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## Thow bogie cattle wagons – Kadee coupled version Assembly instructions

Three variants of the Thow bogie cattle wagons were built over four separate shop orders between July 1890 and 1898. Over that time 36 wagons were produced, the last two remaining in service until their withdrawal in 1957.

The first variant is the initial 1890 prototype BCW 6251 which is covered by the 1890 kit. The next 25 BCWs built are represented by the 1891 kit while the final ten wagons built are covered by the 1895 kit.

Kits for each of the three variants have been produced and these instructions cover assembly of all three types. Specific differences for particular variants are noted in the text. Kadee couplers are supplied in this kit. It is worth noting that these wagons were never fitted with auto couplers.

### Recommended adhesives:

# *Superglue* for polyurethane parts eg. Green Zap a gap. Some brands of superglue may not stick the plastic used in this kit. Unless you know a particular glue will work, testing the glue on some scrap is recommended.

1. Remove the flash from the castings with a sharp knife. Take particular care when cleaning the ends to avoid damaging the top part of the castings as it is very fragile (Image 1). Use of a knife with a sharp, narrow pointed blade is recommended.
2. Drill the buffer stocks to 0.75 mm and glue in the turned brass buffers.
3. Glue the sides and ends together. The best way to do this to glue one side to one end - making sure they are square. Repeat

for the other side and end and then glue both of these assemblies together.

4. Drill and tap an M2 thread in the bogie mounts on the floor casting.
5. Position the floor inside the body and glue it in place.
6. For the 1895 version only, glue the Westinghouse cyclinder onto its pad on the underside of the floor (Image 2).
7. Fit the sub-roof and check it sits down into the body. If it doesn't, material may need to be removed from the tops of the sides and ends with a fine file. Once happy it is correctly placed, glue it to the body.
8. Glue the corrugated roof to the sub-roof
9. On 1891 & 1895 versions the horizontal bars have to be glued to the ends and sides (Images 3 & 4 show their placement).
10. On the 1895 version fit the brake hoses to the buffer beams (Image 4).
11. Each brake wheel comes as two halves that have to be folded together. When over-folding to an angle between 90° and 180° the bend has to be made away from the etch line. Cut the brake wheels from the fret, then over-fold them and solder the two halves together. Clear the hole in the centre of each brake wheel with a 0.45 mm drill.
12. Drill two 0.5 mm holes through each of the brake wheel supports on the floor casting. Insert 0.45 mm wire through the lower holes and bend each end to 90° to

- form the locking handle. Insert another piece of 0.45 mm wire through the top holes and position the brake wheels so that they can be glued to both the support and the wire (Image 3). Trim off any excess wire.
13. Four truss rods are bent from lengths of 0.45 mm wire. Slide a plastic turnbuckle to the middle of each piece of wire prior to bending the angles (Image 3). Glue the ends of each truss rod into the angle between the floor and the bogie bolster. Glue the rods to the small supports cast on the large cross members (Image 2).
  14. Assemble the Kadee couplers and fix them to the floor with either glue or a screw.
  15. Test fit the waisted bearings into the etched holes in the bogie frame. The etched holes may need to be opened up slightly with a round file or a suitably sized broach. The flange of the bearing has to be soldered to the side with the half etched lines (Image 5).
  16. Over-fold the top round spacer making sure it is on the opposite side of the etch to that with the half etched lines. Solder it in place.
  17. When folding etched parts to 90°, the bend must be made towards the etched line. Fold the sides of bogies to 90°. Fit the triangular support etches into their slots and secure them by twisting the protruding tabs.
  18. When happy with the assembly being square, apply solder along all the etch lines then trim off the excess tab material.
  19. Clean the flash from the bogie side frames. Locate the centre of each axle box in the back of the casting and drill a 1.8 mm hole. Open out the top of each hole with a 2.3 mm drill to allow the sideframe to clear the bearings (Image 6). A spare sideframe is supplied.
  20. Fit the wheels and glue the side frame castings to the etches.
  21. Fix bogies to the underframe using M2 screws ensuring they are not so tight as to prevent the bogies from rocking side to side.
  22. Paint the wagon, apply decals (Image 7), seal the surface and weather to taste.

### References:

General assembly and painting techniques:  
Branchline Modeller No. 1 Pages 35-41

Goods wagons of the NSW Railways  
(Eveleigh Press, 2019) Pages 300-303

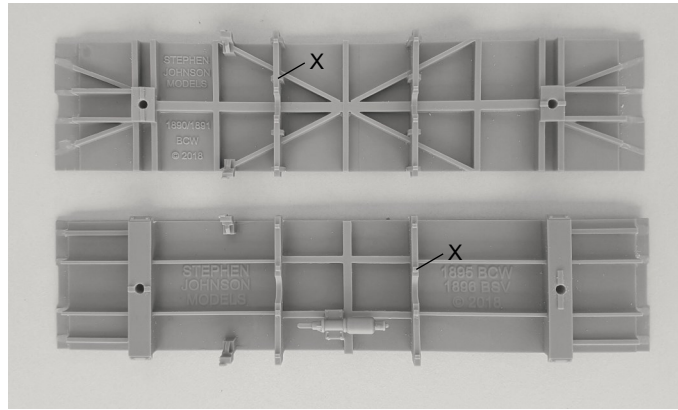
Stock wagons of the NSW Railways (James  
McInerney)  
[www.oocities.org/james\\_mcinerney2000/stoc  
kwagons.htm](http://www.oocities.org/james_mcinerney2000/stoc<br/>kwagons.htm)

Painting and weathering a BCW: Australian  
Journal of Railway Modelling No. 9 Page 43

## BCW instructions - Photos



**Image 1.** The pieces marked with an arrow are very fragile..



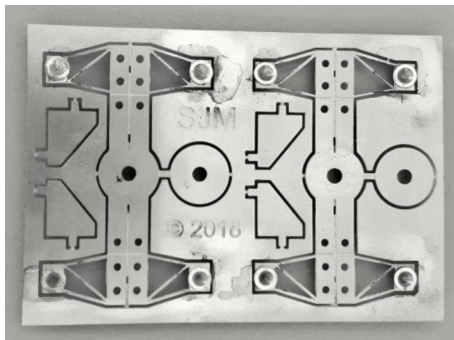
**Image 2.** Truss rod supports are marked with an 'X'. Also shown is the position of the brake cylinder on the 1895 version.



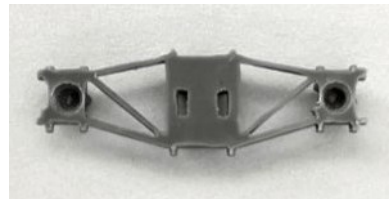
**Image 3.** Side view of an 1895 wagon showing the location of the horizontal bars, the brake wheel and locking handle.



**Image 4.** End view showing location of horizontal bars and brake hose.



**Image 5.** Archbar bogie etch showing correct orientation of the waisted bearings. Tabs on the angle brackets can be twisted with pliers to secure the part prior to soldering.



**Image 6.** Flash has been trimmed from the sideframe casting and holes have been drilled to clear the waisted bearings that protruding from the bogie frame.



**Image 7.** Prototype photos showing location of decals.