

J20 0-6-0 assembly instructions.

CHASSIS ASSEMBLY.

Take the frames (1) and solder in the axle bushes (2), making one frame LH and one RH. Select the '00' or 'EM' frame spacers as required, solder the 8BA nut (3) over the hole in the centre section of the main spacer (4), and if fitting a D11 motor, solder one of the washers over the hole in the centre of the motor mounting.

Fold the main spacer and then assemble the frames, main spacer, rear spacer (5) and motor mounting (6) ensuring that everything is assembled square and flat before finally soldering together. Bend the guard irons (7) and solder to the frames. Solder pieces of the 22g wire (8) through the three holes in each frame to form the brake gear supports.

Now take the brake hangers (16) and solder the brake blocks (17) to them, making three L/H and three R/H. Then solder the hangers to the support wire (8) ensuring that the brakes do not touch the wheel rims. Temporarily fit the wheels and thread 22g wire through the lower holes in the hangers so that the ends protrude beyond the faces of the wheels, place the brake pull rods (18) over the ends of the wires and solder them in place, trimming the ends of the wires after the rods are fixed.

Remove the wheels and paint the frames at this stage rather than after the wheels are fitted.

Next fit the wheels, axles, gear and crankpins to the chassis, using the four axle washers (9) to take up the sideplay on the front and rear axles. The centre wheels require sideplay to negotiate curves. Fit the pairs of coupling rod halves (10) together. Place the rods on the crankpins and check that the wheels revolve freely, clearing out the holes with a No.60/1mm drill is necessary, and then fit the coupling rods using the six small washers, supplied with the crankpins, to retain the rods on the crankpins. Put paper between the washers and rods during assembly to avoid soldering everything up solid, and then remove the paper after fixing. Screw the collector tag (12) to the main chassis spacer with one of the 8BA screws (13) and the two fibre washers (14). Check that the tag is not electrically live to the chassis, then form current collectors using some of the 26g nickel silver wire (15) solder to the tag. If using a D11 motor screw this to the mounting plate, checking that the gears mesh correctly. The drawbar (19) and pivot (20) are screwed with the same screw used to fix the rear end of the chassis to the body.

SUPERSTRUCTURE ASSEMBLY.

Take the footplate (1), lay on a flat surface and solder the buffer beam (2) to the underside just in from the front edge, then solder the valances (3) in place, 1mm in from the footplate edges. Fix the drag beam (4) in place, then bend up the ends of the steps (5) and solder into the slots in the valances. Solder an 8BA nut (6) over the holes in the front and rear ends of the footplate to screw the chassis to, and then fix the two upper frame pieces (7) into the slots in the footplate.

Take the front splashers sides (8) and the splashers tops (9) form the tops to match the sides, assemble the splashers and solder them to the footplate. Fit the small riveted covers (10) to the front of each splashers, then fit a sandbox filler cap (11) into the holes in the splashers tops. Take the middle splashers sides (12) and their tops (13) curve the tops to match the

sides, assemble the splashers and solder them to the footplate, then fix the mechanical lubricator (14) to the front splasher on the right hand side of the loco.

Take the cab sides (15) and cab front (16) and solder them together with the front between the sides, then slot the assembly to the footplate and solder in place. Bend the ends of the cab floor support (17) at right angles, then take the cab floor (18) and if using a D11 motor, cut out the small rectangular piece at the front along the half etched lines to clear the worm,

Now solder the floor support and floor into the cab. Take the rear splasher sides (20) and tops (21) curve the tops to match the sides, assemble the splashers and solder them in place. Take the middle sandboxes (22) bend to shape along the fold lines and solder up the joints, fit a riveted cover (10) to the front of each and a sandbox filler cap (11) into the hole in the top of each, then fix the assembled sandboxes to the footplate. Repeat this process with the rear sandboxes (24).

Turn now to the boiler/firebox (25) roll to shape, bend out the firebox sides, and then solder up the seam of the boiler. Roll the smokebox inner (26) and solder to the boiler. Solder the smokebox front (27) to the front edge of the smokebox. Now form the smokebox outer (29) then bend out the lower part of the sides to match the profile of the smokebox front and fix around the outside of the smokebox, up to the edge of the smokebox front. Once this is done the assembled boiler/firebox can be fitted to the footplate. The firebox slots into the footplate, and the bottom of the smokebox should be a sliding fit between the upper frames. It is important that everything is checked for squareness at this stage, both from the sides and from above and that the footplate is kept flat during assembly. The boiler bands (30) can be fitted next, and then the handrail can be formed from the wire provided (31) and fitted with the handrail knobs (32), Form the ejector pipe (33) along the right hand side of the boiler from the 20g wire, and fix in place. Take the cylinder cover (34) and bend along the etched line to match the angle of the upper frame fronts, make the handrail and fix into the two holes, then fix the cover in place between the frames.

Take the smokebox door handle (36) and the upper lamp bracket (37) fix them to the smokebox door (38), and then fix the door to the smokebox front. Fit the regulator handle (40) to the backhead (39), and then fix the backhead into the cab. Next curve the cab roof (42) to match the cab front and solder in place. Fit the two rainstrips (43) in place, curve the vent (44) to match the roof, and fit to the roof. Solder the cab side beadings (46) to the edges of the cab sides, bending to shape whilst fixing, then fit the cab handrails. Holes are provided in the footplate for the lower ends of the vertical handrails. Curve the fall plate (47) and fit to the cab floor, making a hinge from some of the handrail wire and two split pins. Fit the reversing lever (48) to the right hand side of the Loco, then fit the boiler fittings (49—53) front lamp brackets (54), buffers (55) and vacuum pipe (56).

Finally fit the pipe along the left hand valance using the remainder of the 22g wire (57).

TENDER ASSEMBLY

Take the chassis (1) and bend down the sides at 90° degrees to the centre. Solder an axle washer (2) over each axle hole then clean out the holes with a 2mm drill. Solder 22g wire through the three holes in each frame to form the brake gear supports (3). Temporarily fit the wheels to the chassis. Take the brake hangers (4) and solder the brake blocks (5) to them, making three L/H and three R/H then solder the hangers to the wire supports making sure that the brakes do not touch the wheels. Take the pull rods (6) and thread 22g wire (7)

through these and through the holes in the lower ends of the hangers, solder in place when assembled and trim the ends of the wire after assembly. Remove the wheels and paint the chassis. Refit the wheels to the chassis after painting using axle washers to take up the sideplay, but leaving some sideplay in the centre axle.

Turn now to the body, take the footplate (8) slot the frames (9) into it and fix in place then solder the buffer beam (10) and drag beam (11) in place. Take the sides (12) flare out the top edges over a piece of 3/16" dia. bar and bend up the coal guard along the etched lines, then take the back (13) and flare out the top of this also. Slot the back into the footplate and fix it and the sides to the footplate, so that the sides are level with the footplate edges. Now bend the three of the four lamp brackets (14) and fix into the slots in the back, and then make the handrails (15) for the sides and the back. Take the coal plate (16) and bend along the fold lines as shown in the diagram, with the etched fold lines underneath so that the slots for the fire iron rack (32) are on the left side of the tender, then fit the bulkhead (17) into the slots. Fit the rectangular coal space sides (18) in place, and then fit the assembly into the tender, slotting the base of the bulkhead into the footplate. Bend the ends of the floor support (19) at right angles and fix in place, then bend up the floor/front plate (20) along the etched line so that the brake column hole is on the left side, and fit it to the floor support and coal space. Solder the two rectangular pieces (21) in the remaining gaps either side of the front plate.

Now take the side beading (22) and back beading (23), curve these to match the flare of the tender sides and back, and solder in place. Solder the coal guard beadings (24) to the coal guards, and then solder the step plates (25) to the underside of the footplate. Bend up the ends of the narrow steps (26) and fit these to the step plate, then bend up the ends of the wide steps (27) and fit them into the slots in the rear end of the frames. Bend the guard irons (28) to shape and solder them to the buffer beam, then fit the buffers (29). Fit the axleboxes (30) to the frames, then solder the 1/16" dia. drawbar pin (31) to the footplate and drag beam.

Slot the fire iron rack (32) into the top of the coal plate, then form the two toolboxes (33) curve the lids (34) to fit and solder the toolboxes into their respective slots, the narrower toolbox going on the left hand side next to the fire iron rack. Fit the two cupboard doors (35) to the front of the coal space, then fit the two side plates (36) into the slots in the coal space front either side of the floor. Fit the two small beading pieces (37) to the tops of these then thread handrail wire through the ends of these and through the holes in the footplate to form the front handrails, Fit the brake column (38) into the hole in the floor, the tank fillers (39) into the holes in the rear of the coal plate, and fit the last lamp bracket to the centre of the top of the back.

Lastly fit a vacuum pipe (40) to the buffer beam if modelling a vacuum fitted Loco.

CHASSIS PARTS LIST

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|------------------------|-------------------------|----------------------|
| 1. Frames. | 8. Brake gear supports. | 15. Pickup wire. |
| 2. Axle bushes. | 9. Axle washers. | 16. Brake hangers. |
| 3. 8BA nut. | 10. Coupling rods. | 17. Brake blocks. |
| 4. Motor screw washer. | 11. Crankpin washers. | 18. Brake pull rods. |
| 5. Frame spacers. | 12. Collector tag. | 19. Drawbar. |
| 6. D11 mounting. | 13. 8BA screws. | 20. Drawbar pivot. |
| 7. Front guard irons. | 14. Fibre washers. | |

SUPERSTRUCTURE PARTS LIST

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|----------------------------|-------------------------|-----------------------------|
| 1. Footplate. | 21. Rear splasher tops. | 41. |
| 2. Bufferbeam. | 22. Middle sandboxes. | 42. Cab roof. |
| 3. Valances L/H & R/H. | 23. | 43. Rain strips. |
| 4. Drag beam. | 24. Rear sandboxes. | 44. Roof vent. |
| 5. Steps. | 25. Boiler/firebox. | 45. |
| 6. 8BA nuts. | 26. Smokebox inner. | 46. Cab side beading. |
| 7. Upper frame pieces. | 27. Smokebox front. | 47. Fall plate. |
| 8. Front splasher sides. | 28. | 48. Reversing lever. |
| 9. Front splasher tops. | 29. Smokebox outer. | 49. Whistle. |
| 10. Riveted covers. | 30. Boiler bands. | 50. Ross pop safety valves. |
| 11. Sandbox fillers. | 31. Handrail wire. | 51. Dome. |
| 12. Middle splasher sides. | 32. Handrail knobs. | 52. Anti-vacuum valve. |
| 13. Middle splasher tops. | 33. Ejector pipe. | 53. Chimney. |
| 14. Mechanical lubricator. | 34. Cylinder cover. | 54. Front lamp brackets. |
| 15. Cab sides. | 35. | 55. Buffers. |
| 16. Cab front. | 36. S/box door handle. | 56. Vacuum pipe. |
| 17. Cab floor support. | 37. Upper lamp bracket. | 57. Vacuum pipe along |
| 18. Cab floor. | 38. Smokebox door. | valance L/H side. |
| 19. | 39. Backhead. | |
| 20. Rear splasher sides. | 40. Regulator handle. | |

TENDER PARTS LIST

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|-------------------------|-------------------------|--------------------------|
| 1. Chassis. | 15. Handrails. | 29. Buffers. |
| 2. Axle washers. | 16. Coal plate. | 30. Axleboxes. |
| 3. Brake gear supports. | 17. Bulkhead. | 31. Drawbar pin. |
| 4. Brake hangers. | 18. Coal space sides. | 32. Fire iron rack. |
| 5. Brake blocks. | 19. Floor. | 33. Toolboxes LH & RH. |
| 6. Brake pull rods. | 20. Floor/front plate. | 34. Toolbox lids. |
| 7. Tie bars. | 21. Side plates. | 35. Cupboard doors. |
| 8. Footplate. | 22. Side beading. | 36. Front plates. |
| 9. Frames. | 23. Back beading. | 37. Front plate beading. |
| 10. Buffer beam. | 24. Coal guard beading. | 38. Brake column. |
| 11. Drag beam. | 25. Step plates. | 39. Tank fillers. |
| 12. Sides LH & RH. | 26. Narrow steps. | 40. Vacuum pipe. |
| 13. Back. | 27. Wide steps. | |
| 14. Lamp brackets. | 28. Guard irons. | |

Fig. 1. Chassis Assembly

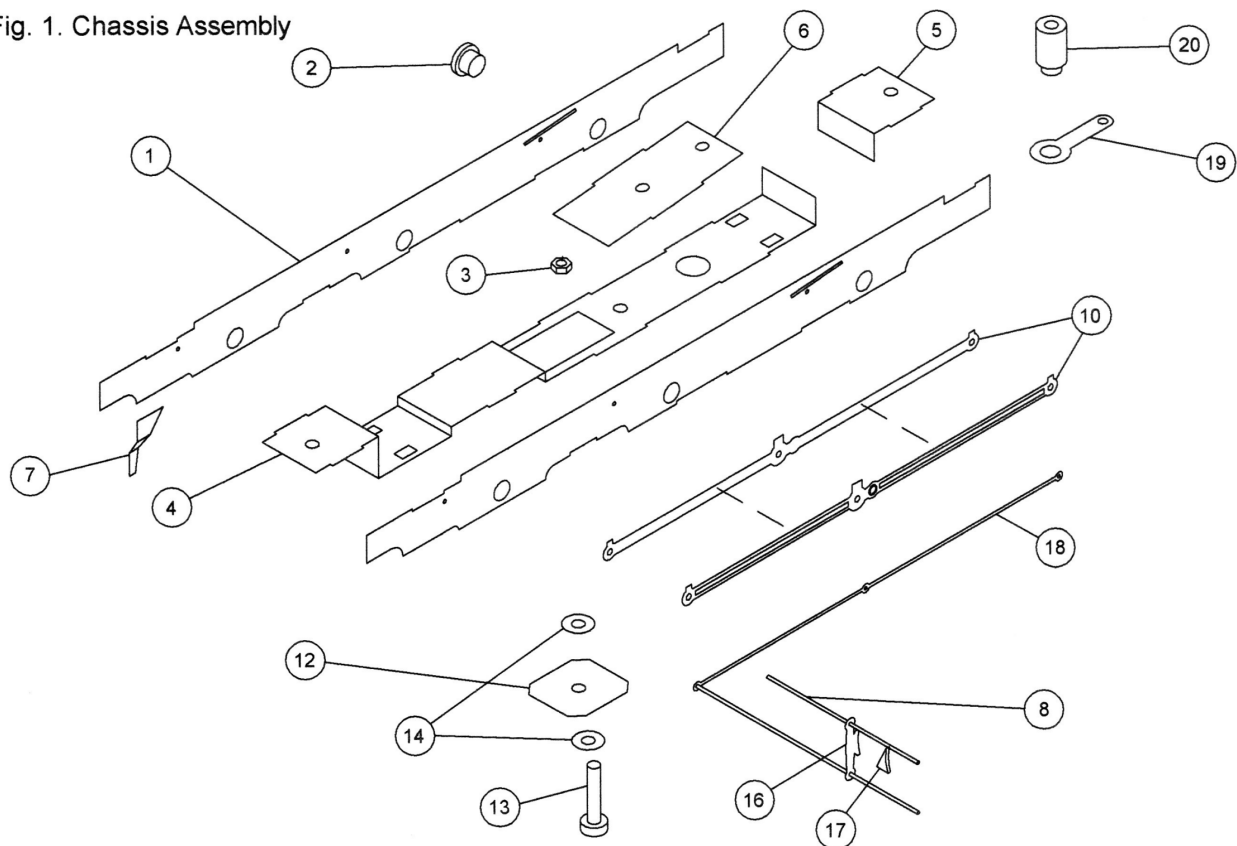
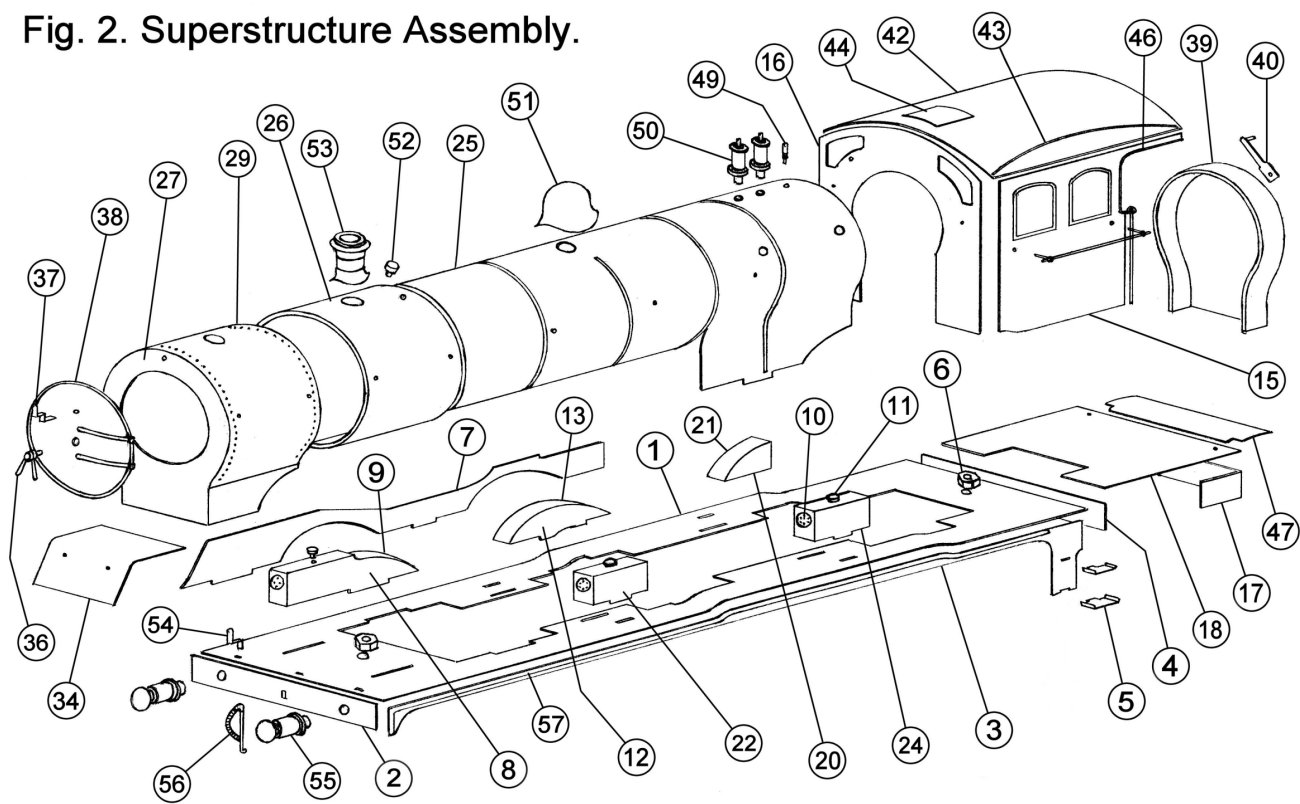
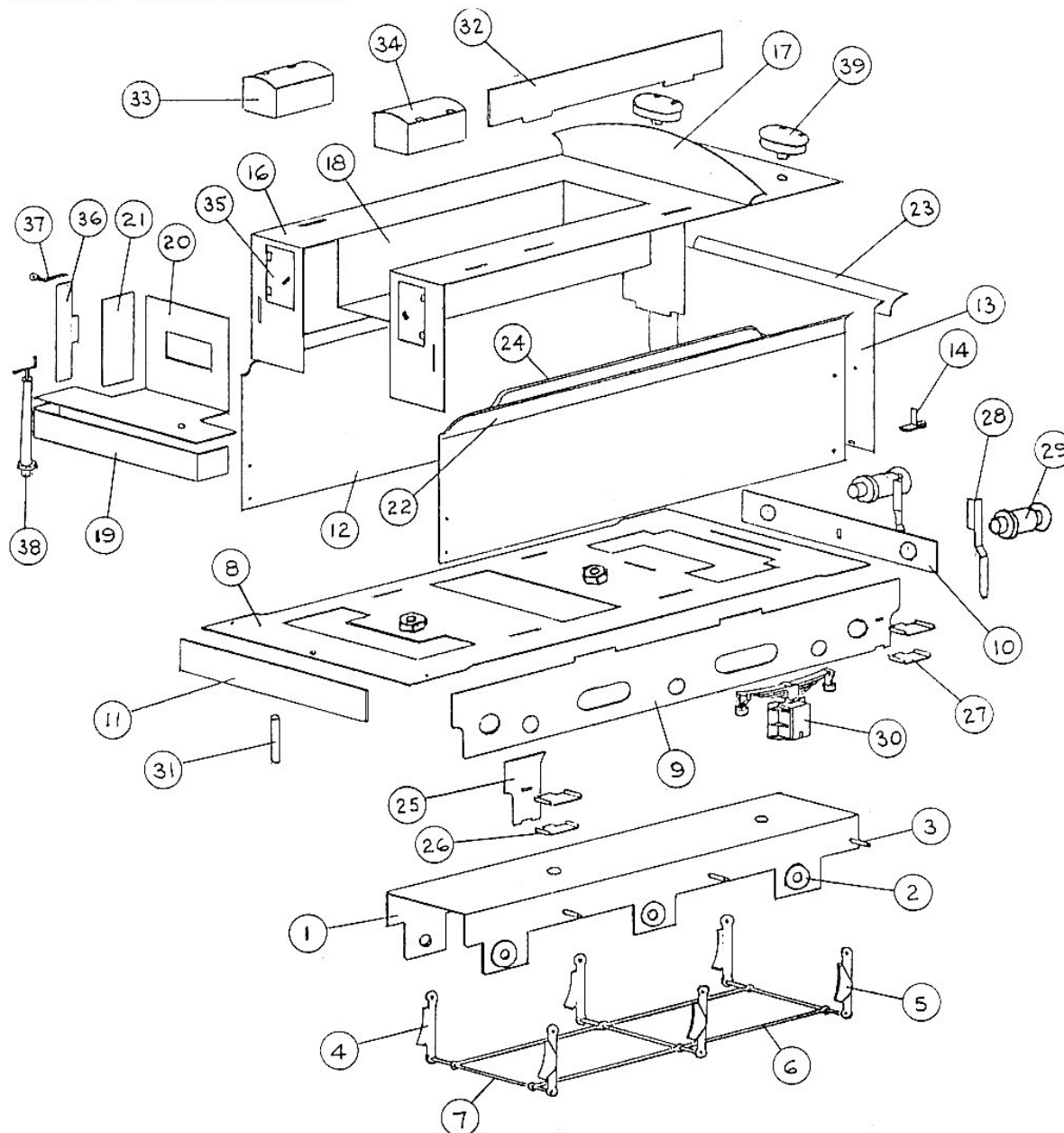


Fig. 2. Superstructure Assembly.



Tender Construction



P. D. K. MODELS8.

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