

## **7mm WAGON BUILDING FOR BEGINNERS**

This article is for beginners and is not intended for those who have 'done it all before' but it is aimed at the new entrants to the hobby. Having built many wagons over a period of 50+ years one gets into the habit of not reading instructions but just getting on with the wagon. I found recently from someone who had never built anything that he was baffled by the terminology for most parts of the kits but also those relating to tools. So those who've been there etc. please do not be offended if I appear to be teaching you to suck eggs.

Getting started in 7mm scale can be daunting for the beginner as there are many different kits available of varying complexity. In this article I have tried to sort out the various manufacturers' offerings to make the choice easier. It is very frustrating for a starter in gauge '0' to start a model wagon and after spending much time and effort have produced a disappointing result. I have tried to explain the merits of the various manufacturers' kits and their pitfalls. I also have gone back to basics and this article is not aimed at the experienced modeller though there may be some hints and tips that they would find of use. I have only attempted to explain plastic kits as etched brass kits are in another league and are unlikely to appeal to the average beginner. I have chosen the main manufacturers of plastic/resin kits and they are Slaters, Parkside Dundas, & Coopercraft. Powside do not make their own kits but use Slaters as they pre letter private owner's wagons. This is probably the largest range of liveries and adds to those that Slaters and Parkside produce for their own kits. There are several other manufacturers who mainly use resin and some of these kits should only be attempted after building plastic kits. As Parkside always show the interior detail of open wagons where as Slaters do not show such detail in every case, so if you want an empty wagon use a Parkside otherwise load the wagon with a suitable load to hide the lack of detail.

The quality of the instructions varies from the well detailed and those that are confusing to say the least. One set is just three photos (the rest is pure guess work). These instructions often give a very basic list of tools required which most experienced modellers will have. I have expanded the list for someone who has to start with getting some tools in the first place. Parkside give individual instructions for each wagon and are good. Slaters are OK but often use one set of instructions for several kits which is confusing to the beginner. Powside use the relevant Slaters Instructions.

To start with one needs a flat and fairly solid base to work on. A piece of kitchen worktop is very useful and should be about 12" x 24". The surface must be of the flat variety and not one with any form of embossing/pattern. I find a fairly neutral pattern preferably without straight lines the best. This surface is flat enough to ensure that the wagon is built with the chassis level. The type of cement that is used for the fixing of the plastic does not readily stick to work top surfaces though super glue does.

Tools required are as follows:-

Craft knife with different blades, tweezers, needle files, 6-8" flat medium file, a set of small drill bits sizes from .5mm to 2mm plus a pin chuck, (for holding small drill bits), buffer casing size drill bit 1/8<sup>th</sup>" diameter, (hole in buffer beam) small side cutters, small pointed pliers, small flat nose pliers, small round nose pliers, steel scribe, fine toothed saw blade (Exacto 132 teeth per inch) and a fine paint brush for glueing. The glue required is Mek-Pak for the body and Plastic Weld for ABS plastic items such as the buffer housing, kitchen roll, cotton buds and cotton rags are useful. A piece of foam rubber about 10mm thick and large enough for the largest vehicle to fit on comfortably, this will prevent damage to the vehicle and keep it still whilst smaller parts are fitted and the when wagon needs to be placed on its side or roof. A small 'puffer' is preferable for blowing dust away from the work as it supplies dry air where as blowing produces a certain amount of moisture which causes dust to adhere rather than move away from the model. Other tools which are useful but not an absolute necessity are a small vice, clamps and inverted tweezers for holding a model. Clamps can be bought in packs of six from one of the many 'Pound' shops. The tools are best bought from a supplier that caters for modellers such as Squires of Bognor Regis. The total cost is not great but worth the investment. This list is by no means exhaustive but is a good basis to get started and it will not cost a fortune and will last for many years.

To get started I check that all the parts are in the kit, it is rare that parts are missing. Lay out the parts and study what you have and check with the instructions and any diagrams provided. The next phase is to start on the body by removing the sides, end and floor from the sprues. To do this it is best to use a fine saw to cut these items free. By using a saw you do not distort any of the parts. With a fine file clean up the edges and any other place where there is a blemish. The next job is to make sure that the parts fit together squarely. In the case of an open wagon with end doors ensure that the correct side is fitted to the correct end, (ie an end door is at the end of the side with the door hinge fitting). When sure that the fit is correct and square join the two pieces with the adhesive. With a small brush (small pointed one size 1 or 2) run a small amount of the chosen glue along the joint making sure that fingers are kept out of the way as the plastic for a short time will be soft and fingers prints will appear if glue, finger and plastic come into contact. The adhesive will dry within a minute sufficiently for the piece to be put down. Whilst the glue hardens the remaining side and end can also be joined but ensure that the halves will make a whole body. Now the floor can be added again making sure that it all fits together squarely. Read the kit instruction to see in which order the sides and floor is to be fitted. In respect of a covered wagon the roof may be fitted now. If the wagon is to be weighted the weight can, in the case of a box van, be placed inside and glued to the floor with super glue. A small piece of lead is best. Lead sheet can be purchased from builders merchants that sell lead flashing.

The next parts to be assembled are the solebars, axleguards, and axle boxes. Ensure that the bearings 'brass top hat' fits into the axlebox snugly. Depending on the kit as to whether the axleguard is fitted to the solebar before this part is fitted to the body or afterwards make sure that the axleguards are square and that they are the correct distance apart to ensure that the wheelbase is parallel. In the case of Parkside kits the axlebox slides up and down in the guards so follow their instructions as to how they are fitted

together. This requires careful application of the adhesive so that the wrong parts are not fixed together in error. Other kits either do not have any forms of compensation or as Slaters do on some kits use etched brass etchings to achieve the same effect. Ensure that the wheels revolve freely without excessive side play which should be kept to the minimum necessary for free running and preventing 'buffer locking'. This is when buffers pass round the back of each other and lock together causing derailments. The brake gear consisting of brake block assembly, safety loops, brake lever and brake lever guide can now be fitted according to the instructions. Make sure that the correct parts are fitted on the appropriate side. Follow the instructions for the particular wagon that is being built. There are several variations of brake gear according to the prototype.

Buffing gear can be fitted now, though the buffer housing can be fitted to the body before the running gear is fitted. Make sure that the buffer housings are fitted the right way up — with the small web at the top. (This was for the shunter's pole not to slide off when coupling up). Also in the case of end door mineral wagons make sure that the correct buffer housings are fitted to the correct end. The door end has housing that has a raised part on the top of the housing, but again look at the instructions. Parkside have a small ring fitted on the housing and I find the easiest way to glue this part accurately is to insert a scribe through the ring then into the housing and when lined up apply the adhesive, turn and remove the scribe carefully leaving the part to dry hard. Try passing the buffer head into the buffer housing and make sure that it moves freely then remove and fit the small spring, refit, and check that it moves freely. A gain remove it when you are satisfied that it move freely and does not catch the solebar. The size of the drill for clearance of the hole in the housing is shown in the kit but DO NOT use the larger one right the way through the part as there will be no ridge for the spring to stop on. Having sprung buffers helps to stop buffer locking. The coupling hooks (draw bars) can be assembled and tried for freedom of movement. Ensure that the spring can be fitted. The draw hook should be able to move out when pulled and returned when released. Sprung draw gear helps to start a loaded train as the springs will get things moving. Do not permanently fit the draw gear now. These parts are better fitted after painting.

When you are satisfied that the wagon construction is completed it is now ready for painting. Although it is plastic I wash it in warm water and let it dry naturally usually overnight in a dry and warm room. Do not apply heat. I normally use Phoenix Precision paints either sprayed or brush applied. They do sell paint in spray cans which I have used for the body work and I tend to brush paint the running gear. The colours are described in the kit instructions. Regarding the body, I usually spray an acrylic undercoat of white or light grey obtainable from car accessory shops. This dries quickly though I leave it 4-6 hours before proceeding. Some masking will be required when spraying, use a low tack masking tape. When the base colour of the wagon is done the running gear etc is brush painted black (GWR is grey). The next task is to apply transfers which are usually supplied in the kit. There are various types of transfer so follow the instructions applicable. Transfers adhere to the wagon better if the area where the lettering goes is gloss varnished. Most of the paint available for the basic wagon colour is matt or semi matt and transfers tend not to adhere. When the varnish is dry and hard (over night drying) apply the lettering as the drawing appropriate for the wagon. Leave 24 hours and then

varnish to fix the transfers permanently. I usually use matt varnish and weather the wagon as clean wagons are not normal in daily use though the occasional wagon is ex-works and clean. In this case satin varnish is appropriate. Buffers and draw hooks can now be fitted. In the case of buffers a small dab of paint should be applied to the nut holding the buffer in place after fixing. If this is not done when the wagon has been running for a while the nut works loose, falls off, followed by the buffer head and spring disappearing on the layout. Spares can be obtained however. I do not paint the buffer heads or the draw hooks as the paint chips off but I use a chemical blackening agent, which is available from Squires.

Weathering is an art in its own right and there is plenty of information on how it is done.

For a first time wagon building exercise I would suggest the kit is chosen for the simplicity of the wagon ie not a fitted wagon with more complex brake gear. Parkside Dundas produce the best kits that are ideal for a beginner, the ones being most suitable as they are fairly basic is of an open wagon and a box van. Kits are PS06 LNER (NBR) 4 plank open wagon and PS02 LNER (NBR) box van do however have separate solebars which require careful fixing but they have very simple brake gear. Alternatively kit PS30 of a Standard BR coal wagon is simple and straight forward. Kit PS26 a GWR open wagon is both simple and can be made into different types of GWR open wagons giving the modeller a little more experience of wagon construction. Both these kits are of wagons with very simple brake gear and when these have been mastered proceed with other wagons of your choice. At this stage be careful that you do not chose a more complicated vehicle to build as you may be disappointed with the result. However after a few kits you will be surprised how much easier it gets. I hope you find railway modelling a pleasant and enjoyable hobby.