

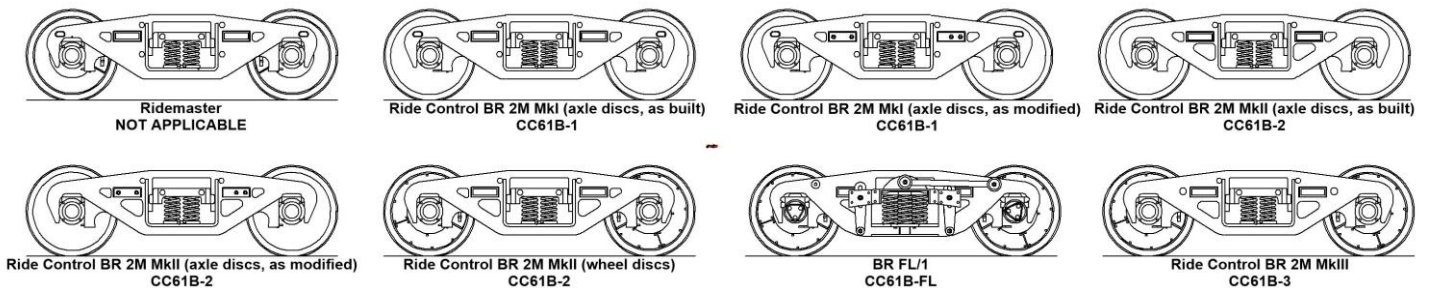
CC61B Ride Control Rigid Bogies.

A design specifically created as a direct replacement for the Bachmann FGA and FFA Freightliner vehicle bogies, but requiring 10.5 mm wheels on standard 26mm pin-point axles.

History.

Five different designs of bogie were used on the production (batch 2) freightliner vehicles as built, but during their working lives it is possible that some wagons did not retain the type with which they were originally constructed. The “core” original construction bogies number sequences were as below but there were also multiple minor exceptions in the numbering which for simplicity are not detailed here:

Mk I Axle discs:	FGA 601021 – 601175.	FFA 602085 – 602220
Mk II Axle discs:	FGA 601176 – 601361	FFA 602221 – 602653
Mk II Wheel discs:	FGA 601362 – 601452	FFA 602654 – 602892
FL/1 Wheel discs:	FGA 601453 – 601543	FFA 602893 – 603029
Mk III Wheel discs:	FGA 601544 – 601689	FFA 603030 – 603163



The prototype freightliner (batch1) wagons had many detailed dimensional differences which are not reflected in the Bachmann model. They were equipped with Ridemaster bogies and wheel disc brakes, the discs being an integral part of the wheel centre. Concern about the reliability long term resulted in the subsequent switch to axle mounted discs for the start of main production.

The original axle mounted disc bogies suffered problems with fractures on the brake beam and were modified in the 1970's with externally visible strengthening (plates with bolts on the ends of the brake beams). These problems were one factor in the reasoning behind the change back to wheel mounted discs, albeit in “bolt on” format.

All the FL/1 bogie vehicles were cascaded to bin-liner (FUA, FYA) and other sector use in the 1980's as they were considered “Non standard” for Freightliner.

Ironically many of these survived the longest of all these wagons as the “end vehicles” were modified (FDA) and used for infrastructure work as alternatives to Salmons for track panels; some may well be still in use.

The Original Bachmann bogies are for the Mk II axle disc variant with strengthened brake beams.

Introduction:

Safety warning.

This kit is suitable for adults only. There are small and/or sharp components. The castings and recommended solders contain lead. Observe appropriate hygiene precautions; do not eat or handle food without first washing hands. The tools and materials recommended also require the care in handling; protection for the eyes and face (dust mask) must be applied when cutting, soldering and using a mini-drill.

The components on the etched sheets are all held in position by half etched tags. The fronts of the sheets have the identifying text and should be “face up” for cutting of tags.

It is recommended that a small sharp craft knife is used to remove the components from the frets; Use a hard base surface, such as an off-cut of chipboard or MDF, on which to perform this cutting. Ensure that the blade of the knife used for cutting the tags is regularly changed as soon as there is evidence of wear (I use a small snap-off type knife, which is quick for providing a fresh cutting edge).

Folds and bends are used extensively in the kit, and these fall into two basic types:

Folds of 180° are made with the ½ etch “channel” on the outside. 90°, or less, are made with the ½ etch “channel” on the inside. Most of the bends and folds can be made either with finger pressure or with smooth faced pliers. Some need a degree of support to avoid distortions. Always take care to maintain a degree of accuracy with these folds as they can influence the final alignment of the bogie.

Assembly.

The kit consists of:

1 x Etched sheet containing 2 etched frames, pivot spacing washers, and cosmetic beam reinforcement plates for axle disc variants.
4 x Pewter side frame castings.

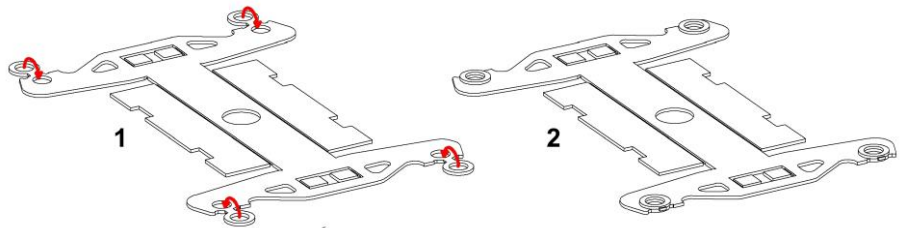
There are 4 variants for the cast side frames: CC61B - 1 (Mk I castings), CC61B - 2 (Mk II castings), CC61B - 3 (Mk III castings), CC61B - FL (FL/1 castings). The Mk II and Mk III castings may be supplied with either plain cap, or 3 bolt bearing style.

Required per bogie pair:

4 x 10.5mm Ø appropriate disc wheel-sets on 26mm pinpoint axles,
8 x 2mm shouldered pin point bearings.

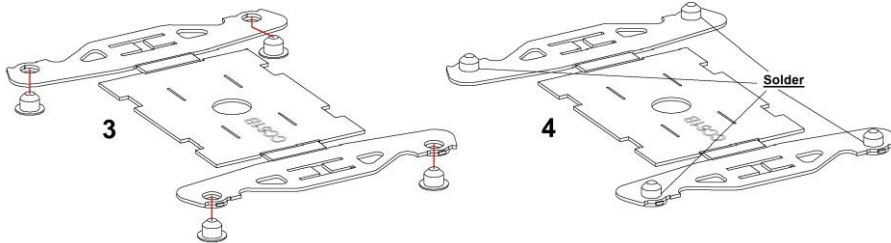
The bogies will fit directly on to the Bachmann wagons with the spacing washers provided on the etched sheet; there is no requirement to modify the wagon frame. The original Bachmann bogie pivot screws are used.

1. Remove the frames from the etched sheet and carefully clean up any tag residues with a fine needle file; the outer face of the etched frame has the CC61B text. Fold over the bearing spacers 180° on to the inner face, and compress with smooth face pliers.



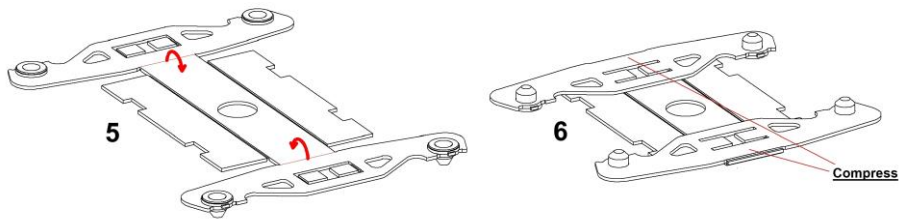
2. Check that the holes are aligned, by gently rotating the shank of a 2mm drill or 2mm rod; it is not necessary to enlarge them.

3. Insert bearings (2mm Shouldered pin point type – not provided) from the back face (through the folded spacers, then the outer frame), and invert the side member; if you position the bearings face down on the work surface, you can press them directly through the aligned spacers and outer frame.

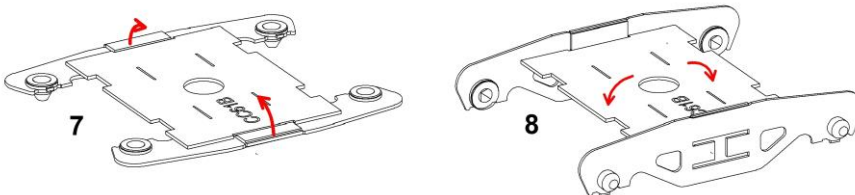


4. Ensure that the bearings are fully located by pressing down on the outer face of the side-frames; apply flux and solder (not too liberally) in position from the plain outer face, on the underside of the bearing. It is not necessary to totally laminate with solder, but only to retain the bearings; excess solder may restrict a snug fit of the castings.

5. There are two half etched fold lines on the top surface of the etch at the ends of the bolster. These allow the bolster to have a depressed centre to make it a direct replacement for the Bachmann wagon. Fold over the side-frames 180° at the outer fold lines on to the inner surface of the unfolded bolster.



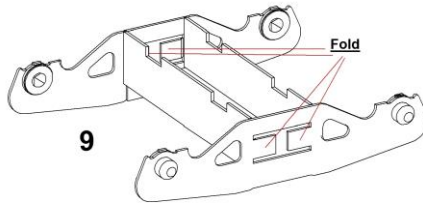
6. Firmly compress these folds with smooth faced pliers



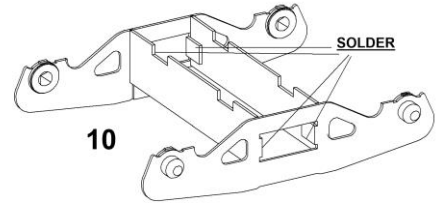
7. Grip each of the compressed folds (6 above) and bend up the two side-frames so that they are at 90° to the central platform or bolster.

8. Fold the two sides of the bolster so that they are at 90° to the platform. Take care to avoid splaying the first folds on the side-frames.

9. Fold inwards the re-enforcing flaps at 90° in between the bolster sides, and compress the folds firmly against the bolster sides with pliers.



10. Apply flux and a good fillet of solder to each of the re-enforcements, allowing it to flow into the joints and all the folds between the bolster and side frames.



11. The finished frame must now be thoroughly cleaned to remove all traces of flux.

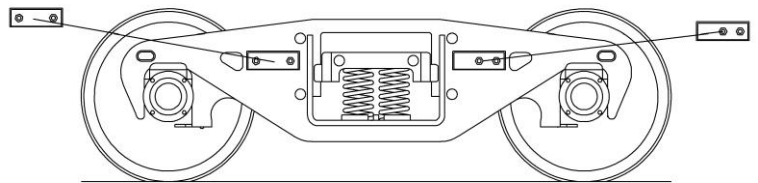
12. Check the squareness of the frame, normal way up, on a flat surface, and correct if necessary (unlikely) by twisting carefully. Check the fit of wheels in the frame. There should be a very small amount of end float. The correct wheels are 10.5mm dia. with either axle or wheel discs, which is determined by the prototype chosen.

13. Offer up the Pewter side-frame castings to check the fit of the bearings in the casting holes. The centrifugal casting process is subject to variation in shrinkage. Consequently, it may necessary to increase the diameter of the casting bearing holes with a 2.2mm or 3/32" Ø mm drill in a pin chuck before they will fit without force. Also remove any residual flash with a scalpel to generate a clean casting. Finally secure the cosmetic side frames with contact adhesive or cyanoacrylate, and the bogies are ready for painting. Experienced modellers might wish to secure the castings with 145° solder for extra strength.

14. For the FL/1 castings the torsion bar is supplied as a separate component which plugs into holes in the cast frame. This can be assembled as either a LH or RH format; on the original wagons the bars faced towards the ends of the vehicles on both sides of a wagon. They are also be secured with cyanoacrylate adhesive.

15. Distortion during fitting the wheel-sets can cause excessive play in the bearings; this can easily be corrected by pressing both ends of the outer frames in line with the bearings. Finally check on a flat surface that the frame has not twisted; carefully correct if necessary.

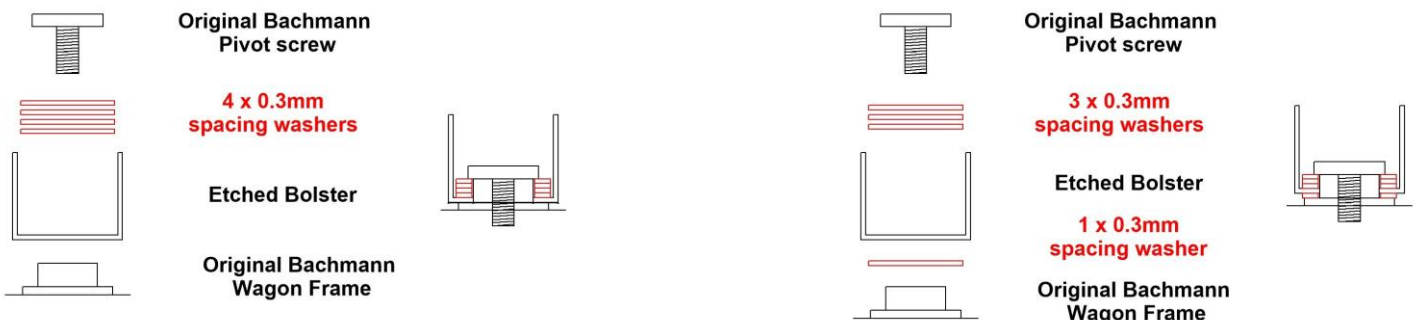
16. For those modelling the modified axle mounted disc variants – Mk I and Mk II - the small detailing etched plates can be secured with cyanoacrylate (high viscosity, slow set recommended) adhesive. These etched plates are very small and require some care in removal of any tab residue, and handling; there are 50% spares on the sheet.



For the Mk I bogie castings, the brake beam holes require first filling with small pieces of styrene approximately 1mm x 3mm x 1.75mm to provide a backing surface to which the etched plates can be secured.

Although not strictly necessary, you may also find it easier to provide a backing for the Mk II bogies; these will be smaller than for the Mk I at approximately 0.75mm x 2.5mm x 1.25mm. The positioning and orientation of the two plate types is shown here. A "dry run" is recommended before any adhesive is applied.

17. Spacing washers are provided to set the ride height and control pivot float when fitting the bogies.



The drawing shows a diagrammatic representation of two possible options using the 0.3mm full depth washers. There is no requirement to modify the original Bachmann frame. Some half etched washers are also provided in the unlikely event of needing more minor adjustments.

email: stensonmodels@btinternet.com

Website: www.stensonmodels.co.uk