Belcher Bits BB-45: RAF Type D Bomb Trolley 1/32

Background

Starting in the late 30s, the RAF developed a series of bomb trolleys to carry ordnance from the bomb dumps out to the dispersal areas where armourers would load them on aircraft. The first two types were lightweight, used sprung suspension and had a capacity of 1000 lb. However, as bombers got larger, so did bomb loads and the Type D trolley with a capacity of 4000 lb was introduced.This kit represents the Mk II version and was often seen at Lancaster dispersals loaded with a 4,000 lb HC bomb or 'cookie'.

Frame assembly

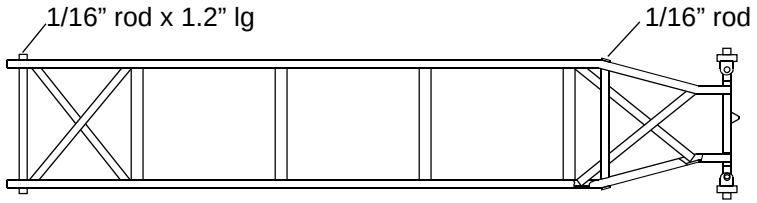
The frame is provided on a thin flash of resin, the front and rear of which should be trimmed away (including the two cross members which are just there for support prior to construction) and cleaned up. Use a 1/16" drill and drill through the side frame in two locations where small discs indicate.

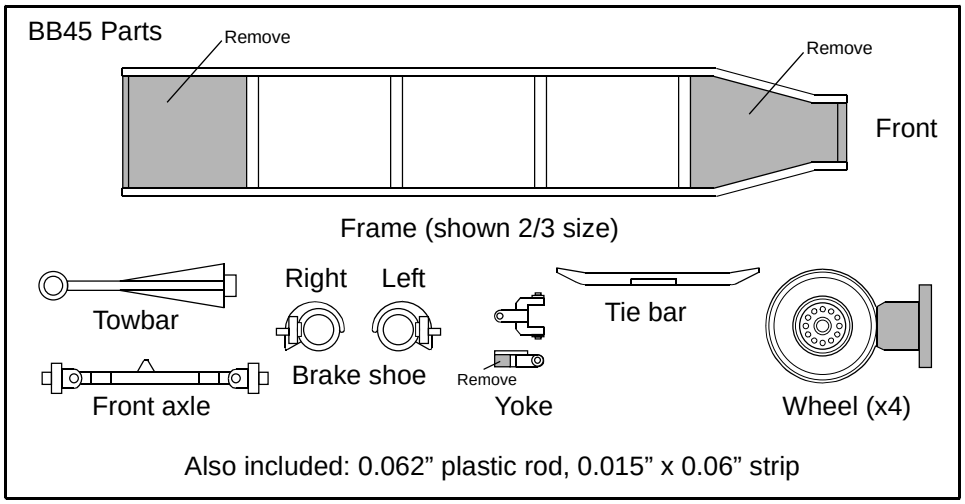
Front of frame

Glue the front axle in place under the front arms. The top of the axle has slots to fit the arms and the small tab faces forward. Cut two lengths of flat strip and glue them to the inside of the bottom frame as shown below, one overlapping the other. These cross-members really strengthen the whole frame. Cut a length of the 1/16" plastic rod to 1.1" long, feed this through the front holes and glue in place. The excess can be trimmed off; leave a little protruding because the real thing was welded on the outside.

Rear of frame / Rear axle

Cut and fit two lengths of flat strip and glue them to the inside of the bottom frame like at the front, one overlapping the other; glue the overlap





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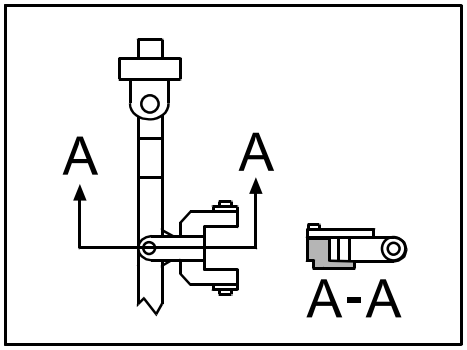
together. Cut a length of the 1/16" plastic rod to 1.2" long, feed this through the rear holes, center and glue in place. This will be the rear axle.

Front axle assembly

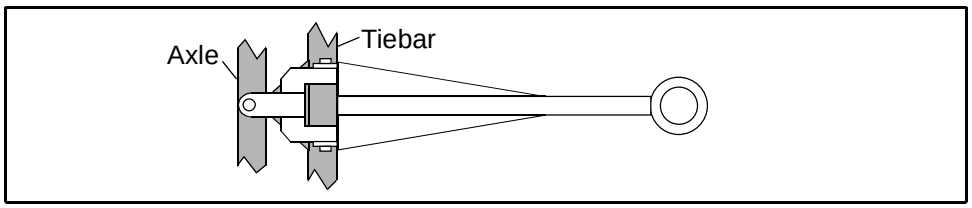
Remove the yoke from its backing flash, and remove the small rectangular bit under the top piece. The yoke is then glued to the axle, sitting on the tab with its top part sitting on top of the axle. See the detail drawing below. Clean up the brake shoes and open up the center holes. Fit the brake shoes to the ends of the axles, with the small rectangular tabs facing directly forward. The shoes fit over the larger discs at the end of the axles and when installed, the small axle stubs must still protrude.



The brake tie bar is then glued in place. The triangular tab sits under the small tab on the axle, and its two ends should just touch the bottoms of those rectangular projections on the brake shoes. Apply a dot of glue there. On the real trolley, this bar served not only as a tie bar for the steering, but also applied the brakes depending on the position of the towbar. A cam on the bottom of the towbar pushed down on the tie bar when the towbar was raised. When the towbar was hooked to the towing ractor, the brakes were released, but once in position, the towbar was raised and the brakes on the trolley were set to hold it in position.

Time to get the trolley up on its wheels. Saw them off their sprues and clean up the bottom leaving a small flat. These were low pressure tires so they should show a bit of depression. It helps to shim up the frame (about 0.2" or so) so the flats on the tires all end up aligned. That is one problem with cyano glues; you generally do not get the time to line evrything up after the glue is applied.

The towbar is cleaned up (the rectangular strip along the bottom represents the brake release mechanism and should be tidied up but not removed) and can be glued in position in the steering yoke. The tow ring should rest on the ground (which is why the wheels go on first).



Final steps

Up until 1940 (and after the war) trolleys were painted RAF Blue but during the war, they were generally overall Dark Earth. Most photos of Type D trolleys show no markings at all. The trolley illustrated below is a later mark than that depicted in this kit, but similar.

Towing the trolley

I wish I could report good news here but not really. There are a couple tractors available but they are not ideal and can be expensive. The most appropriate is a PlusModels resin kit of an early war RAF Fordson tractor in 1/35. It looks good, but is expensive, and of course, being 1/35, it is about 10% too small. Thunder Models makes a nice model of a Case tractor but again in 1/35. Unfortunately, this was a US tractor and would not really have been used on RAF bases. Finally, there is a diecast of a Fordson TE-20 in 1/32. It is an agricultural tractor without towing equipment and really is a 1950s variant. What is needed is a nice 1/32 kit of the David Brown tractor, seen all over late war RAF bases. Maybe someone will provide.

References

1. Various photos on the internet
2. RAF publication A.P.1664D, Vol 1, Sect 1, Chapter 3

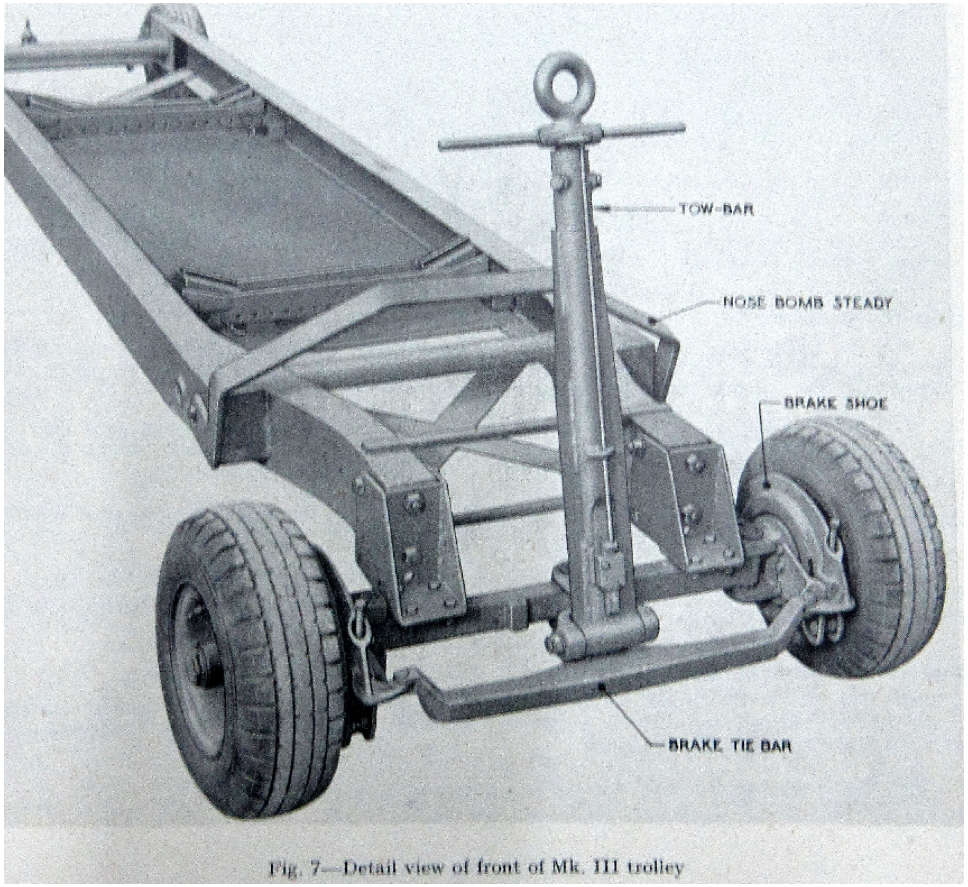
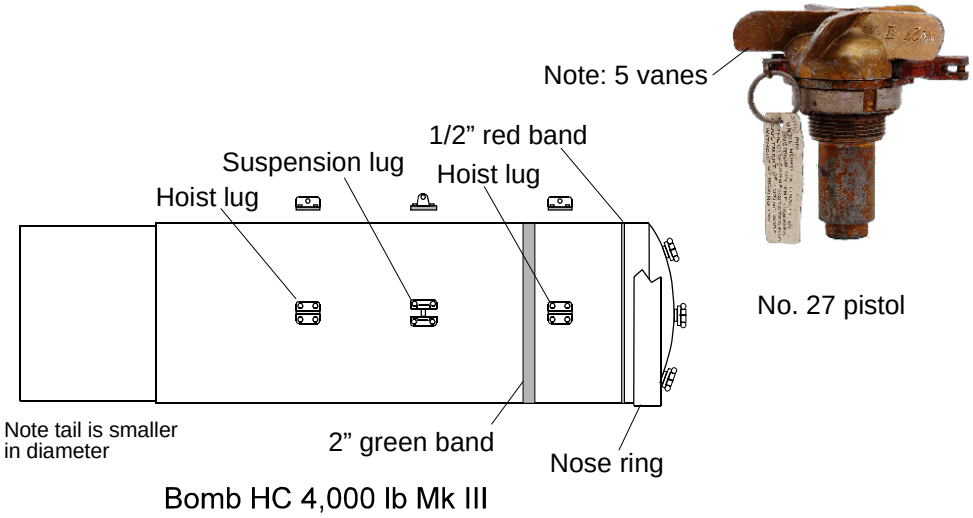


Fig. 7—Detail view of front of Mk. III trolley

Improving the bombs

The bombs provided in the HK Lancaster kit are nominally 500 lb MC types, and a 4000 lb HC cookie. The dimensions are not too bad, but detail is lacking in the extreme. They are designed to look OK in the bomb bay of the kit, but out in the open on a bomb trolley, they need help.

The large cookie has no suspension lug, so something will need to be added there. While being loaded, the bomb also had two hoist lugs bolted on which were used to lift it into position, then disconnected. The three bomb pistols at the front are in the right position, but need arming vanes (see below). The drum tail was slightly smaller in diameter than the bomb (29.3” vs. 30”) but this could be overlooked. Usually, these later cookies also had a thin metal ring fitted around the nose to help them fall straight. The diagram below is scaled to 1/32.



Bomb HC 4,000 lb Mk III

The 500 lb MC bombs also need detailing of the suspension lug (RAF used single suspension points, so removes the double ones on the other side) and the nose of the bomb seems to be fitted with a large circular push-button rather than a normal pistol and arming vanes. Many of these bombs also used tail pistols so arming vanes could be added using thin brass strip.

Bombs were stored in the open in bomb dumps and rolled in the dirt to load them. Typically, they were dark green in colour but need weathering, especially the body of the bomb. The tails were often added later and they are generally much cleaner looking. Both MC and HC bombs had a narrow red band around the nose to indicate they were filled and a wider light green band further back to indicate high explosive fill.