

Re-Wheeling RTR Loco's

by Charlie Bloomfield

This short article hopefully carries on the theme of helping some of you to perhaps get just a little bit more from your hobby. Re-wheeling model loco 's with Romford is certainly nothing new but has come up more than once in conversation with members at some of the exhibitions that the DOGA has attended and also in your letters. Firstly, Onrar Awad explains his methods for re-wheeling.

Experiences on Re-Wheeling old Chassis

by Omar Awad

I decided I would experiment on one of the many Triang Princesses in my collection. Changing the drivers from the old Triang solid wheels to Romford drivers using the same Triang chassis. What I did was as follows:

The bearings supplied by Romford fit perfectly into the Triang chassis, so 3 axles were prepared. I took the bearings and placed them in position in the axle hole and super-glued them very carefully into position.

The next stage was to use the Hornby gear wheel and fit it to the Romford axle. So, very lightly file the inside of the gearwheel with a rat tail to accommodate the Romford bearings. Lightly locate the bearings in the gearwheel, add a small amount of superglue to the joint and quickly compress them together with a vice or clamp. Next lay them flat and file the bearings flat to the outside surface of the Hornby gear. (Why you may ask, well you do not you may find that the gearwheel may not fit in the chassis block. Next step is to fit the Romford axle in the centre driving wheel

hole and through the gear wheel. At this point the gear will turn loosely on the axle so very carefully and by using a piece of fine wire drop a small amount of crazy glue down onto the axle / gear making sure that the chassis is tilted to the opposite side of the chassis bearing so that the glue runs only towards the gear bearing joint. (Make sure that the gear wheel is set in the centre of the axle and in-line with the worm wheel on the motor).

This done, I took the Romford drivers and using the original connecting rods, I drilled out the con rod pin hole on the Romford driver until I got a fairly good loose fit for the conrod pin to turn in the Romford driver.

Please note that the centre drivers are not treated in the same way, in fact the centre drivers used the Romford crank pins and a small top hat bearing which makes a good fit to the original con rod centre holes.

As for the motor, I purchased a replacement Buhler motor from AMR of Crawley and fitted that to the Triang chassis with an appropriate worm. If the worm to gear contact is too tight the motor will have to be lifted so to speak by say 0.2mm. This can be done in many ways, but is best accomplished by filing the motor stay slots on the chassis close to where the gear and axle are.

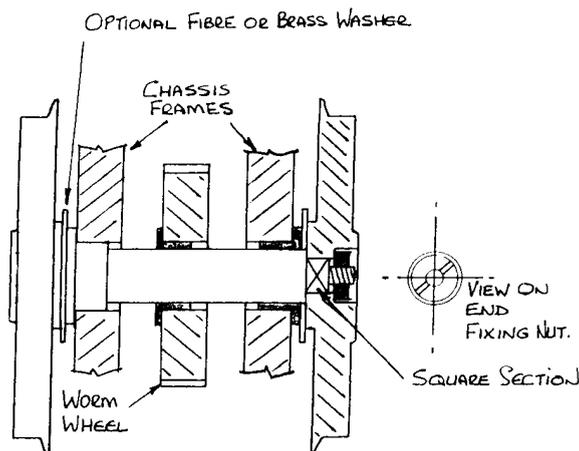
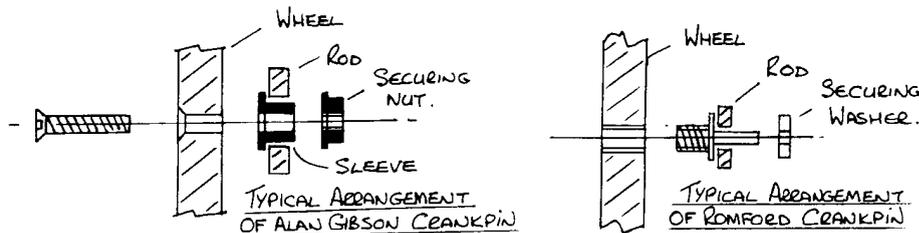
Many thanks to Omar for writing in with his experiences.

Of interest, whilst you will need to use the Romford bearings for the older Triang, Triang/Hornby models, (Alan Gibson also makes the same type of bearing), for Hornby-Dublo models the Romford axles will fit directly into the chassis and the original gear will fit directly onto the axle without sleeving.

Following a conversation with one of our more frequent correspondents, Gerald Lloyd-Williams, he kindly loaned me an old 1960/70's ex GW Collett goods engine to rework. Now I believed this to be an original Will's kit with the chassis being provided by an old Triang Jinty tank. This model had certainly seen some use over the years, but as the basis for gaining an introduction to re-wheeling, it was ideal. Before commencing the job, just a few things to consider. If you run your models on say less than 2'-0" radius curves you would be advised to use flangeless centre driving wheels, there are no hard and fast rules to this, trial and error may be your only alternative. To enable correct meshing of the worm and gear you should ensure that there is little sideways play in the centre axle, all side play should be accounted for in the front and rear driving wheels. Omar has explained the use of the Romford bearings. If you have never seen

Romford driving wheels up close, the axles have a male screw and a square boss machined on each end, the wheels in turn have a square female fitting in the middle of the back, which of course fits directly onto the axle and is secured by a small brass nut which screws into the centre of the wheel, easy, already quartered for you. Of note, I believe that I am right in saying that the majority if not all UK built steam locos lead from the right hand side, that means that the right hand side crank leads first, and if you really intend to be serious, this means that Romford wheels are only to be used on 2 or 4 cylinder locos, 3 cylinder loco's are of course set at 60° to each other. (Sorry chaps, got a bit carried away there). Coupling rods, you can retain the originals, or indeed replace them with some of the 3 etched kind as produced by the likes of Alan Gibson or Comet or even make them yourself. Romford make there own type of crankpins, made of brass with a small washer which can be soldered or glued onto the pin for keeping the coupling rods in place, Alan Gibson once made his crankpins from brass, but for a few years now has made them from steel, they come in a set of 10 with two sizes of bush, one just for the coupling rod, the other for the centre coupling/connecting rod combination and the whole assembly is secured by a small nut that does not look far off the real thing. For Gerald's Collett we have kept the old X04 motor, after cleaning-up the motor, the loco ran like a dream when using the Gaugemaster series 100 controller. I replaced the original pick-ups with parts from the DOGA kit, you can of course solder wire directly to the existing pick-up strip.

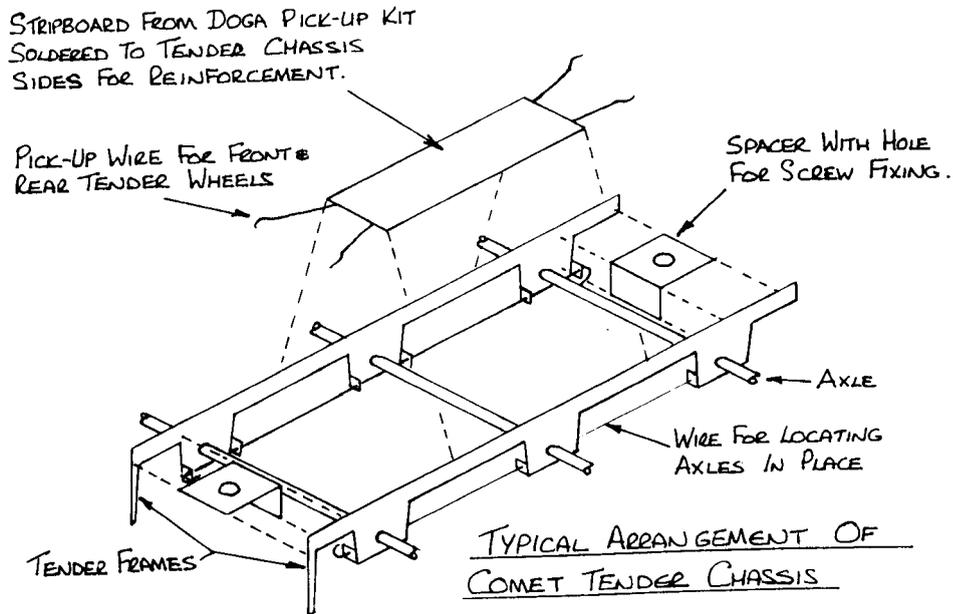
Once assembled and running, the new wheels certainly made an improvement, but things certainly were not right at the back end, the tender was running all over the place. One of the Romford tender wheels was running eccentric causing it to rock up and down and from side to side. How this had happened I would not care to guess, I certainly had not seen it before. So how do you cure this when the wheels are set into brass bearings glued into the whitmetal casting of the tender frames. You cannot get the wheels out!



IF WHEEL IS STRAIGHT CUT THEN SIDEWAYS PLAY CAN BE ACCEPTABLE. IF WHEEL IS PROFILE CUT TO SUIT WORM THE SIDEWAY PLAY SHOULD BE LIMITED.

TYPICAL HALF SECTION VIEW THROUGH ROMFORD WHEEL

One item that I had never tried before was the etched tender chassis kits made by Comet models. One of these, kit T3, gives a 7'-6" x 7'-6" wheelbase, correct for the Collett tender. So by using a wedge shaped swiss file, I managed to cut through the tender axles and remove the wheels, it was easier than sawing through. The plating had come off the wheels a long time ago, so a new set of 16mm Romford wheels was used. This chassis can be built rigid, sprung or compensated as desired. For our purposes I made it rigid. The main part of the etch are the 2 side frames and spacers. The spacers are folded to 90° and soldered between the frames. The instructions come on a double sided A5 sheet and are quite clear. If you use a flat surface in the first place, you should not really have any problems with the wheels ending up square. Having assembled the chassis, the wheels are located into the chassis by slots and kept in place by 0.7mm brass wire. If your wheels have been supplied for outside bearings, you will have to cut and then file the axles flat to the outside of the wheels. If at any time you wish to remove the wheels, you just remove the wire and the wheels fall out. Once assembled, a dummy fittings was carried out underneath the tender body. Recognise that the buffer centre height should be 14mm, it came out slightly low so some plasticard was made up in layers to form packers between the etched chassis and the underside of the tender tank to obtain the correct riding height. Luckily I was able to superglue two 8BA nuts to the underside of the tender tank so that I could secure the chassis in position by using screws from the underside. In addition, extra pick-ups were fitted to the tender.



*This article first appeared in the Spring 1997 issue of the DOGA Journal.
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