



Air braked stock

The Prototype

These wagons were built in Great Britain by the Standard Wagon Company of Heywood in the 1980's using redundant tank wagon underframes. They were built to design code PO 018a. They have a 17' wheelbase, a length of 27' 1", a gross laden weight of 50.75 tons, and a maximum speed of 60mph. The wagons are fitted with hand wheel, air brakes and English Steel Pedestal suspension units. Disc brakes were fitted to one side of each axle, 180 degrees apart.

Some 40 were built in two batches, 20 in 1988/9, and 20 in 1989/90. All were hired to Allied Steel and Wire and were used on scrap traffic to the Allied Steel and Wire works in Cardiff. Some wagons are believed to have been used for internal traffic at Allied Steel and Wire. All were painted black with yellow chevrons on the buffer beam and around the upper angled surface.

These wagons were numbered:-

1989 RLS4560-4579

1989 RLS5213-5233

During the lifetime of these vehicles the prefix has changed to TIPH.

Because of the nature of the traffic many wagons have received minor body damage such as dents and score marks. Over the years there have also been minor changes to these wagons. At least some wagons have had ladders removed entirely or in some instances just the lower ladder.

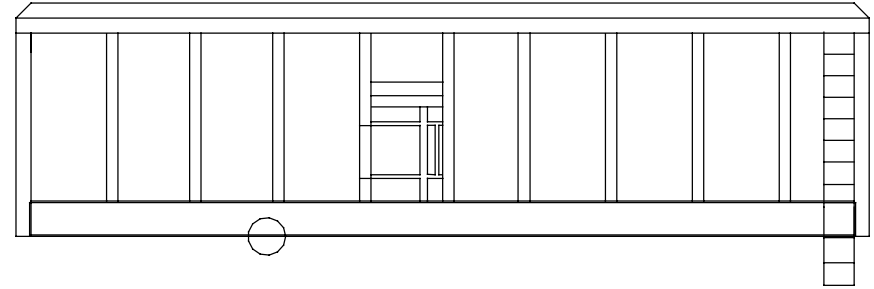
Depending on the type of donor tank wagon some wagons have additional sections of steel work present on the underframe. Modellers are advised to examine photographs as these items are variable and not present on many wagons.

As far as 51L is aware all the wagon are in traffic or in internal use at the time of writing.

Acknowledgements

51L would like to thank Philip Eames and Michael Fraser for their assistance.

Allied Steel and Wire, Standard Wagon, Tiphook, 51 ton steel scrap wagon to PO 018a.



NEW

From 1988 onwards

For OO, EM, P4 and S4

Features: resin body, white metal detailing pieces, etched ladder.

Required to complete: 12mm plain three hole disc/disc brake wheels, Instanter couplings, paint and transfers for the livery of your choice

References

Modern Private Owner Wagons, David Ratcliffe, P75,
Railways in Profile No 9: British Railway PO wagons opens and hoppers, G Gamble, P21

Update, compendium #2, P29-32

Update, compendium #4, P12-20 Private Owner Wagons, Vol 1, Marshall P12-13
Working Wagons, Volume 4, 1985-1992, D Larkin, P49

Web site information sources.

Wagons on the web

<http://web.ukonline.co.uk/wagons/p-coded.html#pc>

Paul Bartlett's site

<http://gallery6801.fotopic.net>

Assembly

These wagons are of the 'fabricated' type ie welded construction. Butt and fillet welds are not always apparent being raised, undercut or flush with the surrounding steel work.

Please read these instructions before starting to build your model. Examine all the parts and familiarise yourself with their assembly. Remove any moulding flash and ensure all parts fit correctly. We recommend wet fine 1200 grit emery (Silicon Carbide) paper for cleaning up castings or fine needle files. For assembly use we recommend superglue or possibly an epoxy resin such as Araldite.

The Bill Bedford w-irons are supplied to ensure free running. These should be assembled following the enclosed instructions. The use of waisted bearings is essential when using this sprung suspension systems.

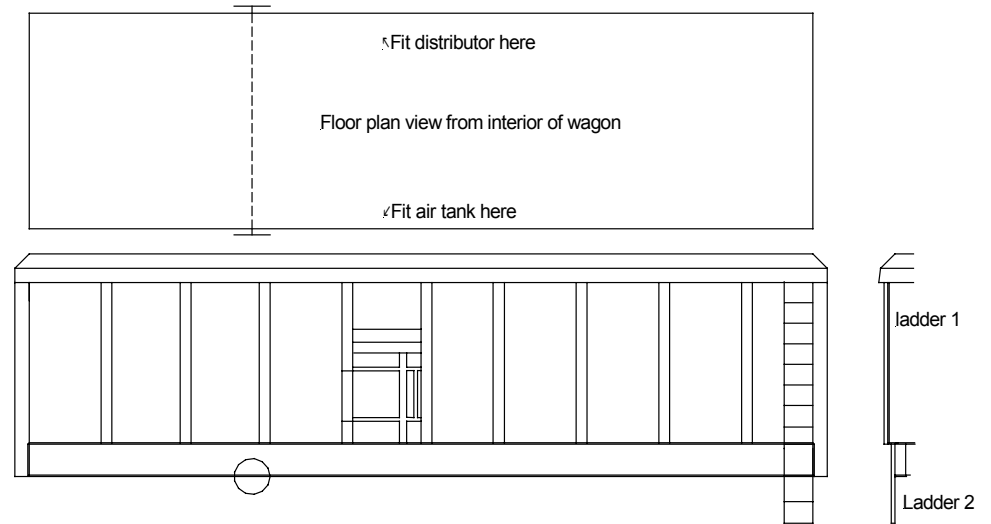
Body

It is probably desirable initially to wash the resin tank in solvent to remove any mould release agent. We suggest the use of enamel or cellulose paint thinners for this purpose. Washing up liquid is not satisfactory. Clean off any mould release marks and flash using wet 1200 grit paper. Bore holes in coupling pockets 0.4mm diameter and open up to a slot to accept couplings hooks of choice using a fret saw. Ensure the body lifting lugs (present on sides and ends) are clear of flash. Attach door in place in the lower section of the 5th panel. The door will need casting runners removing prior to fitting with the long thin lengths at the left hand side. These lengths need cutting to length so that about 1mm may be bent around the stanchion post.

Oleo buffer housing

Bore buffer housing holes (2mm diameter) in buffer beam to accept buffers. The buffer housing shank requires cutting to just greater than the depth of the buffer beam. Attach housings to buffer beam. Using a 1mm diameter drill bit in a pin chuck open up the bore to 1mm so that the bore bottom is coned. Bore out to a depth of approximately 5mm then bore out to 0.5mm diameter for the remainder. Bore the hole slowly to ensure a smooth finish. (Note a lubricant such as white spirit or turpentine will be helpful.) Take care to ensure the bore is square. Fit buffer heads after painting.

The ladders should now be attached.



Ladders

As built there are ladders on the right hand side of the wagon. They consist of two sections, the first (1) 8 rungs from floor to the underside of the angled top and the other (2) 3 rungs from solebar top to some two steps beneath the solebar. The ladder is positioned adjacent to the end with the lowest step of ladder 1 in line with the floor; the first step of ladder 2 is in line with the bottom of the solebar. We suggest that holes are bored (1mm) to seat ladder ends. These should be 5mm apart. The ladders should now be prepared. This is probably the most demanding task in building this kit.

Remove a section of laddering from the fret bend up the stile. For convenience the ladder base plate may be attached by a small pin to timber eg a piece of the bolster wood. Thread supplied 0.3mm nickel/silver wire through the holes and solder in place. With side cutters cut, to length and clean up using a fine file or circular cutting disc to remove surplus wire and clean up stile edge. Note if using a cutting disc safety glasses must be worn. Remove the base plate using a sharp craft knife, cut to length and attach in place. Repeat for the lower section of ladder.

Underframe detail

Attach a length of 0.7mm brass wire across the underside of the solebar to support the hand brake wheels. This should be about 32mm long and viewing the wagon side attached to the left of the third stanchion, see drawing. Attach brake hand wheels to each end of this cross rod. Note: the hand brake wheel is at the same end so when the opposite side is viewed the wheel is to the right of the seventh stanchion counting from the left of the wagon.

Fit the air tank to the underframe. Viewing the wagon from the side in the above drawing place the tank next to the solebar in line with the door panel so that the

horizontal pipe is to the left. The distributor should be next to the air tank. Please be aware that the position of these components will depend on their location on the 'donor' tank wagon and may therefore vary in place.

W-irons

Prepare Bill Bedford Pedestal w-irons as per enclosed sheet. Place w-irons on floor using suspension attachment bolts to position w-irons. Check the rail to sole bar height; this should be 14 mm from rail to the centre of the buffers. It is very unlikely that any packing is required. A section of thin 80gramsm paper may be required. Fit axle boxes these may need thinning alternatively remove the positioning plate.

The w-irons should now be firmly glued in place. If the wagon is gently pushed along a flat surface it should run in a straight line. If not one or both of the w-irons are out of line and should be adjusted. Attach axle boxes to solebar. Ensure there is a slot of sufficient clearance to allow free vertical movement of the bearing. 51L expects some material will need removing.

Brake gear

This wagon has disc brakes on one wheel of each axle diagonally opposite each other, no brake shoes are required. Suitable wheels can be obtained from Alan Gibson, alternatively use a conventional three hole disc wheel and etched brake discs on one side. Suitable etches are available from MJT.

Finishing

Clean and degrease your model, using solvent prior to painting. Use either an etching primer, such as Precision Paints PS1 or Halfords primmer for resin car bodies. Bear in mind static electricity. Build up a layer slowly over time. After painting clean the model using a tissue soaked in white spirit. Place decals as required.

Fit steel buffer heads. without spring to ensure clearance. Thread a spring on to the steel head and insert into the buffer. Ensure the head retracts and returns smoothly under it's own force. It may be necessary to remove the steel head and spring and bore out the 1mm length to accommodate the spring and buffer shank. (Size of these items varies slightly). Repeat as required.

Livery

These POA wagons have been used by a small number of operators over the years and are a black colour with yellow chevrons along the upper angled surface and buffer beam. However after time the livery was more consistent with weathered rust!

The model should be spray painted black. The yellow chevrons are approximately 4 mm wide with 3mm black and are at 45 degrees to the side. We suggest making a small plastic jig and marking the position of the yellow lines using a pencil. The chevrons can then be brushed in using yellow paint. Modellers are referred to the

references for further information. A transfer sheet is being prepared by 51L and will be available in the near future. Contact 51L for details.

Livery summary:

Black with yellow warning chevrons.

A more up to date version of this instruction sheet may be available at www.51l.co.uk.

Interested in the Air braked wagons?

Contact the Diesel and Electric Modellers United
www.demu.co.uk

This is the second of what is expected to be a range of Air Braked wagons. If you have any ideas or would like to assist the development team with contributions contact:
airbrake@51l.co.uk

Wizard Models

Wizard Models stocks a wide range of components, paints, transfers and other necessities for the modeller in OO, EM and P4. A full price list, for 50p + SAE can be obtained from:-

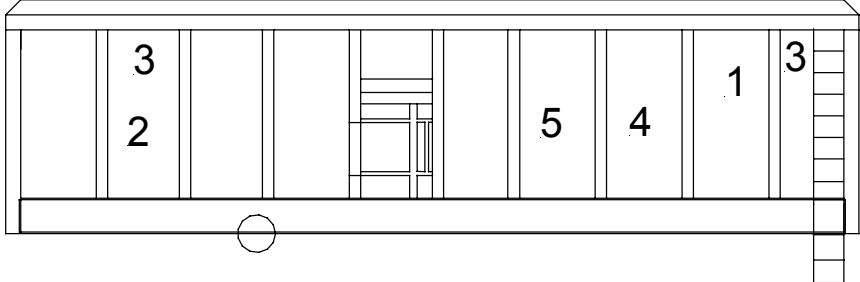
PO Box 225, Macclesfield, Cheshire. SK10 4GB
Tel / Fax: 01625-532944
Email: sales@wizardmodels.co.uk

Alternatively view our online shop at:
www.wizardmodels.co.uk

The site is fully searchable with many products illustrated. Lists in PDF format may be downloaded. Please contact us for any further assistance.

Version: 1.00
September 2005

Livery information



- 1 Allied Steel and wire logo
- 2 Traffic panel
- 3 OLE warning panel
- 4 Maintenance detail panel
- 5 Minium curve panel

51L expects to be able to supply suitable waterslide transfers during 2006.