



RT Models

4mm Scale, 00EM/P4 Hudson Tipper wagon kit

History

Robert Hudson at Gildersome Works near Morley, Leeds had been producing side tipping wagons for light railways and contractors since before the 1880s. Hudson set up the works in 1865 for general foundry and engineering production. The company was registered as a limited company in 1914 with an authorised share capital of £300,000, and went public in 1948. The end came virtually in 1982 when the Gildersome site was sold, but some work continued elsewhere for a further three years.

They patented the unique rolling centre pivot three point tipping mechanism for light railway tipping cars in 1875. This design allowed the triangular shaped skip to be stable in normal position but to allow a man to single-handedly tip the contents out, and for the body to remain stable in a fully tipped right or left hand position. Initially production concentrated on skips for light narrow gauge and this is what most people associate with Hudsons, the type could be found in quarries and mines everywhere. It used steel pressings in the main combining a high degree of ruggedness with a light weight. In about 1937 the trade name 'Rugga' was applied to these small skips to an improved design. Similarly during the 20th Century larger versions became popular, especially with collieries, and numerous standard gauge vehicles of 300 cu. ft. capacity were sold to mines and the National Coal Board for disposing of mine stone, and were still doing so until the early 1980s. They were also to be found used by contractors for spoil clearance and land reclamation, in chalk quarries, and for the disposal of sewage sludge. Even as recently as the 1974 they were being used for land reclamation and rubbish disposal in Essex on Aveley Marshes on the banks of the Thames, where now nearly 40 years later sleek Eurostars thunder by.

A series of the larger wagons (420 cu. ft. capacity) were supplied in 1956 to Sheffield Sewage works and were registered to operate over the Eastern Region between Blackburn Meadows, Tinsley and Thryburgh, although limited to internal use by March 1968.

The 300 cu. Ft. wagons which were fabricated from steel section and sheet were mounted on four 3 foot diameter wheels, with inside bearings, typical wheelbase being 7 foot 6 inches. Hudson's seem to have preferred using split spoke wheels. The body was 11 foot long (inside) and 8 foot 9 inches wide at the top (inside), Length over buffers was 15 foot 6 inches. Loading height was 8 foot 3 inches, and overall height was 9 foot 4 inches. For use in the UK side buffers and three link couplings were normally provided. Braking was usually by hand lever, although screw brake, and even automatic air brake were offered as alternatives.

A smaller 200 cu. ft. version was available for 3 foot, and 3 foot 6 inch gauges with centre buffer couplers and also for standard gauge; this was 14 foot 7 inches over buffers. A 410 cu. ft. version was available for standard gauge which was 20 feet 6 inches over buffers and was also supplied for 5 foot 6 inch gauge too.

Although these were a Hudson design many different firms either built them to Hudson's design under licence or had developed a similar vehicle carefully avoiding the Hudson patent. There were also wagon builders that also sold Hudson built vehicles.

Notes

Take the time to read the instructions and study the diagrams and photos so you become familiar with the building.
Treat the V tip body and chassis as separate units during construction.

The instructions will not be fully comprehensive on the building of the kit but will be guide on certain areas, especially where a choice of parts for certain gauges are required

The diagrams have been drawn as accurately and clearly as possible to help with construction as well as some photos included which this is felt to be far better than trying to describe everything.

Additional parts required

2x 12mm 8 split spoke wheels, some wagons did carry 3 hole discs.

Instructions

V Tip Body

Start with the building of the V Tip body first to become familiar with the construction and also to check clearances on the chassis's construction later on.

Start by punching out the half etched holes with a sharp pointed object to form the rivets on all parts.

Once done remove part 1 the body and carefully form the top of the sides at a 90 degree angle with the half etched line on the inside.

Now fold the body sides and ends up, note the half etched rebate in the ends which the sides go into.

On the ends, parts 20 the rolling ends. The 2 small strips in the middle needs to be folded over completely flat at 180 degree with the half etched lines on the outside.

Then form the long strips carefully curved with the small rectangles on the inside of the curve to fit into the recess on part 7.

Chassis

Start by removing either chassis 11 (00 only) or 12 (EM & P4) and clean the tabs off, place the small parts safely aside for later.

Because of the 180 degree folding needed it is best to anneal the chassis carefully before forming the bends as the nickel silver could snap on the bend lines, try to avoid any distortion in the chassis, practice on the unwanted chassis unit.

Start by forming the outer edges of the chassis sides at a 90 degree angle with the full length half etched lines on the inside. Then bend these at 180 degrees where the half etched lines are only on the axle boxes so you are left with what looks like L section attached to the bottom of the axle boxes.

Repeat this for the other side.

Now form 90 degree bends to form the end L sections on the ends of the chassis, note these are in a higher position than the side L sections.

Fold the chassis sides so you end up with a basic chassis.

Now fold up the chassis centre spacer, either part 16 (00 only) or 17 (EM & P4) and insert into the slots in the middle of the chassis with the open end at the bottom, note this needs to be level with the bottom of the chassis sides, the top will protrude as per the prototype.

Now fold up the ends part 13 with all the folds at 90 degrees, note the sides are inset.

Now fit parts 13 to the chassis ends which slot on. Then solder parts 15 to the bottoms of parts 13.

Next fold up parts 14 and solder these to the tops of parts 13. Note the ends of parts 14 and 15 extend either side of the ends of the headstock.

Next fold up parts 21 the chassis sides and slot these between parts 13 the headstocks, if too tight file the ends slightly of parts 21.

Note the small rectangular hold needs to be at the left hand top for both sides.

Parts 18 the axle boxes and springs need to be folded at 180 degrees with the half etch fold line on the outside. Solder these to the outside of the chassis sides.

Ream the axle bearing holes if needed and attach the brass bearings into the holes.

Brake Gear

When assembling the brake gear, it is best to treat and build it as a separate unit to the chassis.

Take a pair of parts 27 and fold these at 180 degrees.

Next take the brake cross members either parts 29 (00 only) or 28 (EM & P4) and fold the edges at 90 degrees.

Now solder one end of the brakes part 27 tab into the flush side hole of either parts 28 or 29.

Repeat for the other side.

Now attach the other cross member at the other end.

Now take the brake unit you've just created and slot in-between the chassis sides and the L sections

Note on the bottom of the chassis sides parts 21 there is small line markings, these are guides for positioning the brake

units centrally. Once you are happy with its position solder the cross members in place, any tweaking of the brakes position themselves in terms of lining up with wheel sets can be carried out later.

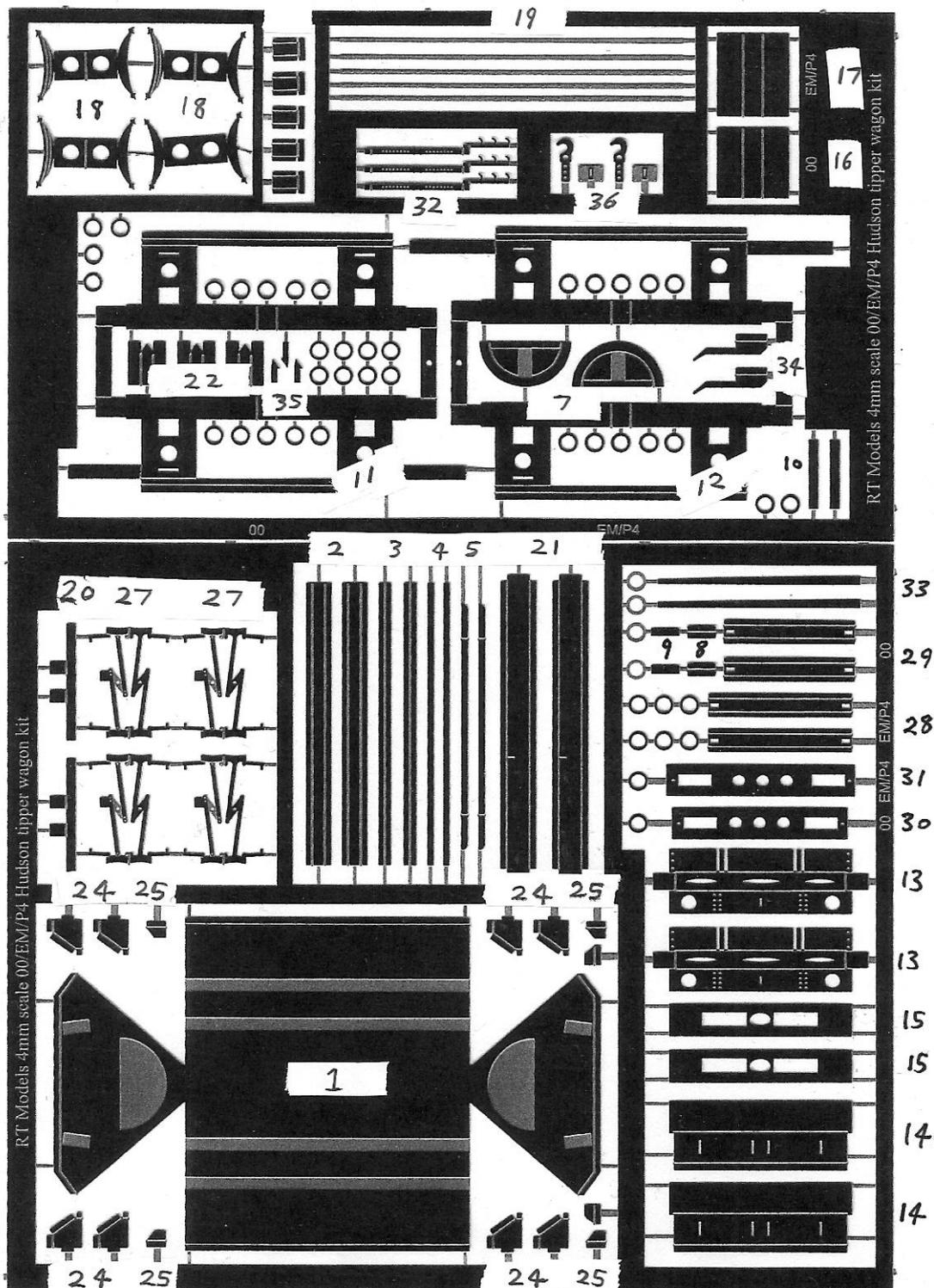
Now take either brake hangers parts 30 (00 only) or 31 (EM & P4) and form a gentle 90 degree bend just after the start of the rectangular holes towards the centre. This should drop straight between the centres of parts 27 the brakes.

Form the brake guides with all the half etched lines on the inside and solder these to the undersides of the head stocks making sure the strips with holes is in the centre and the small tab from them is flush with the end of the head stock.

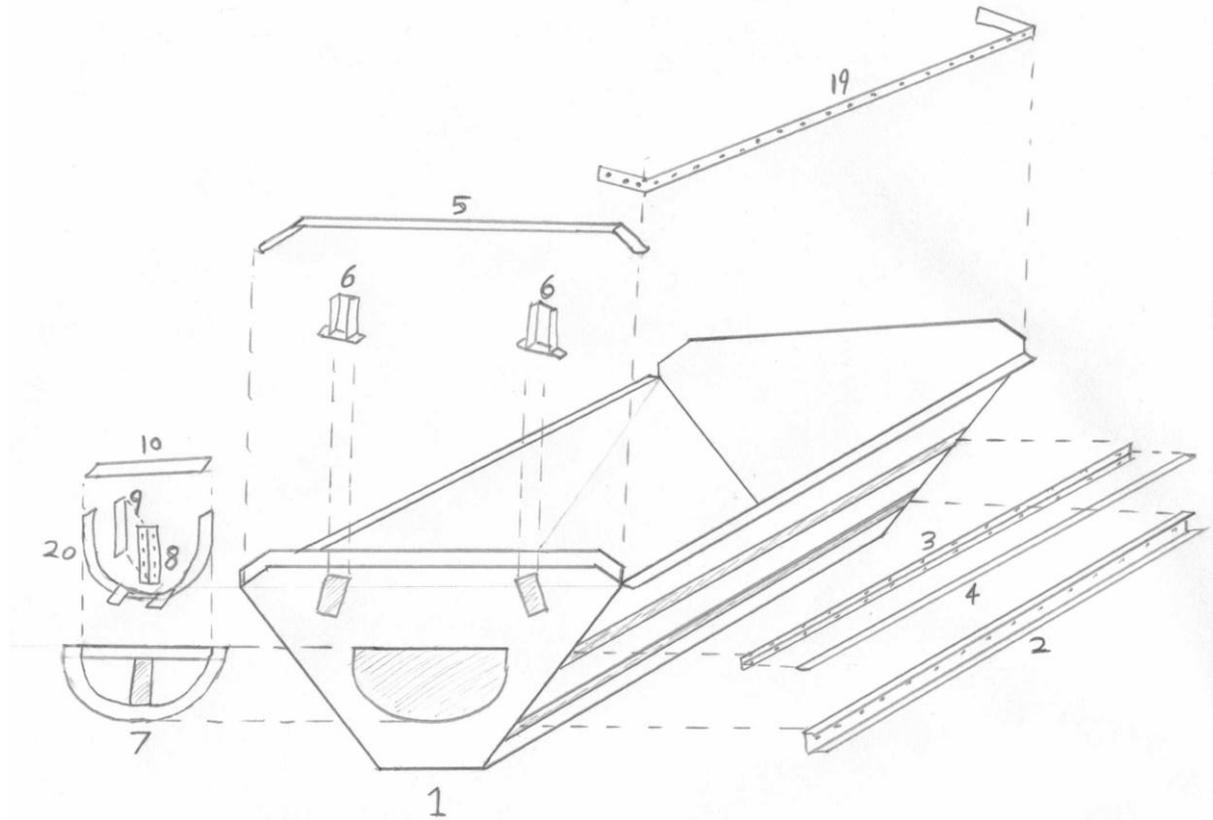
Now fit the brake lever prt 33 to the brakes with the widest part to the centre.

Note this end should be fitted to the tab on the top of the brakes, part 27, NOT the centre pivot like on most wagons.

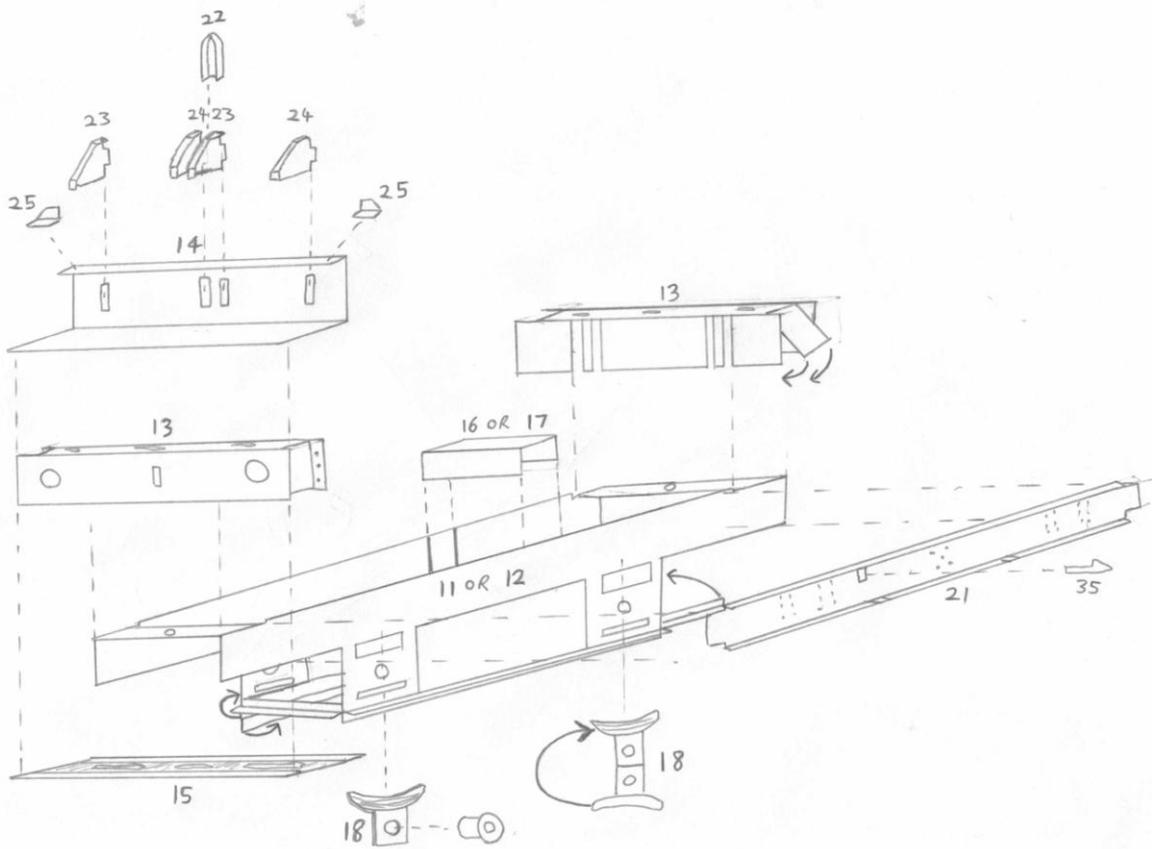
Parts 36 are the coupling hooks and mounting bracket which can be fitted into the slots at the ends of the buffer beams once construction is finished.



V Tip Body



Chassis



Brake Gear

