

HISTORY

The white-metal castings supplied in this bodyline kit represent a Kitson & Company built design for the Leek and Manifold Light Railway. This was a 2'-6" gauge line in the Derbyshire Peak district and ran between Waterhouses and Hulme End. The line was the only example of a railway in the United Kingdom built to the specifications of E.R. Calthrop who had constructed the Barsi Light Railway in India. The 'Manifold' was also unique in having the only public railway use of transporter wagons to allow the movement of standard gauge wagons over the narrow gauge tracks to avoid the transshipment of goods. The Barsi Light Railway had very similar locos of an eight-coupled design. Kitson's widely exported their products to all corners of the world and locos with a family likeness were to be found as far apart as the island of Cyprus and the mountains of Bolivia.

This kit therefore lends itself to adaption and is most suited to British style layouts of a larger loading gauge or those based on colonial practice.

BIBLIOGRAPHY

Recommended sources of inspiration and information: -

Leek and Manifold Light Railway, S.C. Jenkins, M.A., Oakwood Press
Manifold Valley Railway; An Anthology, Eric Leslie, Oakwood Press
Leek and Manifold Light Railway, Lindsey Porter, Ashbourne Editions
Light Railway Construction, E.R. Calthrop C.E., (Reprint) Plateway Press
The Cyprus Government Light Railway, B.S. Turner, Mechanical Engineering Pub.
009 News, Volume 29 Number 1, 009 Society

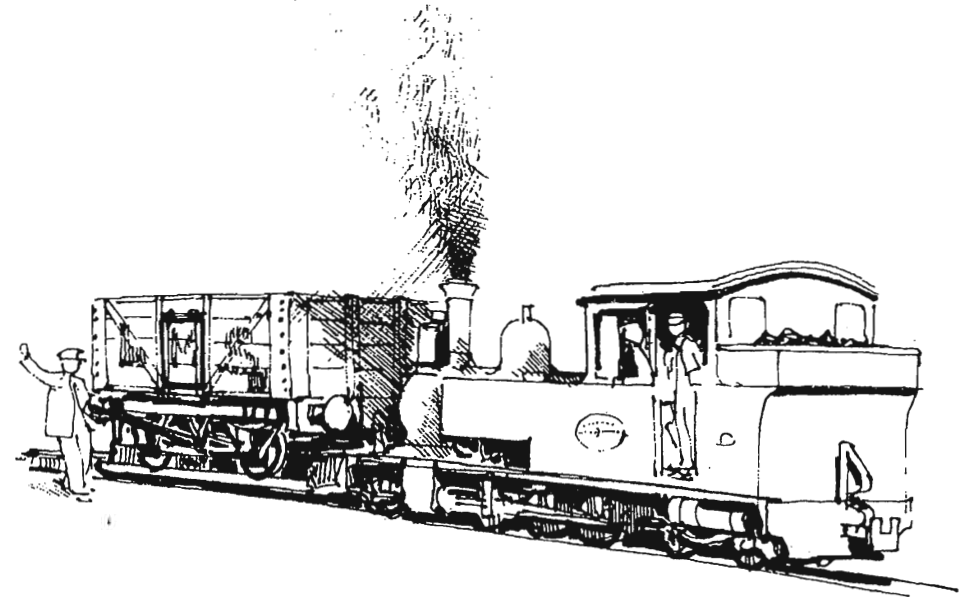
ABOUT THIS KIT.....

Centre Models originally supplied the parts of this kit in a model of the Leek & Manifold 2-6-4's, circa 1978. A chassis unit was supplied in kit form that was not considered by many as being "builder-friendly" and subsequently the kit was withdrawn from sale. The pattern work for the body was modified to accept an 'N' scale Minitrix 2-6-2 chassis but was never re-issued in this form. The casting for the footplate, part (1), has an opening for this and a boss for mounting the rear bogie. This part forms the base for the body and has sufficient metal and together with a capacious cab/bunker

interior allows for cutting to fit a large six or eight coupled 'N' scale chassis or if preferred a hand-built chassis of the correct design.

This body parts set is recommended for those with some previous experience of model building or to those with a fertile imagination and a large file!

As a suggestion we have also included instructions for an adaption of the body parts to make a Colonial style 2-8-2Tas designed and built by Roger Christian. *



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Box top, instruction illustrations copyright Eric Leslie, courtesy Oakwood Press.
Conversion of parts to 2-8-2T; - Text and drawings are copyright Roger Christian.

BEFORE YOU BEGIN

Please read and study thoroughly the instructional notes, exploded diagrams and the recommended order of building. Try to become as familiar as possible with all the parts and components supplied and their purposes before commencing building. Check the assembly at each stage to ensure accuracy.

Work on a clear area under a good light source. Have all the recommended tools to hand before starting. Do not rush the assembly stages or attempt them out of order. All parts are numbered (see parts list) the diagrams are drawn to indicate and facilitate location of castings and the parts; this is NOT an assembly sequence. Clean any 'flash' or moulding lines from castings only after checking that to do so will not interfere with the fit or appearance of the part. A sharp knife will remove most flash. Only use files on parts with care as the white-metal is easily marked by careless or overzealous work with cutting tools. Use wet and dry paper wherever possible and a final polishing with a fibreglass pen or scratch stick.

Use a filler, epoxy putty (Milliput) if any gaps are present, smoothing filler with wet and dry paper (400 grit or fine).

TOOLS REQUIRED

We recommended that you have a good quality set of Swiss needle files, wet and dry abrasive paper of various grades. Sharp knife, pin chuck, small drills and fine long nose pliers. A square of flat thick card or wood is a useful surface to work on.

The primary, and strongest method, of assembly for this kit is by soldering - the whitemetal parts using low-melting solders and matching fluxes - the etched brass parts of the cab and bunker really can only be built successfully by soldering - preferably applied using a temperature controlled electric soldering iron or a 12 volt iron with the temperature regulated via a power controller. Soldering gives an uncompromisingly quick and robust result and is a technique well worth mastering and is not such a daunting method as is imagined by some. With the whitemetal parts an additional bonus is that the searching action of properly applied solders acts as filler. Some components will still need to be glued in place particularly the small details etched and cast detail parts, thus preventing possible damage through excessive heat. The interface of the side tanks to boiler unit may also be joined with an epoxy resin of the slow curing variety.

If you insist on a wholly glue assembly of the whitemetal structure quick setting epoxy resins, five or ten minute, may be used or a cyanoacrylate 'superglue' variant but not of the instant stick type. A gap filling variety such as Zap - a - Gap with a slower grab time gives some adjustment during setting - oh ! and make certain to get

some of the de-bonder at the same time as it may come in useful - make certain that all parts are clean and free of dust and grease before fixing.

SOLDERING

Ye black art of the alchemist used since times ancient to transform flat-packed kits into fine working models (as practiced in the northern Backwoods of England).

Whitemetal parts:-

Carr's 70 C melting point solder with Red Label flux

12 volt or temperature controlled electric soldering iron

Soldering etched parts. Tin, a thin layer of solder, the etched parts first with 145 C solder - place in correct position and apply heat to etched parts to 'sweat' together.

Remember to thoroughly clean the finished soldering work up as you go as the mildly corrosive action of fluxes can tarnish the metalwork in short time. A solution of domestic scouring powder, Ajax etc., and warm water applied with an old tooth brush is quite effective. Rinse well and leave to dry.

RECOMMENDED BUILDING SEQUENCE

Assuming that you have carried out any necessary modifications to the parts to fit your chosen chassis/mechanism the following stages are suggested.

Using the footplate (1) as a base, fit the reversing rod brackets (15) and (16), and rod (17) if required, though the rod may have to be deleted should it foul any chassis work. Attach the left-hand side tank (2) ensuring a square 90-degree angle between the parts. Next attach the rear bunker (6) to the footplate/cab-side, followed by the right-hand side tank (3) checking the assembly for squareness. Trail fit boiler/tank top (4) and fix in place when satisfied. Follow this by fitting boiler/tank bottom (5) – it may require the model to upside-down to do this. Next fit smoke-box (11) to footplate and boiler unit, if all is well and square fit cab front (8), cab back (9) – with its raised detail facing outwards! – and the bunker false floor (7). Fit front (13) and rear (14) buffer beams.

The boiler mountings and tank top details parts may require some gentle opening out of the locating holes to achieve a good fit, do this with a clean round file or suitable sized drills.

On the top of the smoke-box open out the locating hole for the chimney (19) making sure that it is vertical in both planes before fixing. Fit the smoke-box front (12), next followed by the dome (20) to the boiler top and the whistle assembly (22) – note that the steam pipe to this locates into the small hole just under the left hand spectacle rim. The remaining detail parts can now be fitted; – Left and right-hand water tank fillers (25) – with the hinge detail facing forwards, the rear sand box fillers (26) are fitted just in front of the tank fillers. Lastly the fire-iron racks (23) to the right-hand tank top.

Match parts (28) the sand box pipe work to parts (26 & 27) the left and right sand boxes and trail fit. Ensure that the pipe work points downwards and inwards through the space between the boiler and the footplate before fixing to the fronts of the side tanks.

On the top of the dome open out the hole/s for the safety valve of your choice (21 or 21A) and fix in place. On the front of the footplate open out the holes in the two raised rectangles, the jacks bases, and fix jacks (24) with the handles facing towards the rear. Open out the holes to the rear of the cylinder tops and affix the lubricators (29) to the footplate. The cab footsteps (33) fit in line with the cab entrances on both sides. Fit air-tank (30) if desired to the underside of the footplate on the left hand side at approximately 25mm from the rear buffer beam, measured to the rear end of the tank. On

both buffer beams open out the locating holes at the top center for vacuum pipes (32), the smoke box door handle (32) to the smoke-box door. Final fittings: – the cab roof (10) – after any additional detailing or interior painting has been carried out and the lamp (18) after the loco has been painted.

USEFUL PARTS

Also included in this kit are left and right hand cylinder blocks with a stretcher (35,36 and 37), a rear bogie unit comprising two side frames (41) and a stretcher (42) and a front pony truck with side detail parts (38,39 and 40).

PAINTING

We highly advise the use of an air-brush for painting, even the most basic of which will give a much better finish than hand brushing and will avoid that 'just dipped in a tin' look. Thinly airbrushed coats of acrylic paint will also not obscure the fine surface.

VARIATIONS ON A THEME BY KITSON

Roger Christian

Variations' was originally published in the 009 News for September 2001. We are grateful to the author for permission to quote from his article and to reproduce the constructional drawings. Two loco bodies came into the builder's possession, one was a re-issued Meridian Model kit and the other was an original but incomplete Centre Models kit.

"The first was the current version whilst the second was one of the original Centre Models kits with all the small fittings missing but with that awful chassis that someone had tried to do something with. I did not want a straight L & M loco but something more colonial and the Kitson fitted the bill. What about a chassis? Thoughts immediately turned to the Bachmann six coupled though with its small wheels it did not look right when laid on top of a scale drawing. Something else was needed, so how about the eight coupled version instead? I took a chance and sent of an order to Andrew Hastie (Parkside Dundas). When it arrived a few days later I again laid it on the scale drawing. It definitely looked better and decided to produce a 2-8-2 freelance version. The position of the chassis fitting into the footplate is governed by the position of the cylinders. What follows is an account of how I went about fitting a Bachmann 2-8-0 chassis into a Centre Models / Meridian Leek & Manifold loco kit.

MODIFYING THE BACHMANN CHASSIS

Remove the body is the obvious start. The headlight has two wire contacts wrapped round two screws on each side between the cylinders and the leading driving wheels. Remove the wires from the screws, un-screw the retaining screw from the underneath and lift off the weight complete with headlight and wires. The pony wheels come off as well; they look useful for a Corris loco. Saw off the steam pipes above the cylinders. Saw off the pilot leaving the narrow part in front of the cylinders, see sketch 2. Remove the spigot on the underside between the cylinders.

MODIFYING THE FOOTPLATE.

Whichever kit one uses begin by opening out the footplate to fit the chassis as per sketch 1. To do this I used a razor saw after marking it out with a rule and scribe and the sawing done carefully. The sketch and accompanying notes are self-explanatory. The smoke-box requires a slot cutting in the base, 5mm wide, cut lengthways. This will allow a captive nut to be fixed on top of the footplate for the mounting screw. Remember to fit the chassis to mark the hole through the footplate and drill it before securing the nut. Take great care when handling the footplate after opening out, as it is quite fragile until assembly is complete. At the rear end attach scrap pieces of shim brass in the positions shown. The chassis just slide in. Assemble the kit as instructed. Once the smoke-box is fixed the body regains strength but still be careful when handling the footplate behind the cylinders. The smoke-box door covers the slot cut earlier. The discarded weight also had the job of holding the motor in place. To get over that problem I glued another piece of brass shim under the boiler/tank top casting making it long enough for plenty of glueing area as well as reaching the motor. Don't discard the motor insulation.

MODIFYING THE CYLINDER BLOCKS.

The sketches should be self-explanatory. The hardest part is finding a means of holding tem securely whilst sawing. Once fitted to the footplate the Bachmann cylinders are conveniently hidden. On each casting I removed the piston rod gland detail first.

That's all the hard parts done so what about the rest? The front pony wheel assembly is supplied with the kit, for the rear I raided the 'bits' box. The front coupling (Greenwich) is mounted on top of the pony wheel assembly. Attach the coupling before fitting to the loco. The rear coupling is mounted immediately behind the buffer beam with scrap material from the footplate until level with the coupling recess. A 14BA bolt in an undersize hole holds it in place. The cowcatchers (pilots) are Langley (Miniature Models) accessories for the Lynton & Barnstable Manning Wardle locos. Slight modifications are required to allow the couplings to swing. Fit the front cow-

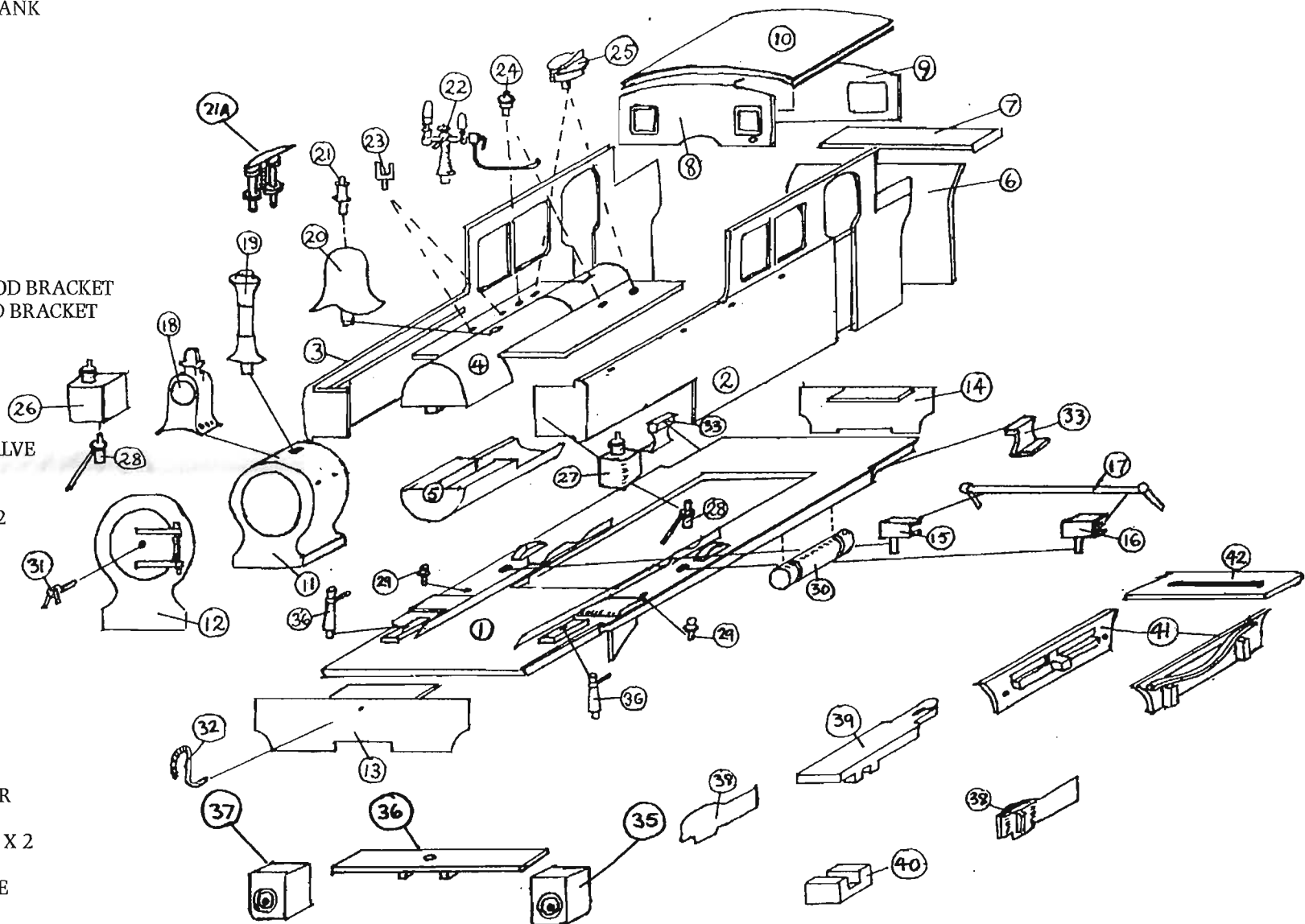
catchers after the coupling is fixed to the pony wheel assembly. Believe me doing it this way will prevent much cursing and swearing."

"The second kit as mentioned previously had no fittings at all except the front pony assembly and the rear bogie assembly so the 'bits' box had to be raided in earnest. Starting at the smoke-box it was given a stovepipe chimney. A colonial steam dome and sand dome from Meridian went on the boiler top with a safety valve from an unknown source. Behind the cab the bunker was given etched coal rails from Mr. Chivers (Chivers Finelines) and the raised detail filed off except the top edge. An ejector pipe was fashioned from soft brass wire as well as pipes from the sand dome. The tank top filler lids were, I think, the Langley double Fairlie firebox doors. American style cowcatchers, again Langley, were fitted instead of the Manning Wardle type as on the other model. Etched fire iron brackets were added to the tank top. These came from the Parkside Dundas Hunslet 'Ladies' (Linda - Blanche) kit.

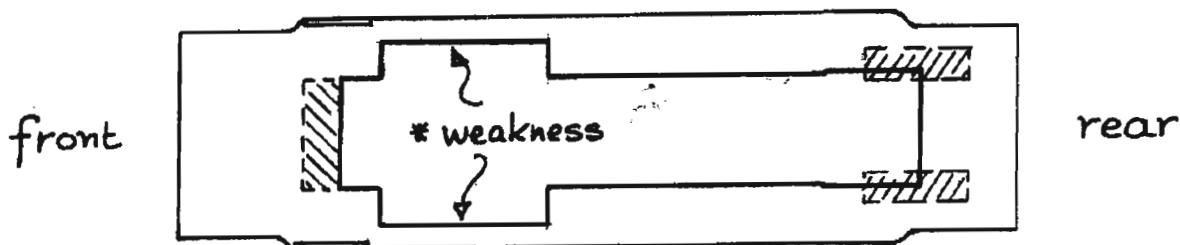
The 2-8-2 configuration has a better balance about it than the 2-6-4, and especially the 0-8-4 Barsi Light Railway loco, resulting in models, which are more aesthetically pleasing. I now feel that I have two models of character which look authentic even though they are based on the same kit."

KITSON PARTS LIST

- 1 - FOOTPLATE
- 2 - LEFT-HAND CAB AND SIDE TANK
- 3 - RIGHT-HAND CAB AND SIDE TANK
- 4 - BOILER AND TANK TOP
- 5 - BOILER AND TANK BOTTOM
- 6 - BUNKER BACK
- 7 - BUNKER FLOOR
- 8 - CAB FRONT
- 9 - CAB BACK
- 10 - CAB ROOF
- 11 - SMOKE-BOX
- 12 - SMOKE-BOX FRONT
- 13 - FRONT BUFFER BEAM
- 14 - REAR BUFFER BEAM
- 15 - RIGHT-HAND REVERSING ROD BRACKET
- 16 - LEFT-HAND REVERSING ROD BRACKET
- 17 - REVERSING ROD
- 18 - LAMP
- 19 - CHIMNEY
- 20 - DOME
- 21 - ROSS POP SAFETY VALVE
- 21A - RAMSBOTTOM SAFETY VALVE
- 22 - WHISTLE ASSEMBLY
- 23 - FIRE IRON RACKS X 2
- 24 - REAR SAND BOX FILLERS X 2
- 25 - WATER TANK FILLERS X 2
- 26 - SAND BOX LEFT-HAND
- 27 - SAND BOX RIGHT-HAND
- 28 - SAND BOX PIPE WORK X 2
- 29 - LUBRICATORS X 2
- 30 - AIR TANK
- 31 - SMOKE BOX DOOR HANDLE
- 32 - VACUUM PIPES X 2
- 33 - CAB FOOT STEPS
- 34 - JACKS X 2
- 35 - LEFT-HAND CYLINDER
- 36 - CYLINDER BLOCK STRECHER
- 37 - RIGHT-HAND CYLINDER
- 38 - PONY TRUCK SIDE-FRAMES X 2
- 39 - PONY TRUCK
- 40 - PONY TRUCK KEEPER PLATE
- 41 - BOGIE SIDE FRAMES X 2
- 42 - BOGIE STRECHER



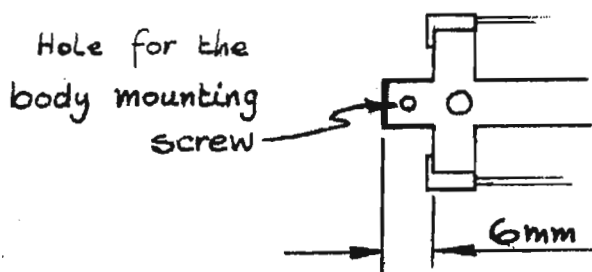
1. **FOOTPLATE**
 Drawn fullsize for model.



On underside glue
 2.5mm thick packing piece
 where shown shaded.

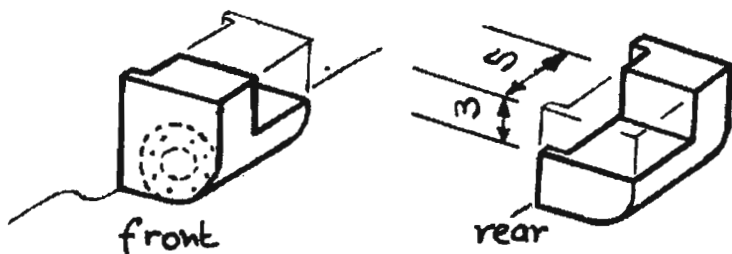
At rear of chassis
 opening increase width a
 little to allow moulded pegs
 on chassis side to slide in.
 Glue pieces of brass shim where
 shown above and below f/plate.

2. **CHASSIS**



Existing hole used for
 the front pony wheel
 supplied with the kit.
 Remove spigot on
 underside
 Glue captive nut on top.

3. **CYLINDER BLOCKS**



* When sawing grip the
 part being removed in
 a pair of pliers so as
 not to damage each
 piece of soft white metal.

Remove piston rod
 gland detail before
 sawing to shape.