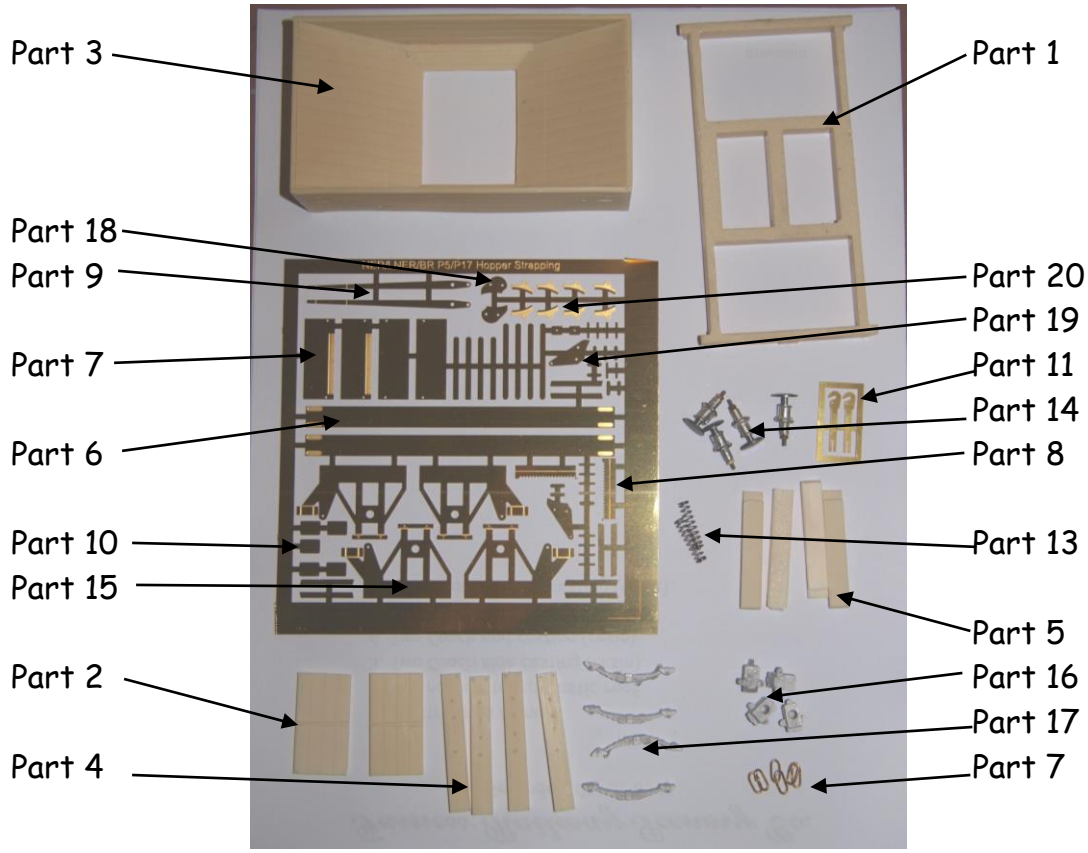
Furness Railway Wagon Co.

NER/LNER/BR/PO 10/11/12ton
P5/P17 Mineral Hopper

Wheels, paint and transfers required to complete.

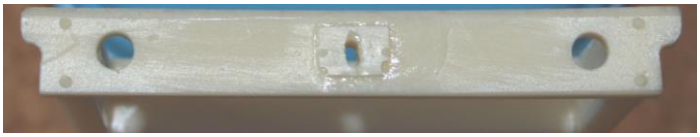
Please note that to aid the folding of the various parts score all the half-etched foldlines that are to be folded.

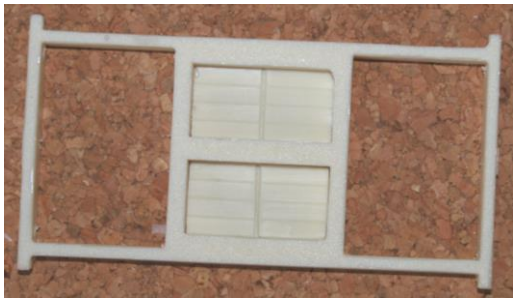
The parts.



Assembly.

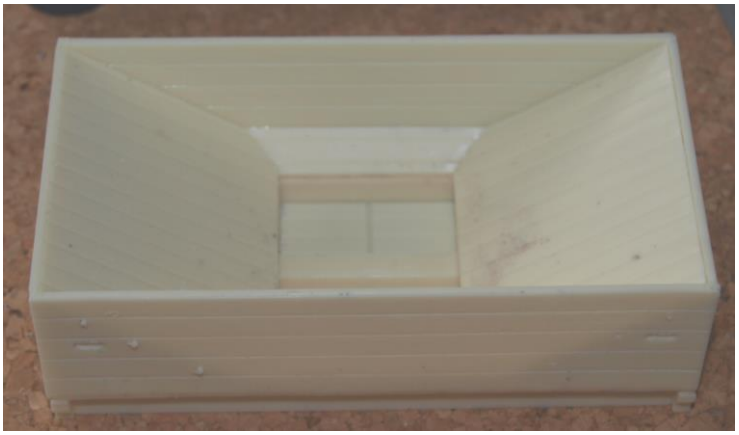
1. Clean up the wagon chassis (part 1) removing any excess material. Drill out the holes at both ends for the buffers and coupling hooks as shown.



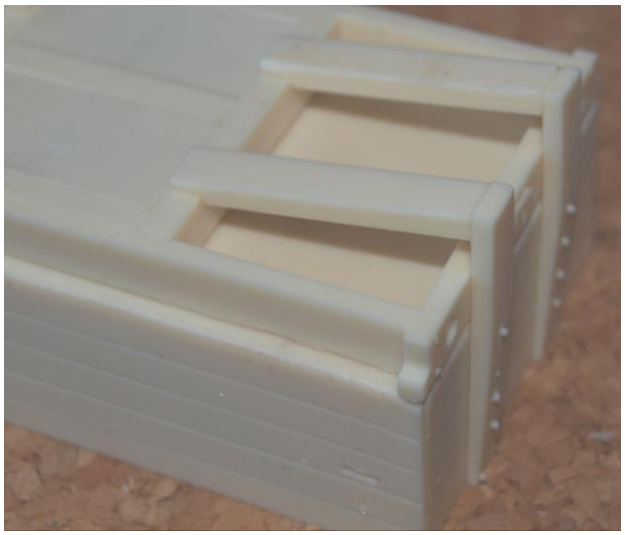


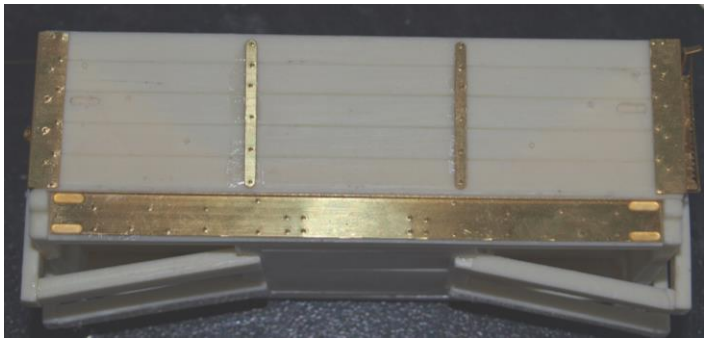
2. Fit (part 2) the hopper bottom doors inside the central holes in the chassis, making sure that the planking detail faces up.

3. Position the top of the wagon (part 3) in the middle of the chassis and glue together.



4. Attach the end beams (part 4) and end beam supports (part 5) as shown. NB the ends are handed so the left hand one (wagon upside down) only had 3 bolt heads. Also, it is a good idea to set the distance apart using a wheel set to get the correct clearance.



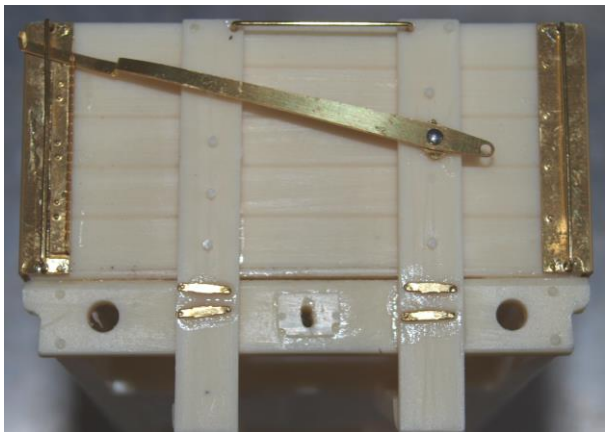


5. Punch out the half etched rivets and fit the sole bar detail plate (Part 6) and strapping (part 7) as shown. Note the end plates are handed and the left hand plate has a half etched recess in it.

6. Punch out the half etched rivets and fit the brake ratchets (part 8) and fix into the half etched recesses on the end. Then, drill through holes in the end plates, tops of end beams and finally the end brake pivot.

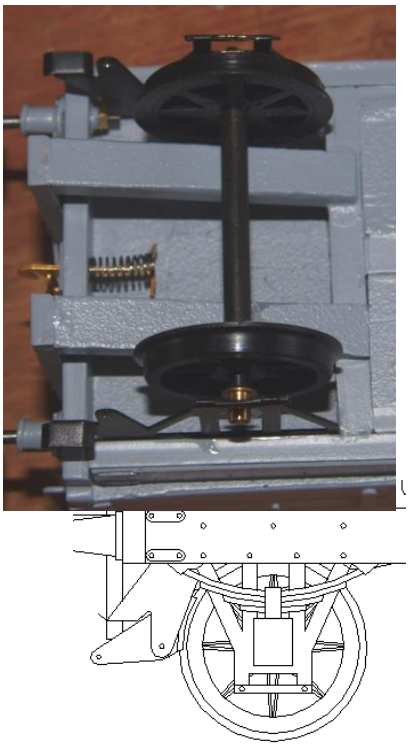
7. Fold up the brake lever (part 9) then attach it and the brake lever reinforcing plate using a pin, as shown. Then fold up some of the wire in to hand rails which fit into the holes previously drilled.

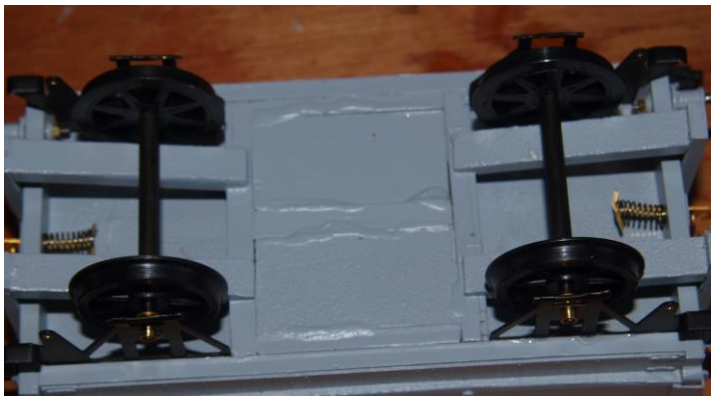
8. Fit the reinforcing plates (part 10) on the ends you can either fit two small plate at the pint the end supports cross the buffer beam or alternatively you can fit a large plate in the same place.



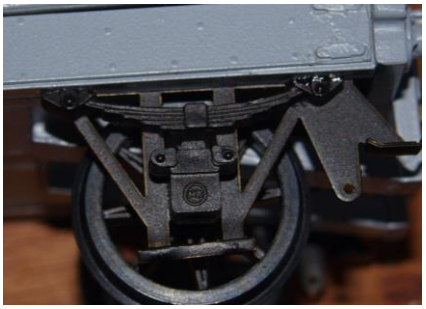
9. Assemble the links (part 11) on to the coupling hook (part 12) and push through the slot. Now, push the spring (part 13) over the back of the back of the coupling hook and bend the tags over to secure the spring in place. Fix the four buffers (part 14) into the holes in the buffer beam using two part epoxy.

10. Drill out the etched w-irons (part15) to suit the bearings of your chosen wheels then fold up and fit the steps no each corner. Assemble a wheel set, 2 x W-iron's, 2 x bearings and 1 x wheel/axle unit. Using two part epoxy resin, glue the assembled wheel set onto the sole-bars so that they are square and line up with the rivets as shown in the drawing.



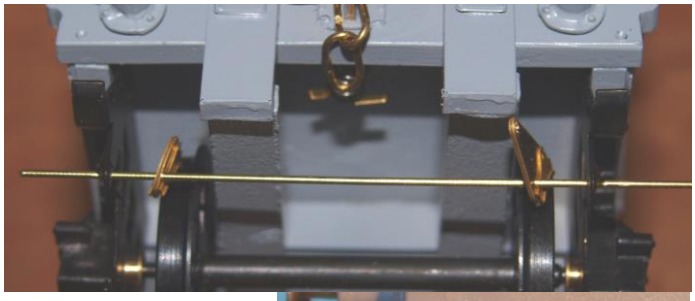


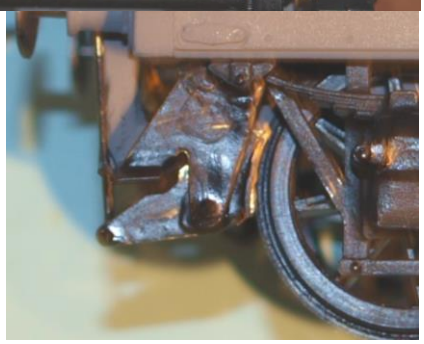
11. Repeat for the other wheel set. Use a straight edge across the back of the wheels to aid getting these parallel and square to the chassis.



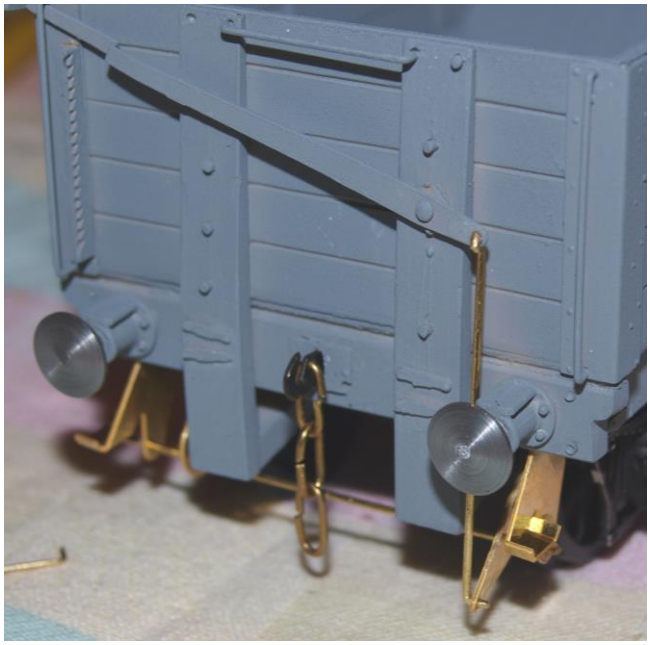
12. next fit the cosmetic axel boxes(part 16) and springs (part 17) as shown

13. Next laminate the brake blocks together these are made up from one central blank (parts 18/19) and 2 brake shoe (part 20) parts.





14. Thread a piece of wire through one of the steps and then through both of the brake shoes and finally through the other step. Note the larger of the two shoes goes on the right hand side of the wagon below the lower end of the brake lever.



15. Next thread a piece of wire through the hole in the brake lever and the larger of the two brake blocks. Make sure both brake blocks are clear of the wheels and secure.
16. Repeat for the other end of the wagon.
17.
18. Finally paint the model in the livery of your choice.

History of the Wagon

This kit represents a P5/17 hopper wagon built for the North Eastern Railway's Central Division between 1889 and 1922. These wagons were a direct descendent of the Stockton and Darlington Railway's 8ton coal hopper.

Between 1889 and 1901, 14,262 of these wagons were built with another 10,345 being added between 1901 and 1922. Originally these wagons were rated at 10 tons, in 1895 new axle boxes were fitted and they were then up rated to 11 tons. In 1907 the axle boxes were changed again and they were up rated to 12 tons and reclassified as P17 in the diagram book. A further change occurred for the last few batches, built after 1917, as the traditional end brake was altered to a clasp, operating on diagonal corners of the wagon. Please note that parts to make this version of the wagon are not supplied in this kit.

These wagons would have spent most of their working lives painted grey from the sole bar up, and black below.

Of the 24,607 wagons built 18,274 were taken over by the LNER in 1923 with 4,283 being nationalised in 1947. However, over the years a large number of these wagons were sold out of service to private owners across the north of England and southern Scotland making them a familiar sight in mines, quarries and general goods trains.

As there was so many of these wagons I have included only a sample of the numbers available. More information on wagon numbers is available in the book "LNER Wagons Vol.2: LNER North-Eastern Area"

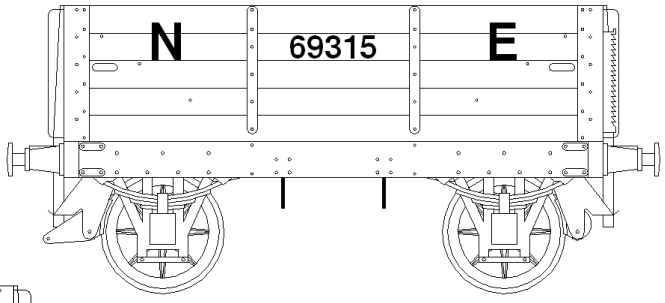
10ton Wagons 69315

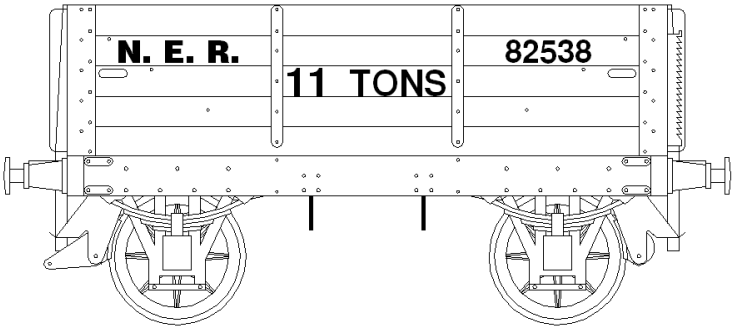
11ton Wagons 82538-83037, 87150-399, 95526-645

12ton Wagons 105981-6099, 107100-395, D428-1000, F465-1000

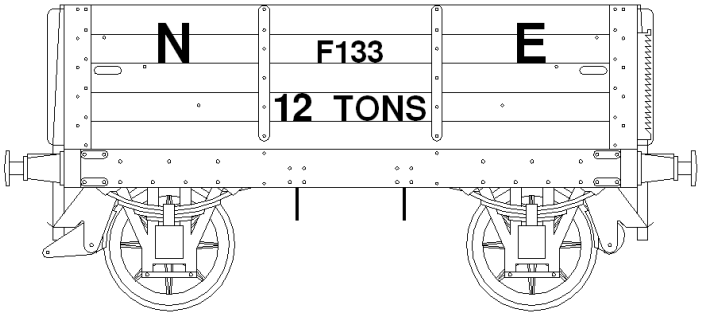
Liveries

NER Livery
Circ 1889

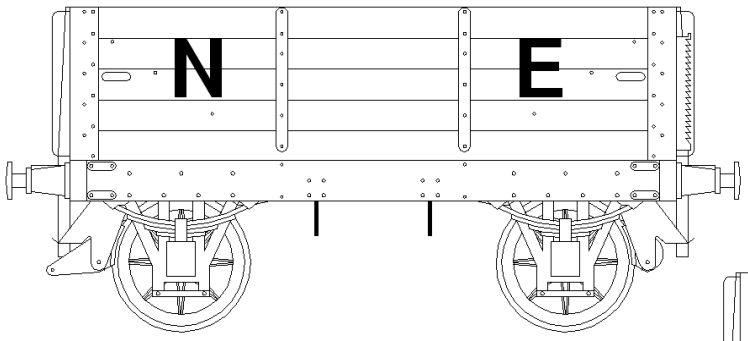




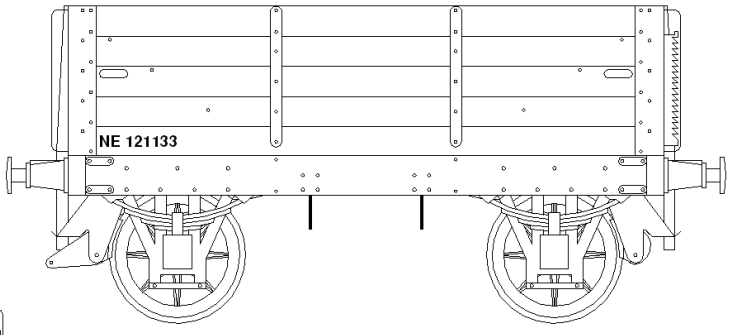
NER Livery
Circ 1901



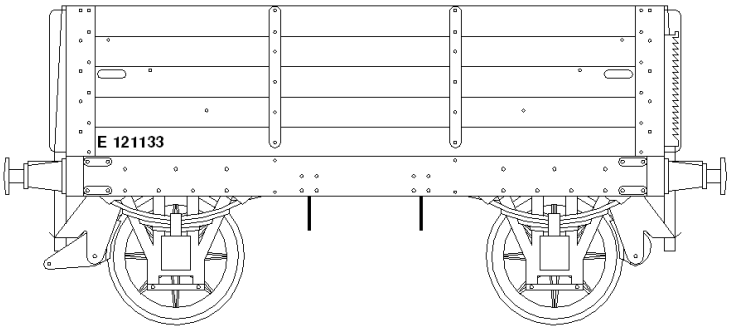
NER Livery
Circ 1911



LNER early Livery
Circ 1923-36



LNER Livery
Circ 1936-47



BR early Livery
Circ 1947-52

Furness Railway Wagon Co.

NER/LNER/BR/PO 10/11ton
P5/P17 Mineral Hopper

1. Construction Manual,
2. One parts etch,
3. One wagon body casting (Resin),
4. One Chassis (Resin),
5. Four End beams (Resin),
6. Four End beam supports (Resin),
7. Two bottom door castings (Resin),
8. Four axle box castings,
9. Four axle box spring castings,
10. Four buffer assemblies,
11. Two coupling hook springs,
12. Six coupling hook links,
13. Two pins,
14. One coupling hook etch,
15. One piece of wire.

We recommend Haywood Railway 3'1" closed spoke wheels for the early wagons and their open spoke wheels for the later wagons.
Transfers are available from Slater's, POWSides and HMRS.