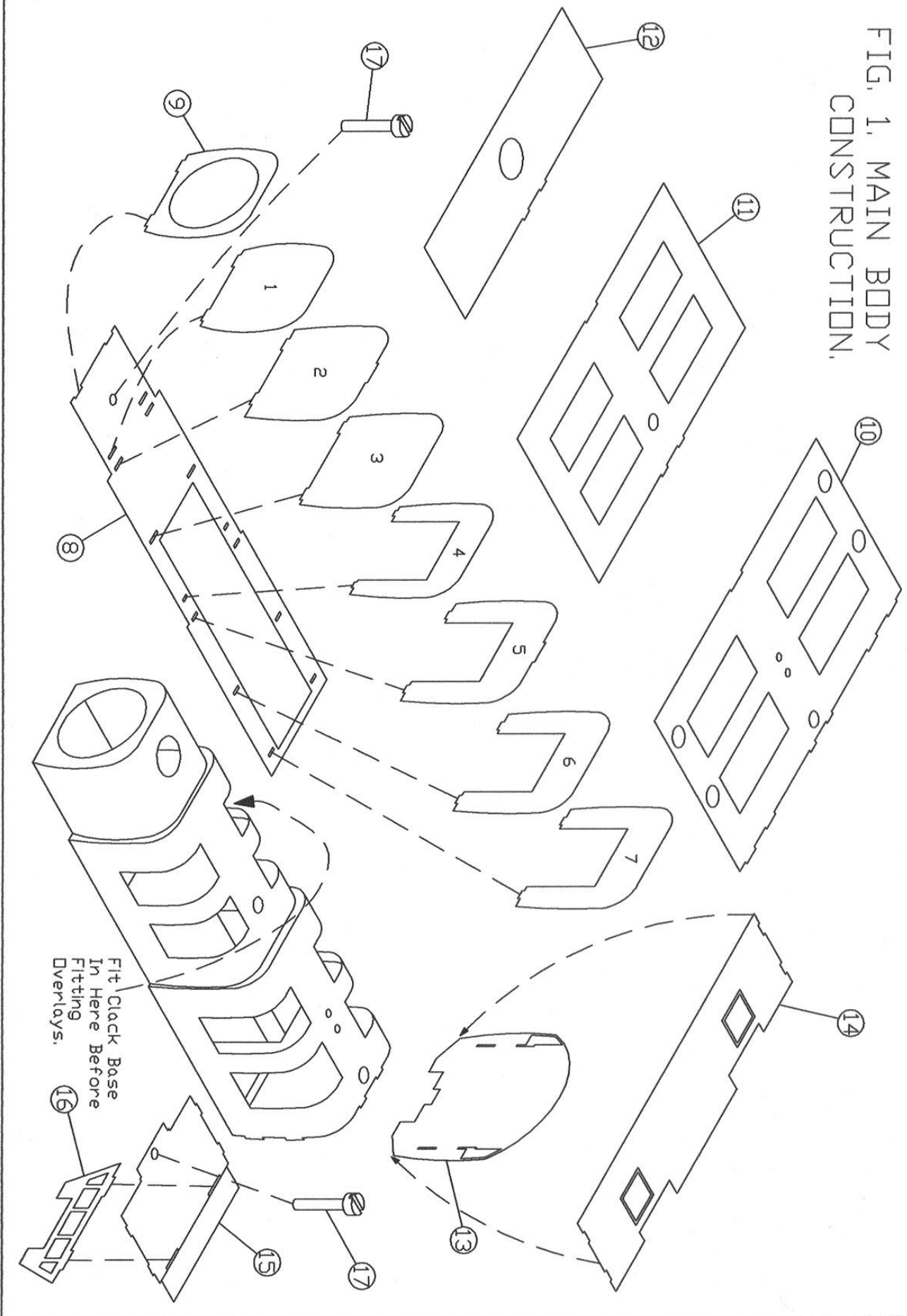


FIG. 1. MAIN BODY
CONSTRUCTION.



Q1 INSTRUCTIONS

FIG. 1. Body Construction.

Take the baseplate (8). Solder the smokebox front (9) into the recesses in the front of the baseplate. Then solder the body spacers (1-7) into their slots following number order from the front. Solder an 8BA nut (17) over the hole at the front of the baseplate (alternatively solder a screw into the hole).

Take the firebox section (10) and line up the recess at the front with the tab at the top of the front firebox spacer (5). Fold it down around the firebox spacers. Make sure that it is even on both sides of the body. Tack it in place and check again that it is lined up correctly. When satisfied solder around all seams inside and out. Repeat this with the boiler section (11) and the smokebox section (12). File away any overlap from these sections under the baseplate.

Lay the cab front (13) on a flat surface. Form the cab roof/sides section (14) to match the cab front. Use a 3mm dia. rod to fold along the half etched lines above the side windows. When this matches the shape of the cab front position it around the front making sure that it is evenly spaced on both sides. Solder it in position. The cab floor (15) sits in the recesses at the bottom of the cab sides, but first solder an 8BA screw (17) into the hole. Solder the cab underframe (16) into the slots in the cab floor. Attach the assembled cab unit to the back of the body. The slots and tabs allow some adjustment to the position of the cab, so check it is lined up correctly and solder in place.

Now punch through the rivets around the safety valve holes and fit the firebox overlay (18) and the boiler overlay (19) [not shown on drawing]. These fit in the same way as the inner frames. Line up the overlays using the holes for safety valves and dome as a guide and gently roll the overlays around the body soldering inside as you go. Once fitted file off any overlap from the underneath of the baseplate.

FIG. 2. Body Detailing.

Solder the following parts in position.

Rivet strip (20).
Cab roof shutter (21).
Riveted cover (22).
Dome (26).
Rainstrips (31).

Glue the following parts in position.

Whistle block (23).
Whistle. (24).
Safety Valves (25).
Large washout plugs (30).
Small washout plugs (29).
Clacks (27).

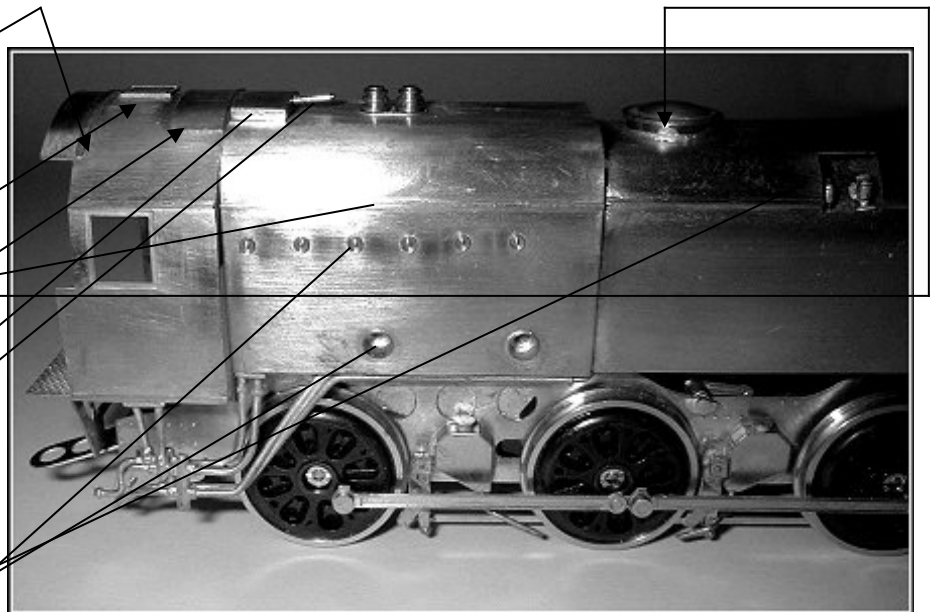


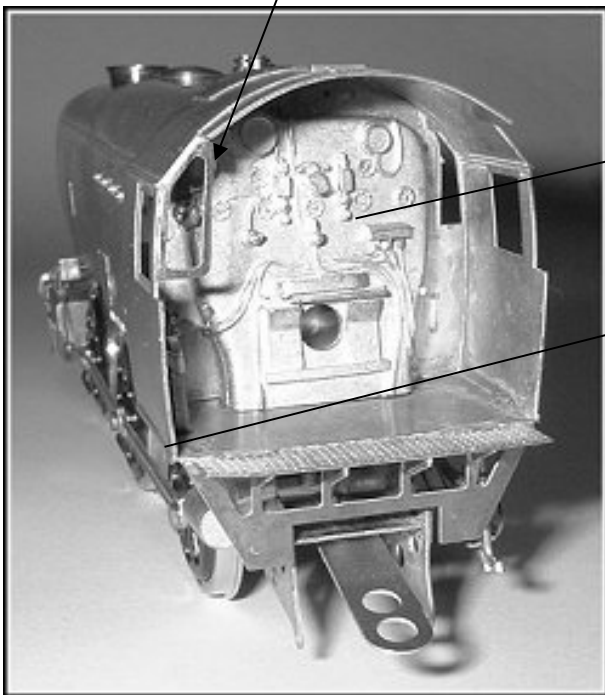
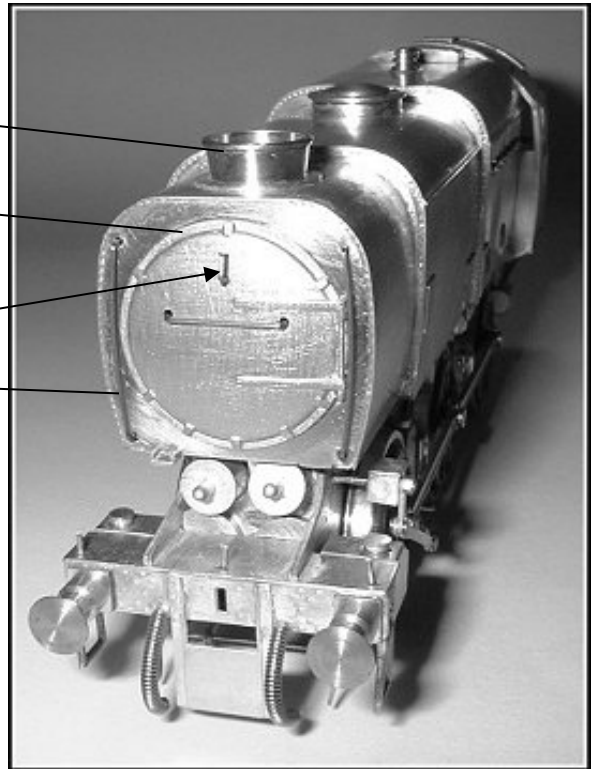
FIG. 3, 4 & 5. Body Detailing.

Solder the chimney (32) over the hole in the smokebox. _____

Fit the smokebox door (33) in place. You may need to enlarge the opening. _____

Drill a hole for the smokebox door lamp bracket and using one of the staples (35) provided fit the lamp bracket. _____

Fit the front handrails using the wire (34) provided. _____



Solder the cab rear spectacle frame (36) inside the left-hand cabside.

Glue the backhead (37) in position.

Solder the lower cabside strips (38) on either side at the bottom of the cab.

Glue the reversing lever (39) inside the left hand

Solder or glue the square riveted cover (40) in position. _____

Likewise fit the two rectangular hatches in place. _____

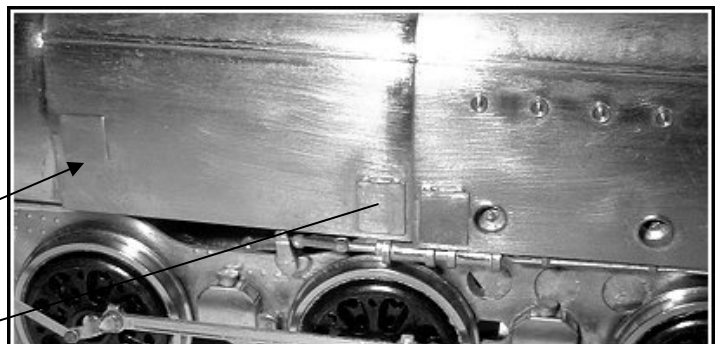


FIG. 6. Under Body Detail.

Use low melting point solder on the whitemetal parts. You could glue these parts, but they are susceptible to being knocked off.

Fold the front smokebox footstep (42) and solder in place.

Solder the vacuum reverser pipework (43) and vacuum reverser in place (44).

Solder the injectors and pipework (45) in place.

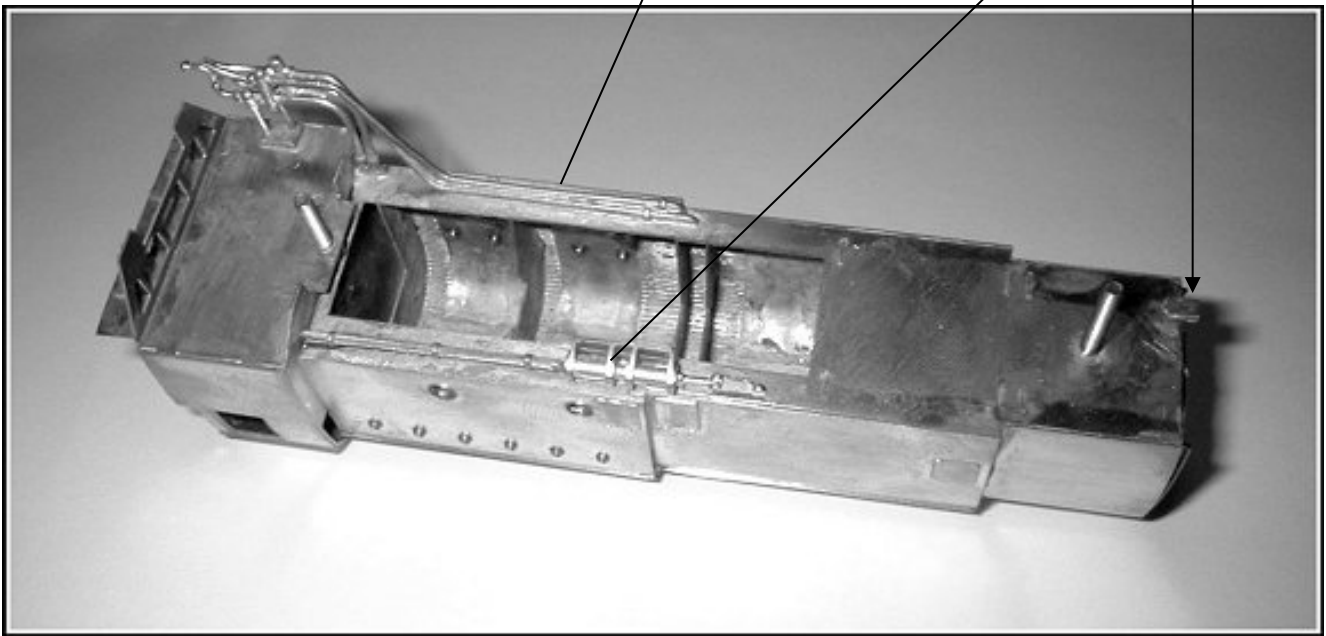


FIG. 7. Chassis Construction.

First decide if you are building a rigid chassis or a compensated chassis. If you are doing a rigid chassis solder six 1/8th axle bearings (47) into the main frames (46).

If you decide on a compensated chassis remove the axle hole infills from the front and centre axle openings on the main chassis frames (46). Solder two axle bearings (47) into the rear holes in the frames and four into the compensating beams (56). Open out the holes for the bearings as necessary.

Fold up the frames with the fold lines inside. Fit all the frame spacers (48, 49, 50 & 51). Check that all is square and solder them in place. Next fit the smokebox saddle top (52) in position. Slot the front running plate section (53) into the slots in the front of the frames and then fit the bufferbeam (54) and bufferbeam riveted overlay.

Now pass wire through the hole centred between the front axle openings on one of the frames. On the inside of the frames place one of the compensating beams on to the wire (note which way round they go) followed by the spring (57) [you may need to stretch this to obtain a good fit] and then the other compensating beam. The wire then goes through the opposite frame side. Hold the beams away from the frames and solder the wire to the frames. Cut the excess wire away from the outside of the frames and file flush.

Now fit the riveted frame overlays (59). The front end of the overlay locates onto the front running plate section. Line the rear end up and solder in place. Solder around all edges and seams.

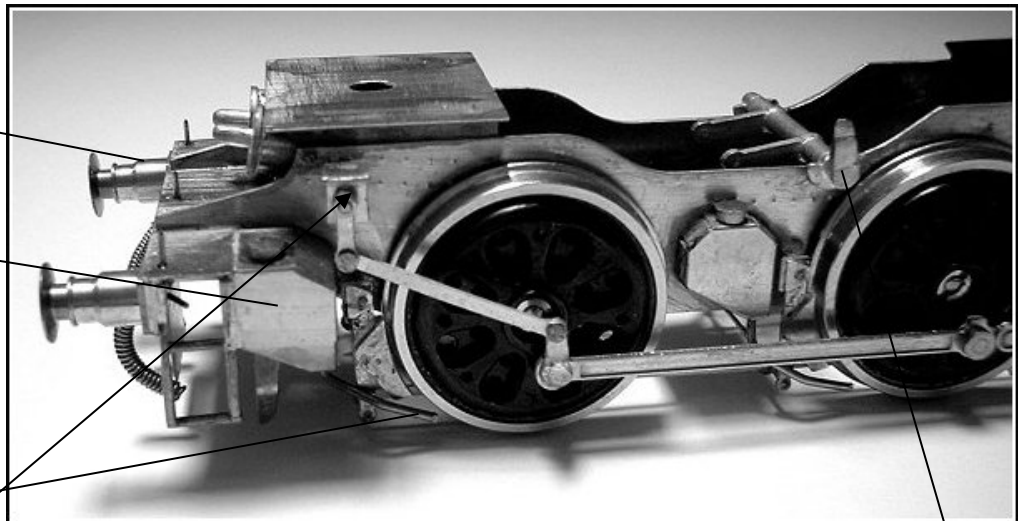
Fit the wire for the brake hangers into the six pilot holes allowing at least 5mm overhang on each side and solder in place. (Note that the wire for the centre brake hanger passes through the compensating beams. So be careful not to solder the beams to the frames!). Fold the top part of the brake hangers' (60) over with the fold line on the outside. Solder the brake blocks (61) to the hangers remembering that three must be left hand and three right hand. Check the photos for the arrangement of the pull rods (62) and the rest of the rigging.

FIG. 8, 9, 10 & 11. Chassis Detailing.

Solder the buffer shanks (63) into the holes in the buffer beam.

Fold the front sandboxes (64) and fit them into the vertical slots.

Fold the centre and rear sandboxes (65) and solder them into the slots between the wheels. Fit the sandpipes using the thicker brass wire (71).



Drill a hole 13mm from the front of the frames and 5mm down from the top of the smokebox saddle. Solder the 16BA screw (72) into the hole from the inside of the frames. Drill through the mechanical lubricator (67) and glue it onto the screw about 3mm from the chassis side. Leave the screw protruding from the lubricator so that the linkage (68) can be fitted when the chassis is painted and the wheels are fitted.

Solder the front ladders (66) between the front sandboxes and the bufferbeam.

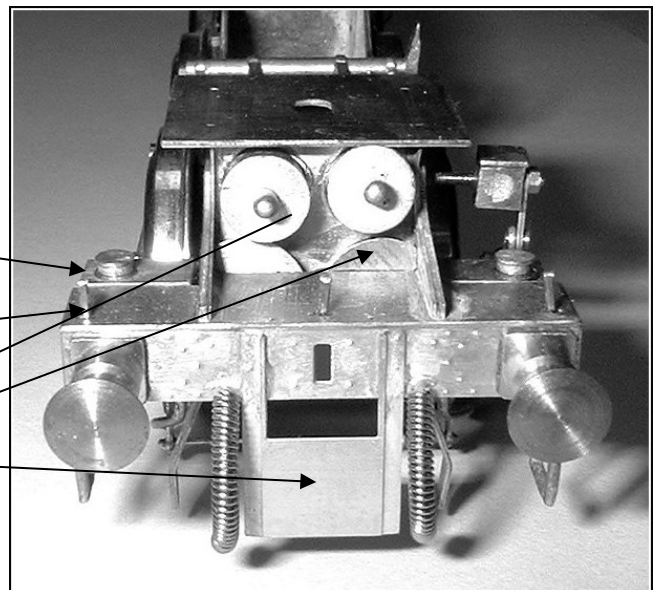
Glue the reversing bar (70) to the top of the frames.

Glue the sandbox fillers (73) into the sandboxes.

Trim the staples (69) and fit as lamp brackets.

Solder the screw coupling protection plate (75) to the bufferbeam.

Glue the Lower cylinder covers (76) in place (these will need trimming unless you are doing an EM chassis). Then glue the upper cylinder covers (77) in place.

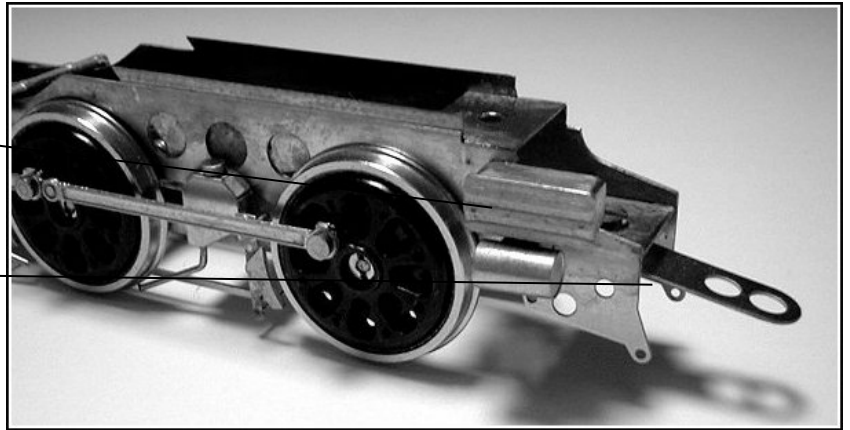


Solder or glue the vacuum pipes (74) into the holes in the bufferbeam.

Glue the AWS cylinder (79) to the AWS box (78) and then fit them in place (do this with the body on so that the AWS box doesn't foul it).

Fit the loco-tender coupling using a 2mm bearing as pivot and an 8BA nut to secure.

The chassis can now be painted. Don't let the compensating beams get clogged with paint.



Assemble the coupling rods (81, 82, 83 & 84). Take care in this operation as they must move freely for the compensation to work.

These surfaces MUST NOT be bonded.

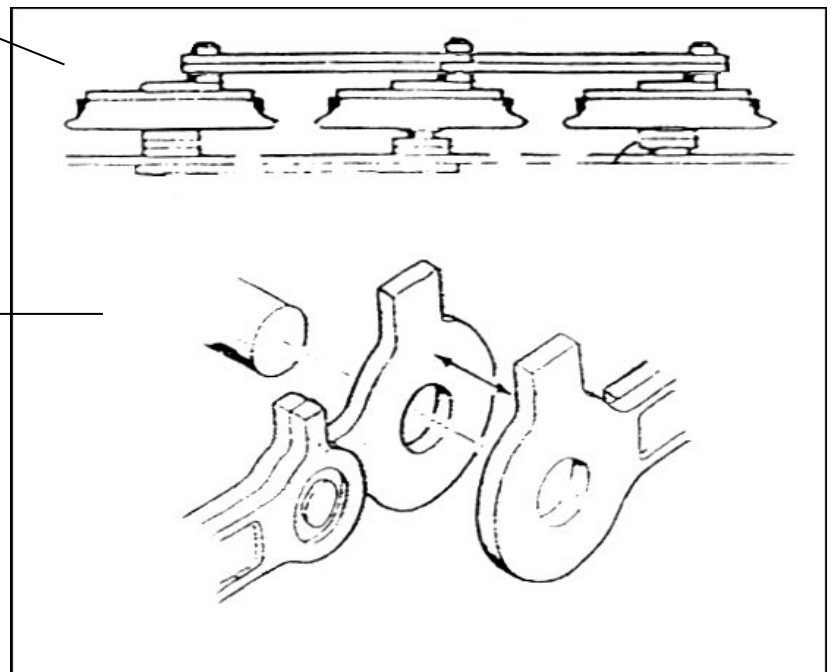


FIG. 12. Tender Construction.

Take the baseplate (85), frame cross members (86) and the main frames. Punch through the rivets from the back of the frames. Fit the cross members into their slots between the wheel openings and the frames onto the cross members and into their slots. When happy everything is square solder all in place. Solder the front drag beam (89) and the bufferbeam (90) in position.

Form the curve of the sides (93 & 94) using the tender rear (91) as a guide. Note that the top of the sides must curve over to match the upper front bulkhead (99). Solder the tender rear into position. Note that it sits inside the main sides. Solder the sides into position along with the tank top support (92).

Fit the lower front bulkhead (95). Fold up the coal space (97) and solder it under the tank top. Also solder the two side bracket sections (98) under the tank top. They locate in the four slots at the rear. Solder the 8BA screws in the holes in the baseplate. The front one will have to be filed down otherwise it will interfere with the coal space. Now fit the tank top/coal space unit in place. You will have to slide it in from the rear because of the overhang on the sides.

Next fit the upper front bulkhead (99) with the window on the left. Solder the locker front (100) to the bulkhead so that it covers the opening. Fit the rear coal space bulkhead (101) with the opening on the left. Fold the fire iron tray (102) and fit it into the slot under the front window and into the opening in the rear bulkhead.

Form the roof (103) to match the top of the front bulkhead. Punch through the rivets from the underside and locate it onto the bulkhead. Fold the coupling mount (105) and solder a 10BA screw into the hole. Solder the coupling mount centrally behind the drag beam. Fit the coal chute (104).

FIG. 13, 14 & 15. Tender detailing.

Solder either the open coal door (106) or the closed coal door (107) in place.

Solder the two split pins (108) into the holes.

Solder or glue the lower locker doors (109) on either side of the lower front bulkhead.

Solder the centre locker doors (112) onto the centre locker.

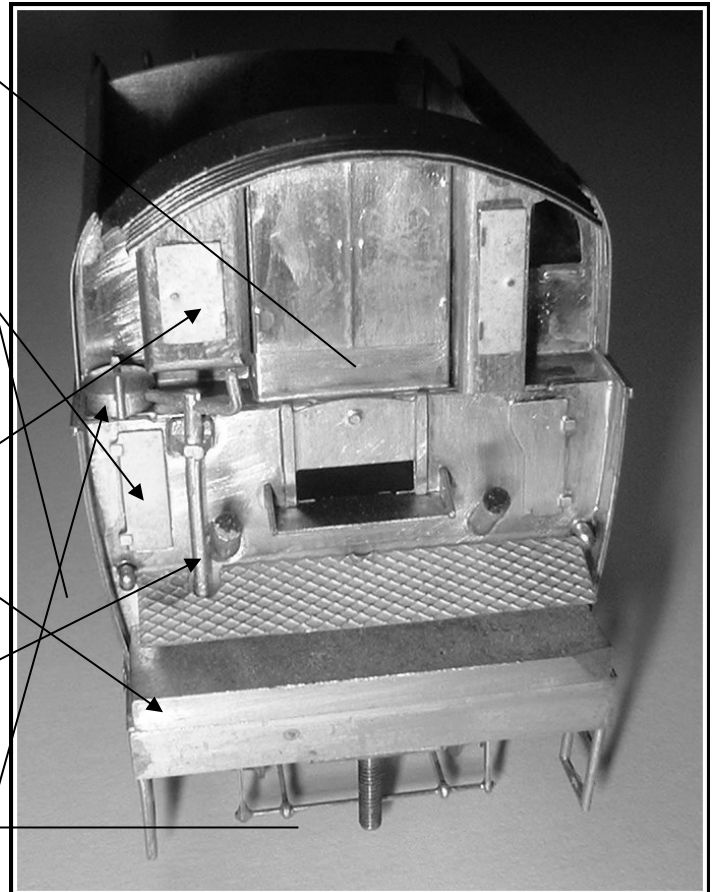
Glue the R/H upper locker (110) and the L/H upper locker (111) in place. Then glue the locker doors (113 & 114) onto the lockers.

Glue the running plate platform (116) in place.

Fit the brake standard (119) into the hole in the running plate and to the lower bulkhead.

File a notch in the fallplate (115) to accommodate the brake standard and then fit it into the split pins by flexing it slightly.

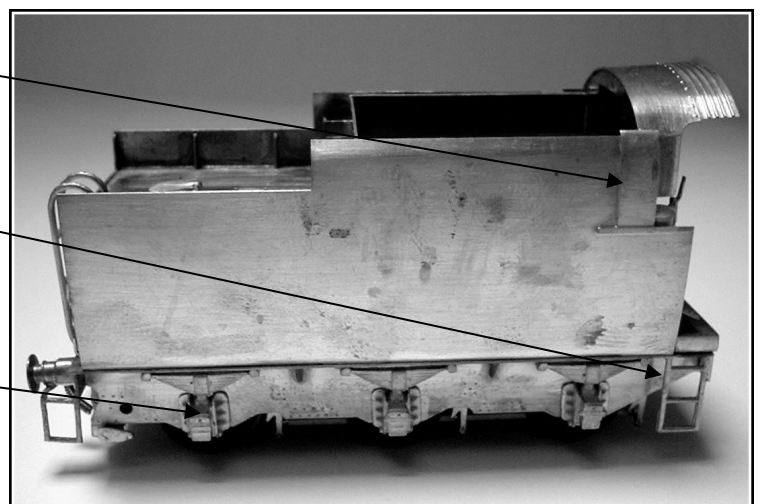
The sandbox fillers (117) and front water fillers (118) can now be fitted.



Solder the cab sliding doors (120) to the tender sides. Trim the top of the doors as necessary.

Solder the front steps (121) behind the drag beam.

Locate the axleboxes (122) in their holes and glue in place.



Form the rear ladder (123) into the shape shown and solder it in place.

Form the rear steps (124) and solder them to the buffer shanks (63). Then fit the buffer shanks into their holes.

Use the staples (69) to form the lamp brackets.

Solder the vacuum pipes (74) in place.

Glue the main water filler (126) and the water softener unit (125) into their holes.

Fit the vacuum tanks (127) behind the buffer beam and the brake operating rod (128) between the frames.

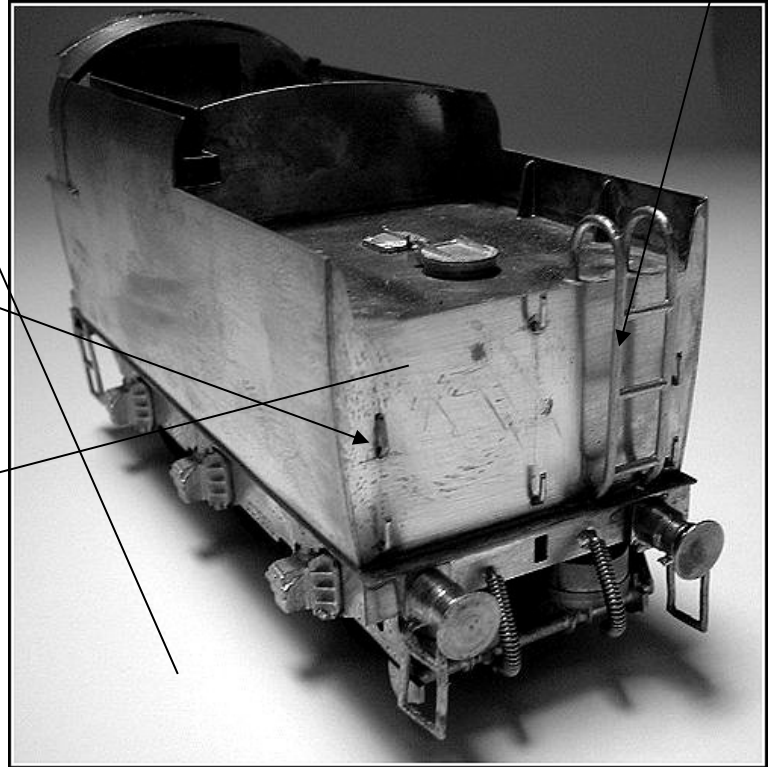


FIG 16. Tender Underframe Construction.

Take the internal frames (129) and solder in the 2mm bearings (132). Open out the holes as necessary.

Fold the frames up at 90 degrees.

Solder three pieces of brass wire (133) into the pilot holes in the frames. Solder a brake hanger (130) to each piece of wire, about 2mm from the frames.

Pass wire through the lower hole of the brake hanger then through the two pull rods (131) and finally through the opposite brake hanger. Solder the wire in place and then trim the excess off.

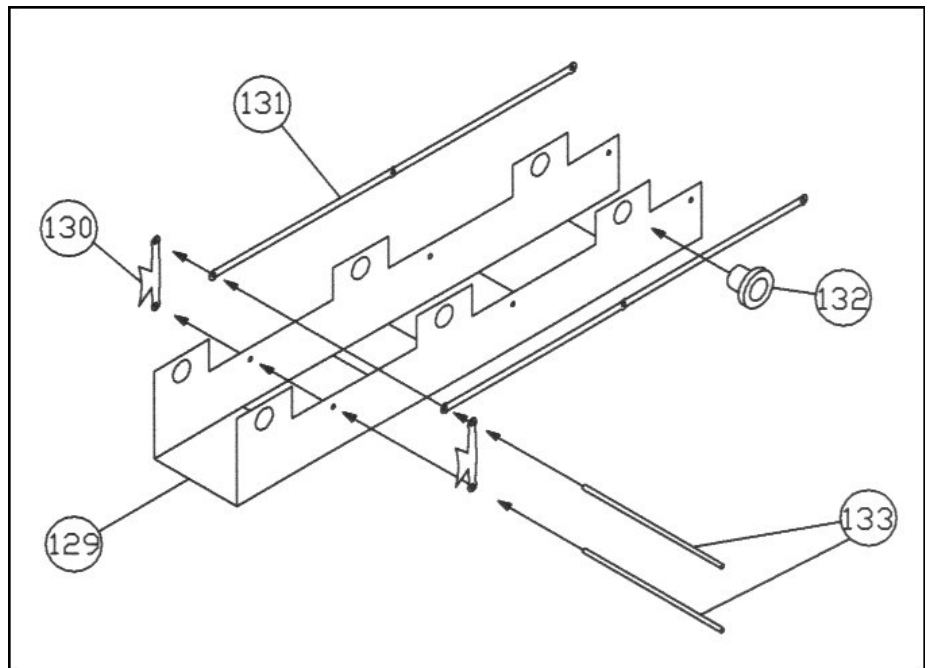


FIG. 7. MAIN CHASSIS CONSTRUCTION.

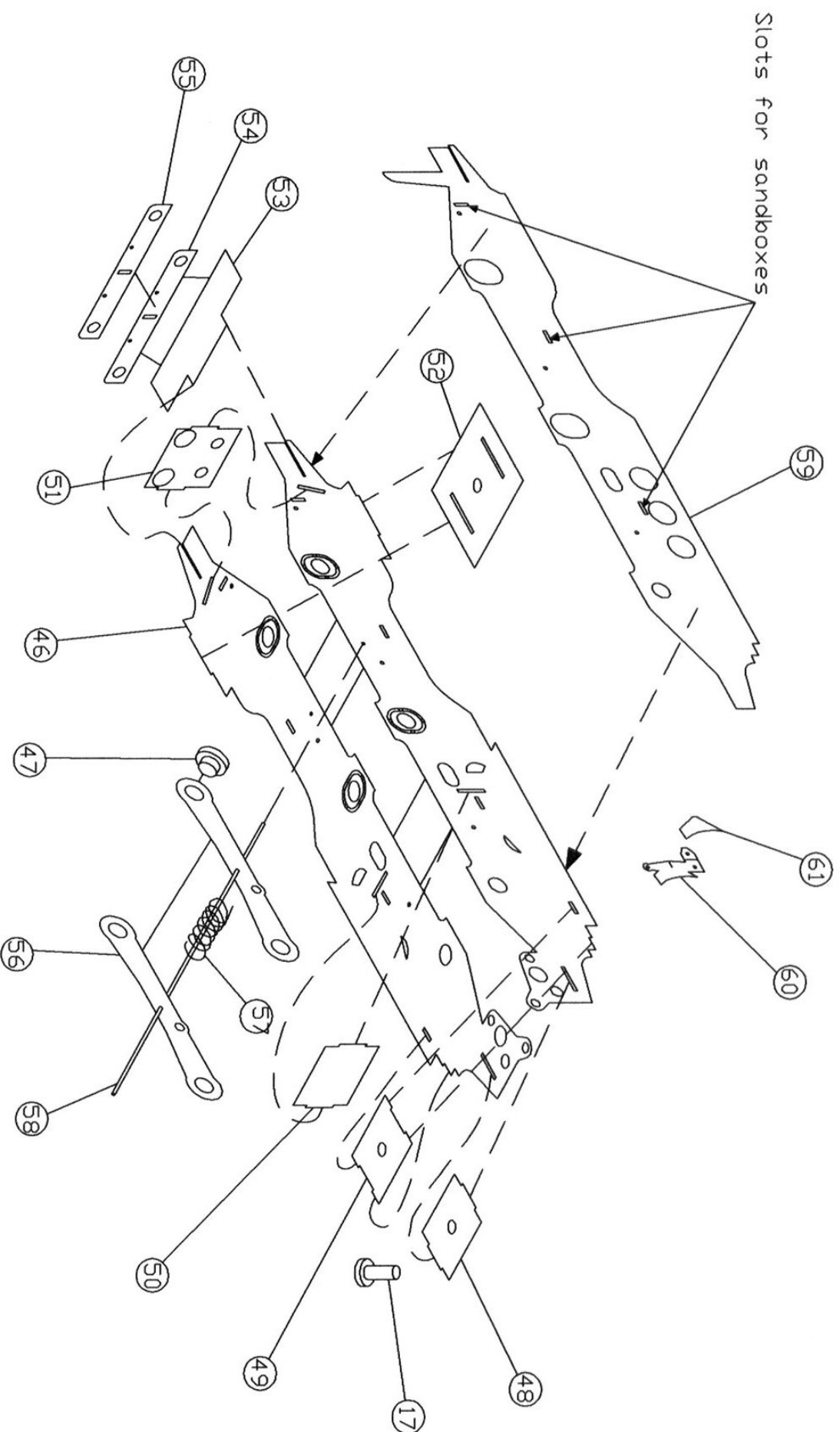
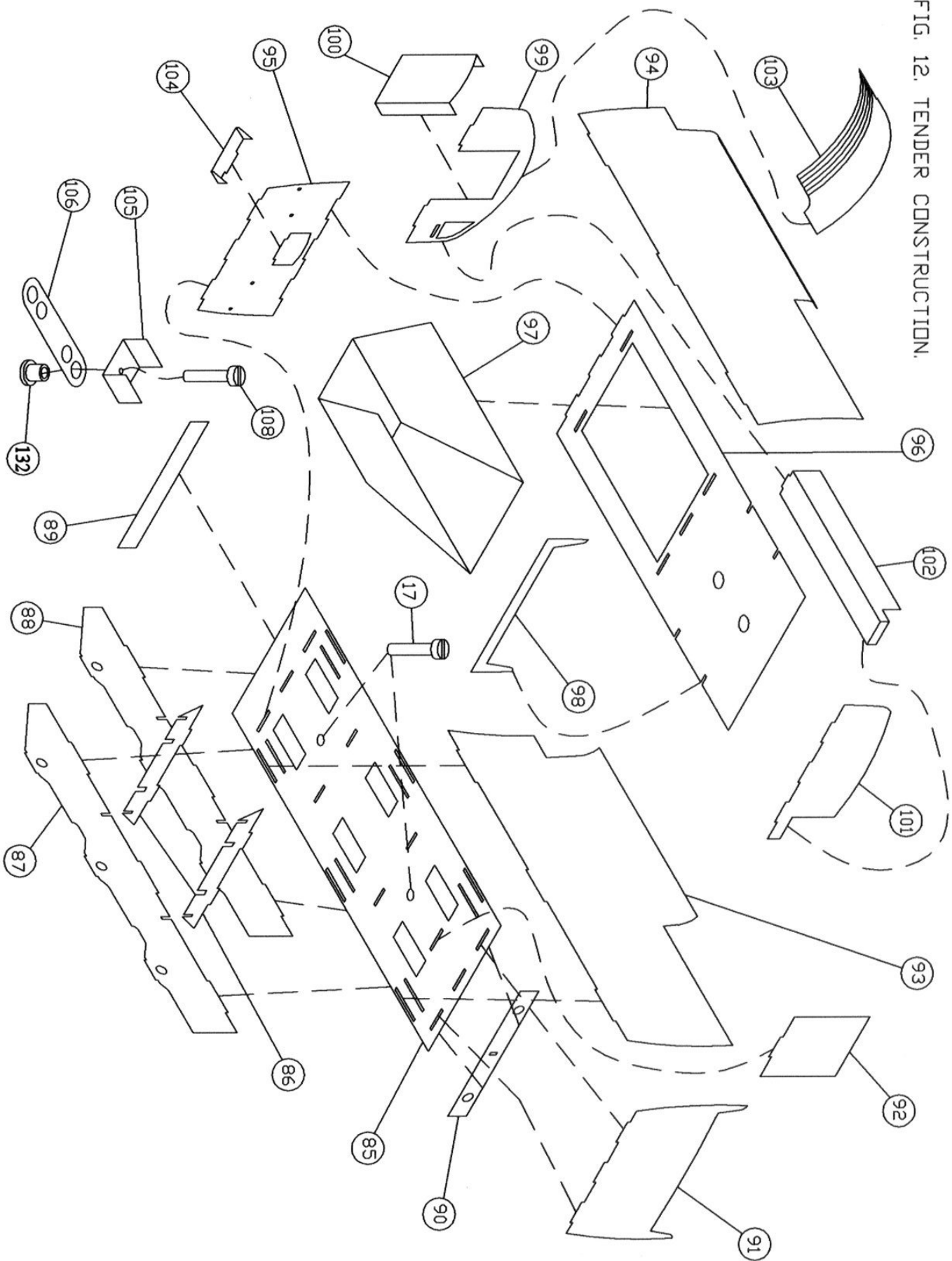


FIG. 12. TENDER CONSTRUCTION.



PARTS LIST.

- | | |
|---------------------------------|--|
| 1. Smokebox spacer. | 50. Centre frame spacer. |
| 2. Boiler spacer. | 51. Front frame spacer (cylinder front). |
| 3. Boiler spacer. | 52. Smokebox saddle top. |
| 4. Boiler spacer. | 53. Front running plate. |
| 5. Firebox spacer. | 54. Bufferbeam. |
| 6. Firebox spacer. | 55. Bufferbeam overlay. |
| 7. Firebox spacer. | 56. Compensating beams. |
| 8. Baseplate. | 57. Spring. |
| 9. Smokebox front. | 58. Thicker brass wire. |
| 10. Firebox section. | 59. Detailed frame overlays. |
| 11. Boiler section. | 60. Loco brake hangers. |
| 12. Smokebox. | 61. Brake blocks. |
| 13. Cab front. | 62. Brake pull rods. |
| 14. Cab roof/sides. | 63. Buffers. |
| 15. Cab floor. | 64. Front sandboxes. |
| 16. Cab underframe. | 65. Centre and rear sandboxes. |
| 17. 8BA screws & nuts. | 66. Front ladders. |
| 18. Firebox overlay. | 67. Mechanical lubricator. |
| 19. Boiler overlay. | 68. Lubricator linkage. |
| 20. Rivet strip. | 69. Staples. |
| 21. Cab roof shutter. | 70. Reversing bar. |
| 22. Riveted cover. | 71. Thicker brass wire for sandpipes. |
| 23. Whistle mounting block. | 72. 16BA screw and nut. |
| 24. Whistle. | 73. Sandbox fillers. |
| 25. Safety valves. | 74. Vacuum pipes. |
| 26. Dome. | 75. Screw coupling protection plate. |
| 27. Clack valves. | 76. Lower cylinder front covers. |
| 28. | 77. Upper cylinder front covers. |
| 29. Small washout plugs. | 78. AWS box. |
| 30. Large washout plugs. | 79. AWS cylinder. |
| 31. Rainstrips. | 80. Loco – tender coupling. |
| 32. Chimney. | 81. Coupling rods. |
| 33. Smokebox door. | 82. “ “ |
| 34. Handrail wire. | 83. “ “ |
| 35. | 84. “ “ |
| 36. Cab rear spectacle frame. | 85. Tender baseplate. |
| 37. Backhead. | 86. Frame cross members. |
| 38. Cabside strips. | 87. L/H frame. |
| 39. Reversing lever. | 88. R/H frame. |
| 40. Square riveted cover. | 89. Drag beam. |
| 41. Rectangular hatches. | 90. Bufferbeam. |
| 42. Front step. | 91. Tender rear. |
| 43. Reverser. | 92. Tank top support. |
| 44. Reverser pipework. | 93. L/H side. |
| 45. Injectors and pipework. | 94. R/H side. |
| 46. Main frames. | 95. Lower front bulkhead. |
| 47. 1/8 th bearings. | 96. Tank top. |
| 48. Rear frame spacer. | 97. Coal space. |
| 49. Frame spacer. | 98. Side strengthening bracket sections. |

- | | |
|--------------------------------|---------------------------|
| 99. Upper front bulkhead. | 120. Sliding side doors. |
| 100. Locker front. | 121. Tender front steps. |
| 101. Rear coal space bulkhead. | 122. Axleboxes. |
| 102. Fire iron tray. | 123. Rear ladder. |
| 103. Tender cab roof. | 124. Rear steps. |
| 104. Coal chute. | 125. Water softener unit. |
| 105. Coupling mount. | 126. Main water filler. |
| 106. Open coal door. | 127. Vacuum tanks. |
| 107. Closed coal door. | 128. Brake operating rod. |
| 108. Split pins. | 129. Internal frames. |
| 109. Lower locker doors. | 130. Brake hangers. |
| 110. R/H upper locker. | 131. Brake pull rods. |
| 111. L/H upper locker. | 132. 2mm bearings. |
| 112. Centre locker doors. | 133. Brass wire. |
| 113. R/H locker door. | |
| 114. L/H locker door. | |
| 115. Fallplate. | |
| 116. Running plate platform. | |
| 117. Sandbox fillers. | |
| 118. Front water fillers. | |
| 119. Brake standard. | |

**P.D.K.
HILLTOP BUNGALOW.
CARNKIE,
HELSTON,
TR13 0DZ**

Mobile. 07732 213251

www.pdkmodels.co.uk

E-Mail: pdkmodels@hotmail.co.uk