and drill out with a 0.85mm bit.

When the glue is set the valance frames can be removed. Using a small pair of tin Snips cut up the valance frames at intervals of about 15mm. Bend the parts of the frames off of the valance and file off all the tabs.

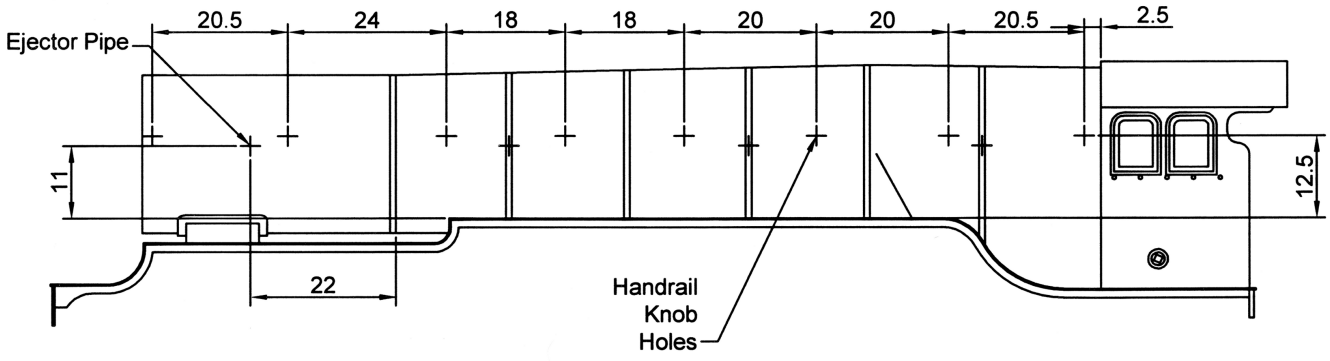


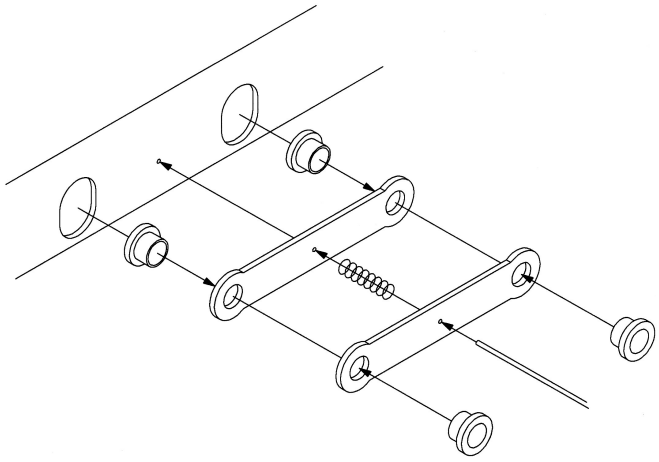
FIG. 4.

To position all these parts as accurately as possible you will need to find as many photographs of the loco you are modelling. The following books will be of assistance; RCTS - Locomotives of the LNER, part 2A; Yeadons Register of LNER Locomotives, Volume and Locomotives Illustrated No, 46, The Thompson Pacific's. The Isinglass drawing No. 4/390 is also an excellent reference.

Fit the parts in roughly number order. The front steps (48) and vac pipes (59) will be better soldered in place. Everything else can be glued in place with either superglue or epoxy resin. The positions and measurements for the washout plugs are shown in the supplementary drawings.

FIG. 5.

The chassis can be built rigid or compensated so decide now which one you are going to make. If building a compensated chassis remove the sections from the axle holes. Cut out the mainframes (67). Also cut out the front spacer (69), bogie mounting spacer (70), centre spacer (71), pony mount (72), rear spacer (73) and rear frame stretcher (74). Fold the frames up and solder spacers 69, 70, 71 and 72 in place. Bend out the rear frames to the width of the rear frame stretcher (74) and solder the stretcher in place. Tack some solder across the back of the frame folds to give added strength.



Compensated Chassis – Remove the centre sections from the front and middle axle openings. Solder the axle bearings (75) into the compensating beams (68). Fit the compensating beams by passing brass wire through the frames, through one of the beams, then one of the springs, then the next beam and finally out the other side of the chassis. Hold the beams away from the chassis side while soldering the wire in place to prevent them being soldered to the frames. Fit the wheels so you can test the compensating mechanism and when satisfied that it works O.K. remove the wheels and put them to one side.

Rigid Chassis - Solder the chassis bearings (75) into the frames (you may need to file these down a bit to give wheel clearance).

Cut the main motion bracket (76) from the valve gear fret and fold as shown, likewise with the front motion bracket (76a). Locate and solder them in the slots in the top of the frames. Solder a 10BA screw into the drawbar mount (102). Solder two 10BA screw into the rear spacer (72) and an 8BA screw into the front spacer (70). Solder the cab steps (77 & 78) into the slots at the back of the frames.

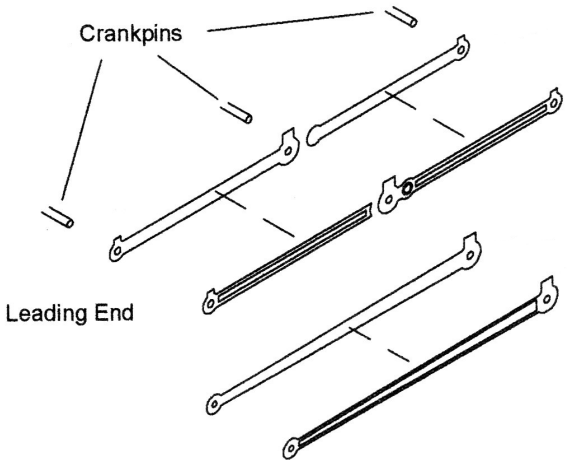
Assemble the brake hangers (79) and blocks (80) making three L/H and three R/H. Cut the brass wire (104) into suitable lengths (1½ ins approx) and solder into the holes in the bottom of the frames. The assembled brake shoes can be attached to the ends of the wire approx 2.5mm from the side of the frames. Once in place the brake rodding (81) can be attached by passing wire through the bottom of the brake hangers then the two rods and then through the hangers on the opposite side. The rodding should run just inside the line of the frames,

Fold the cylinders (82) and solder them into the frames. Shape the cylinder sides (83) and solder these to the cylinders. Fit the front cylinder covers (96). Solder the inspection covers (101) in place so that they cover the slots for the front spacer. Curve the bogie splashers (98 & 99) and solder into the recesses in the wheel arches. Using low melt solder fit the steam pipes (92 & 93), front valve guides (94), rear valve guides (95) and rear cylinder covers (97). At this point glue the Cartazzi axleboxes (90 & 91) to the rear frames

The frames can now be painted. Take care not to gum up the moving parts if you have built a compensated chassis.

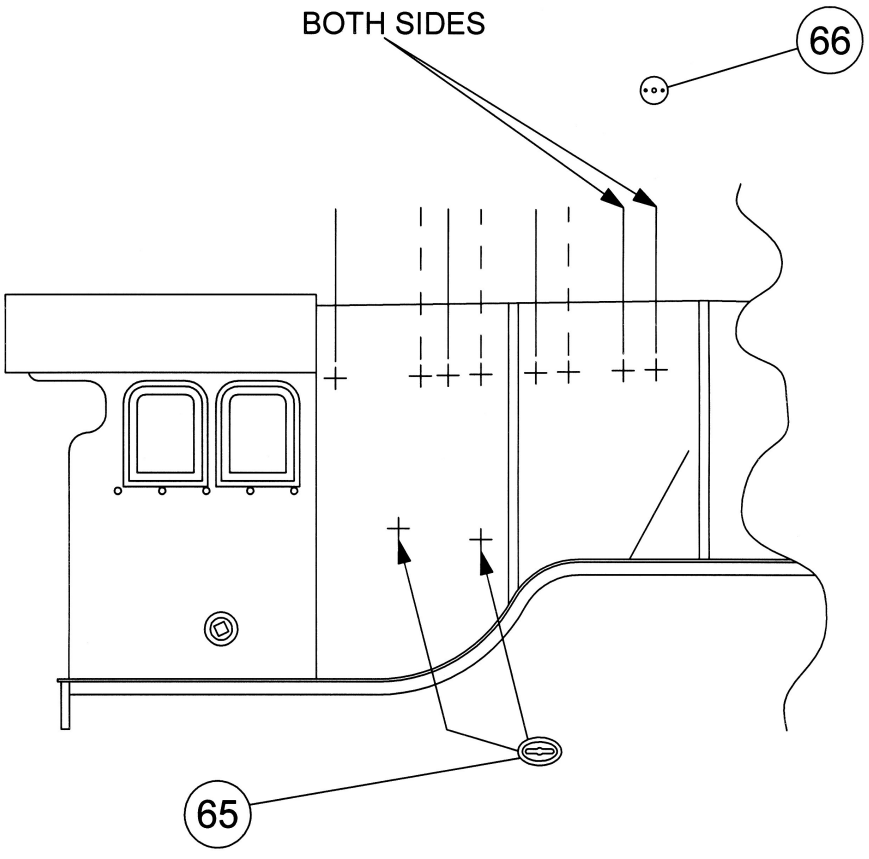
Assemble the bogie (84) and pony truck (85). Fold them as shown and solder in the 2mm bearings (86). Solder the front and rear strengtheners into the bogie.

Sweat together the coupling rods (105) and connecting rods (106). Fit the coupling rods to the wheels (not shown) making sure that the chassis runs freely. Screw the connecting rods to the crossheads using the 16BA nuts and screws provided. Refer to Fig. 6 and rivet together the valve gear parts (take care with this and you should have no problems). Attach the assembled valve gear to the motion bracket (76) using 16BA nuts and screws and fix the drop links to the crossheads in the same way.



Fit the bogie and pony wheels and attach these units to the chassis. Cut away the front bottom corner of the cylinders as necessary. Using some copper clad plate and brass wire fashion pick ups to your own design.

FIG. 4b.



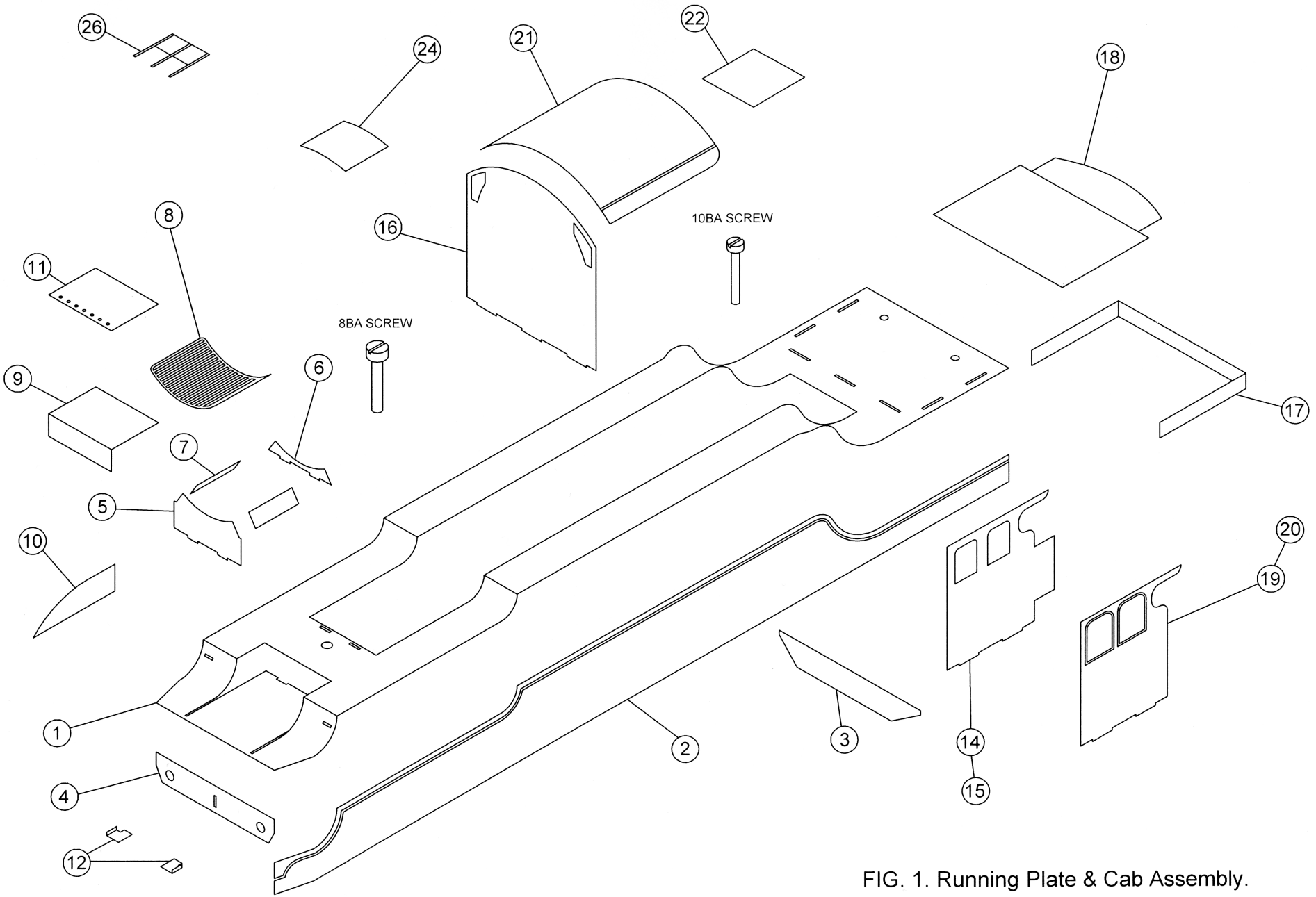
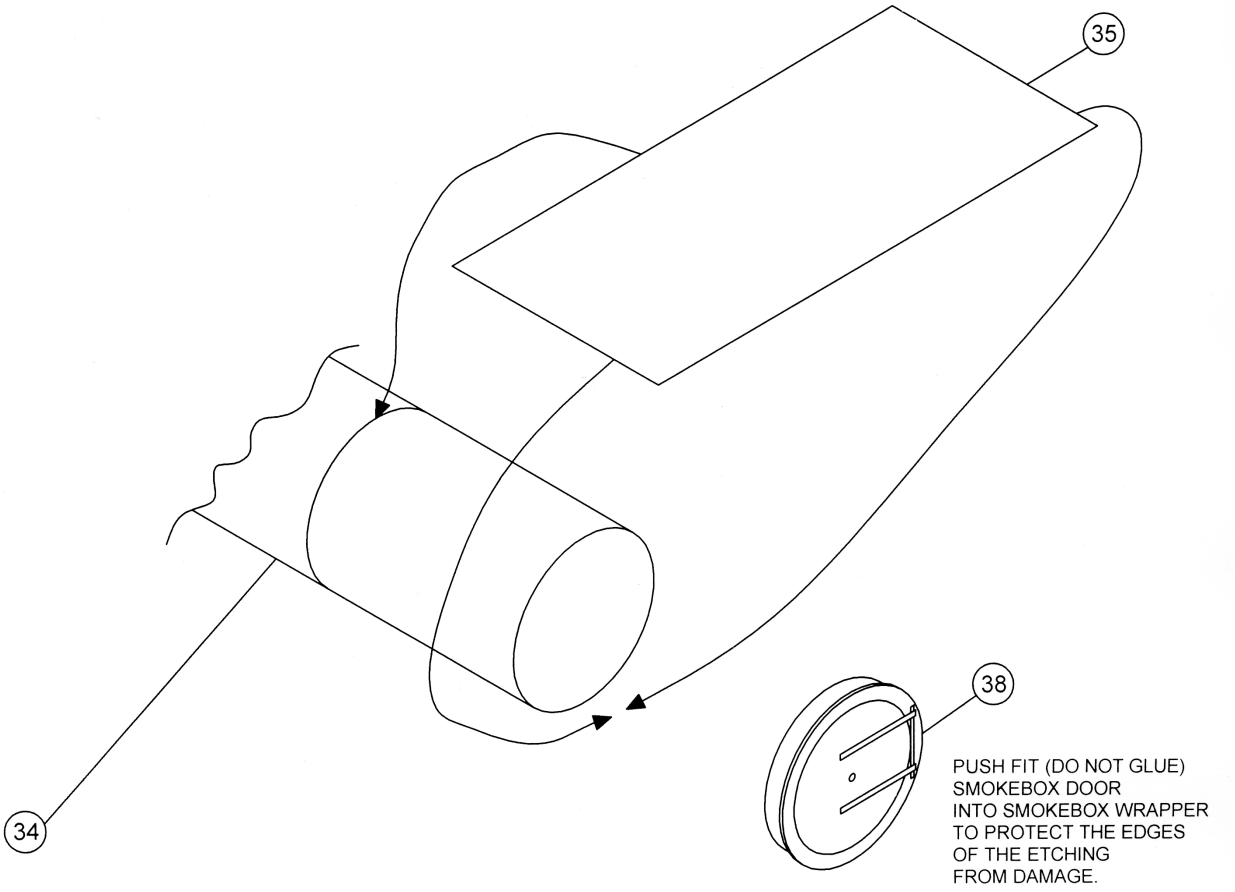


FIG. 1. Running Plate & Cab Assembly.

FIG. 3. BOILER PREPARATION.



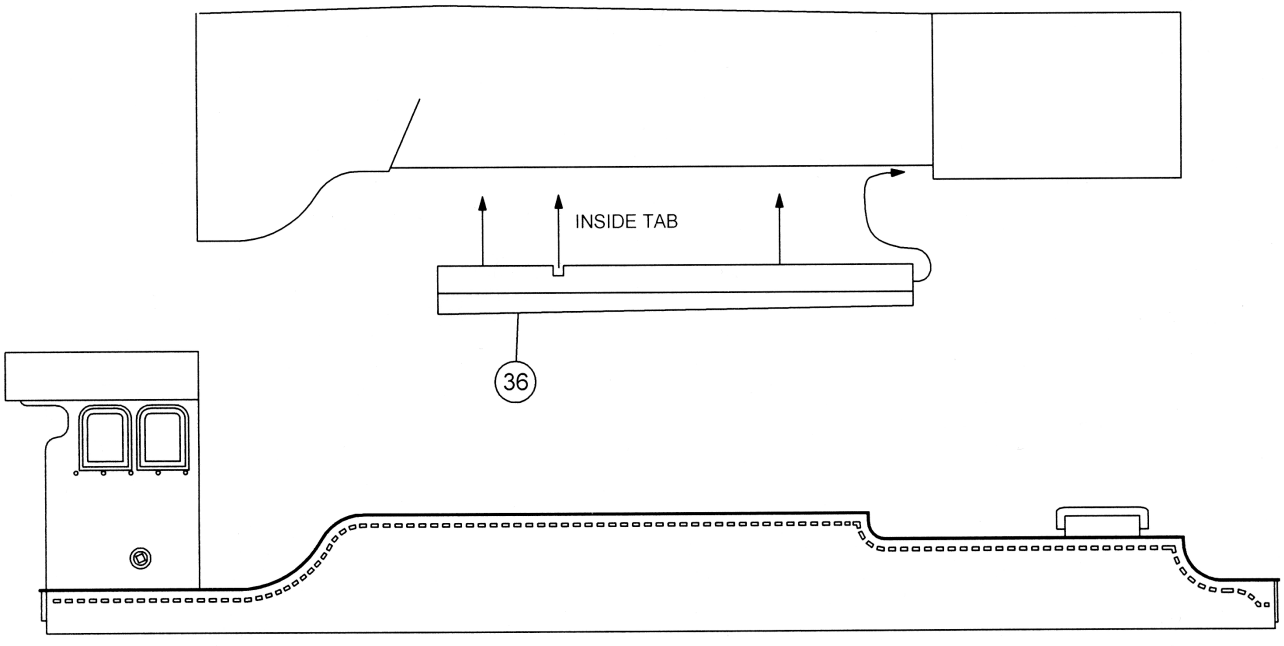


Fig. 4. Body Detailing.

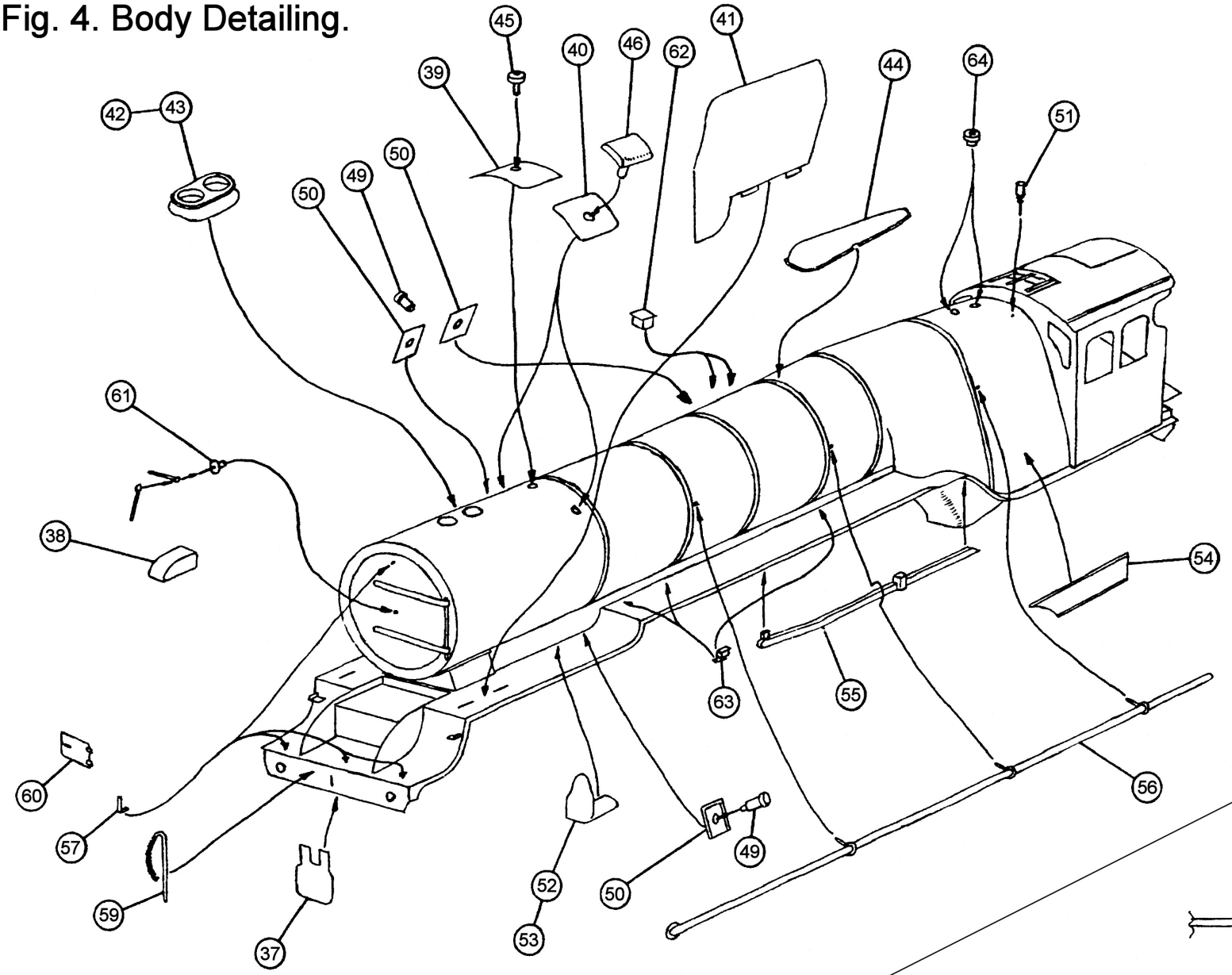


Fig. 4a.

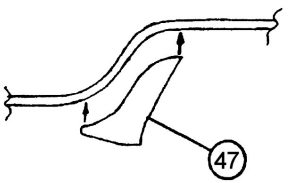
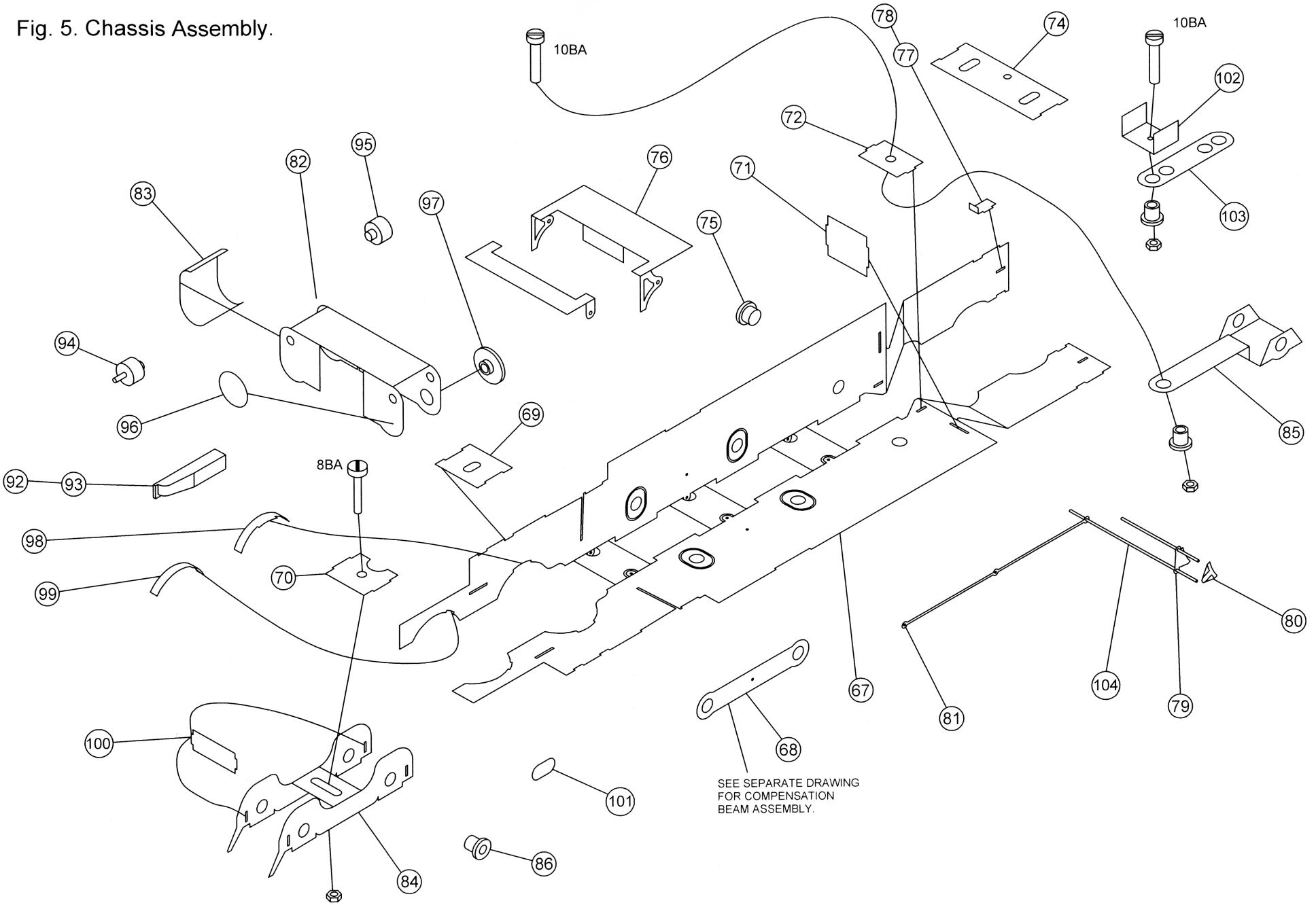
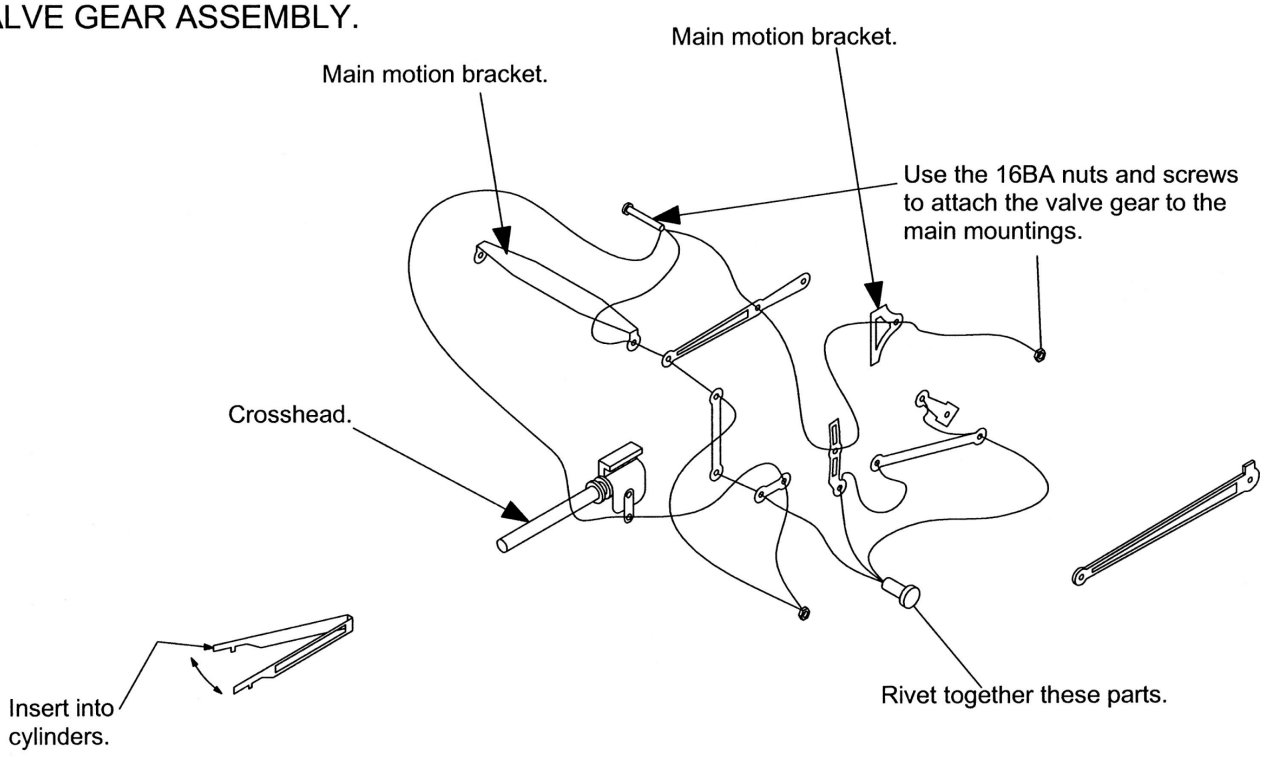


Fig. 5. Chassis Assembly.



VALVE GEAR ASSEMBLY.



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PARTS LIST

1. Running plate.
2. Valances.
3. Dragbeam.
4. Bufferbeam.
5. Smokebox saddle front.
6. Smokebox saddle rear.
7. Smokebox saddle sides.
8. Smokebox saddle top.
9. Valve chest.
10. Front frame extensions.
11. Valve chest overlay.
12. Small front steps (L/H & R/H).
13.
14. L/HCab side (with door).
15. R/H Cab side (with door).
16. Cab front.
17. Cab floor support.
18. Cab floor (with Fallplate).
19. L/H Cab side overlay.
20. R/H Cab side overlay.
21. Cab roof.
22. Roof overlay.
23.
24. Roof canopy.
25.
26. Double cab roof shutters.
27. Spencer double buffers.
28. Cab backhead.
29. L/H Cab platform.
30. R/H Cab platform.
31. Reversing screw,
32. L/H Cab seat.
33. R/H Cab seat.
34. Resin boiler,
35. Smokebox wrapper.
36. Underboiler.
37. AWS protection plate.
38. Centre cylinder steam pipe.
39. Anti-vacuum valve base.
40. Superheater cover bases.
41. Smoke deflectors.
42. Double chimney.
43. Plain double chimney.
44. Streamline dome.
45. Anti-vacuum valve,
46. Superheater covers.
47. Lower firebox castings.
48. Front running plate steps.
49. Sandbox fillers.
50. Sandbox filler bases.
51. Whistle.
52. R/H Steam pipes.
53. Steam pipes.
54. Reversing bar cover.
55. Reversing bar.
56. Ejector pipe.
57. Lamp brackets.
58. Group standard sprung buffers.
59. Vacuum pipe.
60. Centre cylinder inspection hatch.
61. Smokebox door handle.
62. Mechanical lubricators.
63. Oilboxes.
64. Ross pop safety valves.
65. Oval washout plugs.
66. Round washout plugs.
67. Mainframes.
68. Compensating beams.
69. Front spacer.
70. Bogie mounting spacer.
71. Rear spacer.
72. Pony mounting spacer.
73.
74. Rear frame stretcher.
75. Chassis bearings.
76. Main motion bracket.
77. L/H Cab steps.
78. R/H Cab steps.
79. Brake hangers.
80. Brake blocks.
81. Brake rodding.
82. Cylinders.
83. Cylinder sides.
84. Front bogie.
85. Pony truck.
86. 2mm Bearings.
87. Springs.
88. Slidebars.
89. Crossheads.
90. L/H Cartazzi axlebox.
91. R/H Cartazzi axlebox.
92. L/H Exhaust steam pipe.
93. R/H Exhaust steam pipe.
94. Front valve guides.
95. Rear valve guides.
96. Front cylinder covers.
97. Rear cylinder covers.
98. Rear bogie wheel splashers.
99. Front bogie wheel splashers.
100. Bogie strengtheners.
101. Inspection covers.
102. Drawbar mount.
103. Drawbar.
104. Brass wire.
105. Coupling rods.
106. Connecting rods.
107. 8BA Screws and nuts.
108. 10BA Screws and nuts.
109. 16BA Screws and nuts.
110. Valve gear rivets.
111. Handrail knobs.