

Bachmann GWR '8750' Pannier conversion

SHEET 1
Issue 1
05.05

This Manual sheet has been prepared by EMGS member, Stuart Wood, of Hampshire. It gives his personal account of how he achieved a successful result. Clearly a relatively simple conversion that any member could tackle with confidence. Similar models in the Bachmann range such as the LMS Jinty could be converted by this method by following simple 'best practice'.

This model is a very good candidate for conversion to 'EM'. It is a well detailed model right down to rivets on the firebox and all the moulding detail is very fine. These much loved 'Collett' saddle tank locos were introduced first in 1929 and lasted into B.R days. The last being withdrawn late 1966. However, some sold to London Transport Executive during the 1950's were given red livery and continued as late as 1971. There were 863 built in all, and were much modified over the years.

This conversion refers only to latest Bachmann Blue Riband model. It should be noted that earlier Bachmann models of this prototype have a different chassis.

Materials required

One set 4BPK2E conversion wheel set pack from EMGS

This pack contains wheels, axles, crank pins, round threaded crank pin nuts and the short shouldered tubes required to refit the Bachmann connecting rods.

Loctite 603

Superglue

Wheel spacing washers:

EMGS 0.25mm (W325) 0.5mm (W305) 1.0mm (W310)

Tools :

EMGS back to back gauge (part 2211)

Small crosshead screwdriver

Small flat screwdriver

Pair of pliers, fine pointed nose

Small hammer

Flat headed punch

Vice

Approx. 400mm of tube approx. 4mm i/d to fit over axle

No. 70 drill

Pin chuck

METHOD

Dismantling

It will be useful to have a compartmented box to hand to store removed screws and other pieces as work proceeds. Small parts seem to disappear unaided quite frequently!

1. Remove the chassis/mechanism by removing the two crosshead screws at the end of the chassis moulding. Save these screws for reuse later.

2. Remove the two crosshead screws holding the base plate to release it, put aside for reuse.

The base plate and brake gear is all moulded together.

3. Carefully lift up the base plate starting from the cab end of the loco. There are two wires connecting the copper pick-up strip to the decoder device at the front end and care is needed not to damage these; they do not need to be disconnected.

4. Lift out the wheel set complete with the rods still connected.

N.B. Caution The centre axle is a floating axle; there is a shaped plate which is tensioned with a spring located under the plate which is not immediately obvious.

See Bachmann exploded drawing, part Nos.200-010 and 200-011. It would be wise to remove these two items to a place of safety before proceeding further.

It should be noted that the plastic gear wheel is offset from the centre on its axle.

5. Remove the connecting rods from the Bachmann wheels, set aside for reuse.

Remove the wheels from the axle with the gear wheel on. They just twist off and are not on splines. Place a tube in the vice.

Put the axle containing the gear wheel into the tube.

GENTLY tap the axle through the gear wheel finishing with a flat headed punch. Note the gearwheel is fitted onto a splined area of the axle DO NOT ATTEMPT TO TWIST IT OFF, or the hole will finish up oversize which will give unnecessary complications.

Set the gear wheel aside for reuse.

Discard the wheels and bolts that secured the rods to the wheels.

Refitting

6. Fit crank pin bolts to the new wheels.

Refer to EMGS Manual Sheet 2.5.2.(9)

Drill holes for the crank pin bolts using a No. 70. drill. This will allow the bolt to cut its own thread as it is inserted.

I also slightly countersink the bolt hole at the rear of the wheel to allow the countersunk bolt head to sit flat I also apply a touch of superglue to the head of the bolt just before fully tightening it up.

7. Fit the previously removed gear wheel to one of the new supplied axles, remembering that it is to be offset. I checked the correct position of this by placing the axle with the fitted gear into the upturned chassis and carefully measuring the amount of axle protruding from each side of the chassis.

Do not fix the gear wheel at this stage.

As these axles are EM length so the amount of overhang should be equal each side.

It is worth noting at this point that the chassis is wider at this end than the remainder of the chassis so that the thickness of washers required to pack out the drive wheels will be less than the other two axles.

8. Fix the wheels to the axles, using a wheel quartering device, or by eye aligning the spokes by looking through them.

NOTE, The spacing washers need to be placed onto the axles before fitting the second wheel to the axle. I found that the rear driving wheels required 1.5mm each side and the front two axles required 2.00mm to each side, however it would be best to check that you have sufficient play to allow for tight curves.



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9. Now the connecting rods can be refitted. Place the shouldered mild steel tube onto the crank pin so that the wide shoulder is against the wheel; replace the Bachmann connecting rods, checking that you have the proper hand to each side.

Fit the round threaded crank pin nuts.

10. The motor can be GENTLY levered up at the front end from its plastic mount so that the drive is disengaged, this allows you to place the wheels into the chassis, temporarily refit the base plate and try the wheel quartering. When satisfied fix the gear wheel with Loctite 603 or 601.

11. The motor can now be returned to its proper position, by pressing it back into its mount.

12. Adjust the wheel pick ups by bending them out to suit the new wheel positions, and replace the base plate.

13. Test run, and adjust quartering if required. When satisfied, secure the wheels with Loctite 603 or 601

14. Replace the chassis into the loco body and the job is finished.

Useful References

Locomotive Illustrated No. 105 (RAS Publishing)
This has a good selection of photos.

Model Railway Journal No. 111 and 112.

Locomotive Papers No. 99 - The Maunsell Moguls
(Oakwood Press)

The Locomotive History of the SECR - D.L.Bradley
(RCTS)

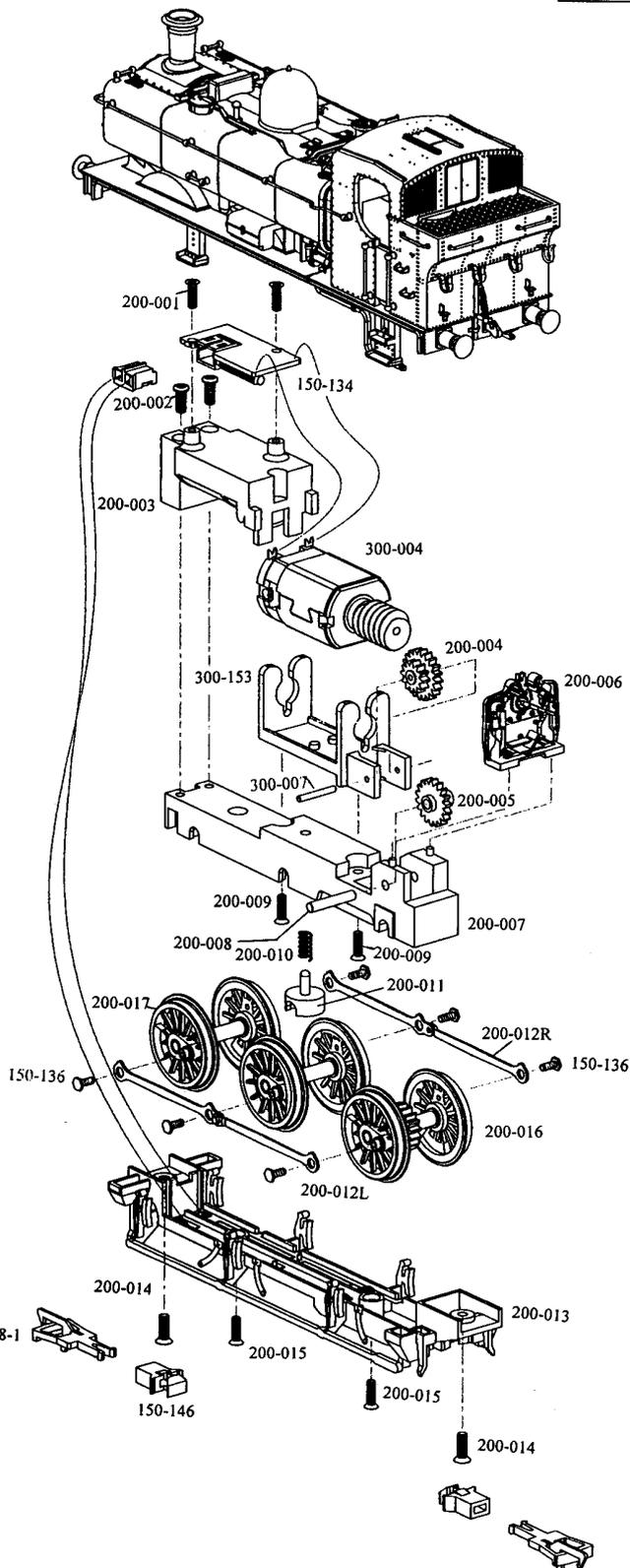
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IMPORTANT!
WHEN ORDERING ANY REPLACEMENT PARTS PLEASE ENSURE TO QUOTE THE APPROPRIATE CATALOGUE NUMBER / LIVERY OF YOUR BACHMANN LOCOMOTIVE, IN ADDITION TO THE NUMBER OF THE PART REQUIRED.



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PLEASE NOTE
WE WOULD LIKE TO BRING YOUR ATTENTION TO RUNNING-IN WHICH IS NECESSARY WITH THIS TYPE OF DRIVE. RUN FOR APPROXIMATELY ONE HOUR TO ALLOW WORKING PARTS TO BED-IN. LIGHTLY OIL THE MOTOR BEARINGS AND GEARS WHEN REQUIRED.