

L.M.S. JINTY TANK LOCO 0-6-0T
4mm. Scale.

These instructions and history should be carefully studied before starting on any assembly work.

The only item needed to complete the model is a DS10 motor

HISTORY.

Obtained from information published by R.J.Essery.

This tank locomotive was based directly upon the Johnson M.R. 0-6-0T design of 1899, as rebuilt by Fowler with belpaire firebox and improved cab. The Johnson design in itself was in fact an enlarged version of the earlier M.R. 0-6-0T design of 1874.

The L.M.S. version was built in large numbers with the first appearing in 1924. Outside builders constructed most of these locomotives as shown below;

<i>Original numbers</i>			<i>1934 Numbers.</i>
7100 - 7119	Vulcan Foundry.	1924	7260-79
7120 - 7134	North British.	1924	7280-94
7135 - 7149	Hunslet.	1924/5	7295-7309
16400-16429	North British.	1926	7317-7346
16430-16459	North British.	1926	7347-7376
16460-16509	Vulcan Foundry.	1926	7377-7426
16510-16534	Hunslet.	1926/7	7427-7451
16535-16549	Bagnall.	1926/7	7452-7466
16550-16599	Vulcan Foundry.	1927/8	7467-7516
16600-16624	Beardmore.	1928	7517-7541
16625-16674	Hunslet.	1927/9	7542-7591
16685-16749	Beardmore.	1928/9	7602-7666
16750-16764	LMS Horwich.	1931	7667-7681
7150-7156	Bagnall	1928/9	7310-7316

These last seven loco's were built for the SDJR as no's 19-25 and taken into the LMS stock in 1930.

Under BR ownership the locomotives were numbered as 47260-47681 but this took several years to complete.

Engines numbered 7260-7309 did not have the key hole cut out in the side tanks. On these engines access to the sand box was via a lid on the tank top.

No's 7260-7309 were also fitted with Ramsbottom safety valves when first built but these were later replaced with the Ross pop type.

Regarding the coal rails, two was the most common and many had a plate fitted to the top rail to enable them to be coaled from the mechanical coaling plants.

Rain strips varied in number and position and can only be stipulated by reference to photographs.

Smokebox numberplates are supplied in the frets for most variations of the locomotives including SDJR.

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The standard kit is supplied with wheels and axles for OO and EM. Those people wishing to build to 18.83 standards will find that no modifications are needed to the kit and the wheel pack can be exchanged by returning same together with stamps for the return postage.

Building Instructions

I STRONGLY RECOMMEND THE USE OF CARRS 188 SOLDER PAINT FOR ASSEMBLY.

Remove footplate item 1 from the body fret and also remove the entire centre section from the footplate which is retained by two tabs. The front of the footplate is the end with the curved splasher sides.

The buffer beams are made up using items 2 & 3. Item 2 being soldered to 3 but ensure that the buffer holes are in line. The front buffer beam should now be soldered to the underneath of the footplate 1mm back from the front with the buffer holes being nearest the track. Note that the underneath of the footplate is the side with the half etch lines.

The footplate valance is supplied on the Nickel Silver fret as items 3 & 4 and the front of these is the end with the largest downward projection. Fit these valance to the underside of the footplate by soldering into the etched groove along the side of the footplate and against the front buffer beam. The rear buffer beam can now be added.

Solder a 12BA nut to the top of the footplate over the etched hole at the rear. Bend splasher sides and cab floor supports up from the footplate so that the half etch lines are to the outside of the bend.

Fit front splasher tops 4 to splasher sides after trimming to length. Remove false tank sides/top 5 from fret and also remove odd items that are contained in this part. Bend part 5 into a 'U' shape with half etch lines to the inside. This item is now soldered into position on the footplate by locating the tabs into the cutouts in the footplate. The cutout in the top of part 5 facing the rear of the model.

Take part 6 and fold to form a box section with all etch lines to the inside. Item 14 is soldered onto the front of part 6 around the etched oblong opening. (see exploded diagram). Bend item 15 to shape and solder into position on 6/14.

Fold item 7 into an 'L' shape and solder this to what would be the inside of the cab with plank lines on the floor and the upright section beneath and projecting above part 5 (Tank top). Ensure this is pushed as far forward as possible and is resting on top of the turned up section of the footplate.

Bend item 13 into a box shape and solder this into position over the etched opening in the cab floor. Cut and file cast backplate to fit and secure into position. Position item 6 onto the rear of the footplate with coal plate area to the inside of the cab and the rear to overhang to the rear of the footplate.

Take bunker sides 10 & 11 and fold the front section so that a small lip piece faces from the outside towards the cab inner (Half etch line on the inside of the fold). Solder these into position. Take bunker back 12 and bend to shape of bunker sides - trim if needed and solder into position.

Take tank sides proper 8 & 9 and if requiring the key hole cutouts file these out to the shape as indicated by the half etch area. Drill handrail holes in tank front No.65 (0.9mm) and bend tank front and cab opening sections at right angles (half etch fold lines to the inside). Place against false tank sides and slide towards rear as far as possible so that the tank front is right against tank top - solder into position from back.

Drill the four small holes in tank top no.75 (0.5mm). Solder tank beading 24 to top of tank side allowing overhang at cab entrance for handrail to fit to - see drawing. Fit handrail in cab doorway opening. Also fit beading 38 to top of bunker also allowing this item to overhang into cab doorway - again fit handrail. Using short handrail knobs fit handrails to tank fronts.

Fit cab doors 16 in position with lip to top and outside. Fabricate brake handle from brass wire and fit into hole in bunker top.

Remove cab roof 22 and parts 35 & 36 from fret and make very light scratch marks on the centre line of the inside of each. Line these marks up and solder in position checking that everything is at right angles. From this point curve the roof a fraction at a time round the cab front and back soldering as you go. DO NOT RUSH THIS OPERATION - it may even be found to be easier if the sharper of the curves were formed over rods before soldering into position.

Lay this assembly in place on tank and bunker tops and slide back so that it butts up against part 7 (false cab front). Position central and secure in position. Take cab window protection bars 19 and fit over rear cab window openings so that bars are vertical.

Bend coal rails 25 to shape and solder to bunker. Fit footsteps 21 to tank fronts by bending into an 'L' shape and position midway from footplate to tank top. Fit either one or two steps to bunker back by reference to photographs - the most common of these being just one central on the bunker back.

The cab rainstrips 42 have been supplied as separate items as they varied in number and position - Establish from photographs and solder or glue into position.

Take boiler tube and smokebox, both of which have been machined to length and remove all traces of burrs. Saw a split line through the smokebox section and push smokebox onto the end of the boiler barrel until both ends are flush. Take smokebox saddle 37 and bend to shape per drawing. Solder a 12BA bolt to the inside of this so that the threaded section points downwards. Place this component onto the footplate with the screw passing through the etched hole on the front section of the footplate - DO NOT solder to footplate. Take the boiler assembly and place so that it sits on top of the tank top and against the tank front. Slide smokebox saddle back until it is line with the back of the smokebox and secure saddle in position with nut underneath. Solder saddle to smokebox and then remove this complete assembly from the footplate.

Smokebox wrapper 41 can now be fitted by folding it around the smokebox barrel and splaying out onto the saddle at the bottom - any gaps at the bottom will be covered by the frames. Glue cast smokebox front in position and file all joints flush. Fix boiler assembly to footplate and tank tops using solder or glue.

Parts 39 & 40 are soldered together to represent the frames above the footplate next to the smokebox - fit these into position.

Take firebox top casting and file carefully to allow it to fit snugly between end of boiler and cab front. Secure in to position.

Parts 23 are tank stays and these should be drilled No.75 and fitted to the tank tops by passing a length of wire through them and into the tank top. The stay should be located so that the thick end holds the half etched section just above the tank top. Cut wire off on top so as to represent a rivet on the stay. The shorter of the stays are fitted at the firebox end.

The tank fillers are made up by soldering parts 18 into the etched groove on part 17 and fixing this assembly in turn onto part 20. This in turn to be mounted on the tank top. The most common position for these was at the extreme front of the tank but I have seen pictures showing engines with fillers between the tank stays and even a few with the filler almost next to the cab.

Boiler bands 28 are fitted as follows - one next to the join of boiler and smokebox, one at the point where boiler butts up against the tank front and one midway between this point and firebox front and the last where the boiler butts against the firebox casting.

Bend small tabs on items 33 & 34 at right angles to mainstep and solder these into the half etched areas on brackets 32. Bend small tab on top of parts 32 forward with etch line on the inside of the bend and solder assembly to the underside of the footplate at the point where there is a half etch area alongside the valance, note that step bracket is set back inwards from the valance by the small tab touching the valance. Perform the same operation with rear steps using parts 29, 30 and 31.

Fit lamp irons 26 to front and rear by referring to photographs. The shorter variety are positioned above the front buffer beam.

Fit the small long casting with the rounded edge between the frames on the top of the footplate and against the smokebox saddle front.

Fit chimney, dome and cab roof vent. After reference to the loco history fit safety valves of choice and numberplate to smokebox door.

Fit handrail to smokebox door using short handrail knobs.

If you have assembled the loco without keyholes in tank sides then the small round castings should be positioned on the tank tops against the firebox and in line with position of rear sandbox on the mainframes. If you have opened the holes in the tank sides then the casting with the rebate should be fixed behind the tank section with the fillers positioned in them at an angle pointing out and up. The front sandbox filler caps should be positioned just in front of the side tanks.

Fit handrail to left hand boiler side 16mm up from the footplate - handrail terminates at the tank front. On the right hand side take the injector casting and fit a length of 0.9mm diameter brass rod to the cast box and fit to this assembly a short length of normal handrail wire at the front end. Trim to length and secure to smokebox side with 16mm up from the footplate. Ensure you only use short handrail knobs on the smokebox sides.

Fix whistle to the left and slightly to rear of the safety valves.
Fit buffers and vacuum pipes to buffer beams.

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Livery for these locomotives was very ornate at all times - PLAIN BLACK with the usual vermilion buffer beams.

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CHASSIS ASSEMBLY.

This chassis has been designed so as to use the gearbox supplied with the kit and a DS10 motor. These items are positioned so that the drive is onto the middle axle with the motor trailing back towards the cab with the rear shaft cut off.

Assembly

Items 3 & 4 are in fact footplate valance which are used during construction of the loco body.

The holes in bottom of the brakehangers and pull rods (8 & 9) should be drilled out with a No.76 (0.5mm) drill. The holes in the top of these brake hangers should be drilled out 0.9mm. Pickup holes in the chassis should be drilled 2.5mm.

Two widths of spacer are supplied the shorter being for 00 and the other being used for EM and 18.83 (S4). Secure spacer 6 to the underside of the footplate by passing a bolt through it and into the nut soldered on top of the footplate - trap a piece of paper between the spacer and the footplate to ensure that you cannot solder these together. Secure the front spacer in position over the bolt projecting down from the footplate using a nut and again trap a piece of paper between the spacer and footplate.

Assemble hornblocks into mainframes per the instructions supplied with them - just one thing though - it may seem simple but don't forget to ensure that you make one of each hand i.e. the hornblocks go on the inside of the frame.

Solder frames to spacers taking care to ensure that they are in line with each other. The rear of the frame can be picked out by the brake pivot point hanging down. Pass lengths of 0.9mm wire through the six small holes in the mainframes and solder in position - these are the brake pivots and should be left protruding from the outside of the frames.

Fit pickups into frames per instructions supplied with them.

Assemble gearbox to front of motor - front in this sense being the end with the brush gear. Test run motor/gearbox and remove rear shaft projecting from motor. Drop bearings out of the middle hornblocks and fit these to the axle in the gearbox, pass drive assembly through mainframes and locate bearings back into the horns - retain with wire as normal.

Fit crankpin screws into wheels from the back and fit axles and wheels into the mainframes.

Assemble coupling rods by soldering to each other with reference to the exploded drawing - note that these rods pivot on the centre crankpin by a half lap joint. Fit short bushes to crankpins and ream holes in conn rods with a round needle file to give a slack fit onto these. Quarter driving wheels by eye and fit coupling rods in place. Solder leads to motor and power the assembly to check for free running, adjust quartering as needed and when happy with the running secure rods to wheels by fitting of the crankpin nuts.

Wire up pickups to motor, lubricate all areas with Daywat and test run.

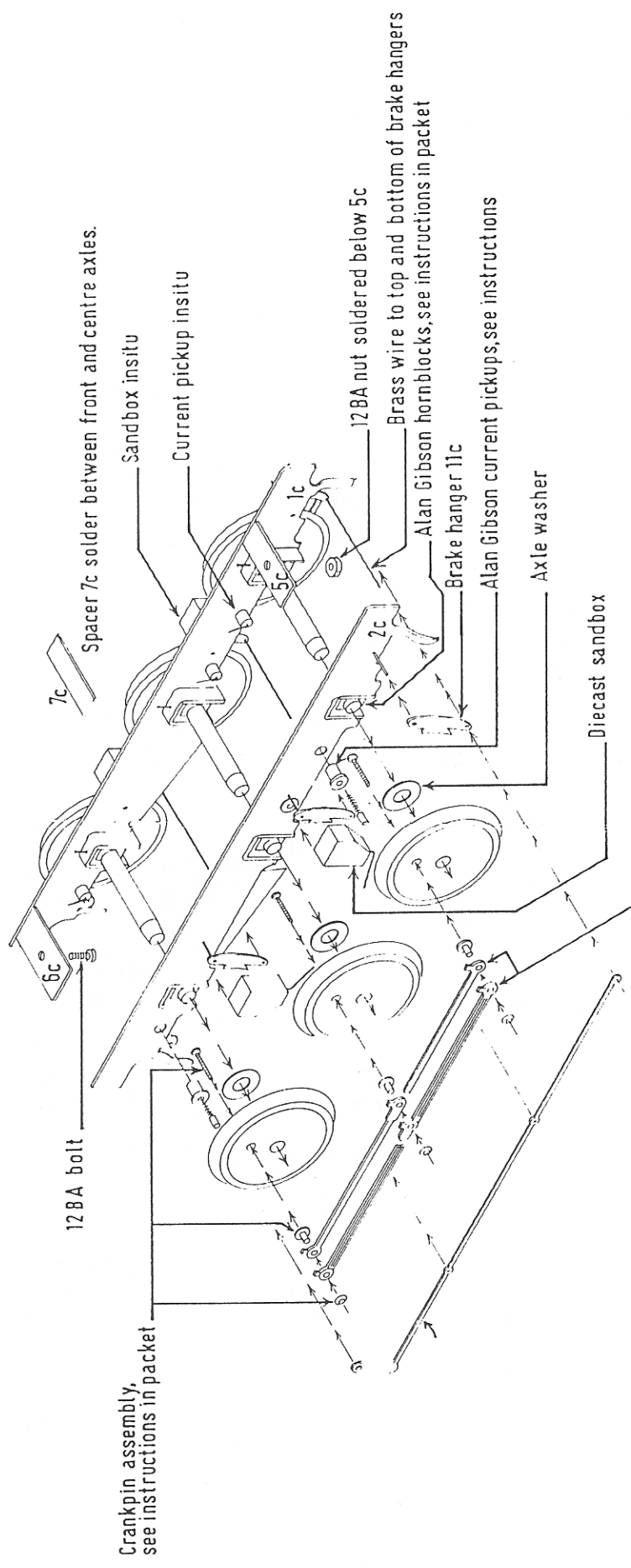
Fit brake hangers to pivot rods in the frames and secure into position. Pass a length of 0.45mm wire through the bottom of these and fit pull rods so that they are on the outside face of the wheels. Slide pull rods as near to the wheel face as possible without letting the wheel touch them. Secure into position and remove any excess wire. Pass a length of 0.9mm wire through the holes at the rear of the pull rods also passing through the rear most holes in the mainframe. Secure into position and trim to length.

With reference to exploded drawing fit cast sandboxes and feed pipes between the pairs of drivers.

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SPRUNG LOCOMOTIVE CHASSIS ASSEMBLY DIAGRAM



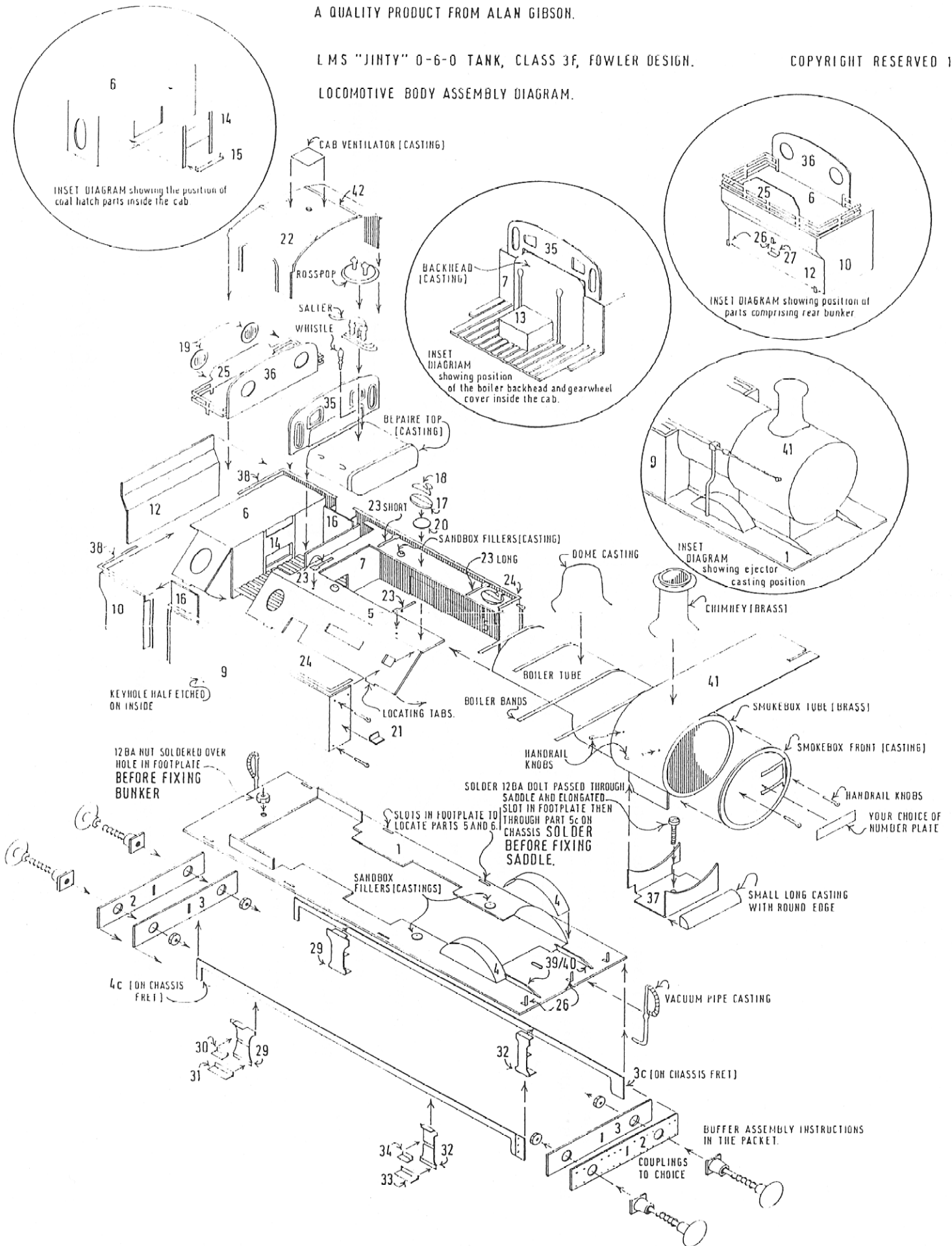
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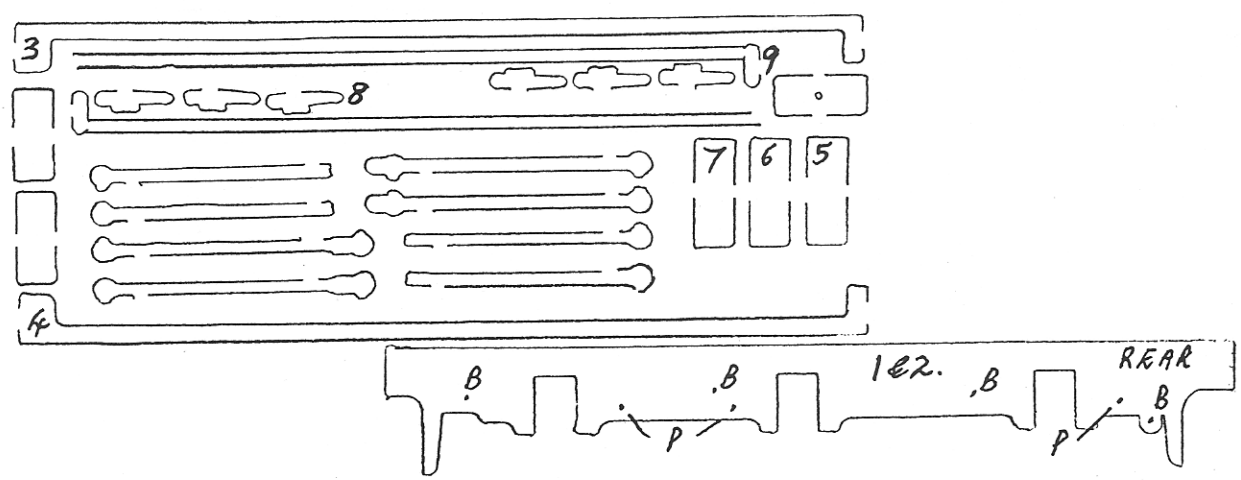
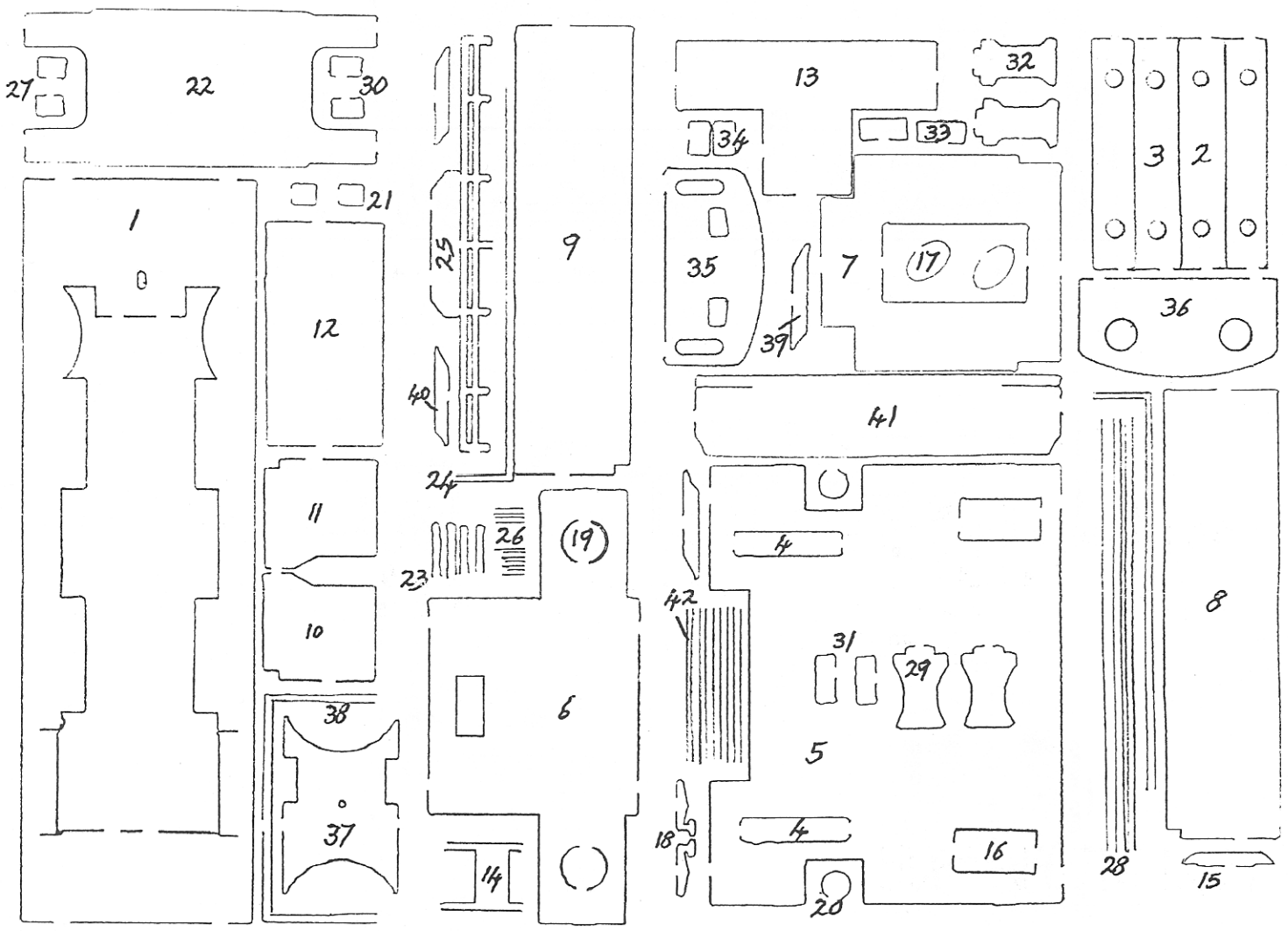
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LOCOMOTIVE BODY ASSEMBLY DIAGRAM.





I WISH TO THANK PECO PUBLICATIONS FOR PERMISSION TO INCLUDE A COPY OF THE LOCOMOTIVE DRAWING FIRST PUBLISHED IN THE MAY 1980 RAILWAY MODELLER.

