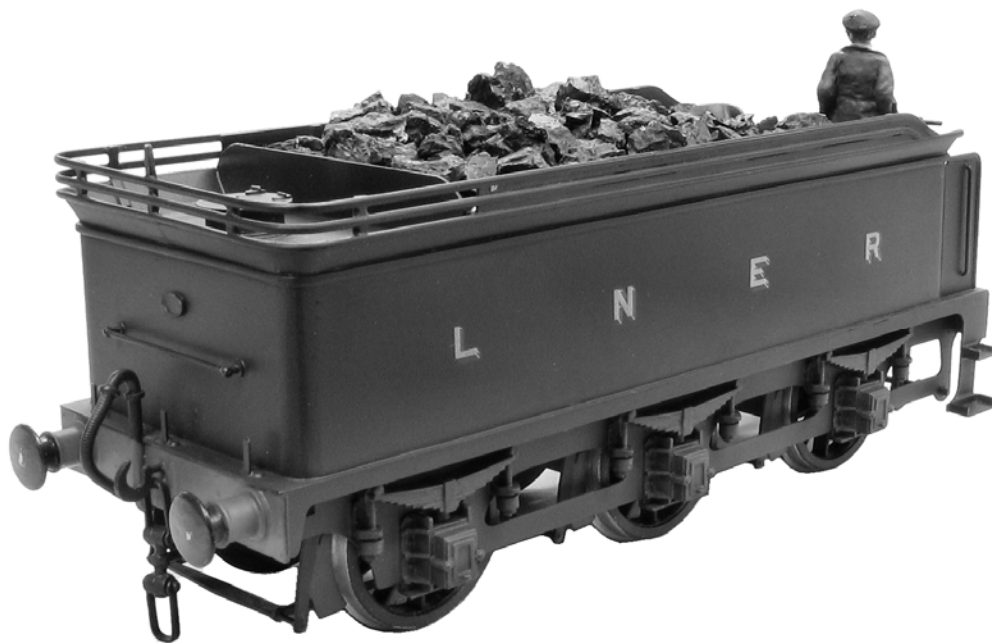


CONNOISSEUR MODELS

**Claymore Kits
NBR 3500 Gallon Tender
for use with LNER D32, J35 & J37**



Parts Required To Complete

3 Sets 4'0", 12 Spoke Tender Wheels (Slater's Catalogue Numbers 7848)

**Connoisseur Models, 1 Newton Cottages, Nr Weobley, Herefordshire,
HR4 8QX, Telephone 01544 318263, Proprietor Jim McGeown**

NBR 3500 GALLON TENDER FOR USE WITH J35, J37 & D32

In fact, there were some differences in these tenders but as these were mainly internal they can be discounted for these kits.

CHASSIS ASSEMBLY.

1. Inside Frames. You will find these in the N/S etch - DO NOT USE the brass. Remove from the etch.

2. Front Stretcher. Cut out and fold to right angle at half etched line.

3. Rear Stretcher. Cut out and fold as 2.

Solder 2. & 3. between the frames, locating tabs and slots. The verticals will lie between the frames to the dotted lines.

4. Axle Stretchers. These fit inside the front and rear axle holes to the dotted lines.

5. Centre Axle Stretcher. Fold to form a "U" and fit between the frames in the remaining top slots, again, the verticals to the dotted lines. Make sure none of the stretchers are proud at the top edges. Fit bearings, axles and wheels at front and rear and check there is no rock, if all is o.k., solder these four bearings in position, the centre bearings are left loose to slide in the holes. Now you can turn to the brakes. Cut 3 pieces of 0.9mm wire and 1 length of 1.2mm, all about 2" long. The 0.9mm is for the brake hangers so can be threaded into there respective holes and soldered, leaving an even overhang. Do NOT solder the 1.2mm yet.

6. Front Pull Rods. Remove from etch.

7. Brake Standard Rod. (One will suffice). Remove from etch.

Thread the 1.2mm wire into one frame, add one pull rod (6), the brake standard rod (7) then the second pull rod (6), Now thread the wire into the other frame and solder in position but do NOT solder the fittings.

8. Rear Pull Rods. Remove from etch.

9. Brakes. Remove from etch.

10. Brake Cross Beams. Remove from etch.

Insert one cross member between the front pull rods, into the holes at the rear end, next fit a rear pull rod to each side. Assuming you have two pairs of hands, slide a brake onto the 0.9mm wire and line up with the wheel, do likewise on the other side. Hopefully, this will stay tight enough for you to fit the other pull rods and brakes. When all the brakes are on, you can secure the three cross beams and the bottoms of the brake hangers. The front pull rods can now be soldered to the 1.2mm wire, about 2mm from each frame so they are about 20mm apart. Push the brake standard rod (7) up to the right hand pull rod and, with the rod part of 7. vertical, solder to the base of the stretcher (2). A little trimming may be necessary to attain the vertical. This should now be under the position of the brake standard, when it is fitted. Trim the hanger wires right up to the brakes but leave the 1.2mm wire to overhang each side by about 6mm.

You can now put the chassis aside.

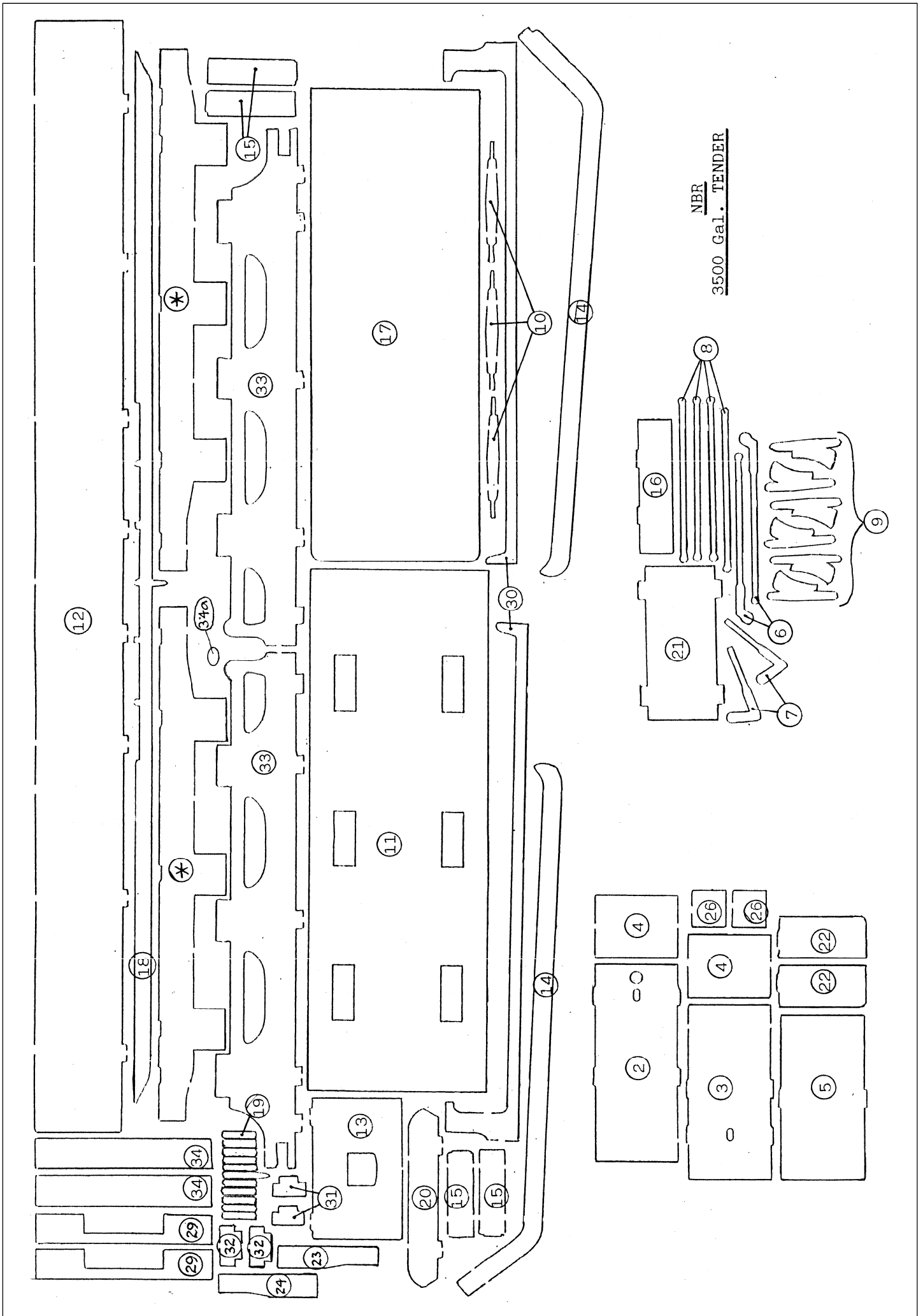
MAIN BODY ASSEMBLY.

11. Footplate. Remove from etch and note top and bottom. Solder an 8BA nut over each of the two fixing holes. The most forward of the holes is for the drawbar and will need some form of peg later but BEFORE the floor is fitted. (8BA screw will suffice as a peg).

12. Main Body. Carefully form the corners, this can be done over a screw driver, bear in mind the radius should be 3 1/2 mm (6"). Make sure the front ends are at right angles past the curves. Fit into the footplate (11). Form a handrail from 0.7mm wire to fit into the holes in the rear and solder in.

13. Coal Plate. Fit into the body between the ends. Note the half etched edges of the plate fit behind those of the body ends. Now take a length of half round wire, (long enough to go right around the main body but not the coal plate) and file the rounded side flat. Solder all the way around the top edge making sure it is straight and does not protrude above the top. Lightly file and tin.

14. Flaired Top. You will see this comes in two halves and needs joining at the centre/rear. Now comes the awkward bit - it must be shaped before fitting. Use the same screw driver as before but possibly in a vice this time as you will need both hands.



TENDER BODY ASSEMBLY Cont'd.

14. (From previous page). The trick is to have the bottom edge only at the screw driver as this edge needs to be exactly the shape of the body top but the top edge of the flair requires a larger radius at the curves. This is actually easier done than described. The two back corners are quite simple but you will need more care (and patience) at the front, these will (and should) look as though they are turning in on themselves. When you are content the shape is correct, solder to the top edge of the body, edge to edge, the half round at the body top will give some leeway. Any difficulty will come at the back join - this will separate if you let the iron dwell.

15. Narrow Coal Plate Supports. Solder into the body, into the slots to the rear and just in front of the centre wheel space.

16. Front Coal Plate Support. Solder into the slots immediately behind the front plate.

Before proceeding, make sure the 8BA nut is fitted to 11.

17. Top Coal Plate. Bend to shape, note the front half etched line is opposite to the norm. Fit into the body, onto the supports, the front edge level with the bottom of the coal hole.

18. Coal Rails. I know this is the later version but it makes life easier. Cut out and lay it face down.

19. Coal Rail Supports. Note the longer one! This is soldered over the centre of the rails and forms a lamp bracket. The other positions will, I think, be obvious. Now bend the rails to the shape of the flair top, making certain the lamp bracket is central but do not fit just yet. Get another length of half round wire. (Incidentally, to straighten this wire put one end in a vice, hold the other tightly in pliers and pull, not too hard, though, as it can snap.) Form one end to fit around the front / top of the flair, solder in position and work your way around, any difficulty will come in forming the other end. Now you can fit the coal rails, start at the back and work forward. Half round wire is then soldered into the half etched sections to form the rails proper, note the shapes at the front ends.

It is now time to consider the drawbar peg, if you are content with an 8BA screw it should be at least 1/2" long, solder into the forward hole in the footplate. Temporarily insert the chassis, the peg should go through the larger, front, hole. Remove the chassis.

20. Rear Top Plate. Solder into slots at rear of coal plate. Depending on how the flair was formed, this may need some light filing

21. Floor. Bend to right angle at the half etched line ON THE BACK. Fit into the slots at the front edge of the footplate and those in the front coal plate.

22. Side Plates. You may need to put a slight curve in the backs of these and file this edge, with the curve, to make them sit right up to the front curve of the body. Before fitting in place, solder a piece of half round wire around the leading edge as beading. Form a grab handle from 0.7mm wire to fit into the holes, the extra wire at the bottom/inside can be left but the top must be filed flush with the back of the plate. Now secure into the slots, up to the edges of the floor.

23. L.H.Tool Box. Bend to shape and secure in left hand corner of floor.

24. R.H.Tool Box. Bend to shape and secure in right hand corner.

25. L.H.Box Lid. Shape at line and fit over L.H. tool box

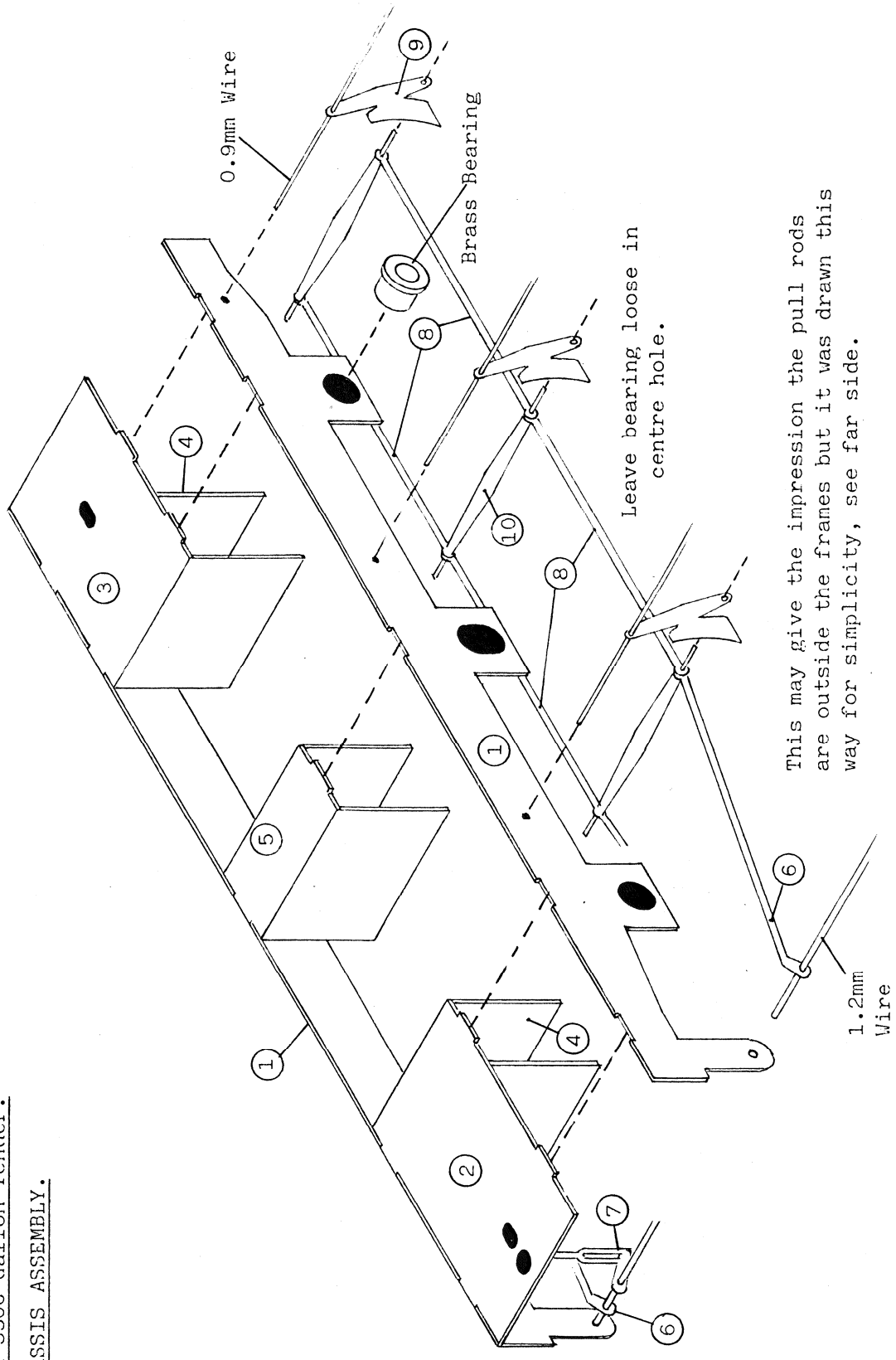
26. R.H.Box Lid. Shape and fit over R.H.tool box. It should be noted the L.H. box is slightly longer.

27. Top Tool Box. For the J35/J37 this is in the loco etch, the D32 is in the N/S.

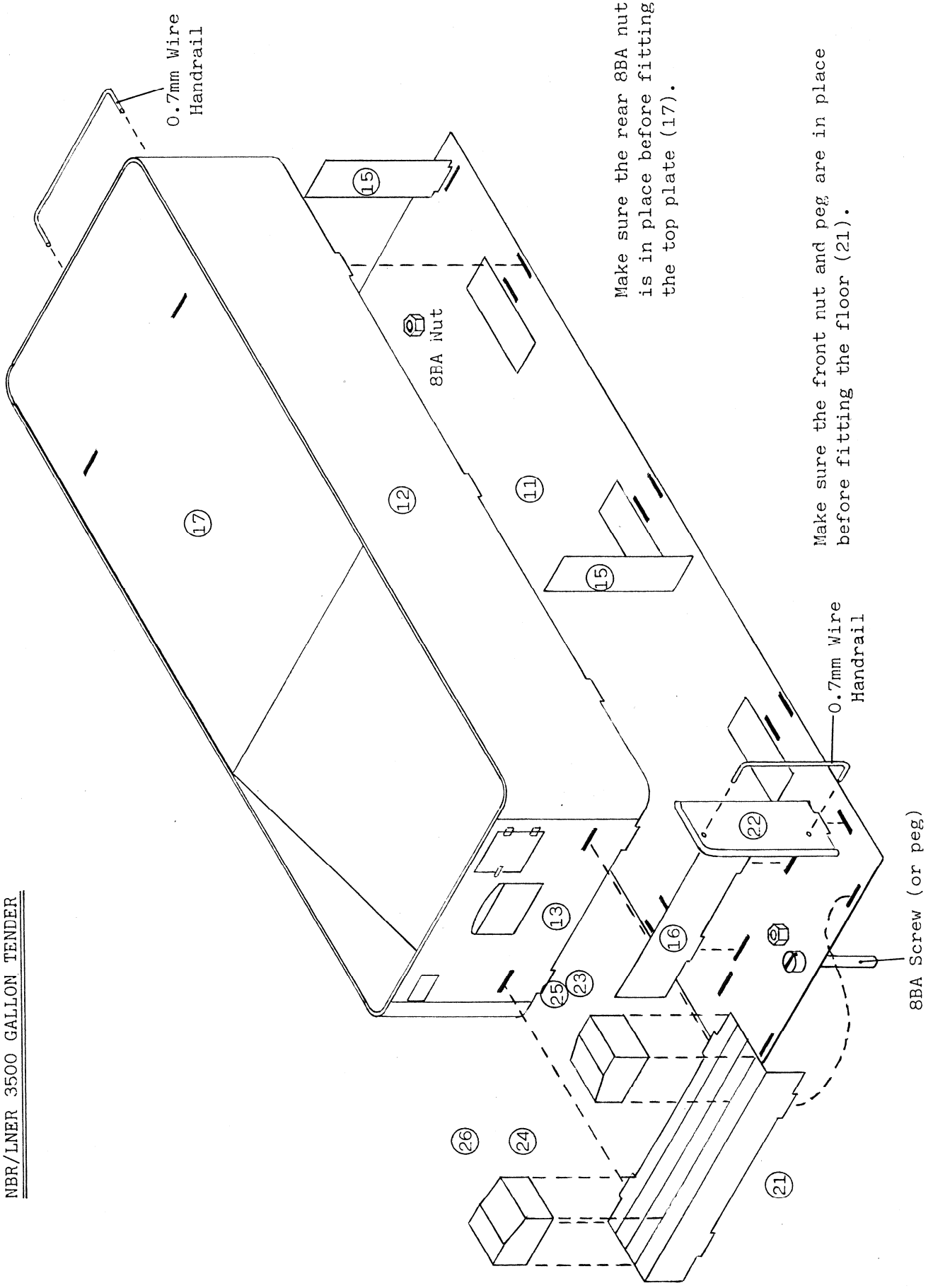
28. Top Tool Box Lid. I did not find out, until too late, that the N/S lid, i.e. the D32, is too long and so the front edge will need shortening by cutting or filing down to fit the box, the side edge is correct. I can offer no explanation as to how this happened so all I can do is apologise. Bend 27. to fit the lid and solder together, the completed box is then fitted onto the main coal plate, in the left hand corner.

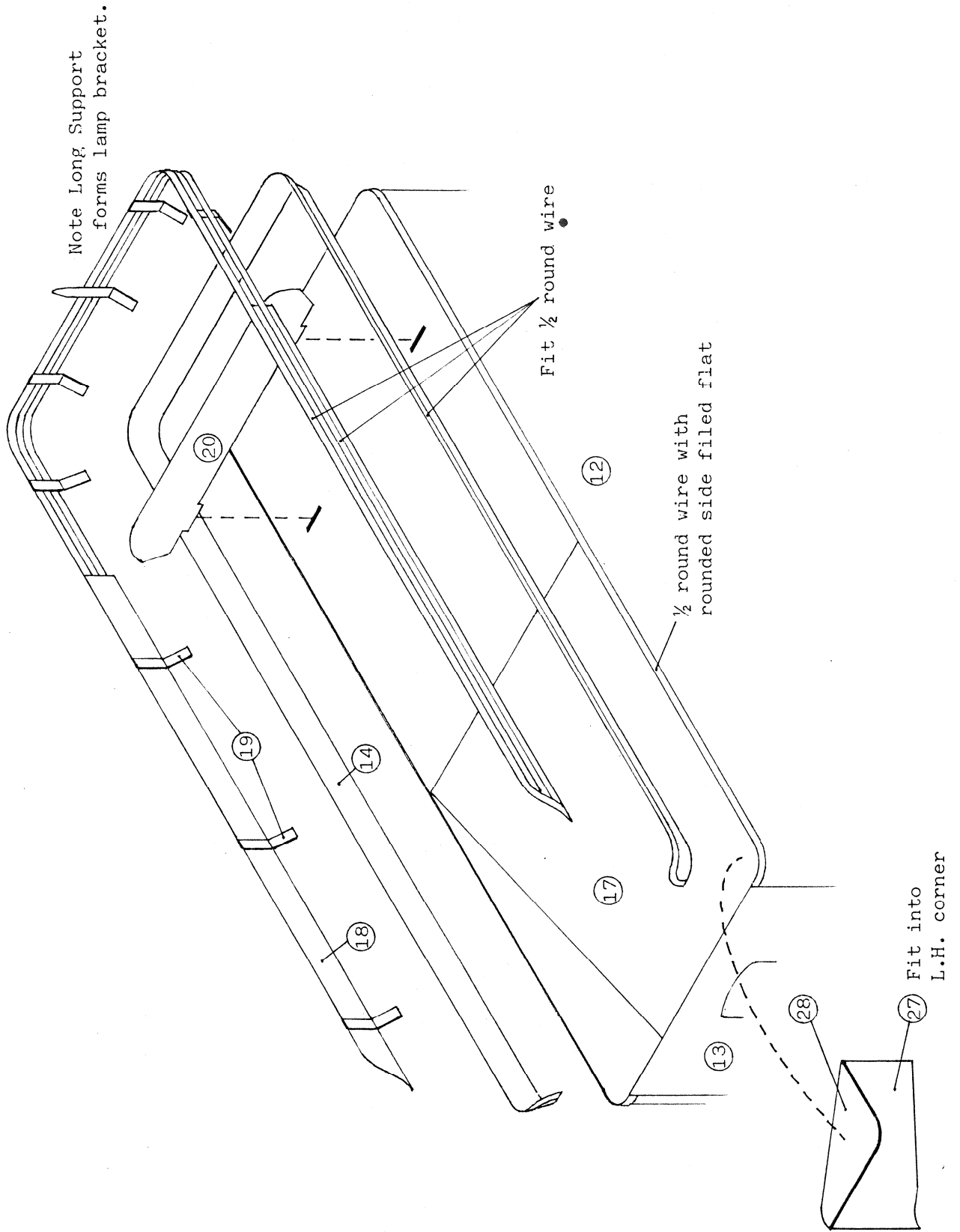
The tender top should now be complete.

NBR 3500 Gallon Tender.
CHASSIS ASSEMBLY.

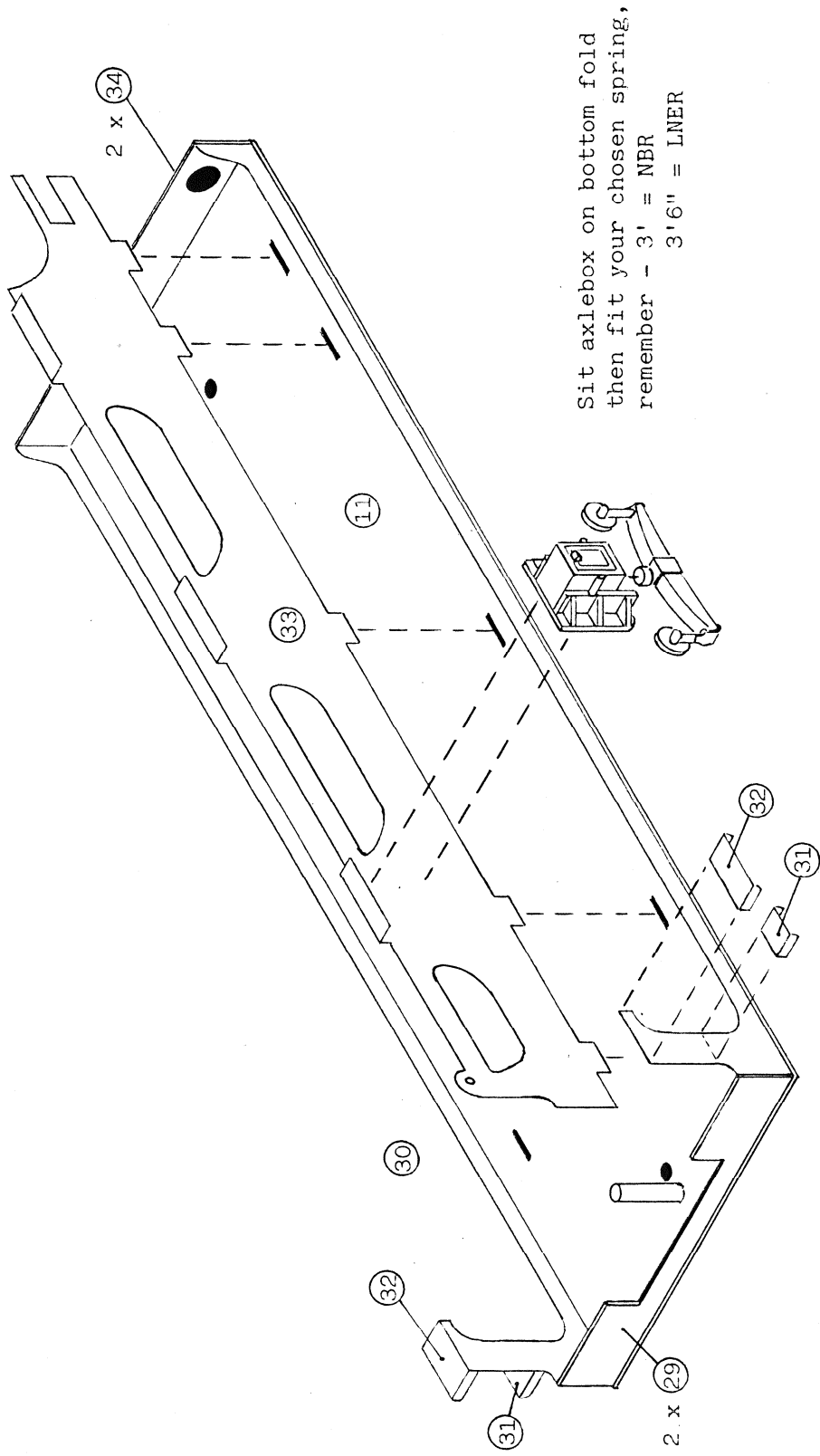


This may give the impression the pull rods are outside the frames but it was drawn this way for simplicity, see far side.





NBR/LNER 3500 GALLON TENDER



NOW TO COMPLETE THE TENDER.

29. Front Beams. Solder the two together, fit under the front edge of the footplate, up to the floor tabs protruding below.

30. Left & Right Hand Valances.

31. Top Step. Bend edges and solder to marks on valance.

32. Bottom Step. Solder to the valance at the bottom edge of the step back plate, below the top step.

Fit the valances into the half etched grooves in the underside, on the appropriate sides, they should be right up to the front beam with the steps at the front.

33. L. & R. Hand Main Frames. Bend up the axlebox supports then solder the frames into the slots in the footplate. The small holes at the front/base can be ignored, filled with solder or have a tiny piece of 1.2mm wire soldered into it to simulate the pull rod carrier. It was a mistake - sorry!

34. Rear Buffer Beams. NOTE THE TOP EDGES. Solder the half etched to the other. Secure under the footplate at the rear, up to the valance ends.

34A. Works Plate. Solder dead centre at the rear of the body, 18mm from the top edge of the footplate.

All the brass work should now be complete.

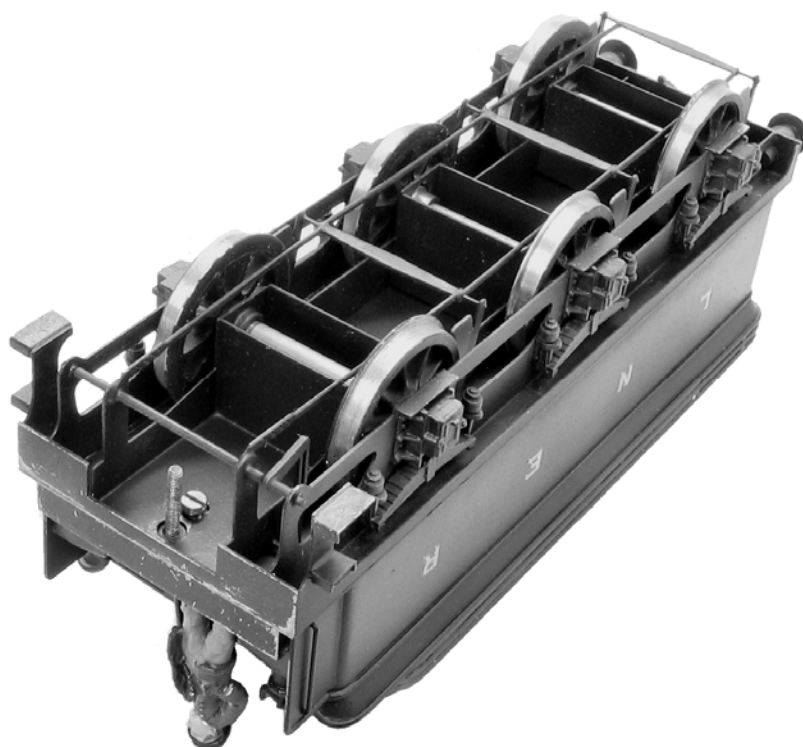
Fix the cast white metal axleboxes to the side frames, resting on their supports, make sure they sit centrally. The springs will fit above these, the nut beneath the lower spring resting on top of the axlebox, again - centrally.

N.B. THE SHORT (3') SPRINGS ARE FOR NBR AND EARLY LNER, THESE WERE LATER ALTERED BY THE LNER TO 3'6" AND EMPLOYED DIFFERENT HANGERS.

Both types are supplied.

Take the cast white metal brake standard and carefully drill a hole in the top to take a split pin. Form a small "L" shaped handle from 0.7mm wire, thread through the split pin and solder upright. Set this into the drilled hole to complete the standard. Check its length to sit on the R.H. tool box with back into the half etched rectangle on the coal plate. Trim if necessary and secure.

Finally. the tank filler (cast W/M). It was intended to fit this into a pre etched hole in the rear top plate but I forgot to draw this in (for which I apologise - again) so, either cut off the stem of the filler or drill a hole to take it, its center being 14mm from the rear of the rear top plate (20).



NBR 3500 GAL TENDER SUPPLEMENTARY INSTRUCTIONS

The main instructions were produced by George Dawson. If you have built a Majestic Models kit previously and are familiar with NBR locos you will probably find the main instructions adequate. I built a tender to go with a J37 loco and did things a little different to Georges instructions. I also found a few things that were not covered in Georges instructions. I suggest that you use these supplementary notes in conjunction with the main instructions. In a similar way to using a magazine constructional article or review to help you build a kit.

(1-10) I assembled the tender chassis in a similar way to the instructions. I opened out the front and rear axle holes with a tapered reamer before assembling the frames. I soldered the bearings into the frames by passing an axle through the bearings. This will help to keep them square and in line. I pushed the bearings out on the axle away from the outside face of the frames before soldering them in place. This is to reduce the side play on the front and rear wheelsets. I prefer this method to using the spacing washers that are on the loco body sheet.

I filed two flats onto the centre bearings to prevent them from turning in their slots. I also found that I had to file the bottom of the slot slightly with a half round file to give sufficient downwards movement of the centre wheelsets.

I preferred to tack solder the brakes (parts 9) to the 0.9mm wire across the chassis so that they lined up with the wheels. Then I fitted the pull rods (parts 6&8). If you find that the brakes are not in the right position. A quick touch of the iron at the joint with the wire will soon adjust them.

I also think that the brake standard rod (part 7) should not be between the frames but outside them. I soldered it to the 1.2mm rod, 4mm away from the L/H frame (looking from the tender front). This will leave the top sticking up in mid air but a length of 0.9mm wire, spot soldered to the outside face of the frame and the top of part 7, will provide a fixing for the top.

TENDER BODY ASSEMBLY

(11-15) I soldered the 8BA nuts over the fixing holes on the footplate by locking in place with a screw. I made a packing washer from card to fit under the screw head and put a little oil onto the screw thread. This prevented the solder flowing onto the thread or screw head and soldering it solid. I used 60/40 solder to give the nut fixing extra strength.

I used a 4.5mm & 5mm drill shank to help form the corners of the main body. I formed 2/3 of each of the back corners first, then offered the body to the footplate, then made any adjustments in the last 1/3 of the corner bends. I formed the front corners by using a block of wood to help press them around the drill shank. These front corners are a little difficult to get an even radius on, but do your best and dont worry, as the side plates, parts 22, will help to hide any irregularity. I found it useful to have the tender top, part 17, and front, part 13, to hand to offer in place to check on the forming.

Once the main body and coal plate are in place I fitted parts 15 to give a little extra strength to the sides. I then formed up the flared tops (parts 14). I formed the rear bend first and then the front. In this way you can adjust the front bend slightly to get them to the right length. I then placed the formed flares to one side.

I fitted half round wire around the top of the main body and when it was soldered in place I filed the rounded side flat. I found this easier than trying to file the wire before fitting. I found that four small electrical crocodile clips were very useful to clip the beading in place as I soldered it. I then fitted the flared tops, tack soldering in place first, then soldering solid once I was happy with the fit.

I then fitted the half round beading into the half etch at the top of the flare. I fitted a piece from the front, along one side, around the back and then half way along the second side. I then fitted a second piece from the front, down this side to the first piece, blending in the joint with a generous blob of solder. I found this better than trying to fit it all in one piece. By fitting this beading now I found that I could use plenty of solder to fill any gaps and blend everything in. But I found that it was a lot easier to clean up without the tender top, part 17, in place

(16&17) I filed off the tabs on part 16 and then fitted it 3mm away from the tender front. I drilled a 3mm hole in the tender top to mount the water filler. This should be on the centre line and 14mm from the slots for part 20 and 11mm from the back edge. You can then open up this pilot hole when you come to fit the casting. I then formed up and fitted the top coal plate, part 17. I found that I had to file a radius onto the front corners. I found that I had a bit of a gap at the tender front, but as this would be covered with coal, I did not worry about it.

(18&19) I found that fitting the coal rails was the most difficult part of the tender. This was probably because I am not used to working with half round wire. Scratch builders will probably find this bit a piece of cake but I did things a bit different to Georges instructions.

I soldered the coal rail supports, parts 19, to the coal rails using 60/40 solder. This enabled me to solder the coal rail supports to the tender flare sides, using the lower temperature 145° solder, in this way there is less risk of the supports coming away from the coal rails. Once the etched coal rails were formed up and fitted with all the supports firmly soldered to the flares and the plated in section soldered to the top of the flares. I sniped out the half etched coal rails at the rear to leave just the supports standing up. I then straightened two lengths of half round wire about 7½" long. I formed these up and soldered them to the supports so that the two ends finished about half way down the etched grooves in the plated in section. I fitted the bottom rail first and then the top one. I then fitted the four lengths of half round to complete the front section. I formed the curved section at the front first and then worked back to a joint with the rear half round wire. Blending in the joint with a blob of solder. I found it useful to anneal the end of the wire with the flame from a cigarette lighter before forming the curved end. I found it a lot better to fit the coal rails in these six separate sections rather than using two continuous lengths.

(20-28) These parts are all fairly straight forward and I fitted them in accordance with the main instructions. I found that part 27 needed about 1mm trimmed off its length.

(29-34A) Again fairly straight forward and I fitted them in accordance with the main instructions. The instructions refer to marks on the valances to locate the top steps, parts 31. There are no marks on the valances, so scribe two lines 11mm from the top edge, then fit the underside of the step to these. I fitted lamp irons (parts 119 from the loco body etch) to the rear of the tender footplate, five lamp irons for NBR, three for LNER.

I made up and fitted the coupling hook. I find it best to pass the shank of the hook through its slot in the buffer beam, solder well on the inside, then cut off the shank flush with the inside face of the buffer beam.

I then fitted cast buffers and vacuum pipe. The vacuum pipe is 6mm to the left of the coupling hook. File a notch into the footplate with a round file to allow the pipe to sit down flat onto the buffer beam, some locos also had a steam heat pipe. Fit axleboxes, brake standard and water filler.