CONNOISSEUR MODELS

Claymore Kits

LNER Class C15
North British Railway Class M

George Dawson of Majestic models originally produced this kit. When George reached the age at which you get a senior citizens railcard and start reminiscing about Churchill's speeches. He decided to sell his range of loco kits and concentrate on the more gentle pursuit of producing wagon kits. Knowing that George's kits had a very good reputation and a selection of NBR locos would complement my range nicely. I was very keen to purchase and produce them.

I have deliberately made very few changes to this kit and have reproduced George's instructions without alteration. There is some basic slot and tab construction to help with the location of parts. But the final squaring up of parts and crispness of construction is reliant upon the skills of the modeller. There are a number of parts that require curved bends. The distinctive half round beading and coal rails on the tender are made by fitting half round wire. None of these things are difficult but do require a degree of confidence and familiarity with etched kit construction. Because of this I would not recommend this kit to a novice modeller. The modeller who has built a couple of etched wagons and a simple tank loco kit should find that this kit provides a very pleasant challenge to their modelling skills and produce a very satisfactory finished locomotive.

Parts Required To Complete

2 Sets 5'9", 18 Spoke Driving Wheels (Slater's Catalogue Numbers 7869E)
2 Sets 3'6", 10 Spoke Bogie Wheels (Slater's Catalogue Numbers 7842)
1 Set 3'9", 10 Spoke Trailing Wheels (Slater's Catalogue Numbers 7845)
Plunger Pickups if desired (Slater's Catalogue Number 7157)
Available From Slater's Plastikard, Old Road, Darley Dale, Matlock
Derbyshire, DE4 2ER, Telephone 01629 734053.
1833 Motor and 40/1 Gear Set, Available from Connoisseur Models

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

NBR CLASS "M", LNER CLASS C15, REID 5'9" ENGINES.

A short history.

In March, 1911, the NBR ordered 30 of these from the Yorkshire Engine Company, in Sheffield, a rather unusual move by the NBR. Although an order for all 30 was placed, they were to be delivered in three batches so were not completed until 1913.

The entire class was practically unchanged throughout their lives although new boilers were being fitted from 1921. A new diagram was not issued until 1939 showing required alterations suggested in 1938.

NBR Nos. 1, 3, 141 and 265 had their wingplates removed in 1922 but these were replaced in the early LNER days. During Chalmers' time, the chimney was altered to a straight sided type but these were not fitted to all loco's. However, during this time, coal plates were fitted behind the rails on the whole class.

The first eleven built had the Westinghouse pump on the tank front at the right hand side, the remainder had it on the side of the smokebox but the earlier engines were altered to the smokebox position after grouping. A much later alteration was the fitting of a taller vacuum pipe in front of the leading buffer beam instead of behind it.

The whole class was taken over by British Railways but Nos. 7461/5, 7470/1 never recieved their 60,000 numbers. Seven egines, Nos. 67453/5, 67462/8/77/9/81 never recieved the lined black livery. The last two survivors were 67460 & 67474 being given push-pull duties on the Craigendoran - Arrochar line until 1960.

All the above and a lot more, can be found in the RCTS publication, "Locomotives of the LNER" volume 7.

About this kit - the "confessional"

As usual, I made a couple of silly mistakes on the original artwork but I sincerely hope these are now corrected, having been retooled. However, there are one or two things to watch out for!

Buffer beams. Holes will need to be drilled, just left of the vac. pipe, for the steam pipes.

Bunker. I know the splashers, inside the bunker, do not centre with the wheels but, as the wheel rims do not foul the underside of the foot plate, I never bothered to alter it!

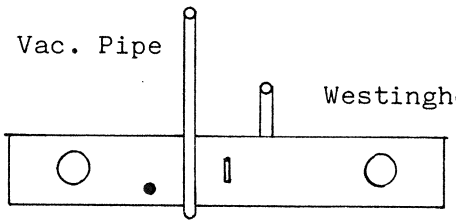
Westinghouse pump. The handrail knob on the right hand side of the smokebox makes it difficult, if not impossible, to fit the pump so I suggest two ways of altering this:-

1. Don't fit the knob or
2. Drill each side of the pump position and fit TWO handrail knobs with a gap between. This is how the prototypes were so fitted.

Steps. Strengthening stays are not supplied but are recommended.

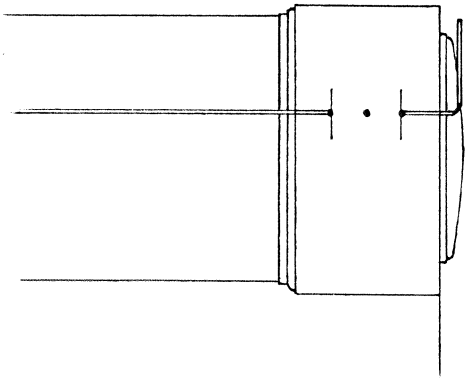
Cab rear windows. I know the guard rails are awkward but I think they look better than the etched type. If I get enough complaints, then I promise to etch the next ones.

Bunker Handrail. I deliberately left out the holes for this because I have a drawing showing a step and high rail but a photograph in RCTS volume 7, fig. 68, Loco. No.9041, shows a lower rail and no step. Since starting these instructions I have become increasingly bothered by this particular puzzle so have rechecked. The General Arrangement Drawing for the C15 shows neither step nor handrail but that for the C16 shows the step and handrail so I have decided to stick to the photograph. See page 1 of these instructions for the required measurements for drilling.

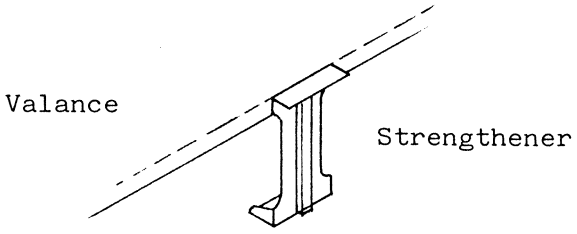


Drill 10mm from centre

APPLIES TO ALL MODELS (whichever era)

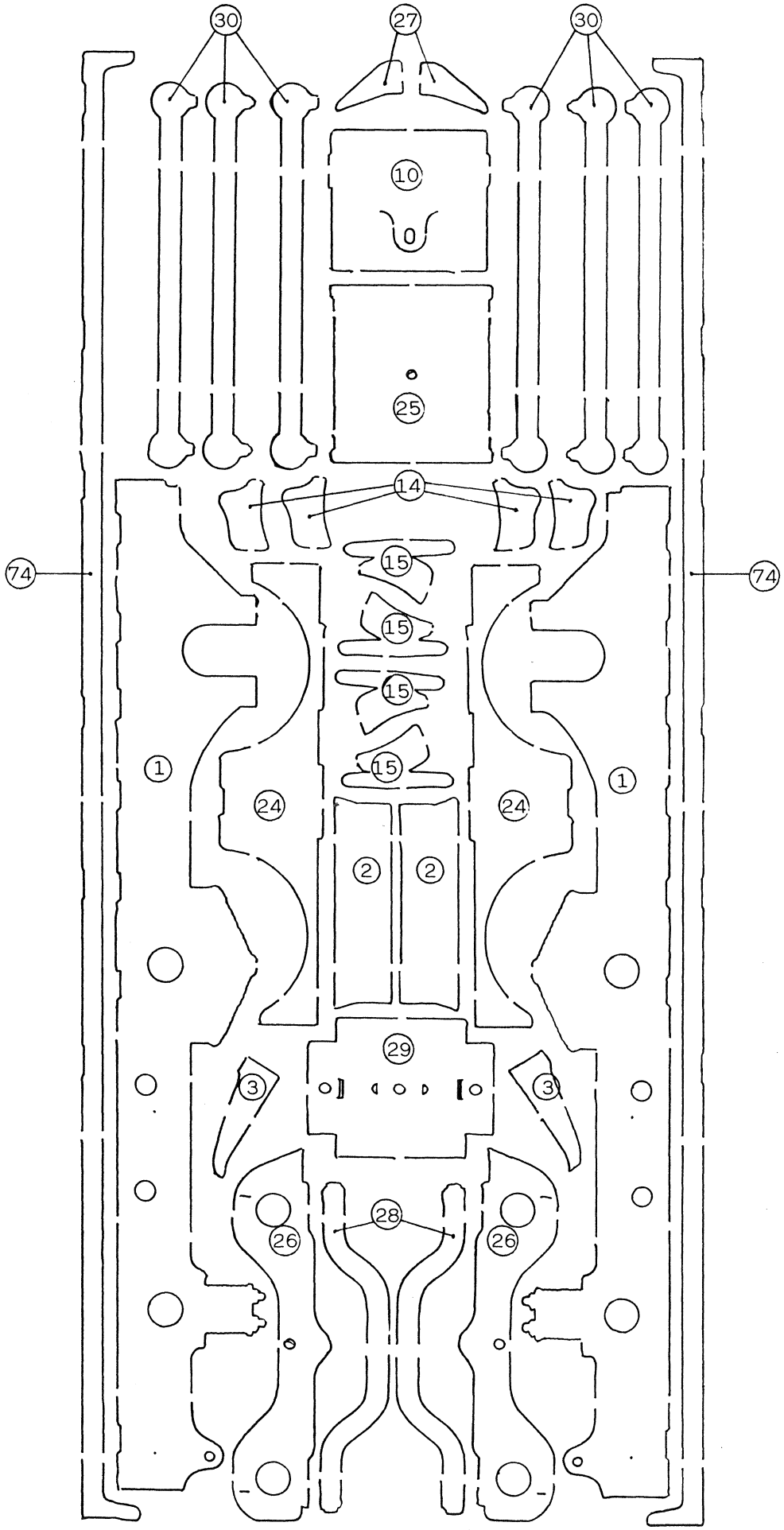


Drill smokebox @ 9mm
centres for h/rail knobs
Leave gap for pump.
Ignore original hole.

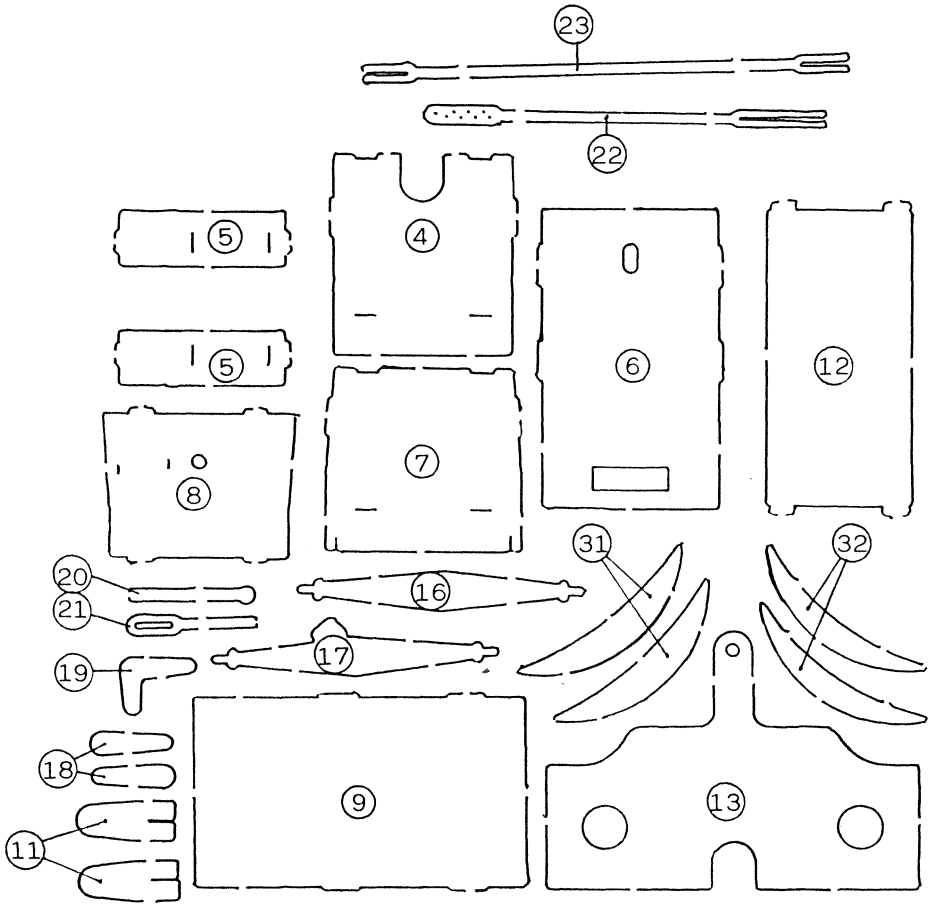


APPLIES TO ALL STEPS.

N.B. Parts # 1. Side frames. Both half etched lines are on the back although the bends oppose one another.



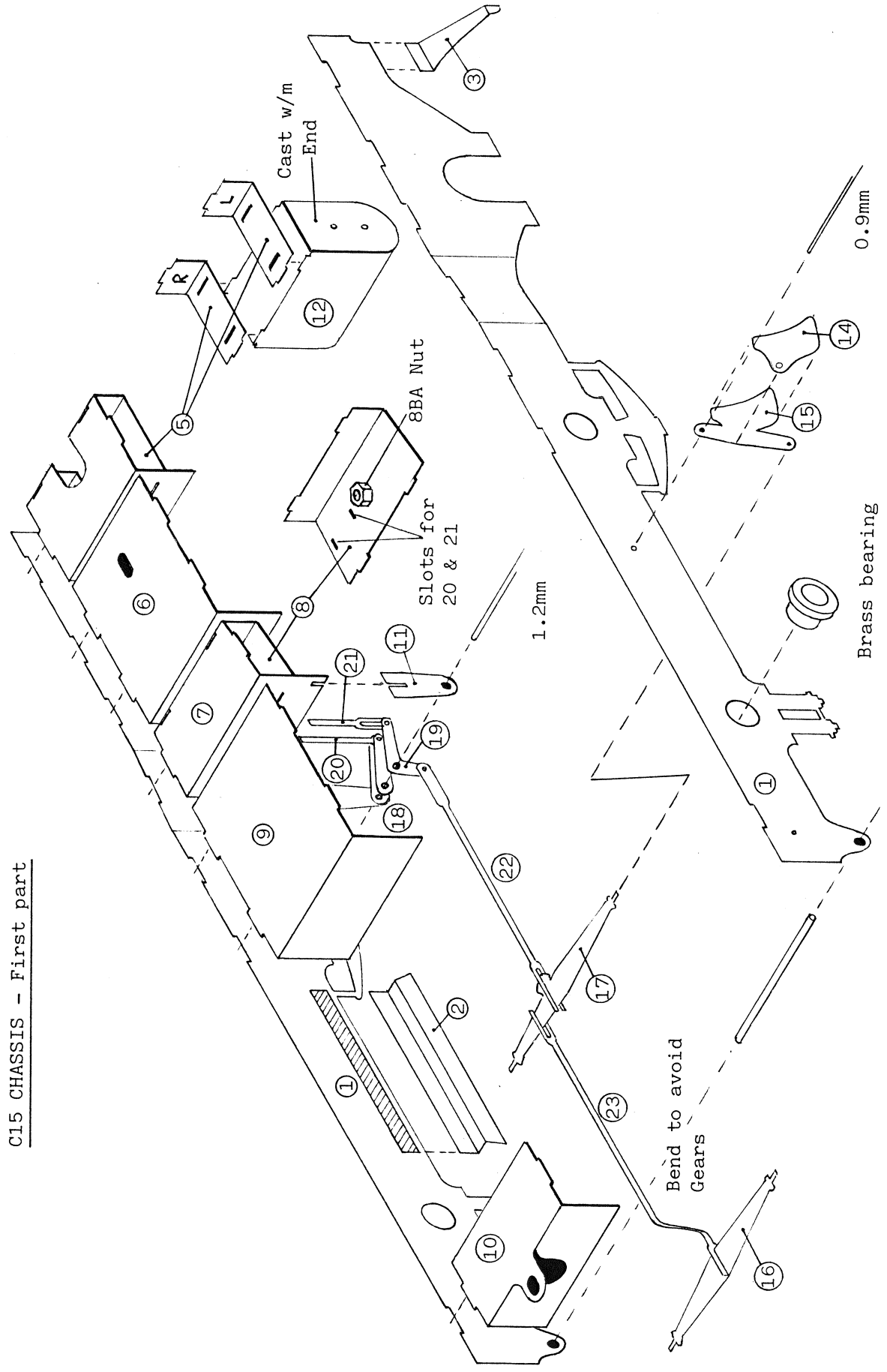
C15 Chassis N/S parts (see also page 5)

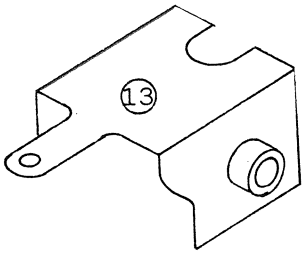


C15 Chassis N/S parts (see also page 4)

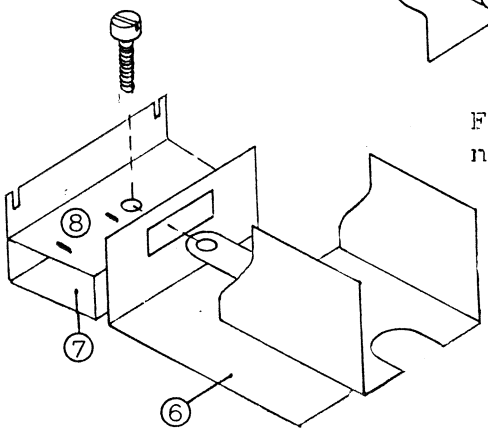
N.B. Part # 32. Balance weights for rear drivers. I can find no evidence these were actually used so you are probably better off ignoring them.

Part # 31. Balance weights for leading drivers - definitely!

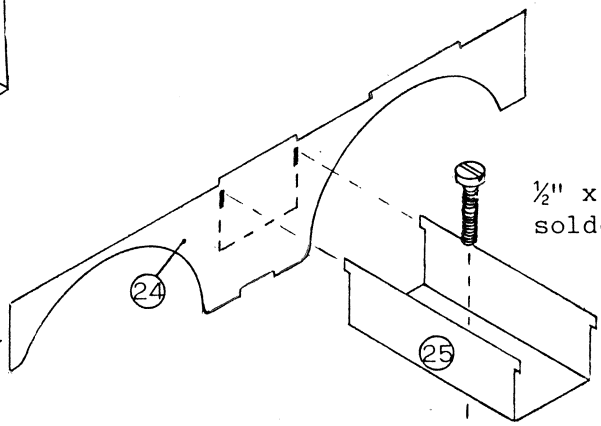

C15 CHASSIS - First part
Cast w/m End
8BA Nut
Slots for 20 & 21
1.2mm
0.9mm
Brass bearing
Bend to avoid Gears
L
R



Pony truck - fold to lines, fit bearings from inside.



Fit pony using 8BA screw into the nut previously soldered in position. on (8)

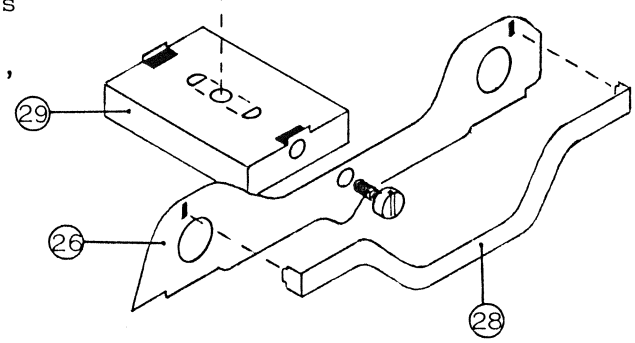


½" x 8BA solder in

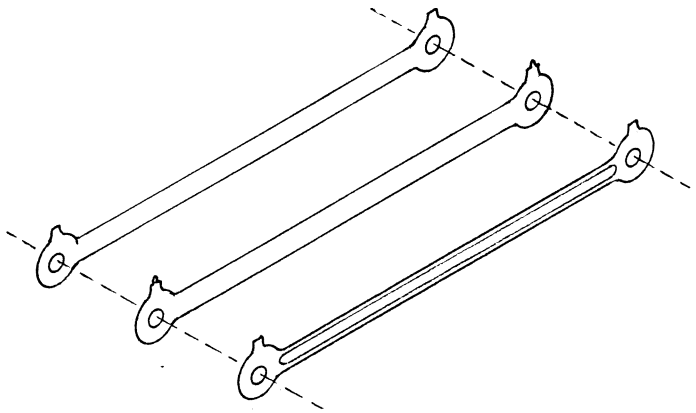
Note - This unit will fit into underside of footplate.

The Bogie - If your layout has long radius bends, the centre hole in (29) may be quite sufficient, if a "sloppy" bogie is needed, cut out to half etched marks.
For the former, insert rear bearing from inside, front bearing from outside.
If "sloppy", both bearings from outside.

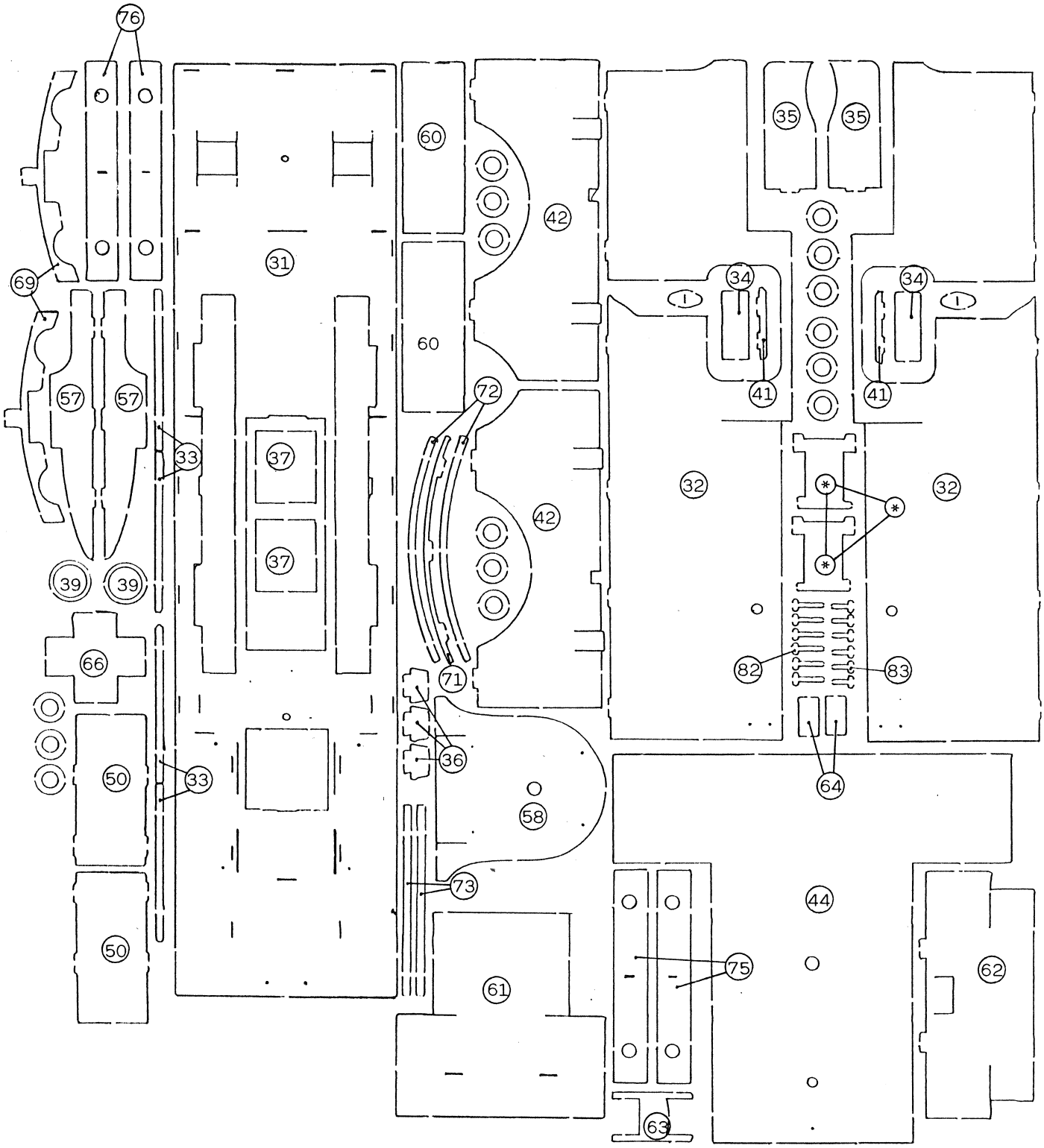
If you require some compensation, tighten 8BA nut & ¼" screw then turn back ¼ turn on one side.



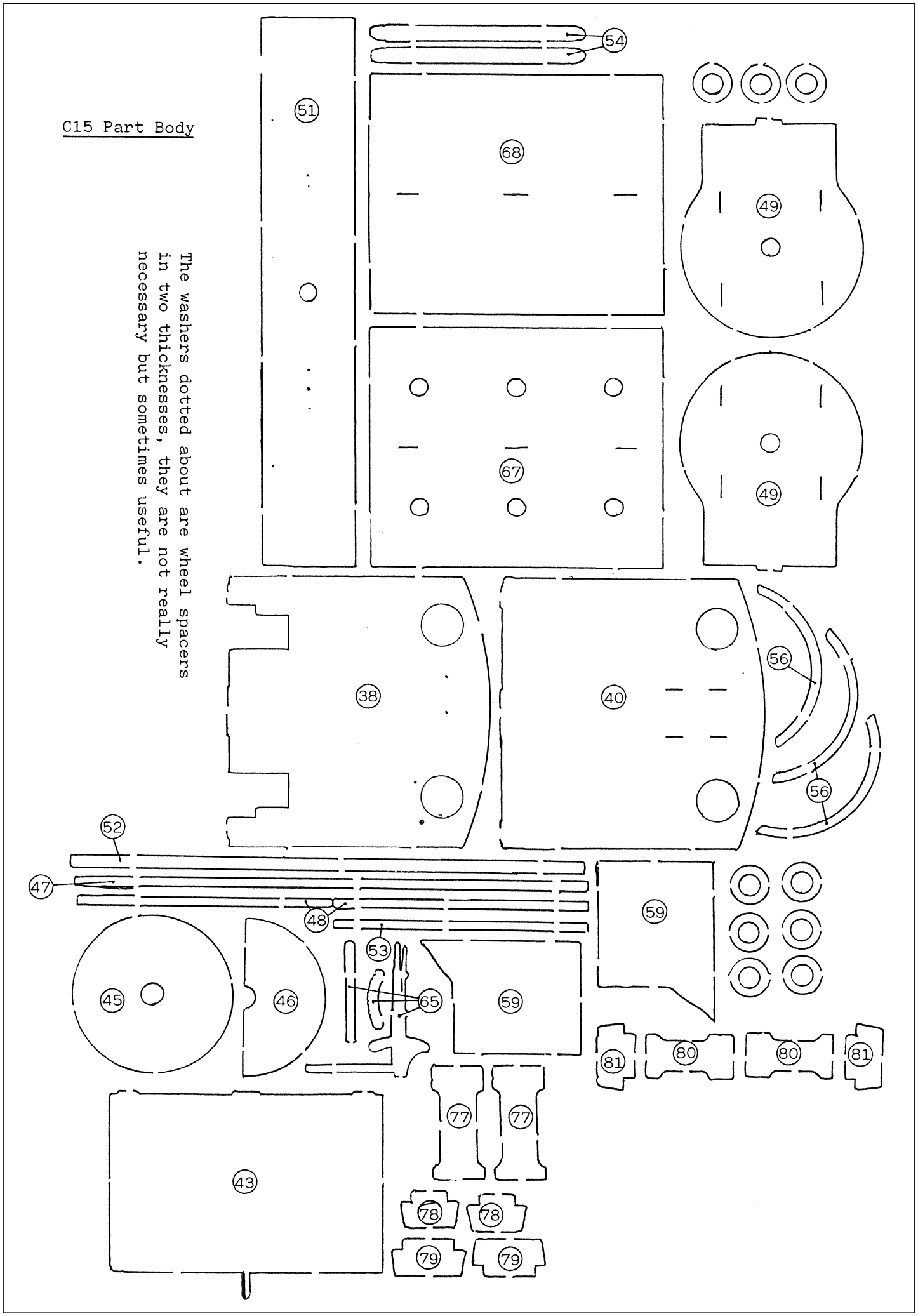
N.B. The side screws MUST be inserted before fixing the equalising beam (28)



Coupling Rods (30)
Laminate three together, note centre rod and half etched outside rod.



* I am yet to find out what these are, I think they should be with my next project but, if you need them, they can be used as doors.


C15 Part Body
The washers dotted about are wheel spacers in two thicknesses, they are not really necessary but sometimes useful.
54
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C15 BODY ASSEMBLY.

Although I believe the chassis to be self explanatory, there are a few points you should know about the body. Whilst the following sequence is how I built my sample, it is not necessarily the best and is given as a guide only.

31. Footplate. Bend up splasher ends in bunker area. BEFORE GOING FURTHER
32. Main Body Sides. Do not curve tank tops yet. # AT END.....
33. Cabside Beading. Fit into cab cut outs.
34. Cab Floor Ends. Fit into cab sides, the half etch will show where.
35. Tank Ends.
36. Tank End Steps. Fit one to each tank end unless your model is among the first eleven built, in which case, fit left hand side only so you can fit the Westinghouse pump to the right.
    Three steps have been provided as some drawings show one fitted to the bunker rear, however, one photograph clearly shows this area is blank.
    Fit handrail knobs and rails to cab sides.
    You can now curve the tank top using (35) as a template.
37. Bunker Splashers. Fit over cut outs in bunker area.
    Fit sides and tank ends into footplate, make sure plate is dead flat and solder from inside.
38. Cab Front Spectacle Plate. Note "Face Forward"
39. Spectacle rings. Solder over window holes.
    Fit (38) between sides into slots in footplate.
40. Cab Back Spectacle Plate.
41. Cab Angles. Fit into slots in cab rear.
    Fit guard rails using 0.45mm wire.
    Fit cab back between sides into slots.
42. Tank inside Walls. Fold tabs down, these will hold the boiler.
    Fit inside the tanks, tabs pointing in.
43. Bunker Back. Curve and bend to fit between body ends.
    Fit the remaining (36) if you think necessary.
    Using the ½ round wire, form and fit the coal rails, the bottom one is best fitted first.
44. Pre Rolled Boiler.
45. Front Boiler Plate. Solder into boiler front keeping tight.
46. Rear Boiler Plate. Solder into boiler rear end. Now solder along the boiler base join, THIS MAY NOT NEED OVERLAPPING.
47. Boiler Band. 0.018". Solder into first half etched groove, right around boiler.
48. Half Boiler Bands. Fit into two remaining grooves.
    Test boiler between tanks, you may decide to file the tank edges to allow for the boiler bands. Put boiler to one side for a while.
49. Smokebox Front & Back Plates.
50. Smokebox Plate Spacers. Fit between plates (49) making certain they square and parallel.
51. Smokebox Wrapper. Curve to shape and fit around the two plates, it is best to start at the marks and work each way, again, keep tight. Temporarily insert boiler and smokebox and line up. NOTE the three holes in the smokebox should be on the left, the two lower down fit to the front. Tack fit boiler and smokebox together, make sure the overhang between the two is even. If happy, make solid and fit the whole boiler in position between the tanks.
52. Smokebox Boiler Band (½ etched). Wrap and fit around boiler up to smokebox. Form a ring from 0.9mm wire to fit around the band, again, up to the smokebox, fill in with solder and file, leaving the back round. This can be done using square section with one edge filed round.
53. Firebox Band.(½ etched). Fit around boiler, up to cab.
54. Angle Strapping. Fit over boiler, between broken lines, the ends will bend up to sit on the tanks, solder in place.

C15 BODY ASSEMBLY Cont'd.

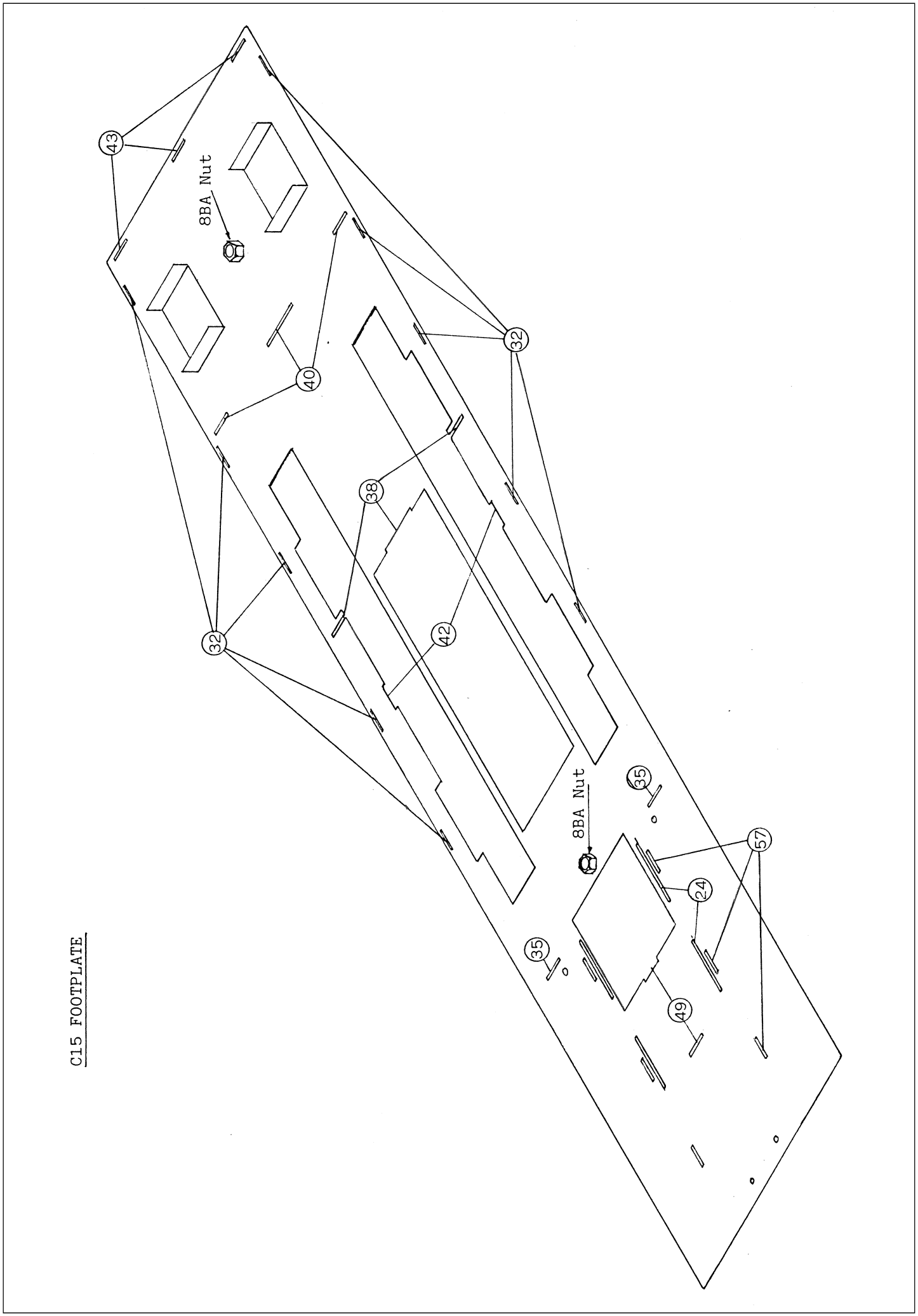
55. Doesn't exist!!!
56. Strap Angles. Fit one into each of the grooves of the strapping, fit the third over the half etch band up to the cab front.
57. Mainframe Extensions. Fit into slots at side of smokebox but first push out the rivets and form, then fit, grab handle.
58. Wingplate. Fit over mainframes, up to smokebox front.

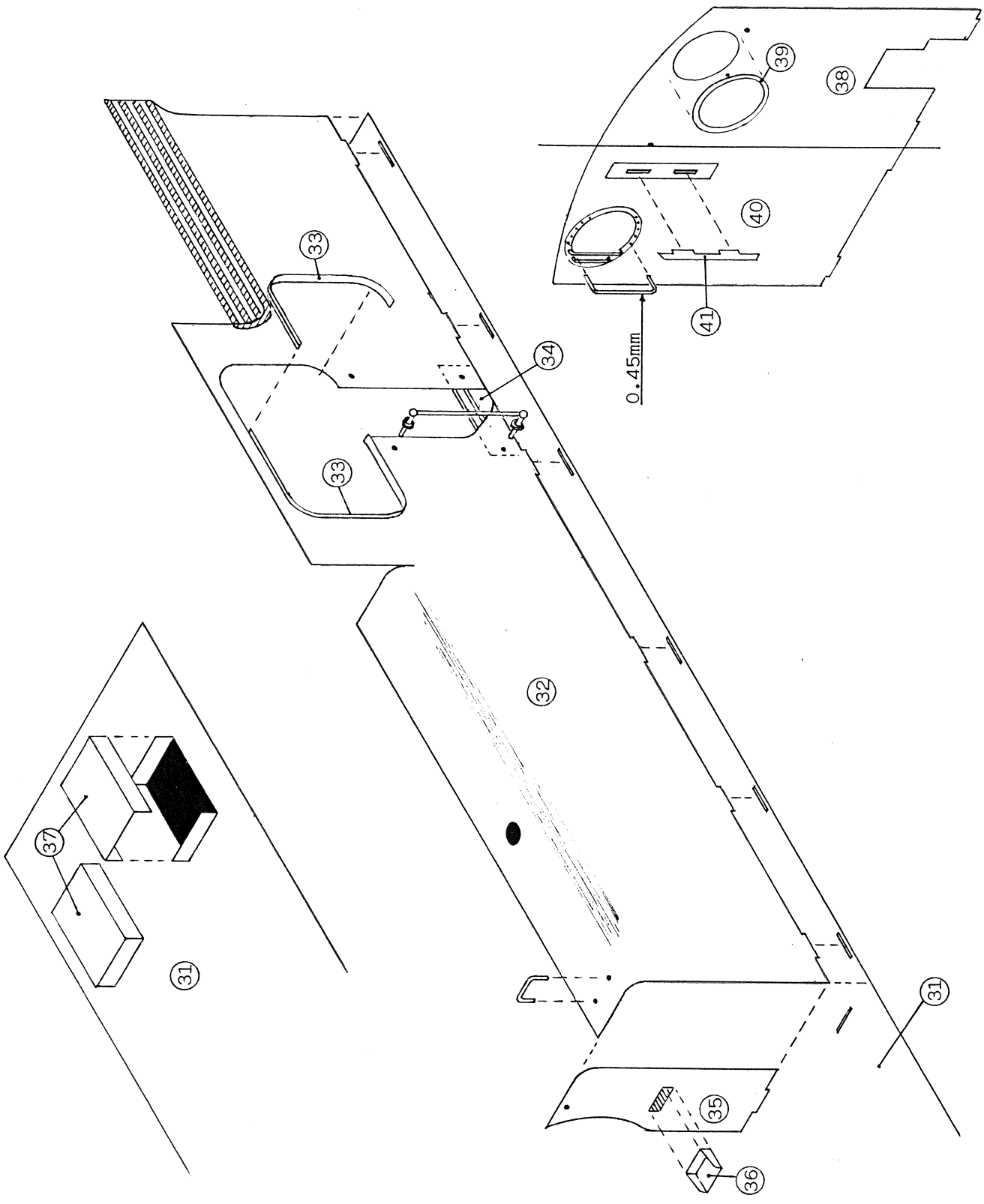
You now turn to the cab.

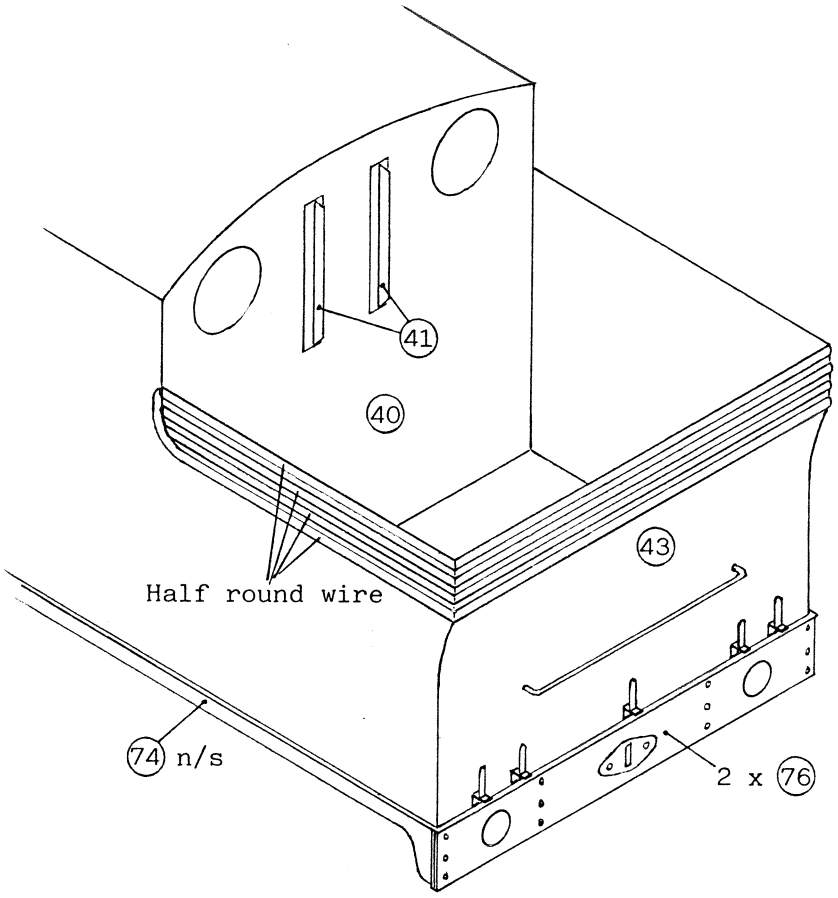
59. Splasher Sides.
60. Splasher Tops. Fit AROUND sides then solder into cab at side and front plates.
61. Floor. Bend to lines on the back and fit into cab, between splashers
62. Cab Coal Plate. Bend to shape, don't forget coal hole floor.
63. Coal Hole Door. Fit around hole in plate.
64. Cupboard Lids.
65. Reversing Lever. Make up and fit to left hand splasher side.
66. Top Cupboard. Bend to form box and fit between marks at top of cab.
67. Inside Roof.
68. Outside Roof. Laminate to (67).
69. Roof Stays. Bend tab and fit to marks on inside roof. Tack fit only as this may need adjustment to get a tight fit into cab so there is no need to permanently fix roof
70. I've done it again - there isn't one!
71. Centre Roof Angle. Fit into slots in roof.
72. Front & Back Roof Angles. Fit to curved edges.
73. Roof Side Edge Angles.
74. Valances. These will be found in the nickel silver etch.
75. Front Buffer Beams. Laminate the two together. If you think your own model had welded beams, reverse them so the rivets do not show then add the separate coupling plate. N.B. FRONT BEAM IS WIDER THAN REAR
76. Rear Buffer Beams. NOTE ARROW POINTING TO TOP
77. Cab Step Back.
78. Cab Top Step. Fit to back.
79. Cab Bottom Step. Fit to back then under cab. Remember strengthener.
80. Front Step Back.
81. Step. Fit to back then behind valance level with grab handle.
82. Rear Lamp Brackets. Five of these were fitted originally but I think this was reduced to three in late LNER days. These are awkward little beggars and I found it easier to drill their positions (a fine drill) and cut off the bottom and fit into the holes.
83. Front Lamp Brackets. A lot simpler!

You can now think about handrails, pipes and fittings. These should be well covered in the drawings but refer, also, to the "confessional".

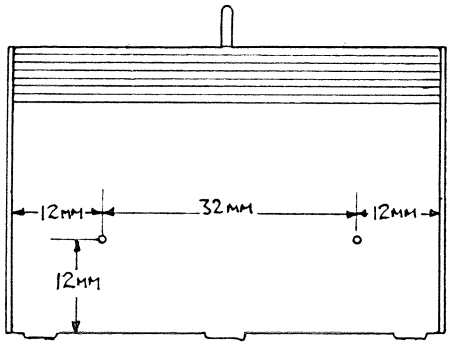
Footplate. Solder 1 x 8BA nut over each of the two holes in the plate.


C15 FOOTPLATE
8BA Nut
8BA Nut
43
40
32
38
42
32
35
57
24
35
49

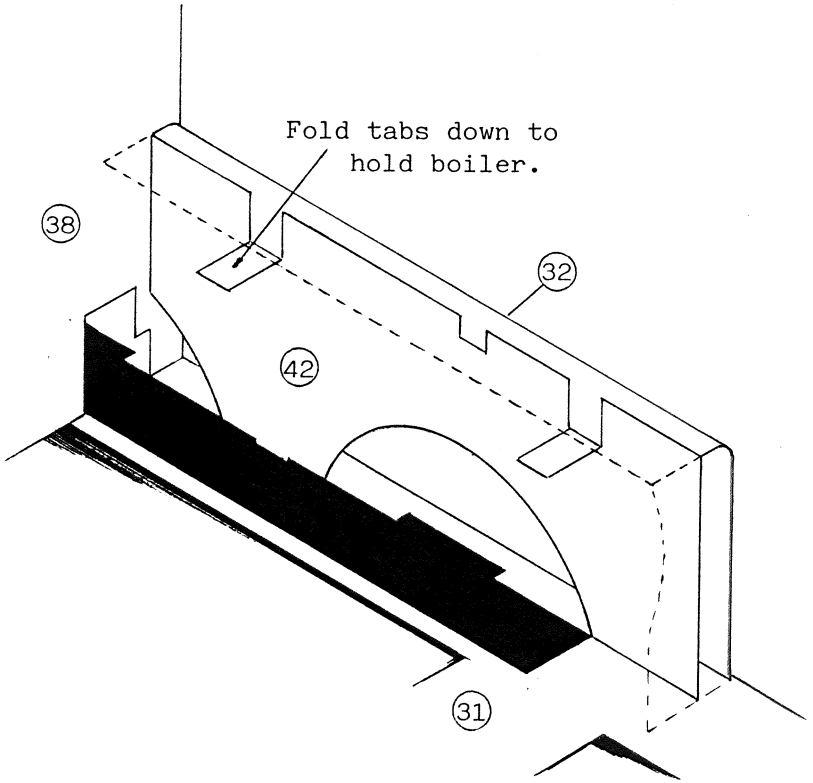

39
38
40
41
0.45mm
33
34
33
32
37
31
31
35
36

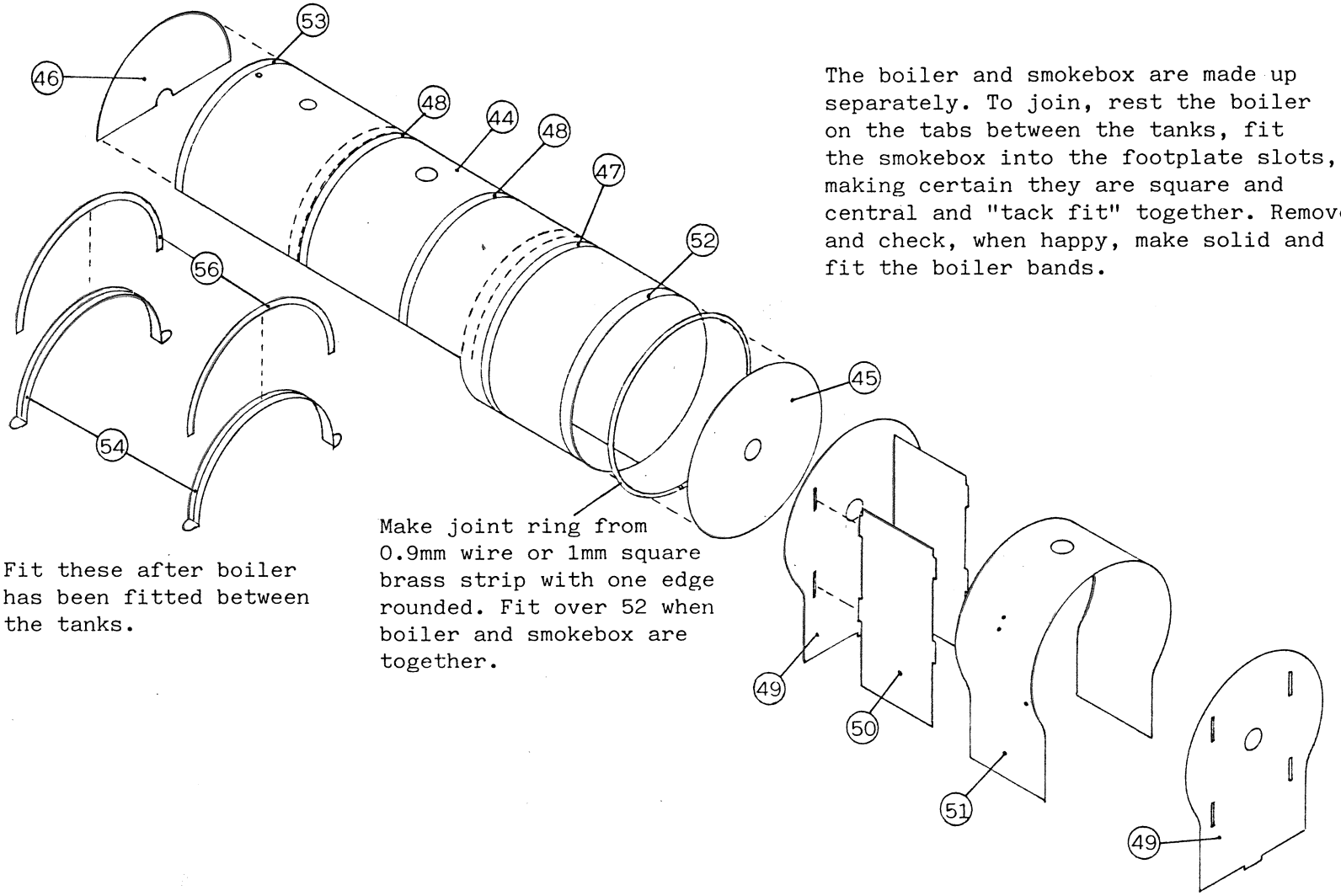


Showing positions of five lamp brackets as used up to the mid 20's. Later LNER positions (3 brackets) are marked.



Measurements required for drilling for handrail, see "confessional".

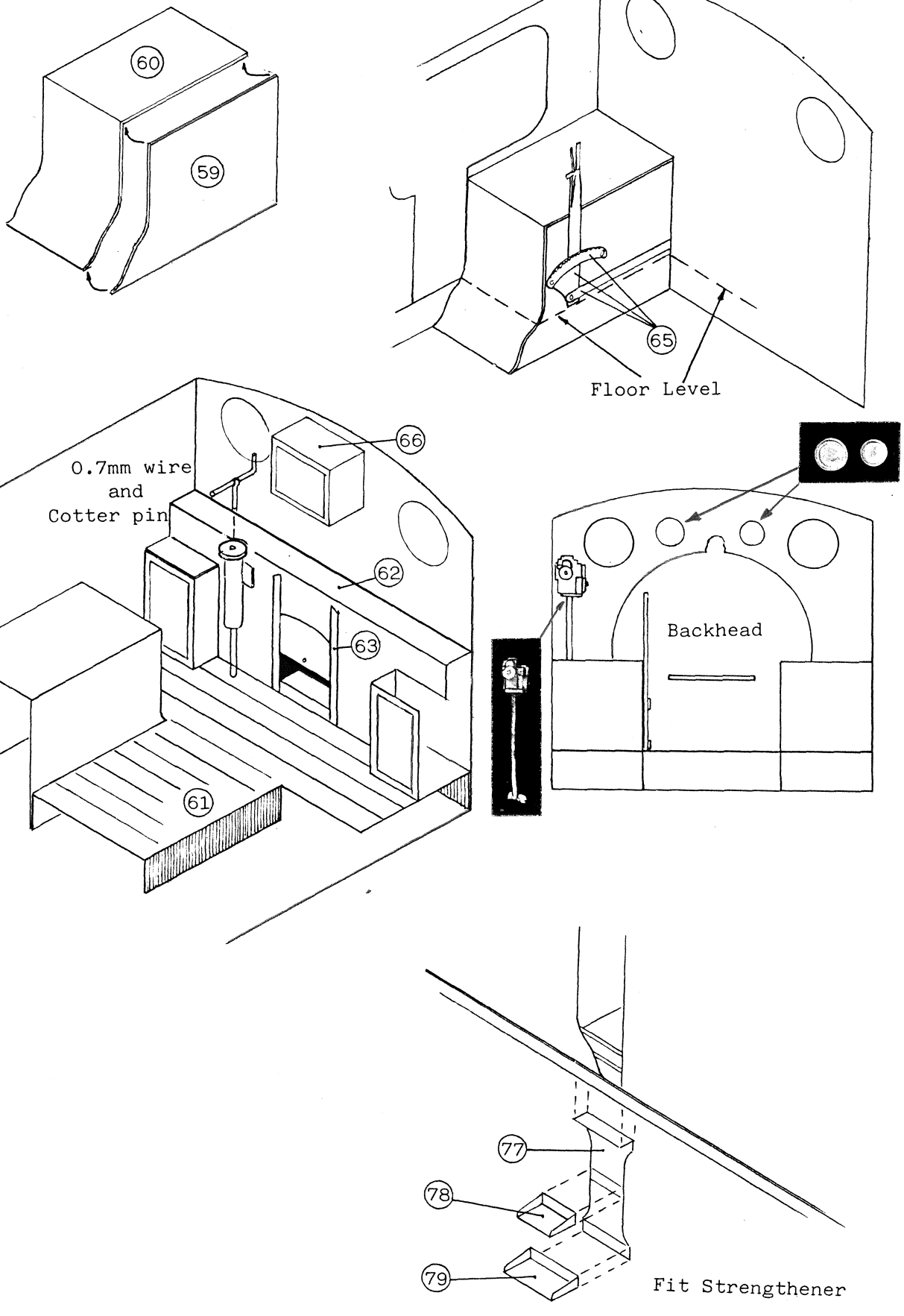


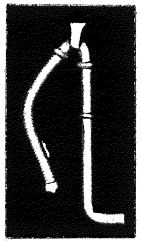


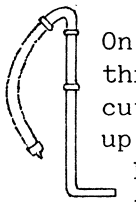
The boiler and smokebox are made up separately. To join, rest the boiler on the tabs between the tanks, fit the smokebox into the footplate slots, making certain they are square and central and "tack fit" together. Remove and check, when happy, make solid and fit the boiler bands.

Fit these after boiler has been fitted between the tanks.

Make joint ring from 0.9mm wire or 1mm square brass strip with one edge rounded. Fit over 52 when boiler and smokebox are together.


60
59
65
Floor Level
66
0.7mm wire
and
Cotter pin
62
63
61
Backhead
77
78
79
Fit Strengthener





On earlier loco's the vac. pipe went through the footplate (etched hole), cut pipe bottom end and fit into plate up to the lower ring.
For later loco's, leave full length and fit up to bufferbeam.

Junction, drill to take 0.7mm wire

0.7mm

Cast w/m

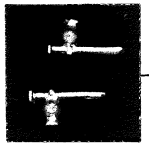
0.7mm Wire Handrail

0.7mm

51

Cast w/m

36



Tallow Cups

Brass Track Pins

74

1.2mm wire Steam Pipe - This can be soldered in position or, if you prefer, drill the valance and attach using small cotter pins

57

2 x 75

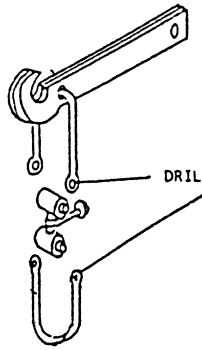
58

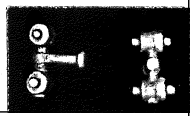
80

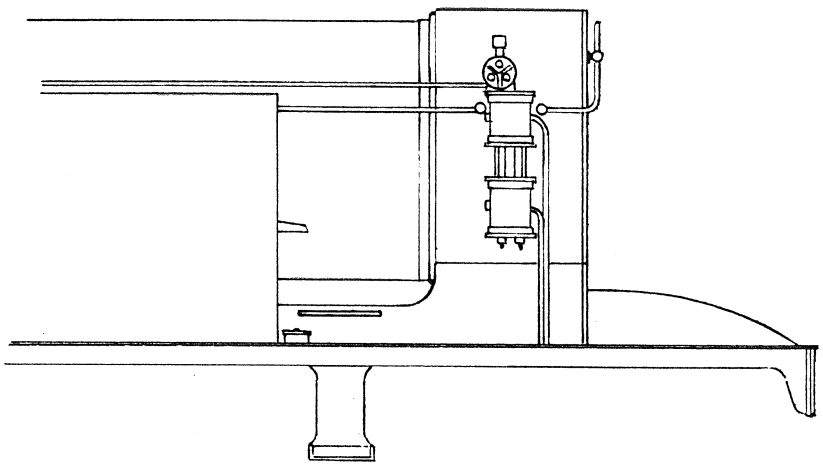
81

Cast w/m Piano Front

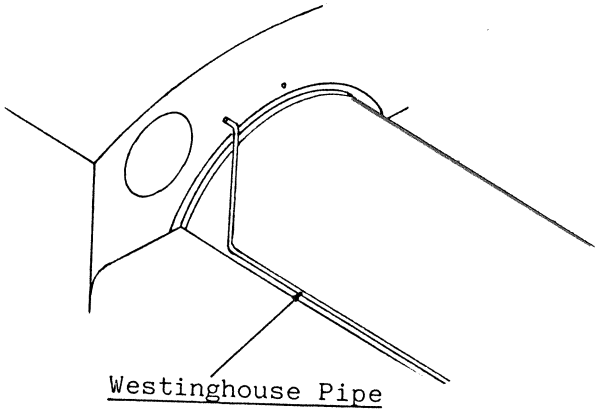
COSMETIC SCREW COUPLING



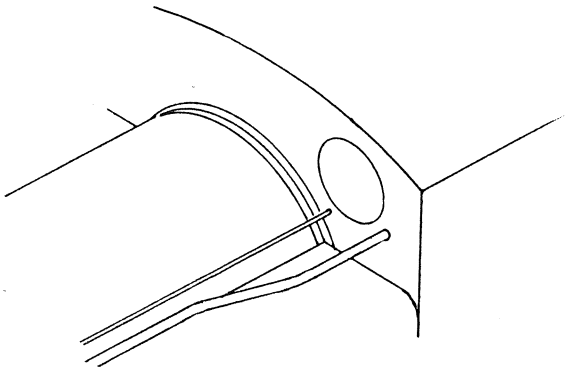




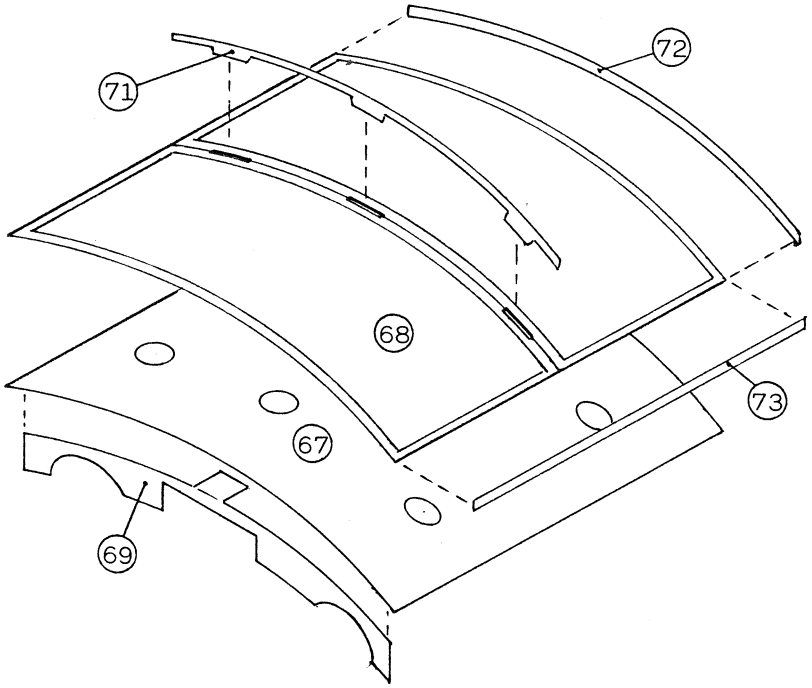
Westinghouse Pump. To fit on smokebox, it is better to ignore the hole given for the handrail knob and drill each side and fit two knobs, this will give a gap in which to fit the pump. Remember the first eleven were fitted to the end of the right hand tank but these were altered to the smokebox position early in LNER days.



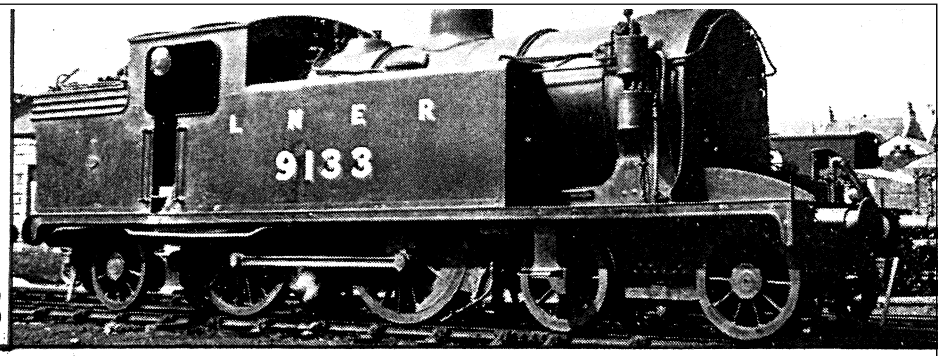
Westinghouse Pipe



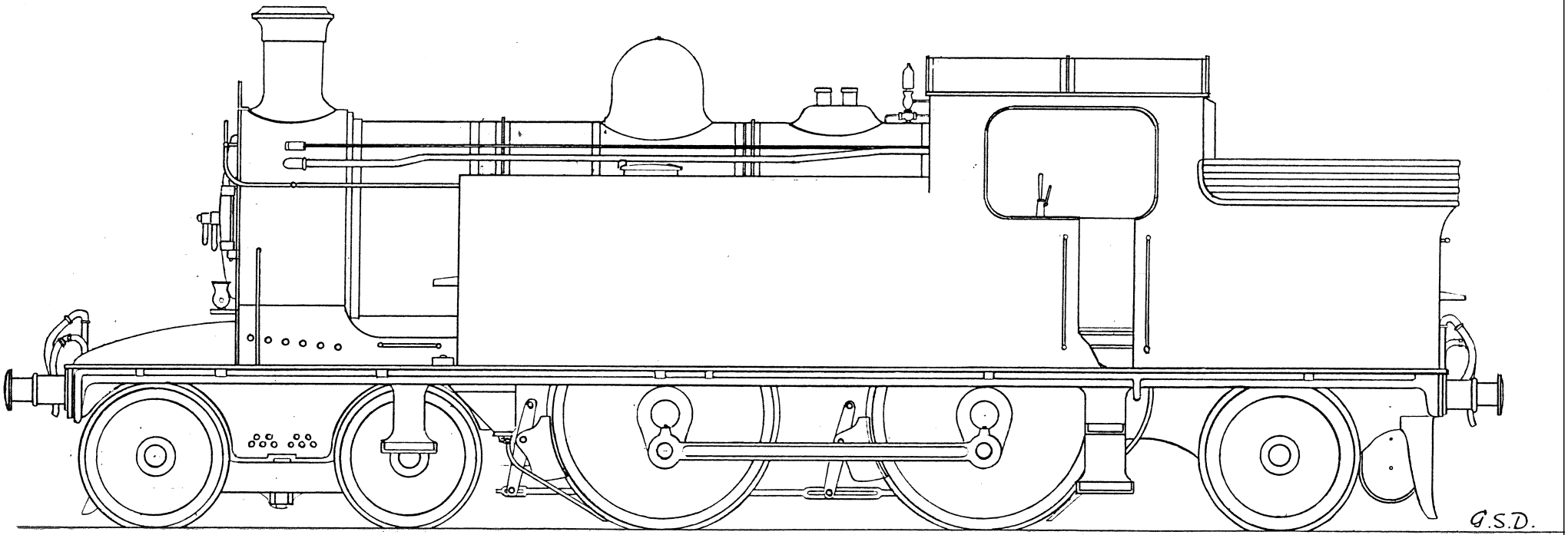
Left Hand Pipes.



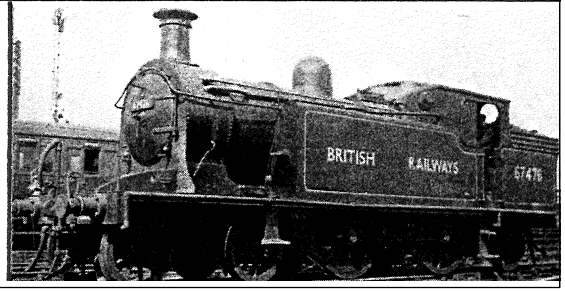
LNER Transfers for lettering are available from the Historical Model Railway Society (HMRS)www.hmrs.org.uk for order form or send to:- Voluntary sales officer, 8 Gilpin Green, Harpenden, Herts, AL5 5NR, SAE for list & order form. You will require sheet 4A, LNER yellow Locomotive insignia.



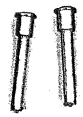
L N E R 1 2 3 4 5 6 7 8



B.R.	No.	1946	No.	1924	No.
67452	8/48	7452	5/46	9001	7/25
67454	2/49	7454	5/46	9003	10/24
67455	4/48	7455	5/46	9004	11/25
67456	6/51	7456	5/46	9005	4/25
67457	5/51	7457	7/46	9122	8/24
67458	9/48	7458	7/46	9131	10/24
67459	9/50	7459	7/46	9134	5/25
67460	6/48	7460	1/46	9135	10/24
(67461)		7461	7/46	9141	4/25
67462	6/50	7462	7/46	9155	6/24
67463	7/48	7463	10/46	9164	11/25
67453	2/50	7453	5/46	9002	3/26
67464	12/48	7464	5/46	9006	2/25
(67465)		7465	5/46	9012	9/24
67466	10/49	7466	6/46	9015	10/25
67467	3/49	7467	10/46	9025	12/25
67468	4/50	7468	5/46	9041	3/25
67469	5/50	7469	7/46	9043	7/24
(67470)		7470	11/46	9048	5/24
(67471)		7471	7/46	9053	12/24
67472	11/48	7472	10/46	9265	11/24
67473	7/50	7473	7/46	9267	10/25
67474	9/48	7474	3/46	9309	2/25
67475	10/48	7475	5/46	9016	4/24
67476	2/49	7476	7/46	9026	4/25
67477	12/49	7477	11/46	9039	5/24
67478	2/49	7478	11/46	9051	7/24
67479	2/49	7479	10/46	9064	6/24
67480	11/50	7480	3/46	9102	11/24
67481	9/48	7481	7/46	9133	5/25



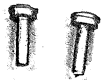
CASTINGS



LOCK UP SAFETY VALVES

ROSS POP SAFETY VALVES

SMOKEBOX ONION LUBRICATORS



SANDBOX FILLERS

REGULATOR

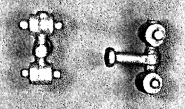
BRAKE EJECTOR

SMOKEBOX DOOR HANDLE

CAB DIALS (gauges)

BLOWER VALVE

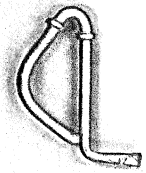
BUFFER BEAM PIPEWORK

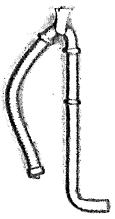


COUPLING CENTRES

AIR

STEAM HEATING





BUNKER FRONT VACUUM BRAKE PIPES