Caledonian Railway 72/113 Class 4-4-0 loco kit

Packing list CR 72/113 class

Whitemetal castings
N/S Chassis etch
Brass loco and tender body etches
14 Brass bearings
1 off long 6BA screw (1” cheesehead)
2 off 8BA short countersunk screws
2 off 8BA nuts
4 off short 6BA screws (1/4” cheesehead)
5 off 6BA nuts
2 off Front splasher sides (brass)
2 off Rear splasher sides (brass)
2 off 3/64 rivets
2 off 1/32 rivets
2 pieces of thick plasticard size 45mm x 6mm
18” Half round wire
2ft 0.9mm wire
2ft 0.7mm wire
2ft 1.2m wire
4 off 4mm steel buffers
4 off Buffer springs (small silver)
4 off 10BA nuts (brass)
3 off Short handrail knobs
8 off Long handrail knobs
3 off Coupler springs
2 off Split pins

Lost wax castings

1 off CR5
1 off CR6
1 off CR7
2 off CR8
1 off CR9
1 off CR10
4 off Pieces from CR11
1 off CR12
1 off CR13
2 off CR1

Instructions and sheet of notes on livery.

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Built by Caledonian Railway from 1916 to 192 as a development of the Dunalastairs, these useful and powerful engines lasted until 1962.

The 72 and 113 Class engines only differed in minor details. Parts are supplied for you to build either batch, but do check photographs of your favourite loco before detailing as, although fairly standard, locos display modifications over the years. Alternative safety valves and domes are provided to enable this loco to be built in any of its guises. Some notes on livery variations are included for you.

Wheels required:

2 off Slaters 7843 3'7" bogie
2 off Slaters 7878D 6'6" driver
3 off Slaters 7848 4'0" tender

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Loco chassis construction

1. From the nickel-silver fret remove the loco frames (1) and spacers (2 & 3). LF is loco front and LR is loco rear. Fit the bearings and use 3/16" bars or loco axles to ensure squareness then assemble the spacers to the frames. Note that the leaf springs are at the rear of the loco.
2. Cut out the coupling rods and their overlays (4 & 5) and solder them together. File the edges of the rods square and check for free running.
3. Add the ashpan sides (6 & 7) placing them between the etched marks on the inside of the frames.
4. Make up the brake beams from 0.9mm wire. I use a small piece of brass tube fitted over the wire to space the brakes from the wheels. This should be between 3.5 and 4mm long.
5. Rivet and then attach the overlays (8 & 9) to the loco brakes (10 & 11). Drill through both ends of 10 and 11 with a 1mm drill bit. Now lace the brake crossbeams (12) through the pullrod (13) and solder the brake assembly in place. You should be able to remove the brakes if assembled in this way to make painting and maintenance easier.
6. Cut out and rivet the front frames (14). Cut out the stretcher (15) and solder it between the front frames ensuring all is square. Solder a long 6BA screw down through the stretcher.
7. Cut out the bogie frames (16), bogie stretcher (17), false springs (18) and compensation beams (19). Fold up the stretcher and strengthen the seams with a fillet of solder.
8. Solder a short countersunk 8BA screw into the larger central hole in each sideframe and then file it flush. Solder together 3 of the springs and solder them centrally to the bogie sideframe.
9. Solder the brass bearings into the sideframes and then attach the cast axleboxes (20) on to the outside of them. I tack solder them with 145° using a spare piece of 3/16" bar to align bearings and boxes.
10. Fit the compensation beams over the springs and put a piece of 1/16" wire through the holes in the beam and the sideframe. File flush at the back and leave the outside protruding by about 1/2mm.
11. Check the fit of the 6BA bolt in the slot and file the slot if necessary.
12. Finally, assemble the bogie with 8BA nuts inside and fit the wheels. Bend out the guard irons to suit.
13. The front frames can be attached to the loco body or the main frames as you wish.
14. Our suggested method of pickup is the American method – all wheels insulated one side of the loco and the other side of the tender – use an insulated drawbar and there is no need for pickups. We can supply plunger pickups if you prefer them.
15. Clearances are better for driving from the front axle and this is our suggested method. Motor and gearbox are your choice – we tend to stick to JH from MSC. Ron Chaplin and ABC supply excellent more expensive items.

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Loco body construction

1. Cut out the footplate (26) and remove all parts from the centre carefully as it is rather fragile. Also cut out the valances (27), buffer beam (28) and drag beam (29).

2. Check your photos and decide whether the front buffer beam is riveted. If this is the case, impress the rivets from the rear. Then lay the footplate on a flat surface and solder the buffer beam into the half etched slot provided. Starting at the front, solder on the two valances. They go approximately 1/2mm in from the edge of the footplate. Add the dragbeam. Ensure the footplate is still flat and think about shaping a block of wood to fit the valances as a jig to hold the footplate square until further parts are added. It is very easy to get things out of square as you add parts and almost impossible to make good if you do.

3. Take the coupling rod splashers (30) and tops (31). Solder the coupling rod splashers on to the footplate and then form the splashers to fit behind them. The shape of the splasher front is correct. If you form the top over it other parts will not fit. The tops are slightly over length so, when they are the correct shape, trim off the surplus and solder them in place. Fit the splasher sides, aligning them with the edge of the cutaway in the footplate.

4. Attach the spectacles (32) to the cab front (33). Bend up the splasher tops (34) – a Humbrol paint tin is just the right diameter. Attach the splasher tops inside the splashers.

5. Take the boiler (35) and solder a piece of scrap brass inside the seam to strengthen it. Clean it up and then bend down the firebox sides.

6. Take the inner smokebox wrapper (36). Check the boiler length with the drawing and solder the wrapper to the boiler. Offer up the boiler to the footplate and cab assembly. Mine sat a little high and I had to remove a little metal from the front splasher tops.

7. Rivet the smokebox front (37) and the other wrapper if necessary and fit them to the smokebox. The wrapper is supposed to fit outside the smokebox front, not behind it. When this is achieved fit the rear of the smokebox (40) and the boiler bands (39). Now test fit the boiler/smokebox and check clearances – I really tried to get this right but still had to remove metal from the boiler to clear the wheels. Things are very tight here. Take your time and be patient.

8. Next fit the false frames (41) noting that these angle in slightly from the smokebox front.

9. Next fit the cabsides (42). Note that these are handed – they have a half etched mark to locate the lampirons on the outer cab side.

10. You can now fold and fit the cab splashers (43 & 44), the cab floor (45) and its support (46). Both the support and the floor will need slight trimming to fit. You will also find things tight at the rear of the splashers and you may have to grind a little away below the floor to give clearance.

11. The valve chest cover needs forming (part 47). Use 6mm bar to form it and trim to the correct width. Once fitted drill through the two etched holes and fit the 3/64” rivets to simulate the handles.

12. The cab cut out beadings (48) can be formed to shape and fitted along with the handrails that go through them and the cabside handrails as well.

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13. Shape the pieces of plasticard supplied to fit between the splashers.

14. Fit the front steps (49) and the rear steps (50 & 51).

15. Form and assemble the cab roof from parts (52 – 55). You can fit now or later after adding the cab detail.

16. Solder together the two parts of the reversing rod (56) and fit in front of the leading splasher on the left hand side. This should leave you with two little steps (57) for the front of the sandbox and the two covers that fit on the smokebox (58).

17. The final etchings for the loco are the balance weights for the leading driving wheels (59) and the lampirons (82).

18. Next fit the sandbox lids and small handrails in front of them. I then fit buffers, vacuum and Westinghouse pipes, the chimney, dome safety valve and whistle, followed by washout plugs.

19. If you are building a 72 Class, you need to fit the snifting valve behind the chimney. The 113 Class had them on the side of the smokebox. Both types are supplied.

20. I now fit the handrails to the boiler and smokebox, the smokebox door and handwheel. Fit the smokebox door star first, if your loco had one. Three are supplied as part of the nickel silver etch.

21. Fit the pipe from the smokebox to the cab on the left hand side above the handrail using 1.2m wire. Also add the lubricators on the smokebox side and rear, then the Westinghouse pump and lubricator on the right hand side.

22. Use the diagram supplied to detail the cab and fit the roof if you have not already done so. This just leaves you to attach the sandboxes and the boxes below the footplate underneath the smokebox and your loco should be ready for the paint shop.

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Tender chassis construction

1. Cut out the sideframes (21 & 22) and the two spacers (TF Tender Front and TR Tender Rear).

2. Ream the holes for the bushes and fit them. Note: A compensating beam is provided for the tender (front two axles) but I forgot to put the centre hole in it. If you wish to fit compensation, clamp the unit behind the frame before assembly and drill through the hole in the frames and unit. You will need to open the holes in the frames for the unit to work. 1mm up and down play should be plenty – if it isn't, perhaps you should examine your trackwork. The diagram shows how to compensate.

3. Once you have decided which method to use, assemble the chassis sides and spacers with bushes etc.

4. Fit 0.9mm wire for the brakes to attach and follow the method described for the loco using parts 23, 24, 25 and 12.

5. Cut out the footplate (60), sideframes (61), valances (62), bufferbeam (63) and dragbeam 64). Note that the front of the footplate has a longer distance to the holes for the wheels than the rear.

6. Fix the dragbeam 1/2mm back from the leading edge of the footplate and position centrally. Solder the valances 1mm in from the edges. Note that the buffers are nearer to the top of the bufferbeam than the bottom. Solder the bufferbeam centrally to the rear of the valances. I always strengthen steps with an L-shaped piece of 0.9mm wire soldered behind them.

7. Sideframes always seem to end up in the way of the buffers so before you fit them decide whether you wish to cut holes in the sideframes to clear them or move the sideframes out slightly and the buffers in slightly to clear them. Once decided, solder he sideframes in place. The correct position is flush with the outside of the holes in the footplate.

8. Bolt the chassis to the footplate using the other two 6BA nuts and bolts. Solder the nuts to the top of the footplate.

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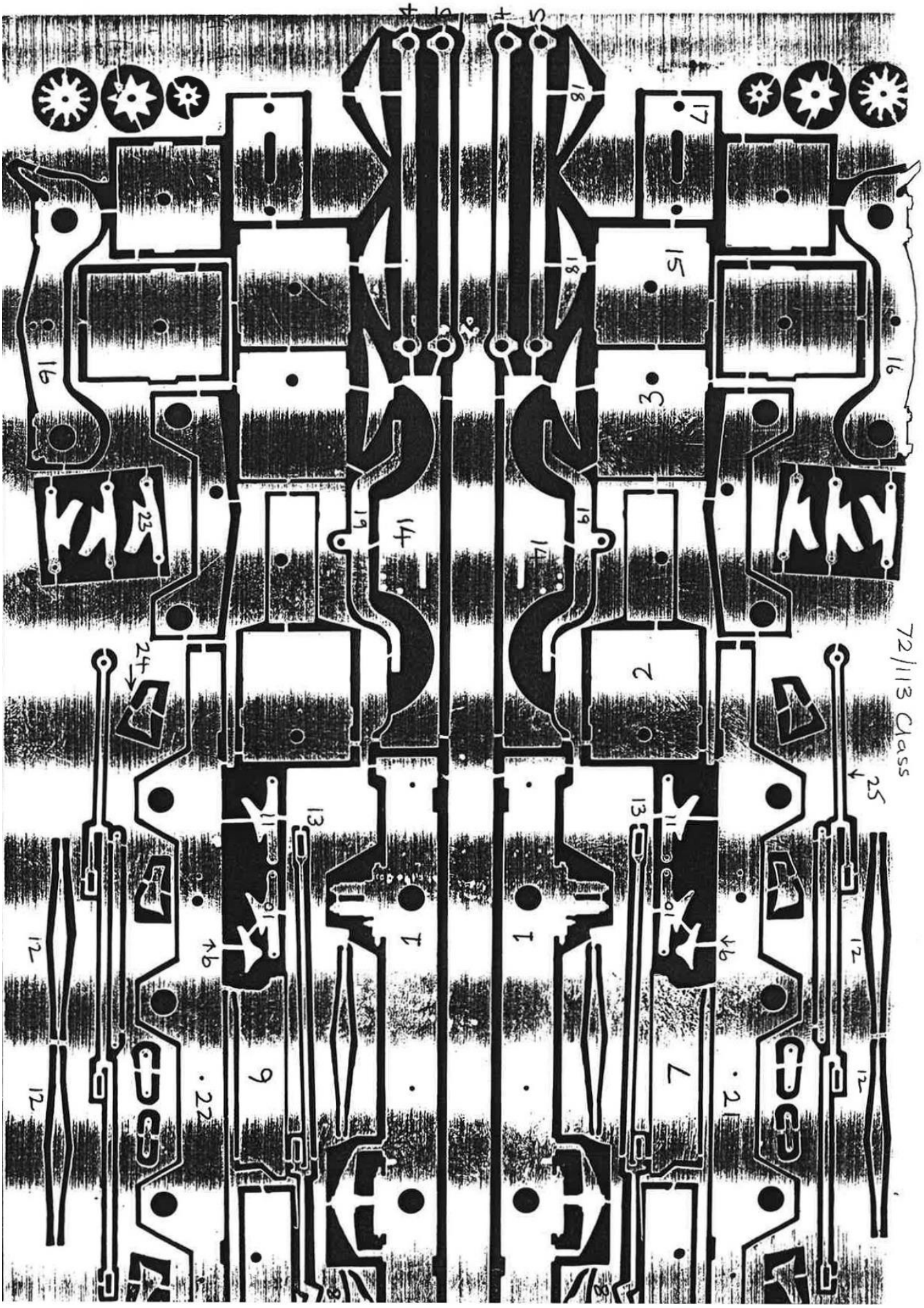
Tender body construction

1. Cut out the two parts of the tender body (65 & 66). Remove the half etched portions at the rear and then take 4mm from one end. Butt join the two parts together with a strip of scrap brass inside for strength. Clean up the joint outside and then use the top (67) as a jig to form the corners. Use 7mm bar for the rear corners and a 10mm bar for the front.
2. Bend and fit the coping corners (68 & 69) and clean up before proceeding.
3. Use the front coal plate (70) to bend the tender top (67) to shape (see drawing). When satisfied solder parts 67 and 70 in place.
4. Now solder the assembled tank to the footplate. The rear of the tank is 2mm forward of the rear of the footplate.
5. Add the beading (71) to the top of the front coalplate.
6. Bend up the lockers (72 & 73) and fit them and their lids (74). Add the wingplates (75) and the fit the lockers and lids.
7. Cut two small pieces of brass 5mm by 4mm and attach them to the wingplates to support the tender floor (76). The floor may need trimming to fit.
8. Take the rear coalplate (77) and attach the beading (78) to the rear followed by the two reinforcing lugs (79). Then solder the rear coalplate at the top of the slope in the coal space.
9. Add handrails, half round beading and half etched beading beneath the flared coping.
10. Part 81 is the support for the toolbox and is soldered crossways on the top of the left hand front of the coal space.
11. Attach the lampirons of your choice and the steps on the front end of the valances (83).
12. Drill out the buffer stocks 4.1mm to a depth of 6mm and then through 2.1mm. Fix the buffer stocks to the tender and then add vacuum and Westinghouse pipes, water tank fillers with the hinges facing the front of the loco.
13. Cut off the tender brake handle (84) from the sprue leaving a total height of 10mm and solder it centrally on the right hand locker next to the front coal plate.
14. Add the springs, axleboxes and hangers – these can be glued on. Check the photos as not all tenders have the hangers.
15. Fit the pipework along the valance on the left hand side and make a drawbar, then attach the cast brake cylinder and that completes the tender.

Alba Railway Models

Caledonian Railway 72/113 Class 4-4-0 loco kit



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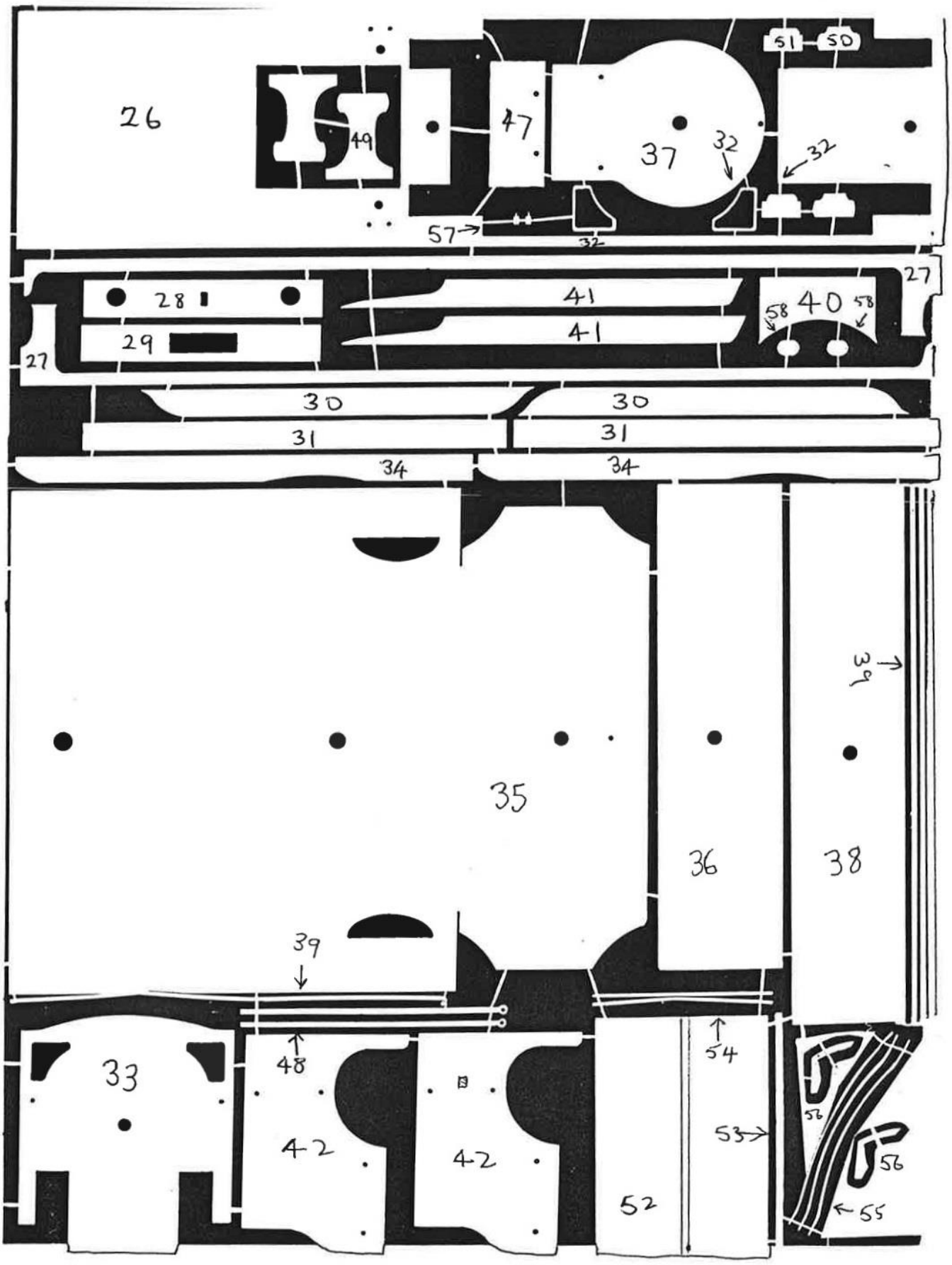

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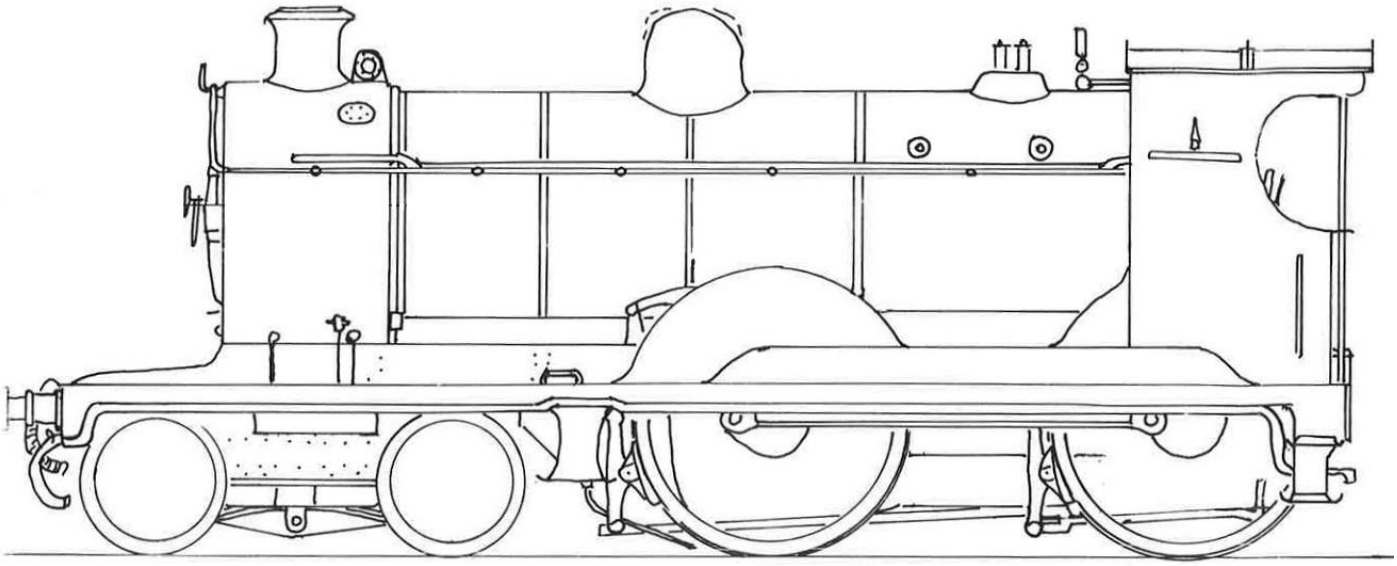

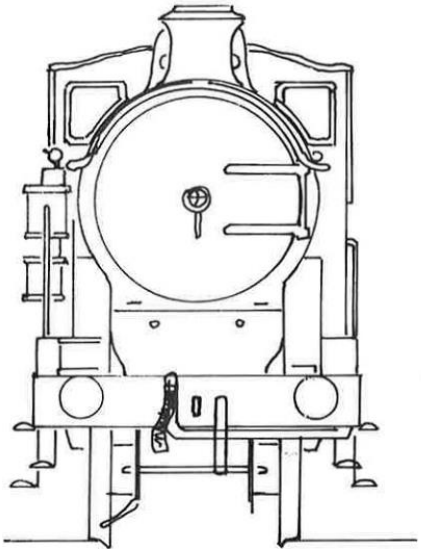

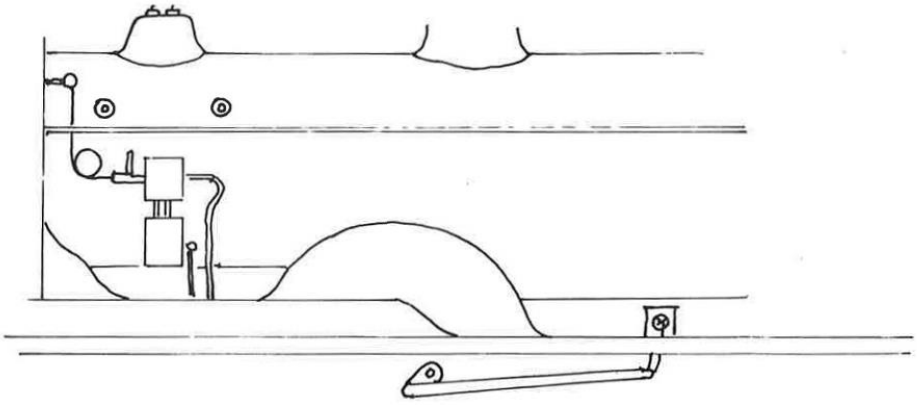

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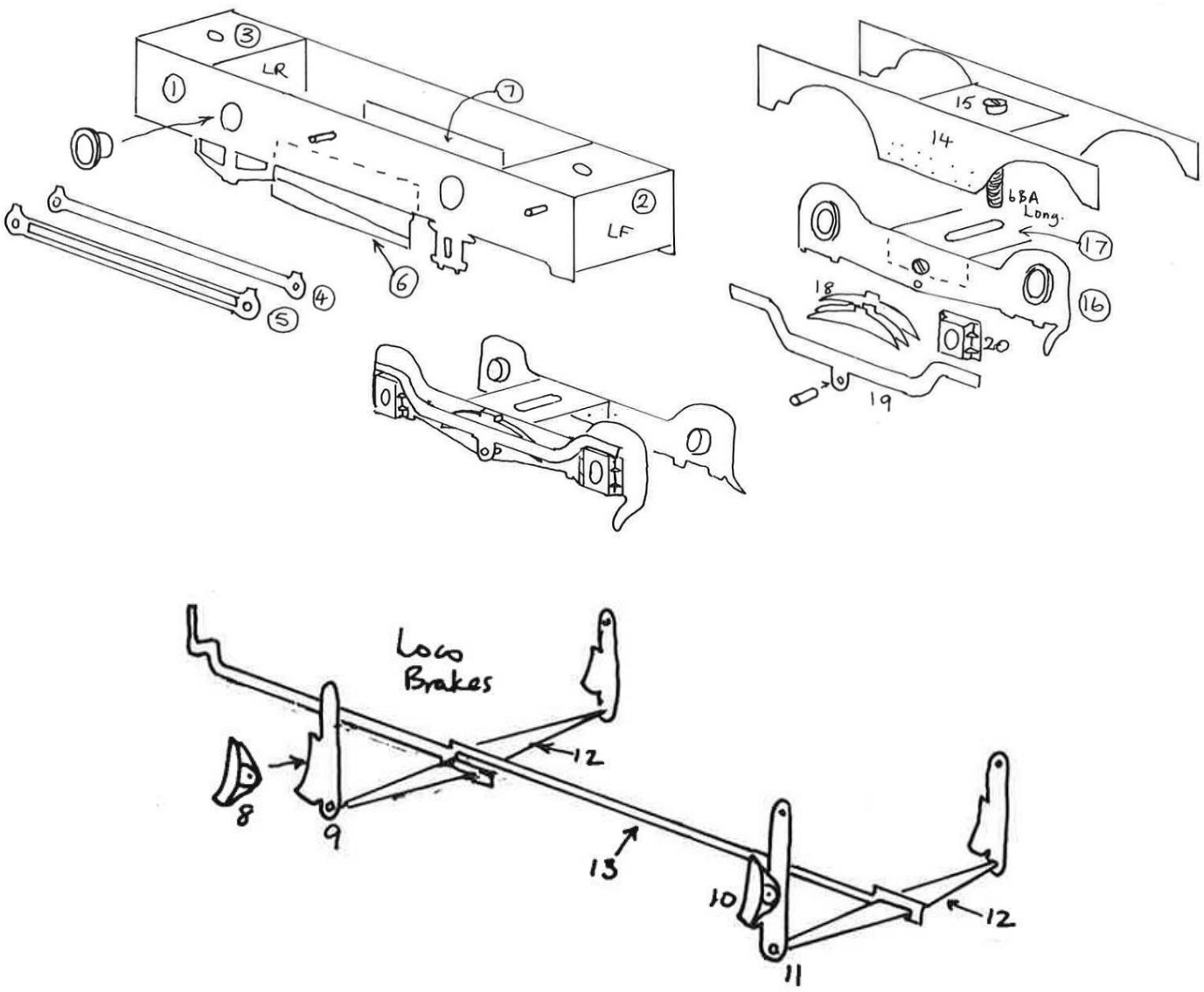

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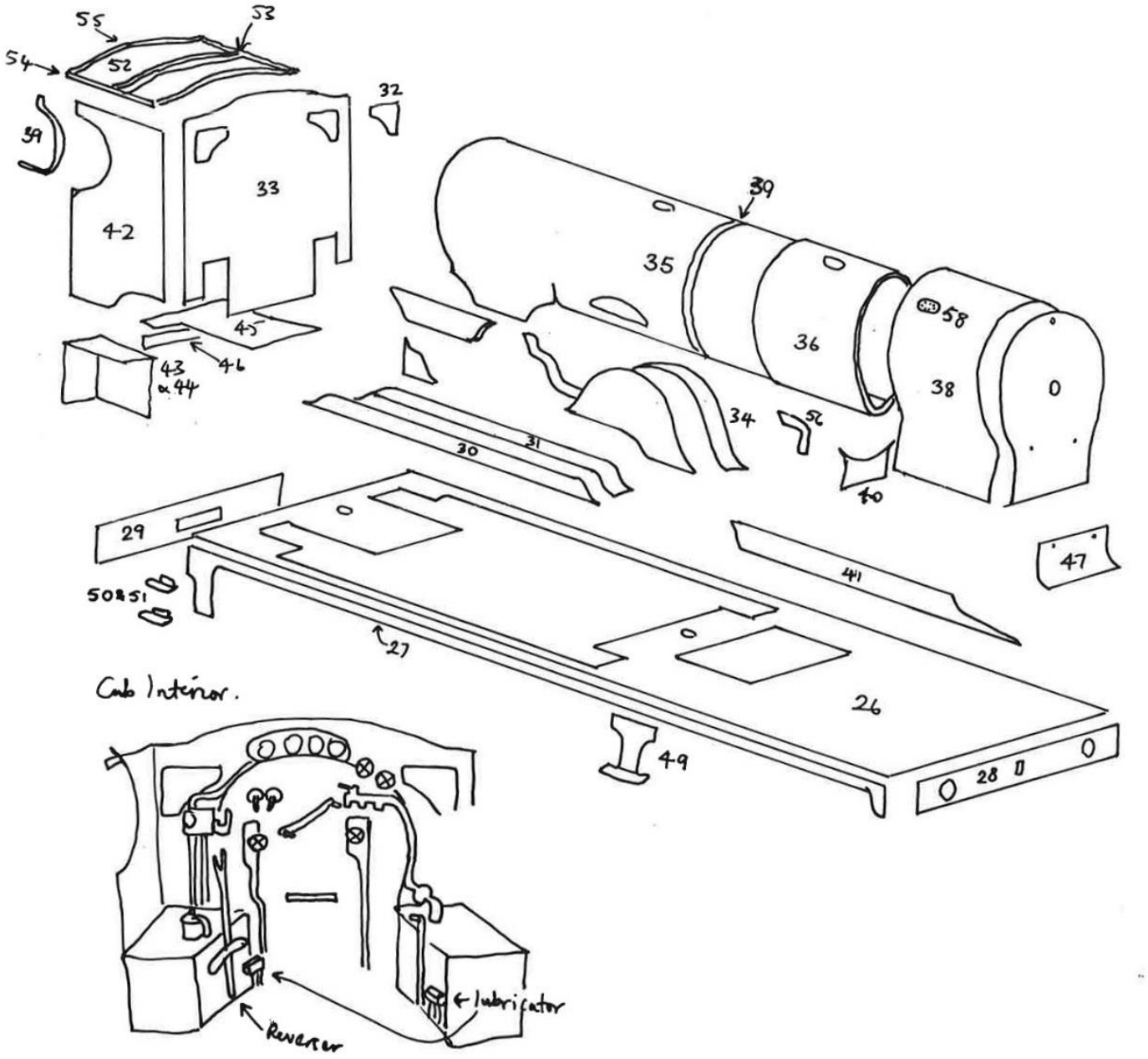

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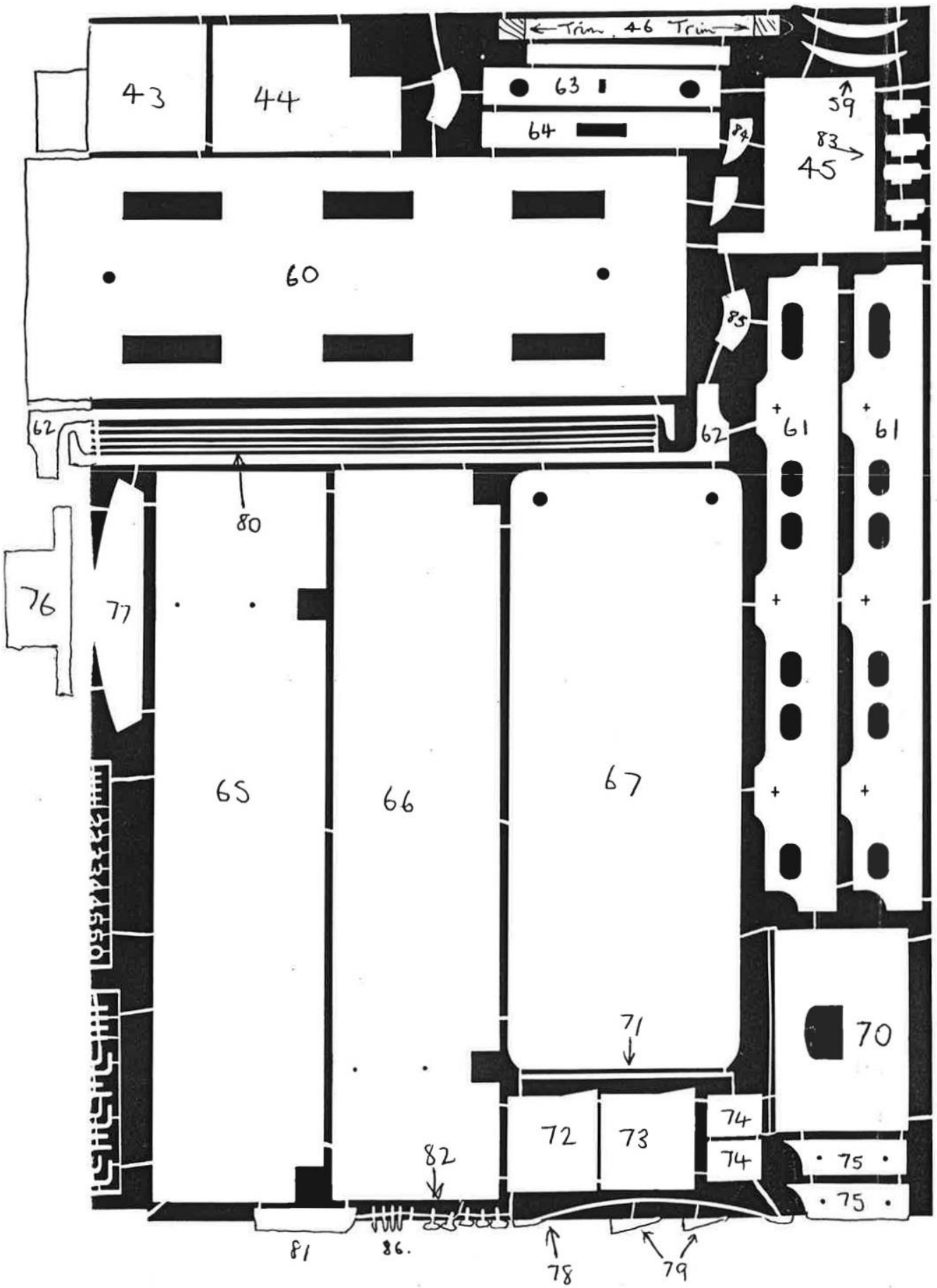

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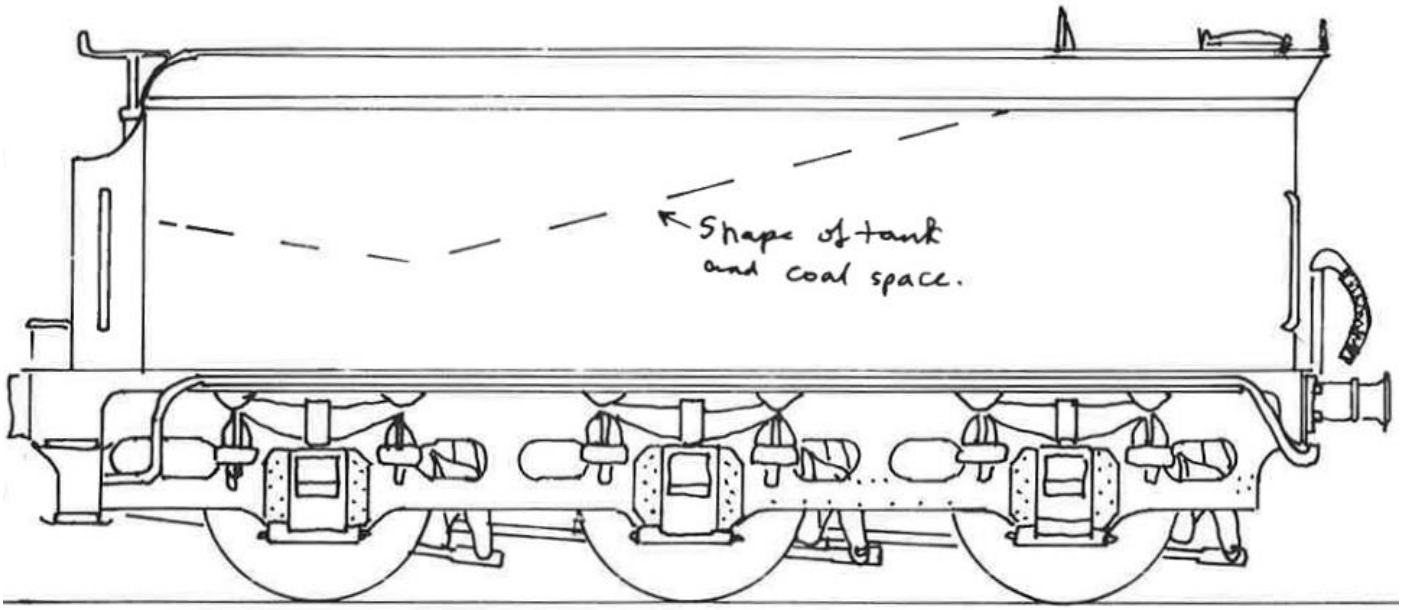

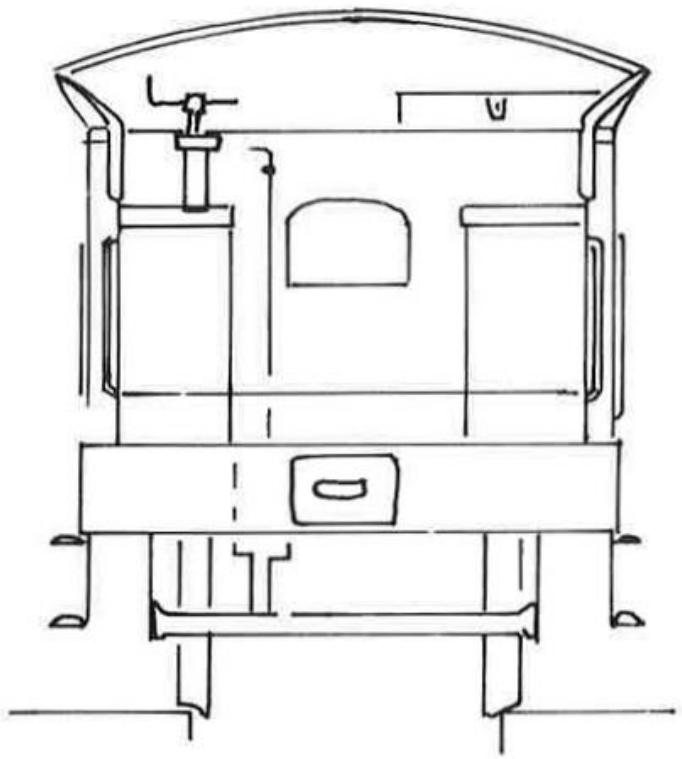

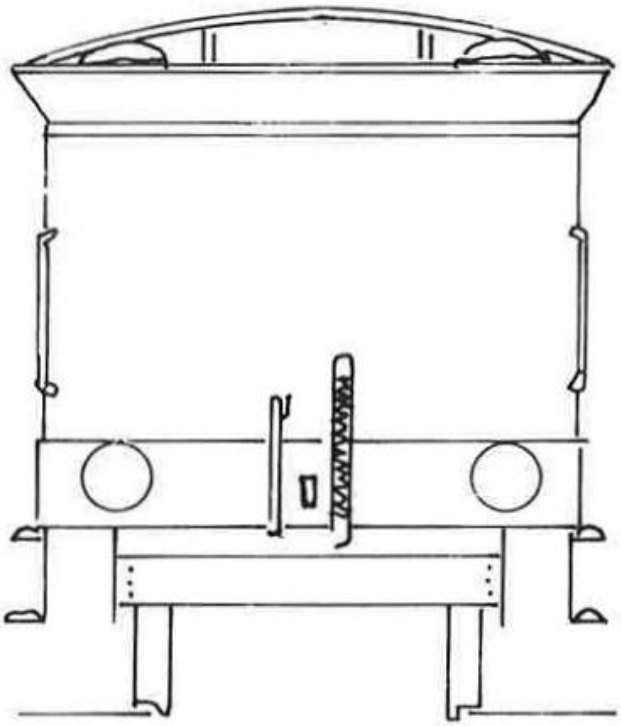

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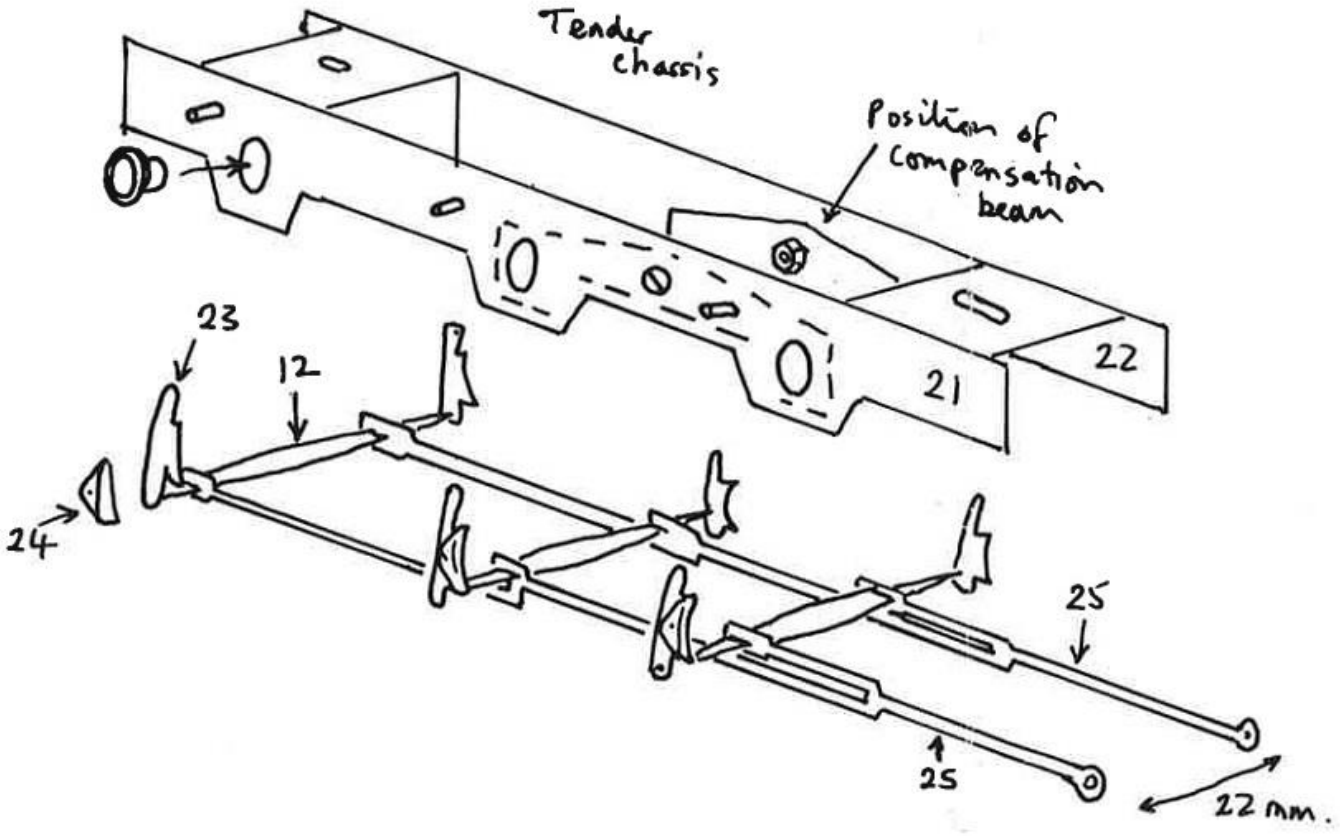

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