

The Mitchell GWR 2-6-2 Prairie Tank Locomotive



Some while prior to the Mitchell Design kits being acquired by Pete Waterman I bought the 45XX

kit. It was to be incorporated into - my then vague ideas of - a God's wonderful layout. The prototype was attractive, big enough to haul some heavy trains but small enough to justify on the smallest of layouts.

That was some years ago and since then my chosen modelling period has receded further and further into the mists of antiquity. It is currently set at the turn of the century and so the 45XX became, (like the same stable's Manor before it), an anachronism. It simply would not do for an 1890-1900 period railway so; I decided; build it anyway for the fun of it and hopefully sell it on to provide funds for more appropriate kits.

Now part of the "Just Like the Real Thing's" stable the kit has been embellished with an extra detail pack. Before the pack was finalised though, I bought from Pete Waterman an early version of his lost wax brass castings for the leading pony truck. Other added items were Carl Legg crank pin nuts, couplings and steam heat pipes, a set of the appropriate Slater's wheels, Guilplates' plates and an ABC gear box.

As usual the kit arrives in a sturdy box, which I find useful for storage of all sort of things, except the finished engine. It is a mystery to me why so many reviewers make an issue of the box the kit arrives in. Anyone who is prepared to spend the time, effort and money to build a quality kit of this nature should, I think, be also prepared to get a proper wooden box in which to carry it about. I want my efforts and investment in time and money to be as well protected as possible so this one now has a wooden box. (Rant mode off!)

The box contains several sheets of brass and nickel silver etches, bags holding various castings, etc., and assorted lengths of wire. There is also a lengthy set of instructions, isometric drawings for the chassis, cylinders and body and pictures of the etch sheets. The instructions are written for a 4mm locomotive with some alterations. There are however five further pages that contain essential information that deals with the differences in the kit for building the 7mm version. Included also are full sized 7mm drawing and list of parts.

I managed to lose, between buying and building, some of the castings and Pete Waterman kindly provided replacements along with pictures of the sprues with identifying letters so that

one can match the parts to the name. For those, like me, who do not know the names of all the various parts of an engine, this is manna from heaven and should be the norm for all kits.

I routinely use an RSU together with Carr's solder cream for most of my soldering with the result that very little ever needs to be scrapped off afterwards. This saves hours of time that can be devoted to building more kits.

As with all the Mitchell kits I have built, this is well designed and, so far as I have measured, very accurate. The chassis, of nickel silver, is the place to start. Get it square and running well before even thinking about the body. My version was built using the laminated etches for the slide bars, built up slippers and rods but there are now available lost wax castings for many of these in the super detailing kit.

It was not difficult to use the laminated parts; they are a good fit. Once the rods are cut from the fret, do not clean them up. Simply insert tapered wooden pegs into the crank-pin holes in each matched pair and clamp the laminated etches together in the vice. Before tightening fully, apply a liberal dose of flux; do try to avoid getting flux on the face of the rods, it makes cleaning up more protracted. Then, with a really hot iron, using 188 degree solder, allow it to run by capillary action between the laminates. The solder should stand proud of the edge of the rod when you finish. It is now a simple matter gently to file the rod to final shape. Once polished the join is invisible, the rod strong and of scale thickness. A similar procedure is used for the slide bars, which fold together.

The chassis goes together easily, the compensation system is simple and effective, everything fits and there are the usual alternative parts to do S7 as well. I chose to use different horn guides to those supplied and used some Finney ones I had on hand.

The cylinders and slide bars, when built up on their bracket, are a bolt on unit and the brass casting for the vacuum pump also fits here instead of to the underside of the footplate. It is a good piece of design. Once suitably drilled out, the crosshead can be connected to a length of .9mm rod that will slide easily in the vacuum pump. Do not solder this rod to the crosshead until everything else is virtually done. Certainly, not until the chassis has been painted because, once the rod is soldered to the crosshead, the cylinder unit is not easily removed without unsoldering it. One of the few instances where I used a soldering iron instead of the RSU.

This is not as onerous as it sounds because the chassis is well designed, once you have it running freely it is a simple matter to complete the detail, paint it and connect the rod to the crosshead. It is worth doing for the realism it imparts, one can almost hear the Phut, Phut as it moves along.

I fitted the coupling and connecting rods using Carl Legg lost wax crank pin nuts. They are available for both Slater's and Alan Harris wheels. The Slater's type will need a 12BA tap carefully run through them to clean up the cast-in thread. Provided that the brass bushes stand very slightly proud (a fraction of a millimetre) of the rods, the crank pin nuts can be screwed

down hard. To screw them down easily you will need to make two small tools. I turned up two pieces steel rod in the lathe, one with a 3.5mm hole and the other with a 4.5mm hole. It is then a simple matter to cut a slot across the edges to fit over the gudgeon pins. Before I invested in lathe I used two pieces of brass tube with suitable inside diameters and cut a slot in the end.

Use the 12BA nuts that come with Slater's wheels while building and setting up the chassis but once running nicely; replace them with the crank pin nuts. Tighten down hard; cut off the excess bolt length and file them flush. They can still be removed for maintenance.

I had to put several washers (provided on the etch) on the axles to prevent excessive side play and consequent fouling of the cylinder by the front drivers.

To make sure that the pony trucks (I used the etches for the rear one and castings for the front one) stay in contact with the rail, I soldered some phosphor bronze strip 10mm wide, bent to a Vee shape, under the frames to bear down upon the truck frames. It works well, is adjustable and allows lateral movement. They are visible in the photograph.

The instructions for the chassis are straightforward and you should have no trouble assembling it. I made wiper contacts from springy phosphor bronze strip (Eileen's Emporium) on all drivers, fixed to small pieces of circuit board (supplied). These were epoxied to the cylinder unit bracket and the rear frames. They cannot be seen when the body is fitted and bear lightly on the tops of the treads. A hefty brass flywheel was turned up and fitted with Locktight to the motor shaft to add even more smoothness to the running.

I chose to build my engine based upon a photograph of No 5400 in GWR days with straight drop frames, no outside steam pipes, no portholes in the cab front and lettered "GREAT WESTERN" on the tank side. The kit covers most of the variants that existed during the life-time of these engines.

The body is quite complex but not difficult if you take time, follow the instructions and plan your moves. This time I had not had the boiler, firebox and smoke box pre-rolled since I have invested in a set of rolling bars. They are not difficult provided one is careful and follows the excellent directions in the kit. If you do not have rolling bars then I suggest you get the parts pre-rolled.

There are a few areas in the instructions that need clarifying to make things easier for others to avoid a few pitfalls:

I found it easier to fit parts Nos: 26 & 27 (the inside cab sides) and floor before fitting part No: 67 (the bunker). It was also easier to fit all the valancing before the buffer beams.

If, like me, you want the square drop end to the front of the foot plate then the facing piece is part No: 50 and not as in the diagram.

The tank sides need to be bent round at 90° but the instructions do not state what the radius should be. I found that a 5/32 drill shank did the job perfectly.

Fit the smoke box step (Part No 42) *before* securing the smoke box in place to the footplate and the same goes for the snifting valves.

There are some parts that are inherently weak due to the method of production and you *will* need to strengthen them.

The front steps needed some wire bending to the same profile and soldering to the back or they bend at the slightest touch. It would not take many such movements to snap them off completely. I tried first of all running more solder in the etch line but this proved not to be strong enough and so used some .7mm nickel silver rod bent to the profile.

The rear sandboxes are a hefty white metal casting that can be drilled to take the pipes. They are fitted to an etched bracket that, while being very accurate, are also very small with about 1mm to be soldered in under the valance. It is recipe for future damage so I bent up and soldered on the back of this bracket some extensions that both strengthened the bracket itself and gave a much greater area to solder behind the valance. It is necessary to do this because the chassis is a close fit between them when fitting to the body and makes them very vulnerable.

Do also take the advice in the instructions and pack the smoke box with lead before fitting the door. It really does need weighting to balance it out and get some weight over the pony trucks. I filled the smoke box and bunker with liquid lead, which balanced it well. There is of course lots more room to fit more ballast in the tanks if necessary as well as DCC chips and speakers.

Would I recommend the kit? Most certainly yes, but it is not, I think, a kit for the absolute beginner. I built it almost exclusively using the RSU and Carr's solder cream so there was very little cleaning up of excess solder to do.

The top feeds are soldered to the body but the safety valve bonnet is loose, polished up and varnished, then fitted with a tiny scrap of blue tack so it can be removed for repolishing if necessary.

After a bath and good scrub in Viakal it was washed again in very hot water and dried using a hairdryer. After that no part is touched with bare fingers so that the paint will take well; a coat of Precision etching primer before final painting.

I could not get the cellulose paint to spray properly and, after stripping twice gave it up. I think the weather was just too hot. However, on asking at my local Halfords how long it would take to get a spray can of Rover Deep Bronze Green I was told they could make it up for me on the spot and promptly did; so the engine got painted using acrylic paint instead. (By the way, if anyone knows of a car colour that is a good match for Wolverhampton Green I would appreciate them letting me know.)

Methfix transfers (much better looking than the pressfix type) followed by sprayed Precision satin varnish completed the job.

It runs very smoothly and quietly in either direction and promises to be a powerful engine capable of hauling greater than scale loads.



What did it cost? The kit currently retails at £240.00, an ABC gear box for it is £60, Slater's wheels £57.50, plates £9.00 and crank pin nuts £5.00, total of £371.50. That covers the minimum requirements. My relationship with the suppliers mentioned is simply that of a satisfied customer. All told, a satisfying model to build.

