

REID SCOTT / GLEN & D29 4-4-0 INSTRUCTIONS.

CHASSIS ASSEMBLY

Take the frames (1) and remove either the segments from the upper axle holes if modelling a Scott, or from the lower axle holes if modelling a Glen. Solder in the axle bushes (2), making one frame LH and one RH. Select the '00' or 'EM' frame spacers (3) as required, solder an 8BA nut (4) over the hole in the centre section of the main spacer for the collector tag, and another over the hole in the small front spacer to which the bogie link will be screwed. If fitting a D11 motor, bend down the sides of the motor mounting plate (5), then solder the washer for the motor fixing screw (6) over the hole in the middle of the motor mounting plate. Now assemble the frames, spacers, and motor mounting plate, making sure that everything is square and flat before finally soldering together. If using a D11 motor, pass 22g wire through the holes in the frames and through the holes in the rear of the motor mounting plate at the same time so that the plate pivots in the frames. Pass 22g wire through the curved slots in the frames and through the holes in the front end of the mounting plate. Fit the Romford worm to the motor, and screw the motor to the plate. Put an axle and the gear in the chassis, adjust the angle of the mounting plate so that the gear meshes correctly, then carefully remove the motor and solder the mounting plate into the chassis, trimming the ends of the 22g wire afterwards. If using a Portescap motor this will not be necessary, although fixing the motor mounting plate into the chassis will provide some useful extra rigidity. Solder pieces of the 22g wire through the holes in the frames to form the brake gear supports (7). It may be found easier to paint the frames at this stage rather than after the wheels have been fitted.

Next fit the driving wheels, axles, gears, and crankpins to the chassis, using the four axle washers (8) to take up any sideplay in the wheels. Solder the pairs of coupling rod halves (9) together, place the rods on the crankpins, and check that the wheels revolve freely, and then fit the Romford crankpin washers. Put paper between the coupling rods and the washers when fixing to avoid soldering the rods to the crankpins, and then remove the paper afterwards. Screw the collector tag (10) to the main spacer using one of the 8BA screws (11), and the two fibre washers (12). Check that the tag is not electrically live to the chassis, then form the current pickups from some of the 26g handrail wire (13) soldered to the tag. Now take the brake hangers (14) and solder the brake blocks (15) to them, making LH & RH pairs, then solder the assembled brakes to the support wires in the chassis, making sure that the brakes do not touch the wheels. Using 22g wire to form the tiebars (16), fit the pull rods (17), and then fit the balance weights (18) to the leading pair of coupled wheels. (The balance weights will be found on the tender etching).

Turn now to the bogie (19), and fold down the sides at right angles to the centre stretcher, then solder the two strengthening pieces (20) between the sides below each edge of the stretcher. Next fit the dummy equalising beams (21), and the axle bushes (22) to the bogie sides. Solder the bogie centre washer (23) to the underside of the bogie, then fit the wheels to the bogie, using the axle washers (24) to take up sideplay if necessary. Now take the bogie link (25), solder the washer over the hole in the smaller end, and tap the hole 8BA. Screw the bogie to the link leaving a small amount of play, and then shorten the screw so that it is flush with the top surface of the link. The bogie can now be screwed to the chassis using an 8BA screw and the cast pivot (26). The drawbar (27) and drawbar pivot (28) are fixed to the chassis with the same screw used to fix the rear end of the chassis to the superstructure.

SUPERSTRUCTURE ASSEMBLY

Cut the footplate (1) from the fret, but **DO NOT** at this stage remove the parts from the cut out in the footplate. Take the valances (2), bend up the steps and step ends, then solder the valances into the grooves in the underside of the footplate. Solder the buffer beam (3) and drag beam (4) in position. Bend up the ends of the two steps (5) and fit them into the slots in the rear of the valances, then solder an 8BA nut (6) over each of the two holes in the footplate to screw the chassis to the etched parts can now be carefully removed from the cut out in the footplate.

Take one of the cab sides (7) and solder the upper, straight part of the cab front to it, (the front fits between the sides), then solder the top part of the other side to the front. Now curve the lower sections of the cab front to match the cab sides. Solder the assembled cab into the slots in the footplate, making sure that it is upright. It will be found helpful to mark in pencil the positions of the driving wheel centres on the valances, cab sides, coupling rod splashers, and leading wheel splashers to ensure that they are all lined up correctly when assembled. The pencil lines can be wiped off after assembly. The wheel centres are 17mm and 55mm in from the rear edge of the footplate, 16mm in from the rear edge of the cab sides, and at 38mm centres.

Take the coupling rod splasher sides (9), and solder the rear top edge strips (10) to their inside faces, then solder the coupling rod splashers to the footplate along the edge of the cut out, and to the cab sides. Curve the front part of the coupling rod splasher tops (11) to match the sides, and solder in place, butting their rear edges up against the bottom edges of the cab front. Bend down the small steps on the front face of the splashers and secure with a touch of solder. Take the leading driving wheel splasher sides (12) and curve the tops (13) to match. Solder them together, and then solder the assembled splashers to the footplate and to the coupling rod splashers.

Press out the rivets in the upper frame pieces (14) with a scribe or large pin, and then fix the pieces into the slots in the footplate. Form the two small handrails, and fix into the holes in the frame pieces. Fix the two main lower frame pieces (15) into the slots in the footplate, fix the overlays (16) to them, then fix the two small front frame pieces (17) in line with them, behind the front buffer beam. Fold up the cab splashers (18), and bend the ends of the cab floor support (19) at right angles. Fit the floor support in place so that its rear face is just in from the footplate edge, then make and fit the cab handrails. Solder the cab splashers inside the cab. Curve the chequered fall plate (21), use a piece of handrail wire and two split pins to form the hinge, and then fit it into the holes in the cab floor. Fit the assembled floor and fall plate into the cab.

Bend up the mechanical lubricator bracket (22) and fit to the R/H side of the loco, with the tag on its front face in the small slot in the footplate, and its rear face fixed to the back of the upper frame piece. Fix the mechanical lubricator (23) to the top of the bracket. Fit the lower end of the reversing lever (24) behind the L/H upper frame piece, with its upper end fixed to the front splasher.

Turn now to the boiler/firebox unit (25). Solder up its seam, and then solder the half-etched inner smokebox (26) round its front. Some of these locos acquired raised rivets on the smokebox towards the end of their lives, and if modelling a loco in this condition, the rivets should be pressed out in the half-etched holes in the smokebox outer (27) with a scribe or large pin. Form the smokebox outer to match the shape of the smokebox front

(28), and then solder both in place. If modelling a loco with raised rivets in the smokebox, then the complete front overlay (29) should be fitted to the front of the smokebox. The bottom edge should be curved to blend in with the footplate (see assembly diagram). If modelling a loco with flush riveting only the lower section of the overlay from the raised horizontal line downwards is needed, and the top part can be cut off. Solder the smokebox saddle back (30) in place, then fit the five boiler bands (31). The assembled boiler/firebox unit can now be soldered in place, taking care that everything is square and straight. Make the boiler handrail from the wire provided (32) and fix in place using the handrail knobs (33). Form the ejector pipe (34) from the 20g wire and fix it along the LH side of the boiler.

Fix the cab windows surrounds (35) and cab side beading (36) in place, then take the backhead (37), fix the regulator handle (38) to it, and fix the backhead into the cab. Curve the cab roof (39) to match the cab front, solder it to the cab, then fix the edge strips (40) to the front and rear of the roof. Fix the whistle (41) into the hole in the boiler top. Some locos had the original round safety valve base replaced with a rectangular one. Select the one required (42) and fit in place, then fit the dome (43), anti-vacuum valve (44), and chimney (45). Take the smokebox door (46), fit the door handles (47), curved front handrail, and upper lamp bracket (48) to it, then fit the door to the smokebox front. Fit the washout plugs (49) into the holes in the firebox. All the locos eventually had circular bases (50) round the washout plugs, and these should be fitted if required. Fit the firebox base pieces (51) either side of the firebox.

Bend and fit the lower front lamp brackets (52) into the slots in the footplate front, then fit the buffers (53), and vacuum pipe (54). Fit the sandbox filler caps (55) into their holes in the footplate, and then fix the sandboxes (56) to the underside of the footplate. Form and fit the vacuum pipe that runs along the LH valance (57) from the remainder of the 22g wire, then fit the Westinghouse pump to the RH side of the loco if required. (These were all removed between 1933 and 1937).

If modelling a Glen, fit the box and its pipe (59) to the RH cab front. The Scott's did not have this fitting.

TENDER ASSEMBLY

Take the chassis (1) and clean out the axle holes with a 2.0mm drill, then bend down the sides at right angles to the centre. Clean out the holes in the axle washers (2) with the same drill, then solder a washer over each axle hole, the front and rear ones outside the chassis, the centre ones inside the chassis. Solder 22g wire through the holes in the frames to form the brake supports (3). Fit the wheels to the chassis, using axle washers to take up the sideplay if necessary, but leaving some sideplay in the centre axle. Take the brake hangers (4) and solder the brake blocks (5) to them, making three LH and three RH, then solder the hangers to the supports making sure that the brakes do not touch the wheels. Pass 22g wire through the holes in the lower ends of the hangers, and also through the holes in the pull rods (6) near from the tie bars (7), and solder in place when assembled.

Turn now to the body; take the footplate (8), and the valances (9). Bend up the steps and step ends of the valances, making sure that one is made LH and the other RH, then solder the valances into the grooves in the underside of the footplate. Solder the buffer

beam (10) in place, followed by the drag beam (11). Bend up the ends of the two steps (12) and fit these into the slots in the valances. Take the frames (13) and solder them into the slots in the footplate, then solder an 8BA nut (14) over each of the two fixing holes.

Now take the tender body (15) and bend the corners at 1.5mm (1/16") radius along the half-etched lines. This must be done accurately to ensure the correct fit of the body to the footplate, and also to ensure the accurate fit of other body parts. The front corners of the body must also be curved at 1.5mm radius. The tops of the sides and back should be flared outwards at 30 degrees to the vertical. Once the tender body has been formed it can be slotted into the footplate and soldered in place. Take the front plate (16) and fit into the slot in the footplate, between, and level with, the front edges of the body. Bend the ends of the floor support (17) at right angles, and fix it to the footplate, slightly in from the footplate edge, then slot the floor (18) into the front plate and fix it to the floor support.

Bend three of the four lamp brackets (19) and fix into the slots in the tender back, then form the handrail for the back of the tender and fix in place. Bend the coal plate (20) next and fit it into the body. The rear section should be level with the half-etched fold lines for the flared top of the body, and the front edge should be level with the bottom edge of the coal hole in the front plate.

Take the lower coping strip (21) and, starting at the front of the body on one side, fix the strip all the way round the body with its top edge level with the bend of the flared sections. Next take one of the two overlays for the flared coping (22), curve the front end and the corner, and fit to the body, then repeat with the other overlay. The two pieces join in the middle of the tender back. Now take the coal rails (23) and curve the corners to match the top of the tender, and then angle the bottom of the uprights to match the angle of the coping, and solder the coal rails in place. Slot the rear bulkhead (24) into the coal plate and fix in place. Next take the two side plates (25) and fix the beading (26) to the edges. Form and fit the handrail to each and then fit the two plates into the slots in the footplate either side of the floor. Bend the toolbox bodies (27) and fix them to the tender floor, then bend the tops (28) to match the angle of the body sides and fix them to the toolboxes. Put the drawbar pin (29) through the hole in the footplate behind the buffer beam and solder in place, and then fix the two small circular plates (30) to the frames. Fix the buffers (31) and vacuum pipe (32) to the buffer beam, and then fix the brake column (33) to the front plate and to the top of the RH toolbox. Fit the axleboxes (34) into the holes in the frames, and fit the tank filler (35) into the hole in the rear of the coal plate. Finally, fit the fourth lamp bracket to the top of the coal rails at the back of the tender.

Scott and Glen Parts list

Chassis

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|-----|---------------------------------|-----|--------------------------------|
| 1. | Frames. | 15. | Brake Blocks. |
| 2. | Axle Bushes. | 16. | Wire for Tie bars, .7mm. |
| 3. | Frame spacers. | 17. | Brake pull rods. |
| 4. | 8BA nuts. | 18. | Balance weights. |
| 5. | D11 motor mounting plate. | 19. | Bogie. |
| 6. | Washer for motor screw. | 20. | Bogie centre strengtheners. |
| 7. | Brake gear supports, .7mm wire. | 21. | Equalising beams, non working. |
| 8. | Driving wheel axle washers. | 22. | Bogie axle bushes. |
| 9. | Coupling rods. | 23. | Bogie centre washer. |
| 10. | Collector tag. | 24. | Bogie axle washers. |
| 11. | 8BA screws. | 25. | Bogie link, and washer. |
| 12. | Fibre washers. | 26. | Bogie pivot. |
| 13. | Pickup wire, .45mm. | 27. | Drawbar. |
| 14. | Brake hangers. | 28. | Drawbar pivot. |

Superstructure

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| 1. | Footplate. | 31. | Boiler bands. |
| 2. | Valances, L/H & R/H. | 32. | Handrail wire, .45mm. |
| 3. | Buffer beam. | 33. | Handrail knobs. |
| 4. | Drag beam. | 34. | Ejector pipe, 20g wire. |
| 5. | Steps. | 35. | Cab window surrounds. |
| 6. | 8BA nuts. | 36. | Cab side beading. |
| 7. | Cab sides, L/H & R/H. | 37. | Backhead. |
| 8. | Cab front. | 38. | Regulator handle. |
| 9. | Coupling rod splasher sides, L/H & R/H. | 39. | Cab roof. |
| 10. | Top edge of coupling. rod splashers. | 40. | Roof edge strips. |
| 11. | Coupling, rod splasher tops L/H & R/H. | 41. | Whistle. |
| 12. | Splashers sides. | 42. | Safety valves, two types. |
| 13. | Splashers tops. | 43. | Dome. |
| 14. | Upper frame pieces, L/H & R/H. | 44. | Anti-vacuum valve. |
| 15. | Main lower frame pieces. | 45. | Chimney. |
| 16. | Lower frame overlays. | 46. | Smokebox door. |
| 17. | Front lower frame pieces. | 47. | Smokebox door handles. |
| 18. | Cab splashers, L/H & R/H. | 48. | Upper front lamp bracket. |
| 19. | Cab floor support. | 49. | Washout plugs. |
| 20. | Cab floor. | 50. | Washout plug surrounds. |
| 21. | Fallplate. | 51. | Firebox base pieces. |
| 22. | Mechanical lubricator bracket. | 52. | Front lamp brackets. |
| 23. | Mechanical lubricator. | 53. | Buffers. |
| 24. | Reversing lever.. | 54. | Vacuum pipe. |
| 25. | Boiler/firebox. | 55. | Sandbox filler caps. |
| 26. | Smokebox inner. | 56. | Sandboxes, L/H & R/H. |
| 27. | Smokebox outer. | 57. | Vacuum pipe along L/H valance. |
| 28. | Smokebox front. | 58. | Westinghouse pump. |
| 29. | Smokebox front overlay. | 59. | Box on RH cab front, Glens only. |
| 30. | Smokebox saddle rear. | | |

Tender

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| 1. | Chassis. | 19. | Lamp brackets. |
| 2. | Axle washers. | 20. | Coal plate. |
| 3. | Brake supports, .7mm wire. | 21. | Lower coping strip. |
| 4. | Brake hangers. | 22. | Coping strips, L/H & R/H. |
| 5. | Brake blocks. | 23. | Coal rails. |
| 6. | Brake pull rods. | 24. | Rear bulkhead. |
| 7. | Tie bars, .7mm wire. | 25. | Side plates, L/H & R/H |
| 8. | Footplate. | 26. | Side plate beading. |
| 9. | Valances. | 27. | Toolbox bodies, L/H & R/H. |
| 10. | Buffer beam. | 28. | Toolbox tops. |
| 11. | Dragbeam. | 29. | Drawbar pin, 1/16" dia. Brass. |
| 12. | Steps. | 30. | Circular frame plates. |
| 13. | Frames. | 31. | Buffers. |
| 14. | 8BA nuts. | 32. | Vacuum pipe. |
| 15. | Tender body. | 33. | Brake column. |
| 16. | Front plate. | 34. | Axleboxes. |
| 17. | Front floor support. | 35. | Tank filler. |
| 18. | Floor. | | |

P. D. K. MODELS.

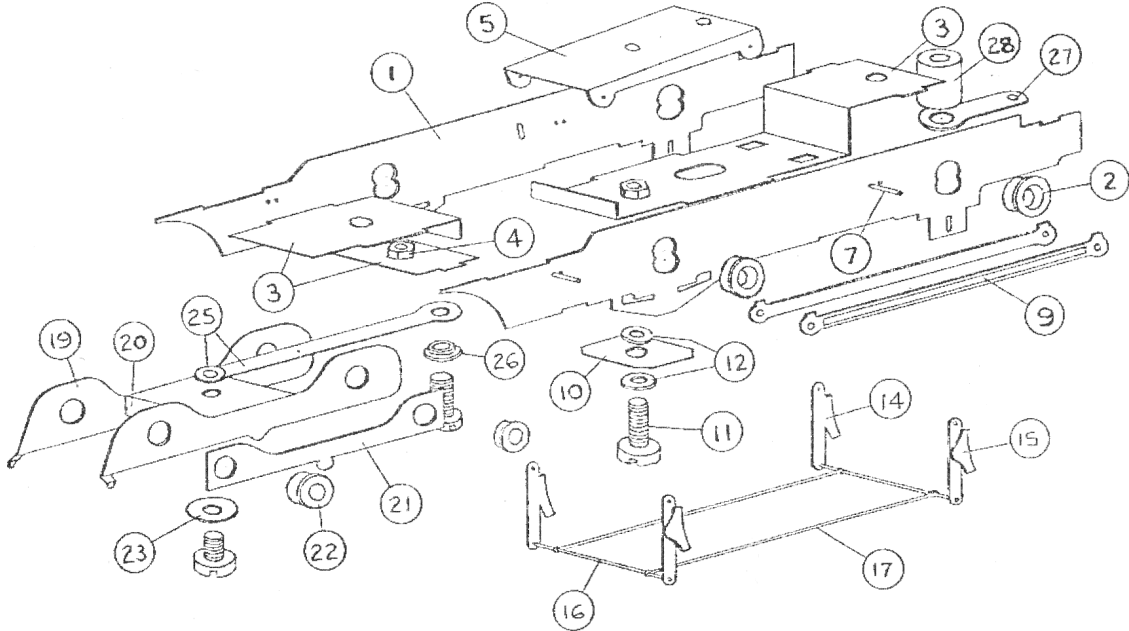
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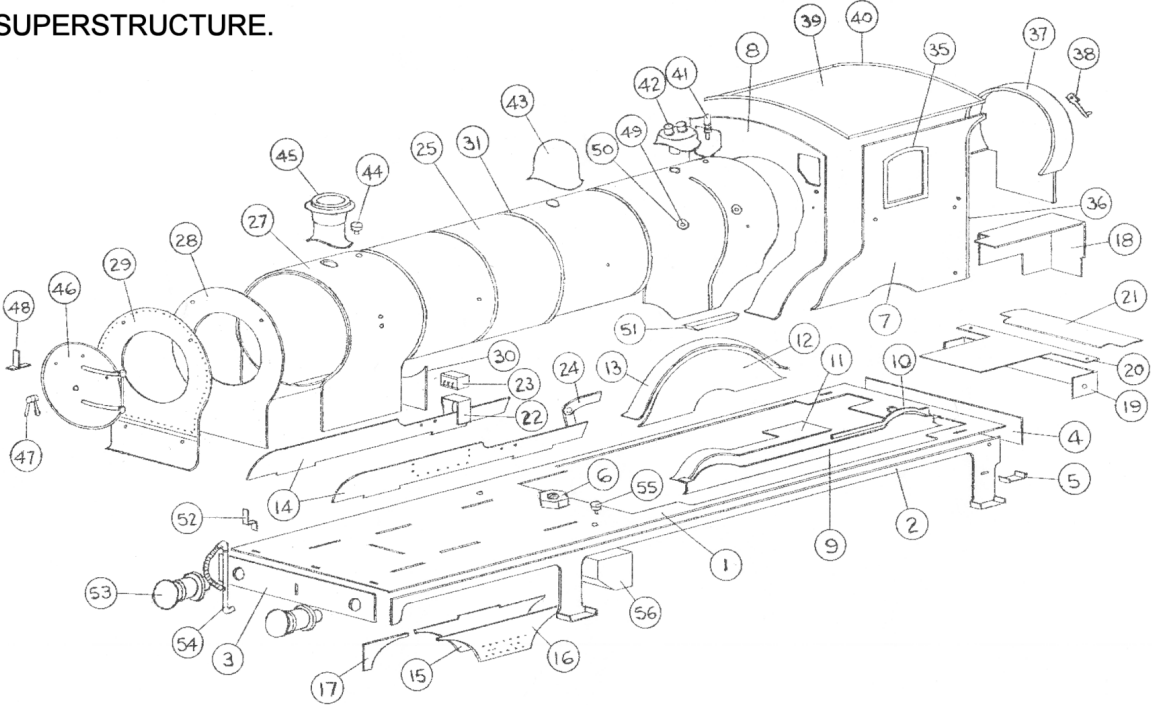
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CHASSIS.



SUPERSTRUCTURE.



TENDER.

