The Prototype

From 1942 Warwells were built by Head Wrightson of Thornaby, Gloucester Carriage and Wagon Co. and also by BR at their Lansing workshops. They were capable of carrying a 50 ton load and were mainly used to transport larger armoured vehicles around the country that required the well to be within the loading gauge. They originally ran on diamond frame bogies with solid or three hole wheels. Being vacuum braked they eventually carried the TOPS code PFV.

Most were refurbished with Gloucester GP22.5 bogies during the 1970s and modified to become air braked with a through vacuum pipe, gaining the TOPS code PFB. Later still they were recoded to KWB, and when some lost the through pipe they became KWA. Some did however continue on the national network into the 1980s riding on diamond frame bogies still as PFVs. Others survived into the 1990s albeit on internal MOD lines at locations such as Long Marston and Bicester, by now with their brake pipes removed, while others were sold off and pressed into BR departmental service with various decks, bolsters and cranes added.

When adding decals it is best to refer to photographs due to the variations in markings, fonts and positioning through the life of these wagons.
The following is a good reference site online:
http://paulbartlett.zenfolio.com/
The cover photograph shows BR Lansing (1942) built PFB MODA95511 at Gloucester 4th July 1977 shortly after rebuild
Photo reproduced with permission by Paul Bartlett ©

General Notes on Construction

Naturally the N Gauge society wants you to achieve the best results you can. These simple guidelines should help:

* *Read the instructions through fully before you begin*
* *Clean off any flash/moulding pips*
* *Some or all of the wagon may be best painted before assembly*
* *Check fit with a dry run of each component before gluing*
* *Use a liquid cement for plastic parts, and cyano for etches*
* *Photographs will help with some details*
* *Build in batches if possible or appropriate*
* *Try to keep modelling area as clean as possible*

But above all....TAKE YOUR TIME!!

Warwell wagon PFB, KWB & KWA

NGK 050b

Period: (era 7-9)
1900 1950 2000

Beginner

This complete kit contains injection-moulded components, one piece Gloucester GP22.5 bogies and decals to build one vehicle

With Decals

To complete this kit you will need:
Plastic Cement, Cyanoacrylate Glue, Paint & Varnish

www.ngaugesociety.com

Getting Started

First, read the instructions thoroughly all the way through and be sure you are confident that you have identified all the parts.

This wagon is supplied with one piece Gloucester GP22.5 bogies.

Notes on Painting

Many a beautifully built model has been ruined by a bad day in the paint shop. Spraying usually gives better results than brushing so try car aerosols if you do not have an airbrush.

The kit has been moulded in grey plastic, the appropriate colours are:

MOD	**Army green**
Wagon deck	**Weathered wood/body colour**
End jacks	**Body colour but later changed to warning yellow**

Transfers and Finishing

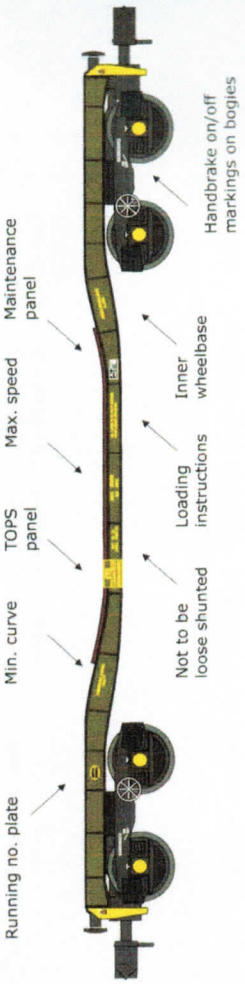
Waterslide transfers adhere best to a gloss surface. It is recommended that you either spray with gloss varnish, or use Johnson's "Klear" floor cleaner.

Cut the transfer from the sheet, dip for a few seconds in warm water, then slide off backing paper onto model. Reposition if necessary with a blunt cocktail stick.

Once decals have been applied, the model can be varnished and weathered to taste.

The illustration below shows a typical livery and markings.

MOD - Army green



Main Body Assembly

The exploded diagram shows how the plastic parts go together. Some detail is omitted for clarity.

Please read through the instructions before starting to assemble the model. Note that the end sections may require modifying depending on the radius of the curves that the model will traverse. See the 'Options' section to decide what is best for you.

Consulting prototype photographs may help with assembly of your model!

1 Remove the floor from the sprue and clean up any flash.

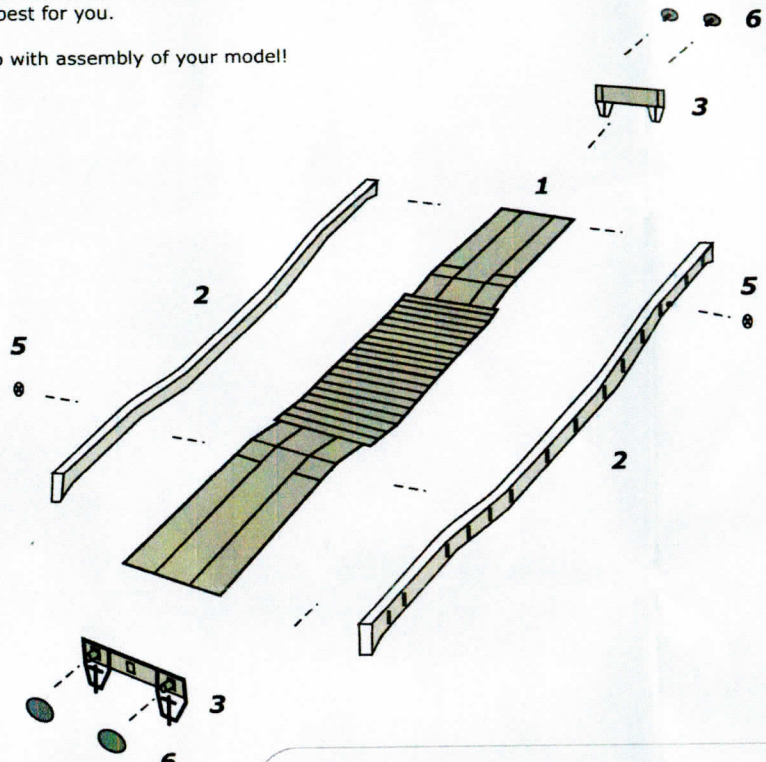
2 Now remove the side/solebar sections from their sprues and clean up. Glue to the floor ensuring they are square and true.

3 The ends/headstocks can now be removed and cleaned up. Glue in place making sure they sit square and true to the sides.
NOTE: Refer to the section on bogie travel before fitting these.

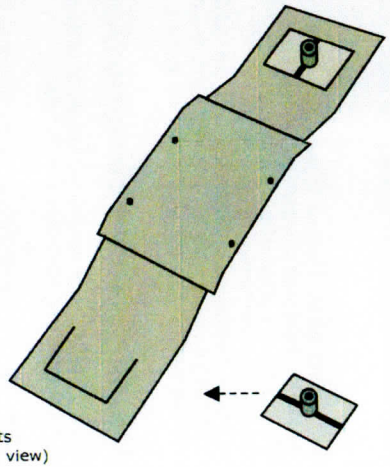
4 Remove the bogie pivots from the sprue and glue in the pockets on the underside. Note that the raised bars should be left-right at one end, and end-end at the other.

5 Remove the handbrake wheels from the sprue and clean up. Attached to the small pip on the solebar towards the righthand end on each side.

6 Fit the oval buffers with a little adhesive.



Buffers



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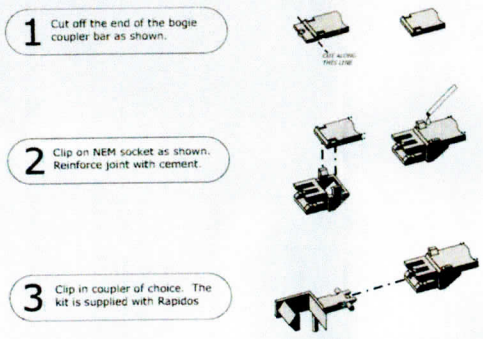
Bogie pivots
(underside view)

Fitting the NEM coupler socket to NGS bogies

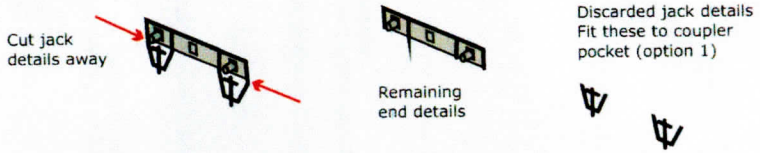


Options for allowing bogie travel

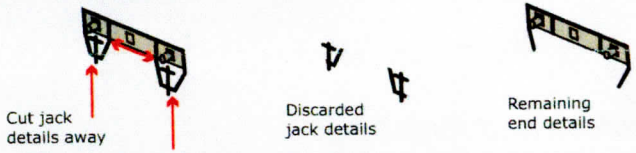
The bogies are moulded with standard 'Rapido' coupling pockets. Due to the distinctive jacks that were fitted under the buffers of these wagons there is negligible space to allow the bogies to swivel. The minimum radius of the curves where you wish to run the wagon will determine the best option for you. Being such a distinctive feature we have left it to you to decide which the best option for you actually is.

1. Cut the jacks from the solebars and attach to the bogies directly on the outsides of the coupler pocket. This allows full bogie swing on all radii and retains the detail, but will reveal the jacks out of position on curves.

2. Cut the jacks away completely and discard. This allows full bogie swing on all radii but leaves the ends bare of all jack detail.



3. Cut the inner section of the frame and the jacks away and discard. This allows a limited amount of bogie swing and retains the outer part of the jack frame detail. This will work down to approximately 11" curves.

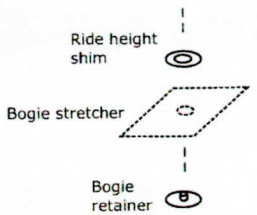


4. Use an alternative swivelling body mounted coupler (not supplied) attached between the jacks (eg. Micro-trains). This allows all detail to remain but means that you will have to use translator vehicles to couple to other stock not fitted with the same couplings.

Fitting the bogies

The bogies are retained by using the fixing pins supplied.
Fit thin washers as shims if the ride height requires adjusting.

Use glue sparingly to avoid inadvertently fixing the bogies!



Congratulations, you have built your kit and can now paint it and add decals as required.