

MAUNSELL 'W' 2-6-4t.

Please read the updates section on the last page, under the parts list. Before starting the kit acquaint yourself with all the parts and read through the instructions. We recommend that you start with the chassis first, although the drawings are not in that order.

FIG. 1.

Cut out the running plate (1) and the six side valence parts (2, 3 & 4). Using the front and centre valences as a guide, form the curves in the running plate. This should be done with great care. When the shape is right solder the valences into their recesses under the running plate. Start with the front valence first noting that they will overlap. When all are in place fit the rear buffer beam (5).

Fold down the front of the running plate. Solder the centre/front running plate section (6) up under the running plate and against the front. Solder the front buffer beam/front overlay (7) to the front section using the buffer holes to line it up. Solder two 8BA screws (8) into the front and rear holes in the running plate. The head of the front screw must be filed down almost to the level of the brass to allow the boiler to sit right.

DO NOT remove the valence supports for the time being. Make sure that the front and rear buffer beams are in line.

FIG. 2.

When assembling the tanks do one side first, it doesn't matter which way round you do it.

Solder in place the tank front (9) followed by the tank outside (10) and the tank inside (12). Make sure all these sit square. Now solder in place the tank rear (11). Once again check for squareness. Now repeat for the other side.

Now attach the side overlays (13) and the front overlays (25). The tank tops (14) sit on the top edges of the tanks. Solder along the edges making sure that the sides remain straight.

Solder the centre smokebox saddle parts (15) into the slots in the front/centre section of the running plate. There should be a slight gap on either side. Take the saddle sides (16 & 17) and punch through the rivets from the back. Fold the top thin edge of the sides outward to coincide with the angle of the saddle curve. Slot the saddle sides into the gaps either side of the centre parts. The rear of the side piece goes level with the back centre part.

Solder the cab front (18) into the slots just behind the water tanks. Check that the sides of the cab front and the 'out' sides of the tanks run parallel to each other. Punch out the rivets on the back of the cab rear. Some distortion may occur so flatten it out between thumb and forefinger. Solder it in place. Cut out the cab sides (20) and the detailed overlays (21). Carefully clean off the tabs. Now solder together the sides and overlays. Soldering around the edges and inside the window openings should be sufficient **EXCEPT** along the top where the solder must flow between the two. When this is done

satisfactorily fold the top edge over to match the top of the cab front and rear. Solder only one of the cab sides in place. Check the fit of the cab floor (22) in the slots on the inside of the cab sides. You will have to trim the tabs down a bit to allow them fully into the slots. Tack the cab floor into the cab side that you have in place. Now fit the remaining side into its slots with the cab floor tabs in the inside slots. The cab should now be basically done (apart from the roof) so when you have made sure all is square solder around the seams.

You must now fit the bunker rear (23) and its overlay (24). These must both be bent to match the rear profile of the bunker sides. This requires great care.

Before fitting the boiler advance to fig. 3, as many of the etched parts mentioned will be better soldered in place.

Fitting the boiler.

Take the resin cast boiler (26) and clean, off any mould feeds at the back of the firebox. Form the smokebox wrapper (27) around a suitable sized piece of dowel (something about 18mm in diameter should be about right). Rough up the resin smokebox and glue the wrapper in place. Note that the plain edge goes at the front. Now try the boiler in position. It must be positioned centrally between the tanks. Once a good fit is obtained tack it in place with superglue. Check again and if all looks o.k. fix permanently with an epoxy resin. Put aside for at least 24 hours. When the resin is rock hard remove the valence supports.

FIG. 3.

Fold the bunker front (28) with the fold line inside. Solder the coal chute (29) and coal door (30) into place. Solder this unit into the slots in the cab floor. Solder the coal guards (31) over the back windows,

Form the cab steps (32) as shown and fit the centre rung. Solder the completed step under the cab. Solder the side step fronts (35) to the piece of thin brass supplied and file the backing pieces to match the fronts. Please note that this is a temporary solution to help clearances on the valve gear. Solder them under the running plate behind the first curve. Shape the front running plate steps (36) and the overlays (37) and solder them together. Fit the two centre rungs to each step. Solder the steps in place.

Fold the tank lifting lugs (38) to roughly 45 degrees and solder two at the front of each tank and two at the back. Solder the three square cylinder end covers (53) above the front buffer beam. The two outside ones have lamp brackets fitted to them. Also solder the buffer shanks (52) in place.

Glue the cab tool locker (39) on top of the bunker front in the middle. Drill out the hole in the top of the backhead (40) and glue the backhead manifold (41) into it. Drill out the holes in the firehole doors and fit the door operating levers (42). Glue the completed backhead in place. Fit the brake standard (43) into the hole in the cab floor. Glue the remaining parts in place in number order.

Solder together the roof (60) and the roof overlay (61). Note that the overlay should overlap at both ends, Form it to the match the profile of the cab front and rear and solder it in place. Use some brass wire to disguise the join between the roof and sides. This also represents the rain strips.

Select right hand or left hand drive before fitting the ejector pipe (56) or the steps (62) on the rear bunker (see bottom right of drawing).

FIG. 4.

Solder six 1/8th chassis bearings (76) into the holes in the main frame (63). Fold the frames up with the half etch fold lines on the **OUTSIDE**. Solder the front two frame spacers (64 & 65) into their slots. Check all is square. Fold and solder the rear bogie mount (66) into its slots. Solder an 8BA nut over the hole in the bogie mount and the front pony truck mounting which is integral with the main frames. Solder the rear spacer (67) into the recesses in the back of the frames.

Form the cylinder (68) sides into roughly the right shape. Fold down the front and rear of the cylinders and solder around the seams. Solder the cylinder fronts (69) and back plates (70) into place. Fold the slidebars (81) (on valve gear fret) back, with the fold on the outside so that they meet. Solder the two sides together and then solder them into the square holes in the cylinder back plates. Solder the completed unit onto the frames.

Fold and solder in place the front and rear motion brackets (71 & 72). They locate in the two sets of vertical in the top of the frames.

Solder the six 2mm chassis bearings (75) into the pony truck (77) and the rear bogie (73). Fold the pony and bogie as shown and solder an 8BA screw (8) into the bottom of the bogie. Fit the guard iron units (78) in place on the bogie and pony. Form the bogie swing arm (74). The pony and bogie can now be painted.

Solder the brake blocks (83) to the brake hangers (82). Solder wire into the brake pilot holes and hang the brakes on the wire about 2mm from the frames. Pass wire through the bottom of the brakes and mount the brake rodding (84) on this. Paint the chassis now.

Fit the wheels (not supplied in the kit, but a wheel pack is available) and paint them. Fit the crank pins and attach the coupling rods (85). Use only one thickness on these as the clearances are ultra tight due to the proximity of the large side steps.

FIG. 5.

Drill out the holes in the crossheads (87) with a 0.9mm drill. Attach the crossheads to the connecting rods (80) with 16BA nuts and bolts (88). Open out the holes in the valve gear (before removing from fret) again with the 0.9mm drill.

Shape the return cranks (92) (see side view). Rivet (93) together the return crank, the return crank rod (91) and the expansion link (90).

Rivet together the union link (96), combination lever (95) and the combination extension (94).

Cut four spacers from the 1/16th tube supplied. They must be about 1.5mm in depth. Put two 16BA screws into the radius rod (89) and put one spacer on each screw. Fit the expansion link onto the screw at the wide end of the radius rod. Attach this to the rear motion bracket with a 16BA nut. Fit the combination lever extension to the other screw and fit this end to the front motion bracket in the same way.

Fit the crosshead onto the slidebar and screw the union link to the bottom of the crosshead. Place the connecting rod on the centre crank pin and then solder the return crank over the top. Repeat for the opposite side.

PARTS LIST.

- | | |
|---|----------------------------|
| 1. Running plate. | 35. Side step fronts. |
| 2. Front valence. | 36. Front steps. |
| 3. Centre valence. | 37. Front step overlays. |
| 4. Rear valence. | 38. Tank lifting lugs. |
| 5. Rear bufferbeam. | 39. Cab toolbox. |
| 6. Centre/front R-plate section. | 40. Backhead. |
| 7. Front overlay and bufferbeam. | 41. Backhead manifold. |
| 8. 8BA screws and nuts. | 42. Firehole door levers. |
| 9. Tank fronts. | 43. Brake standard. |
| 10. Tank outsides. | 44. Chimney. |
| 11. Tank rears. | 45. Dome. |
| 12. Tank insides. | 46. Clack valves. |
| 13. Side overlays. | 47. Safety valve base. |
| 14. Tank tops. | 48. Whistle and manifold. |
| 15. Centre smokebox saddle parts. | 49. Tank fillers. |
| 16. R/H saddle side. | 50. Vacuum pipes. |
| 17. L/H saddle side. | 51. Steam pipes. |
| 18. Cab front. | 52. Buffers. |
| 19. Cab rear. | 53. Cylinder end covers. |
| 20. Cab sides. | 54. Sandboxes and fillers. |
| 21. Cab side overlays. | 55. Motion covers. |
| 22. Cab floor. | 56. Ejector pipe. |
| 23. Bunker rear. | 57. R/H injector. |
| 24. Bunker rear overlay. | 58. L/H injector. |
| 25. Tank front overlays. | 59. Tank vents. |
| 26. Resin boiler. | 60. Cab roof. |
| 27. Smokebox wrapper. | 61. Roof overlay. |
| 28. Bunker front. | 62. Bunker steps. |
| 29. Coal chute. | 63. Main frames. |
| 30. Coal door. | 64. Front spacer. |
| 31. Rear window coal guards. | 65. Centre spacer. |
| 32. Cab steps. | 66. Bogie mount. |
| 33. DON'T USE. Replaced by thin brass. | 67. Rear spacer. |
| 34. DON'T USE. Replaced by thin brass. | 68. Cylinders. |
| | 69. Cylinder front covers. |

- | | |
|---------------------------------|-----------------------------|
| 70. Cylinder back plates. | 87. Crossheads. |
| 71. Front motion bracket. | 88. 16BA nuts and screws. |
| 72. Rear motion bracket. | 89. Radius rods. |
| 73. Rear bogie. | 90. Expansion links. |
| 74. Bogie swing arm. | 91. Return crank rods. |
| 75. 2mm bearings. | 92. Return cranks. |
| 76. 1/8 th bearings. | 93. Rivets. |
| 77. Front pony truck. | 94. Combination extensions. |
| 78. Bogie and pony guard irons. | 95. Combination levers. |
| 79. Front valve covers. | 96. Union links. |
| 80. Rear valve covers. | 97. Handrail knobs. |
| 81. Slidebars. | 98. |
| 82. Brake hangers. | 99. Brass wire. |
| 83. Brake blocks. | 100. Cylinder drain cocks. |
| 84. Brake pull rods. | |
| 85. Coupling rods. | |
| 86. Connecting rods. | |

Updates and Modifications:

Lost wax crossheads are now supplied. The drop link has to be added, and is on the valve gear etch.

The cast Ejector pipe has been replaced by .9mm wire and three Split Pins.

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.

P. D. K. MODELS.

**HILLTOP BUNGALOW.
CARNKIE
HELSTON
TR13 0DZ**

www.pdkmodels.co.uk

E-Mail: pdkmodels@hotmail.co.uk

Telephone: 07732 213251.

FIG. 1. RUNNING PLATE ASSEMBLY.

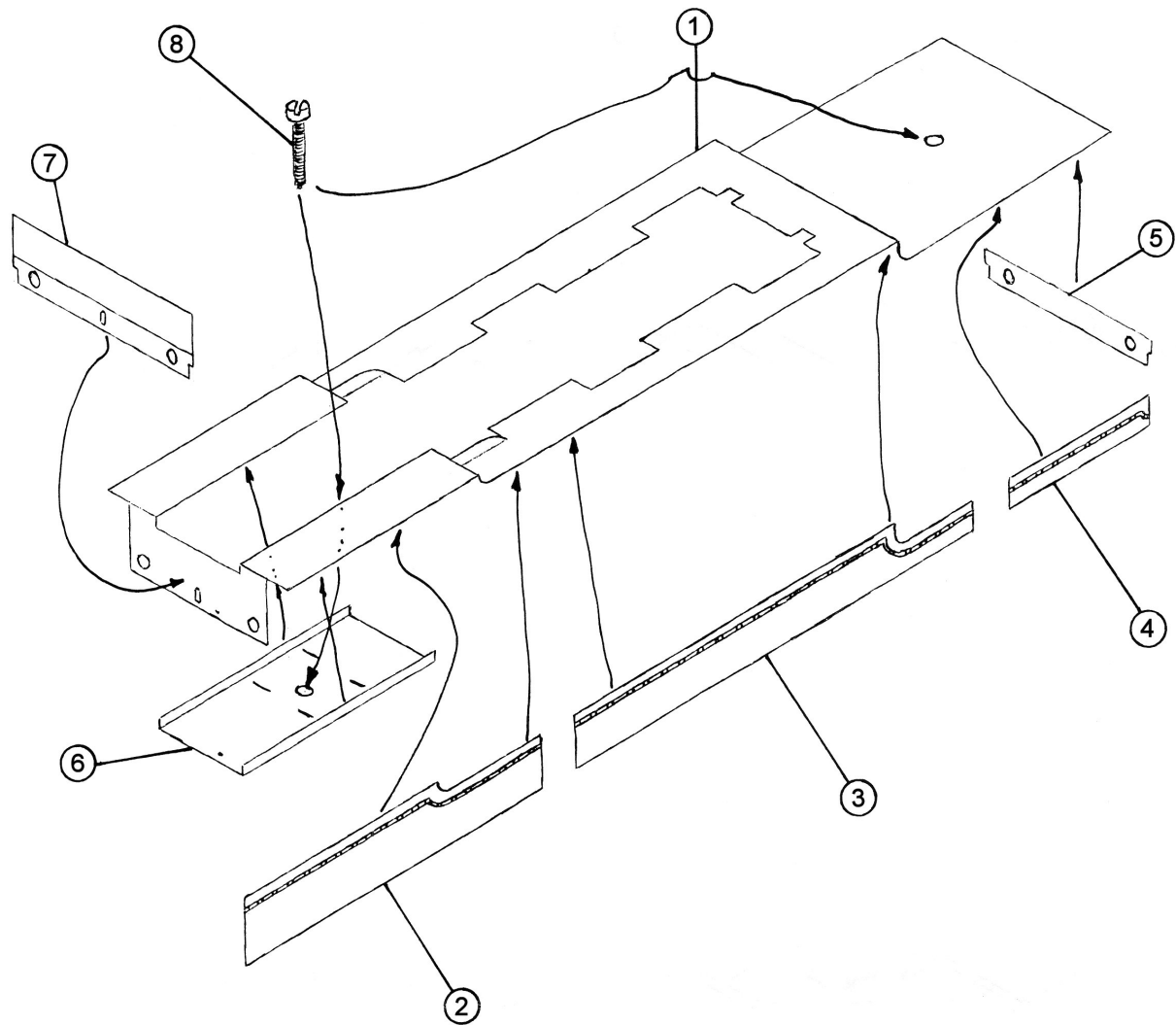


FIG. 2. UPPER BODY ASSEMBLY.

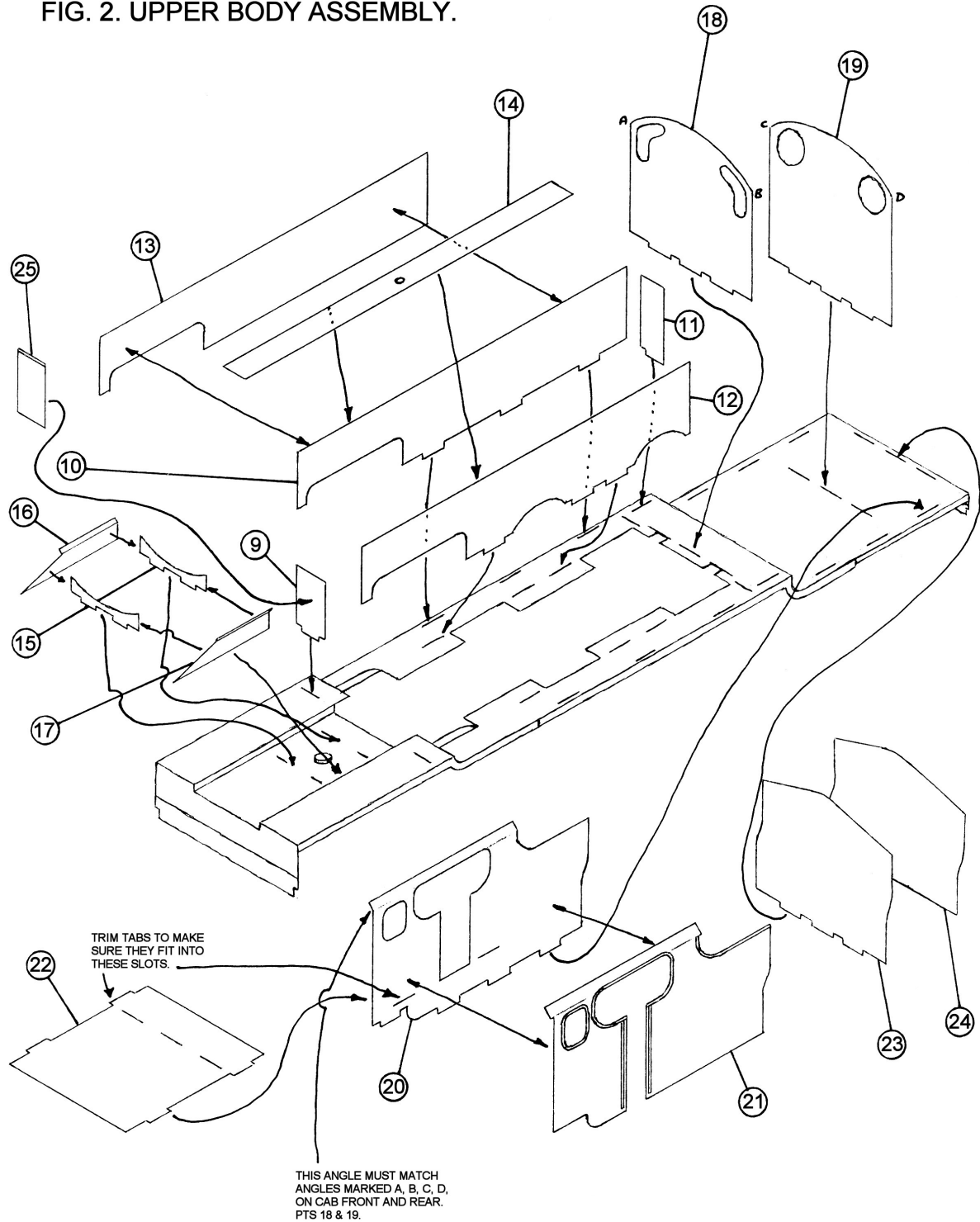


FIG. 3. BODY DETAILING.

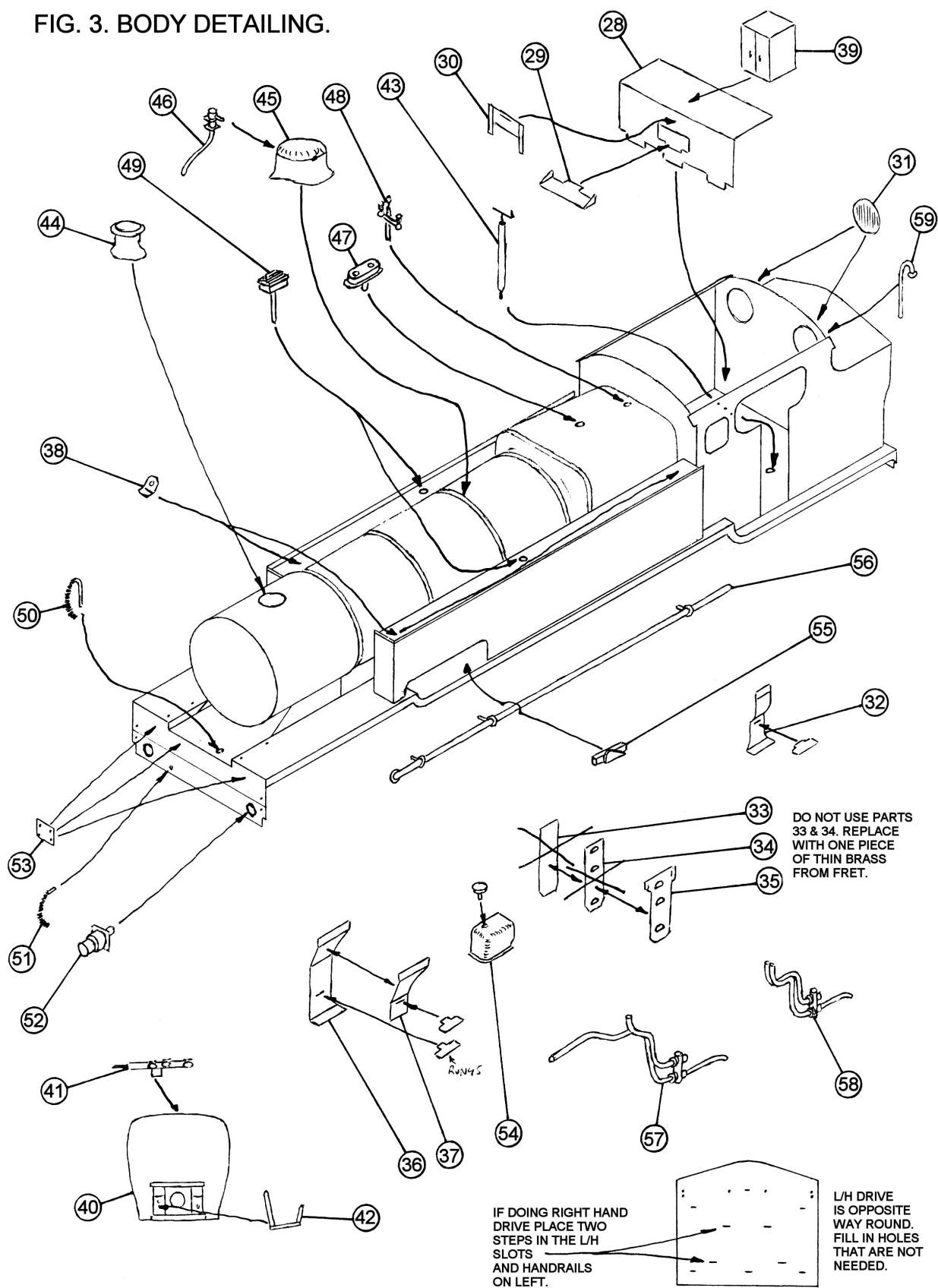


FIG. 4. CHASSIS ASSEMBLY.

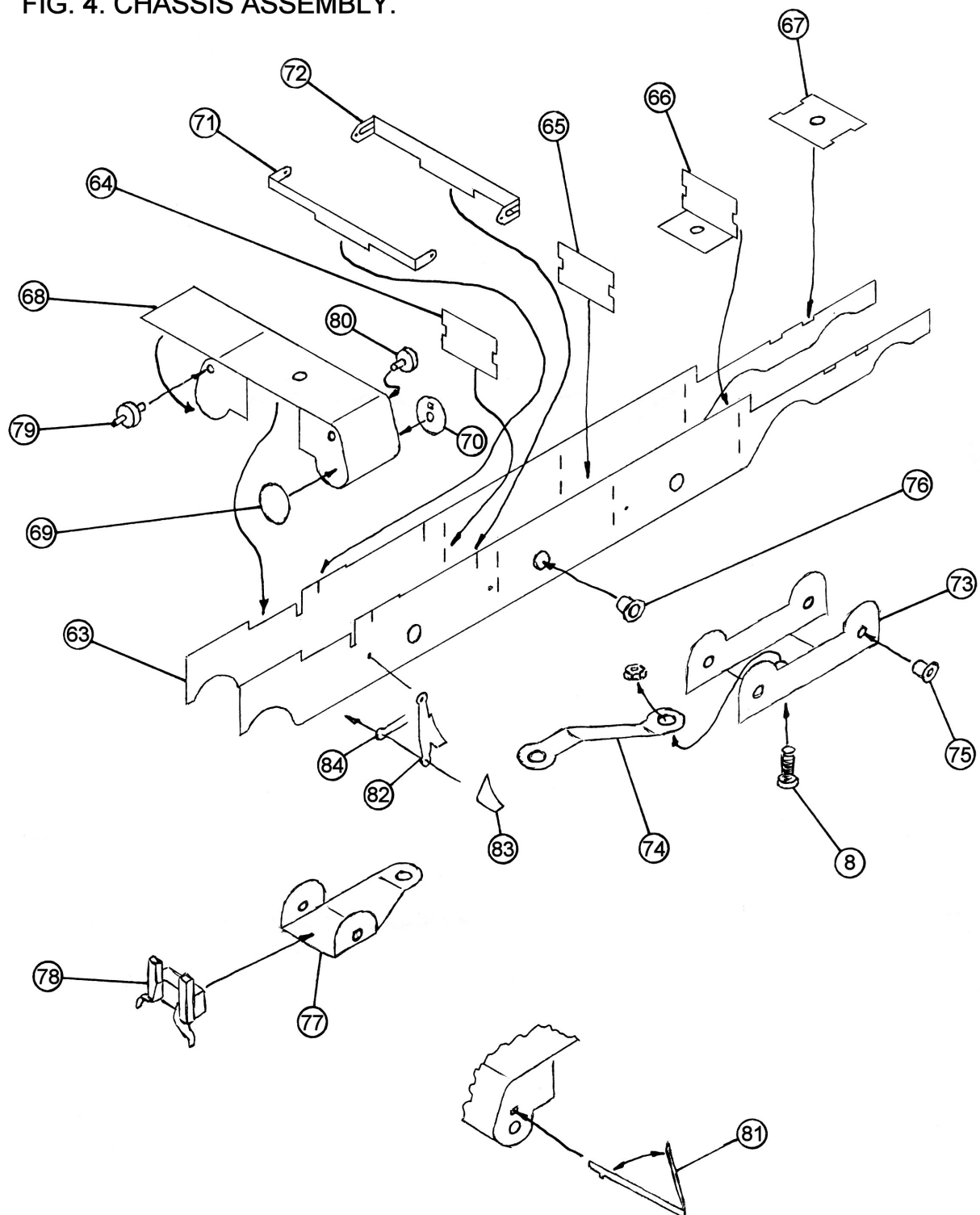


FIG. 5. VALVE GEAR ASSEMBLY.

