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# BRF-020 Type YCV
# Turbot Spoil Wagon

## Building Instructions


**SCALE MODEL PRODUCT FOR ADULT MODELLERS ONLY.**
**WHITE METAL CONTAINS LEAD WASH HANDS AFTER USE.**
**MAY CONTAIN SMALL PARTS. ETCHED BRASS HAS FUNCTIONAL SHARP EDGES - HANDLE WITH EXTREME CARE**

**Thank you for purchasing this kit.**

**This instruction pack should provide a guide for building this model, given some experience of soldering and the basics of etched kit construction.**

**Please read all the pack before starting to build.**

**Drawings and photos are essential for builders to acquaint themselves with the prototype they wish to model. I find that there are various website that provide excellent pictures of the real thing to help you complete the kit.**

**www.wagons.wordpress.com**

**www.ukrailrollingstock.fotopic.net**

**For builders of modern image in 7mm, consider joining MIGO+1, the Modern Image Gauge 0 & 1 Organisation. For more details check out the website www.migo.org.uk**

**Transfers are available from Fox Transfers**

## Suggestion of tools that maybe required and general kit assembly

### Preparation

Before any parts are cut from the etched frets, push through any rivet holes from the back of the fret. These are represented by half etched holes on the rear of the fret. The same also applies to pre-formed loco.

### Forming the Etched Parts

When forming the etches, unless otherwise instructed, the fold lines are on the inside. A pair of bending bars are ideal for this job or a vice, (without serrated jaws), would suffice.

### Soldering

The key word for a successfully soldered joint is cleanliness. If the parts to be joined together are clean metal surfaces and are well coated in a good flux and providing the soldering iron tip has sufficient heat, a perfect joint which is also very strong will result.

A good strong joint can be achieved with glues but it is not easy to rework. A soldered joint can be easily undone, altered, corrected etc. by just re applying some flux and heat from the soldering iron. The flux transfers the heat from the tip to the metal surfaces to be joined and stops oxidization at the joint. I allow the multi-core solder to stay molten on the joint and, when the iron is taken away, will cool to form a solid metal joint.

When undertaking any kind of soldering always hold the parts to be joined together securely and comfortably. You will learn with experience how long to hold the iron on and in turn how much pain your fingers can endure. The use of small clamps such as hair clips, mini G clamps, (not rubber bands!), a small vice, various pliers etc. will make life easier. A simple jig soldered together out of scrap metal or made from wood may also help for holding parts you find awkward to hold.

You can use the various temperature range solders to your advantage during building. Multi-core for larger pieces will give you the main structure. A solder called Carrs 145 or 177 solder is used to apply the finer etches and laminates. Finally white metal solder, Carrs 70 Red Label, is used to fix the castings on.

Remember to take care not to apply too much heat near laminates or casting you have already joined as you may disturb them.

**Cleaning Up**

When assembly is finished, all excess solder should be cleaned from the model. Files, small wire brushes, fibre pens and Wet & Dry paper are all useful aids when performing this task.

On your model there are joints between etches and castings that may require some filling. Car body fillers such as Isopon are ideal, (avoid flexible/elastic fillers). When any solder or filler has been cleaned up the body should be washed in warm soapy water to remove any grease or flux that would prevent paint from adhering. Some washing up liquids leave a film on models, so it is recommended that Cillit Bang is used as a second wash. This removes all films, grease etc.

Plastic window boxes sold in the big DIY stores make an ideal size container for washing your models.

Rinse the model in clean water and leave to dry naturally over night.

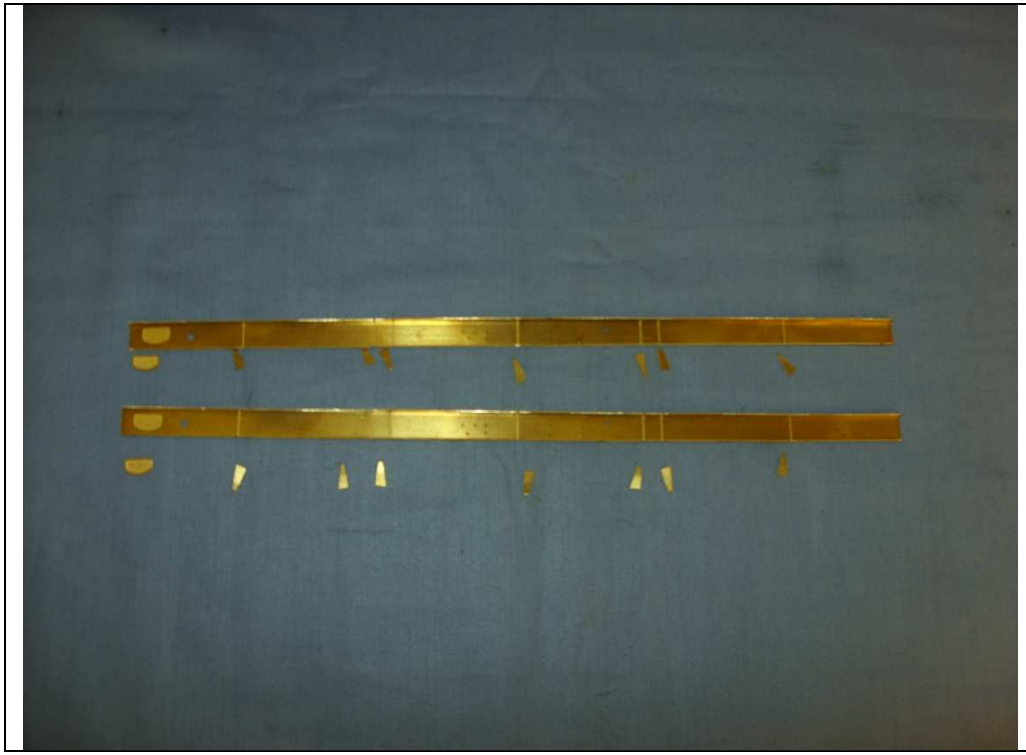
**Keeping the body square**

Always build on a level surface. The last you thing you want is for your model to derail or wobble. Use a piece of 7mm Glass the squarest material you can get. This will ensure that you stand every chance of building a square model.

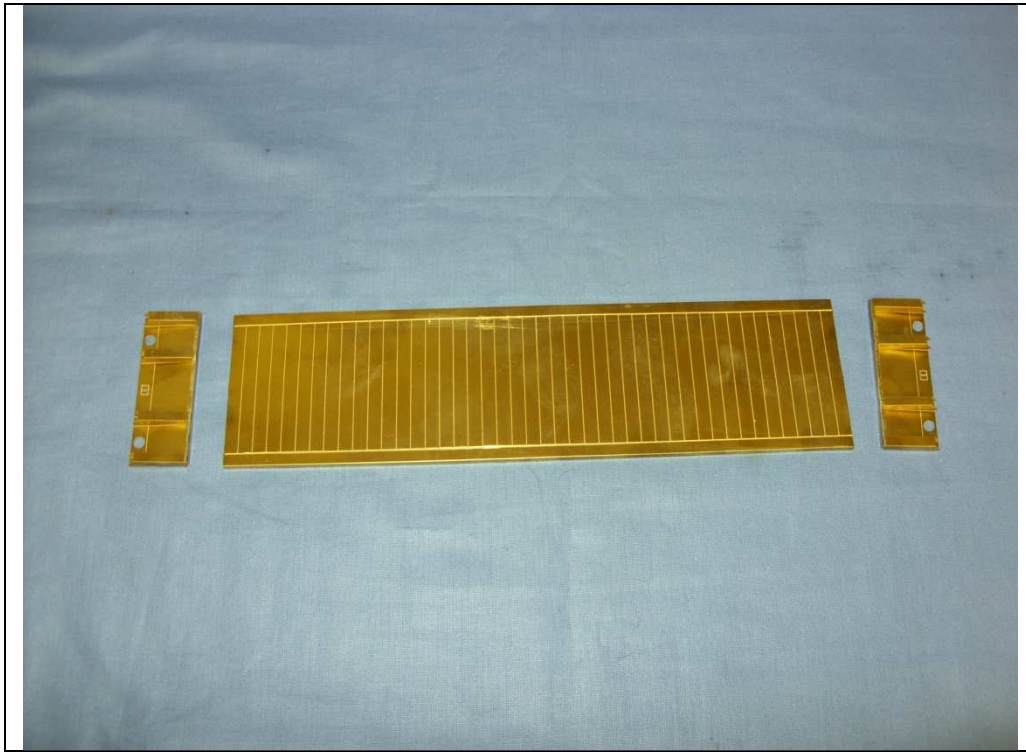
**Tools**

- A soldering iron with range of bits from large to very fine, for example a Weller temperature controlled iron (60 watt)
- Multi core solder, Carrs “Green Label” flux aids the running of the solder#18-24”
- Steel rule
- Folding bars such as those sold by M&M Models
- Range of Swiss files
- Medium cut bench knife such as Stanley Knife or short bladed scissors for cutting out etches.
- Evo Stick/Super Glue and Epoxy
- Good quality side cutters
- Fine pliers and duck billed pliers
- Mini drill and a good range of drills

**Right lets get started!!!!!!!!**

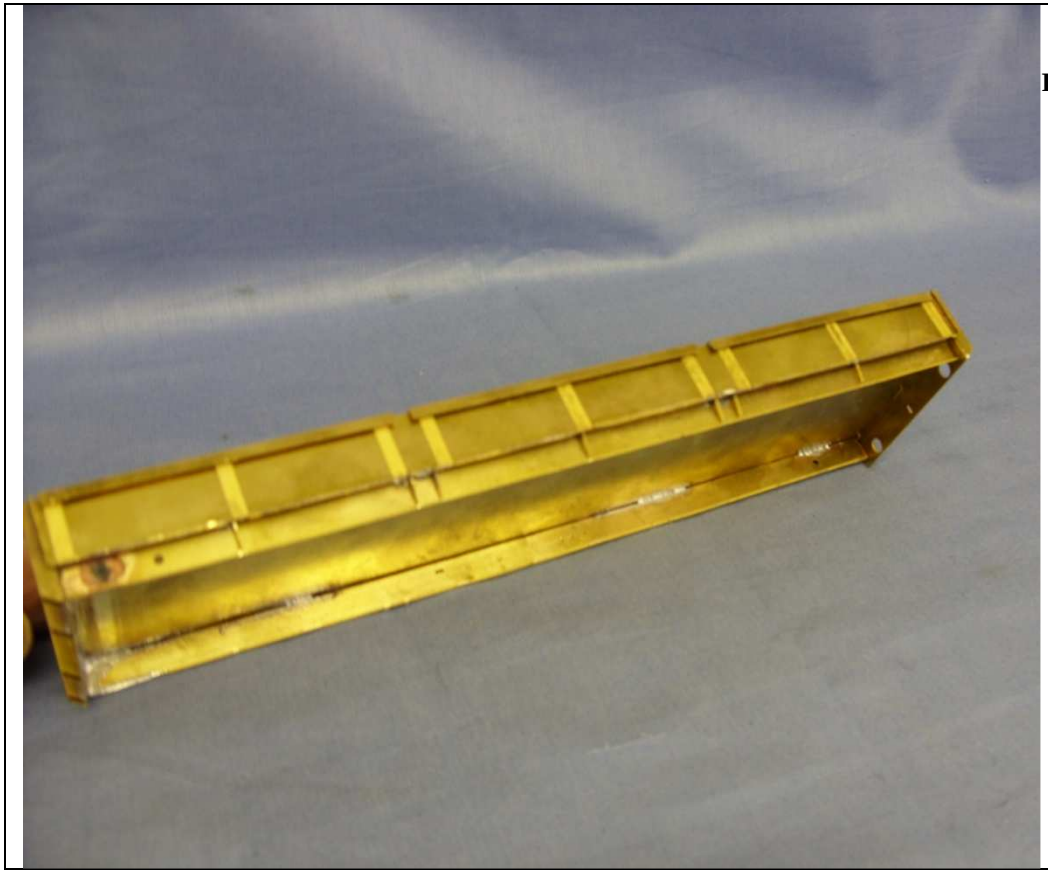


**Fold the top and bottom edge of the solebars and add the 14 solebars gustcots. Then add the wagon builders plate and load consist clip. Don’t forget to push through the rivet detail.**

| | |
|---|---|
|  | **Fold down the sides of the wagon bed and form the ends.** |

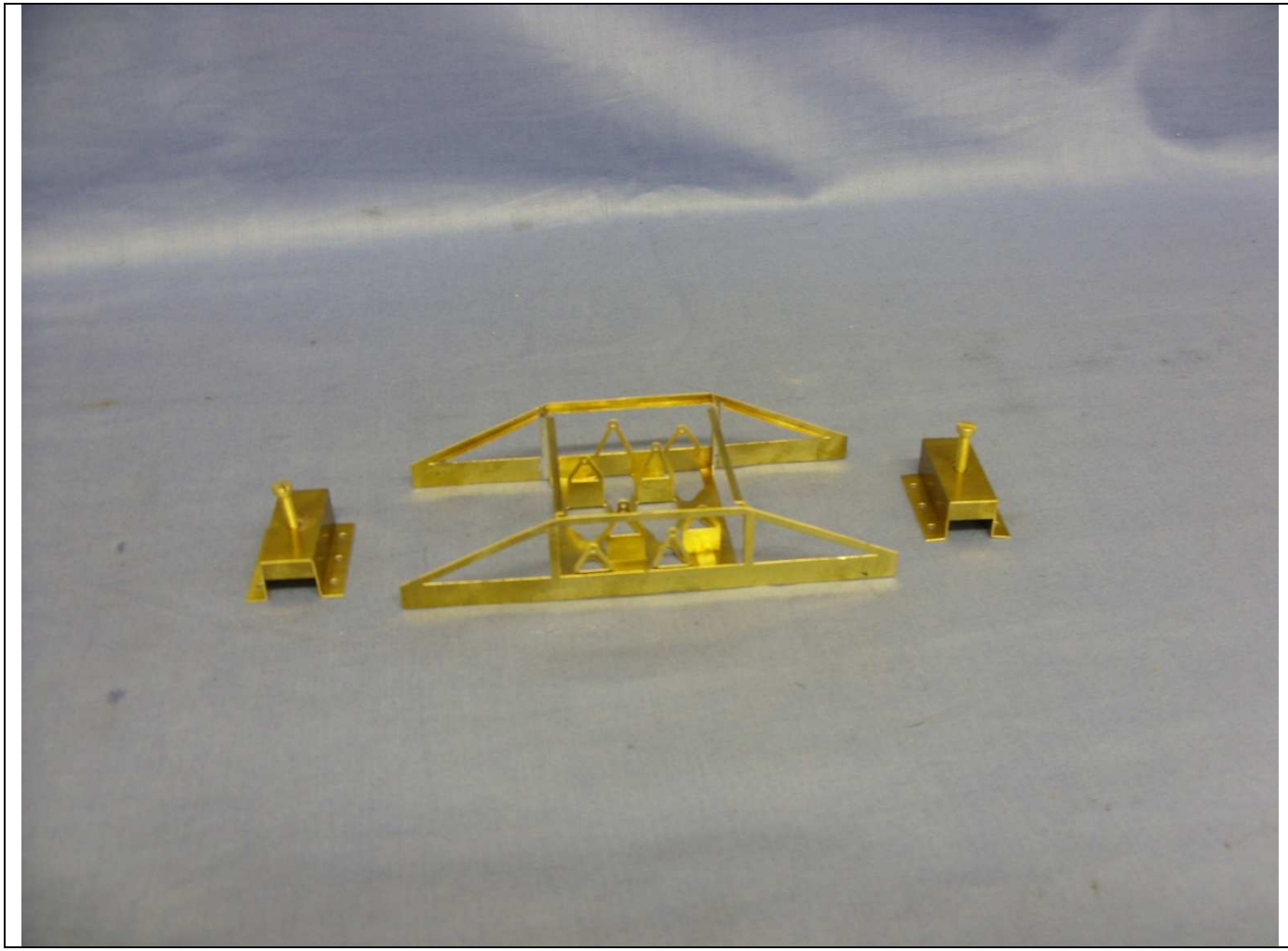
**Fold over the top of the body sides to form a lip and bend the bottom of the body sides to 90 degrees. Now fit the ends and sides to the wagon bed . To gauge the correct place to solder the sides to the wagon bed, test fit the solebars by offering these up to the underside of the wagon bed and ensure that the bottom side of these are level with the bottom of the ends. See the picture two pages on if in any doubt.**

| | |
|---|---|
|  | **This is how things should look.** |



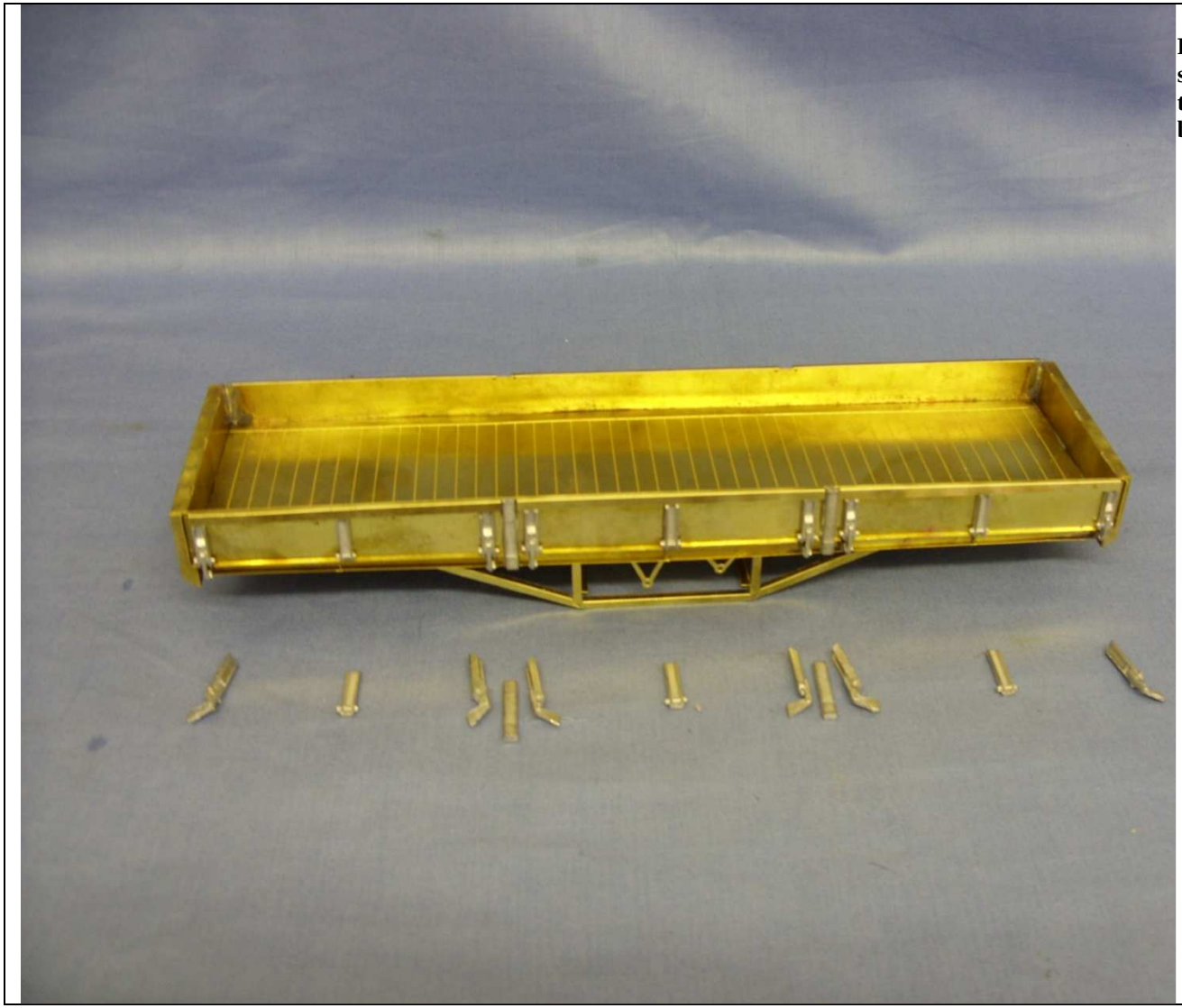
**Fit the two solebars**

| | |
|---|---|
|  | **Make both bogies remembering to fit the top hat bearing. The cross brace is an etch brass part. This can be seen on the completed bogie.** |



**Make up the truss rod assembly and fold up the ‘V’ Hanger s and Vac Cylinder brackets as show. Fold up the bogie pivot box remembering to solder the nut underneath to mount the bogie.**

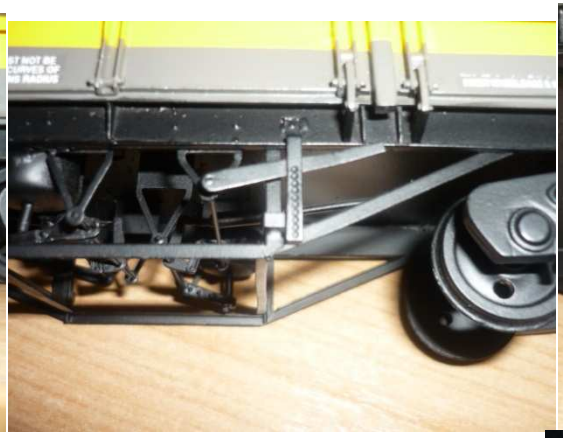
**Solder the truss rod assembly to the rear of the solebars and wagon bed in the position shown. This will be central to the underside of the wagon. Then fit the Pivot Box assembles noting that the bogie centre's are 153mm**



**Fit the Hinged side stanchions to the end of each side door, 6 a side. Fit the Plain side stanchions to the centre of each door, 3 each side and finally the box stanchions between each door, 2 each side.**

**Fit the buffers and lamp brackets to each end and also the brass end ramps. Fit the later by folding down the three flaps and solder these into the slots at the top of the wagon ends. Note that the outer ends of these should be bent upwards first.**

**Now fit the underframe detail as shown on the following pictures. Including the Vaccum Cylinders, Etch Cylinder bottom, Piston, brake equipment.**


THIS WAGON MUST NOT BE
WORKED ROUND CURVES OF
LESS THAN 3 CHAINS RADIUS




**Finally add the air pipes and instanter couplings**


YCV
TURBOT

**The Finished Wagon**

# Old instructions for more reference