

JCB Backhoe

Optional Supplement to JCB 3c2 kit

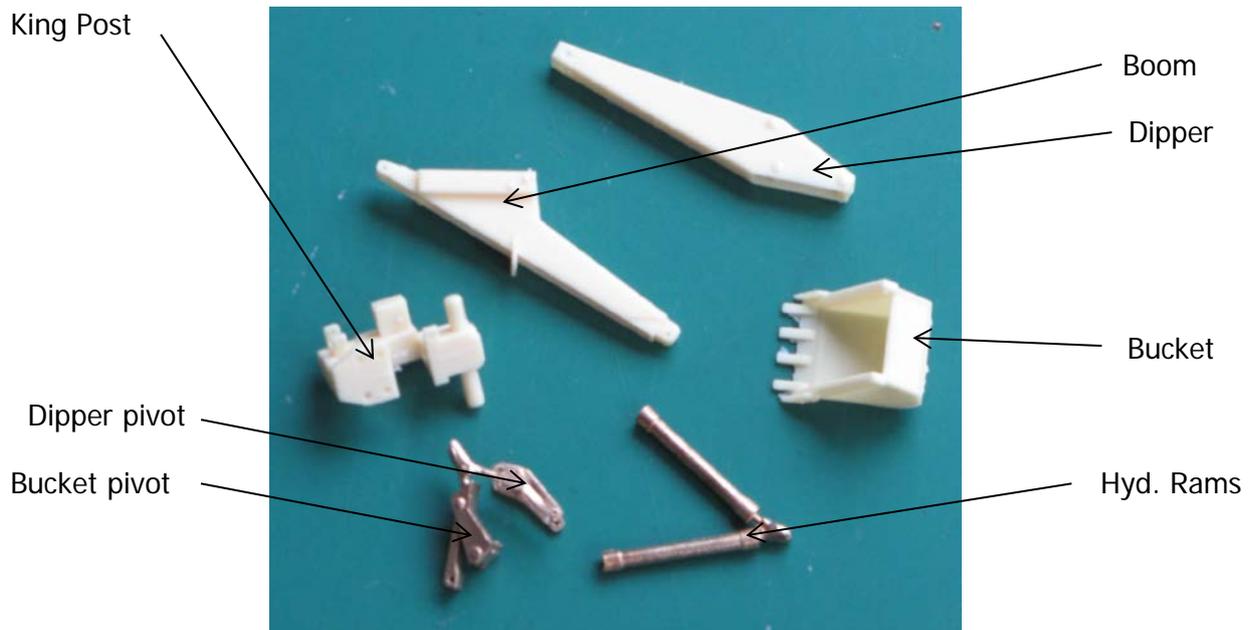
PARTS LIST

PART	QTY	MATERIAL	REMARKS
Kingpost	1	resin	
Dipper Handle	1	resin	
Boom	1	resin	
Bucket	1	resin	
Dipper pivot	1	LW Brass	
Bucket pivot	1	LW Brass	
Hydraulic rams	2	LW Brass	
1.2mm Wire	1	NS	200mm total
0.9mm Wire	1	Brass/NS	100mm total
0.6/25swg Wire	1	Copper	100mm
0.9/20swg Wire	1	Copper	200mm
14 BA screw	2	Brass	
14 BA nut	2	Brass	



INSTRUCTIONS

Firstly, I think it makes sense to read the entire set of instructions all the way through before touching any parts of the kit. This is one of the reasons why our newer kits have their instructions available as free downloads in *.pdf format from www.radleymodels.com



Having read the instructions:

Wash all resin parts with a "Cif" type mildly abrasive kitchen cleaner. **Do not** use "Fairy Liquid" type cleaners as their lanolin will leach into the resin and forever prevent paint and glue from adhering.

Using a very fine [800/1200] grade wet & dry paper, scalpel and/or needle file, remove any moulding pips and/or casting flash present. The pips tend to occur on those surfaces that will form the edges/surfaces to be glued together. Personally, I also run a fine grade of wet & dry over any pieces of wire as clean brass sticks better than tarnished brass.

Open up holes so that wire can pass cleanly through them.

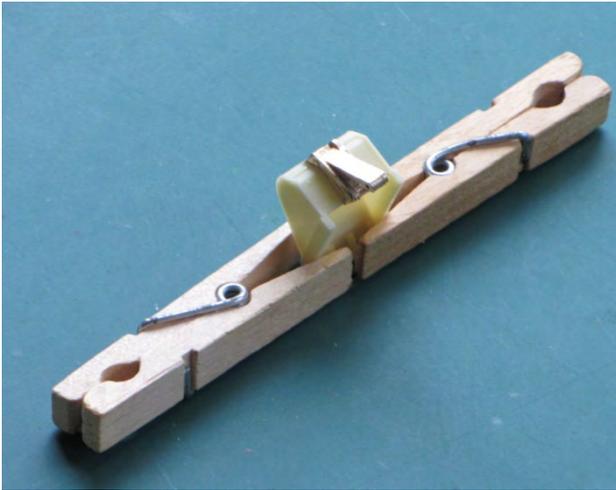
I used 5minute Devcon epoxy for all of the vehicle's resin and metal parts. Deluxe Thin Rocket Cyano is good for the thin 25swg wires going into the king post.

Many parts may best be further secured using the technique of drilling, pinning and gluing using small scrap pieces of 0.5-1mm wire.

Carry out dry run assemblies and identify which are the mating surfaces for each resin and lost wax part. Lightly abrade these surfaces using a piece of wet & dry.



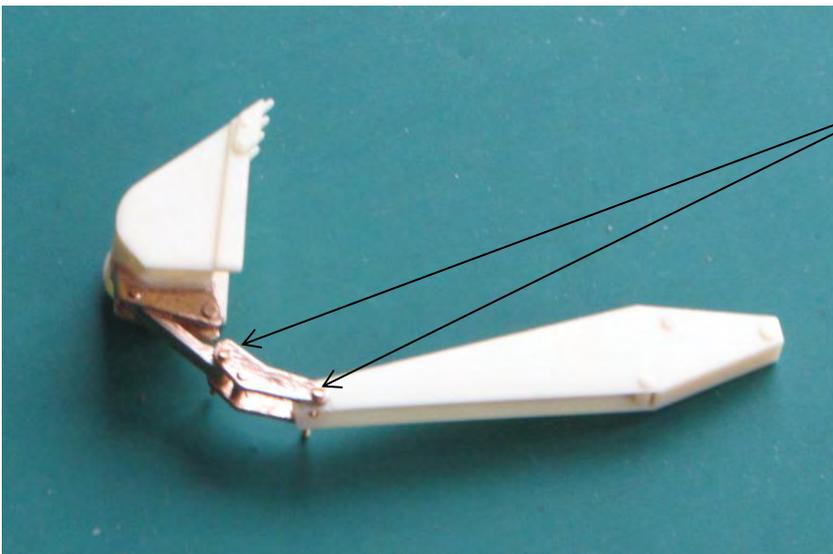
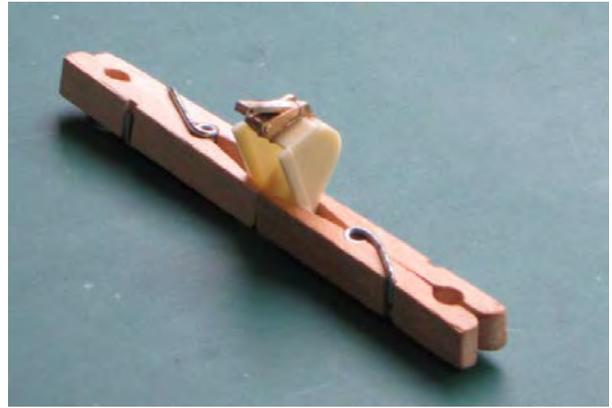
Remove LW parts from their sprues. Note one end of each of the hydraulic rams has a 1.2mm cavity drilled into it.



happily whilst the glue hardens.

Pass a 1mm drill through the hole in the bucket pivot such that a 14BA screw will pass freely through it. Then glue the pivot to the bucket as shown.

It is a bit fiddly – I've found that a pair of clothes pegs will support the bucket and pivot quite

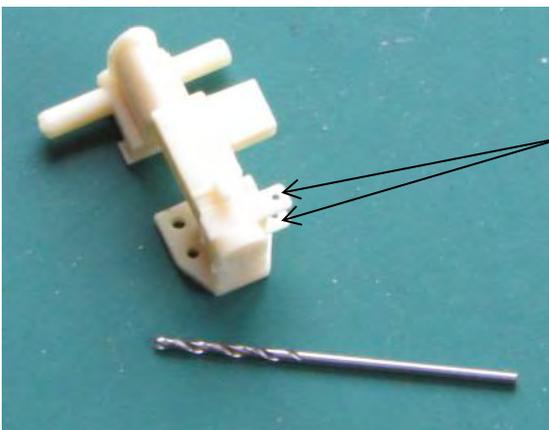


Repeat passing a 1mm drill through the top & bottom holes of the dipper pivot and the bottom [resin] hole of the dipper itself.

Pass two 14BA screws through the holes as shown and apply a 14BA nut to each end.

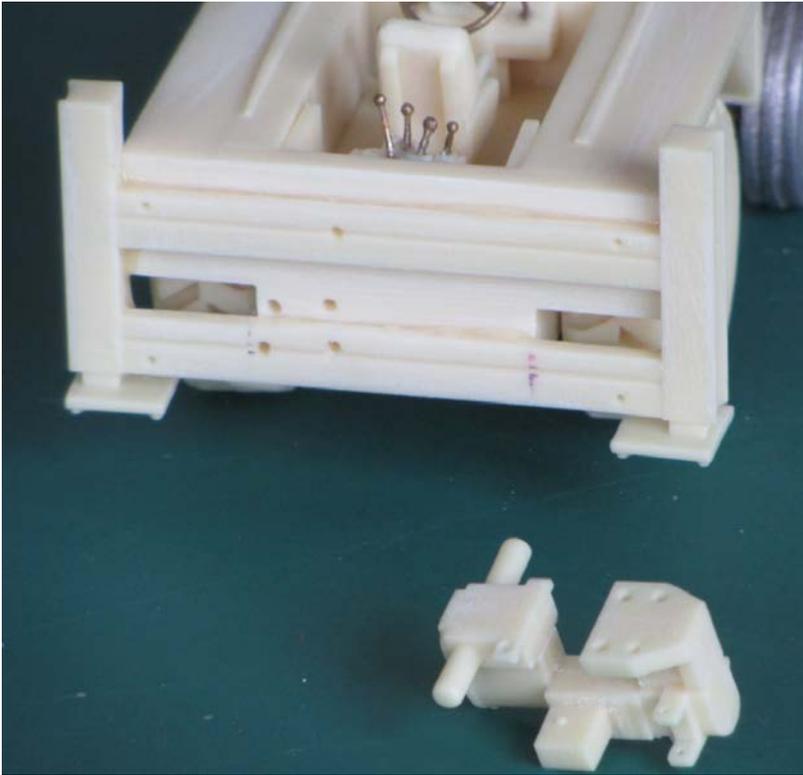
Once the nut is secure you may trim excess screw and apply a blob of solder/nutlock to the nut.

The bucket assembly should move freely. Set aside part for the present.



Open out the five larger holes in the kingpost with a 1.3mm drill.

These two holes should carefully be opened out with a 0.9mm drill.

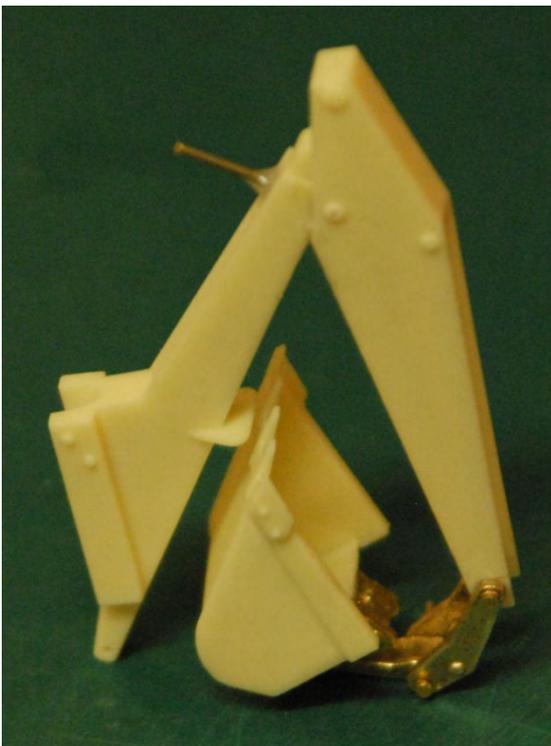
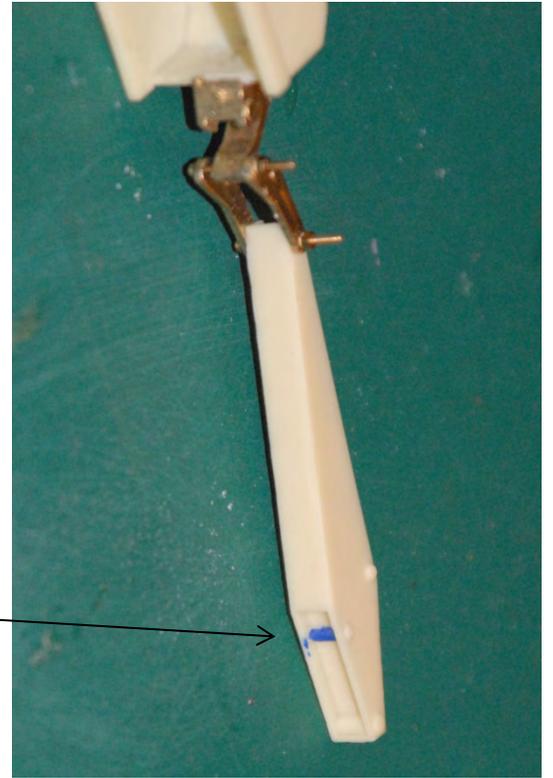


Align the post on the rear of the JCB unit and carefully drill through the five larger holes. You only need to penetrate the tractor unit

rear to a depth of 3-4mm.

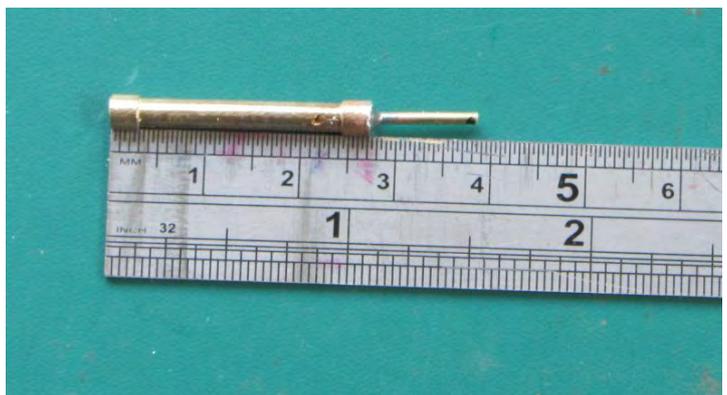
Using a needle file or sharp blade, remove the rib on the dipper [shown in blue on the photograph]

[Otherwise it might interfere with the next stage]

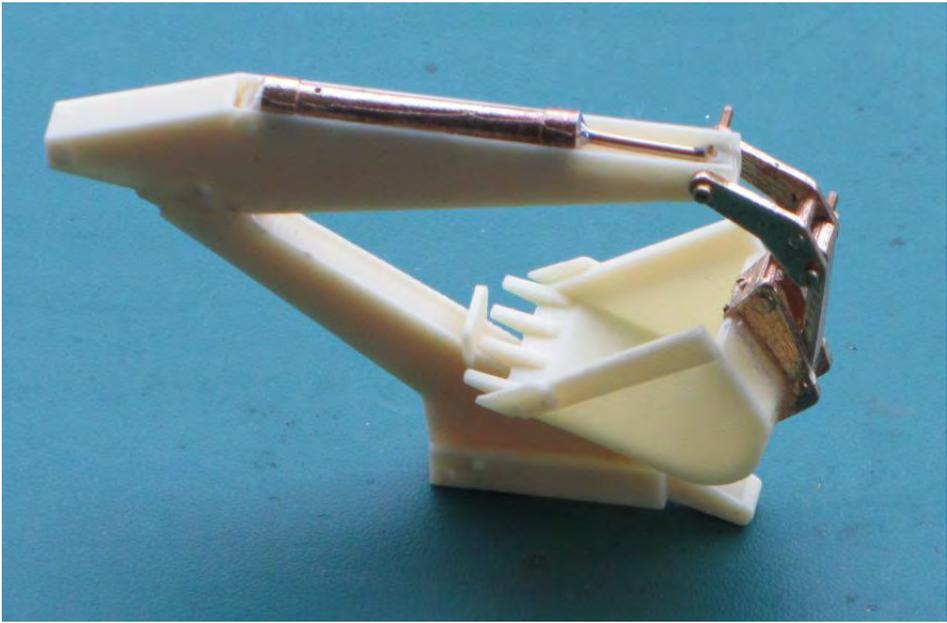


Glue the Boom and the Dipper together as shown. I have also drilled through the upper part of the boom into the dipper and glued a scrap of wire in place to hold the assembly together. When fully set, the pin may be cut off flush with the surface of the boom.

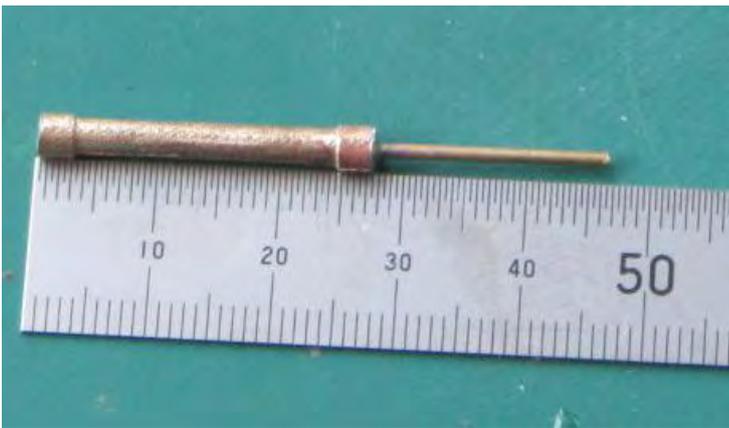
DO NOT GLUE THE BUCKET – IT SHOULD REMAIN FREELY MOBILE.



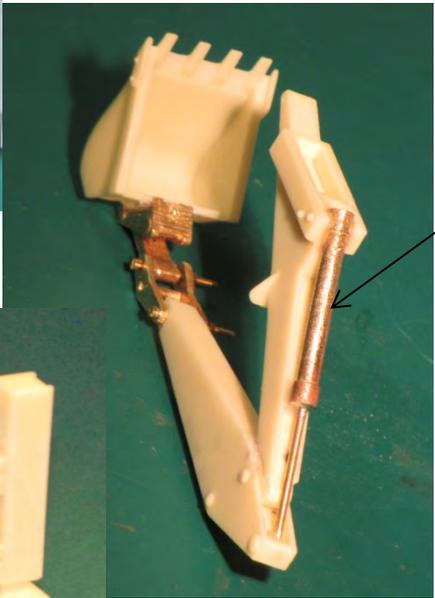
Solder a piece of 1.2mm NS wire into the hole at the end of one of the hydraulic rams such that 11.5mm sticks out of the end.



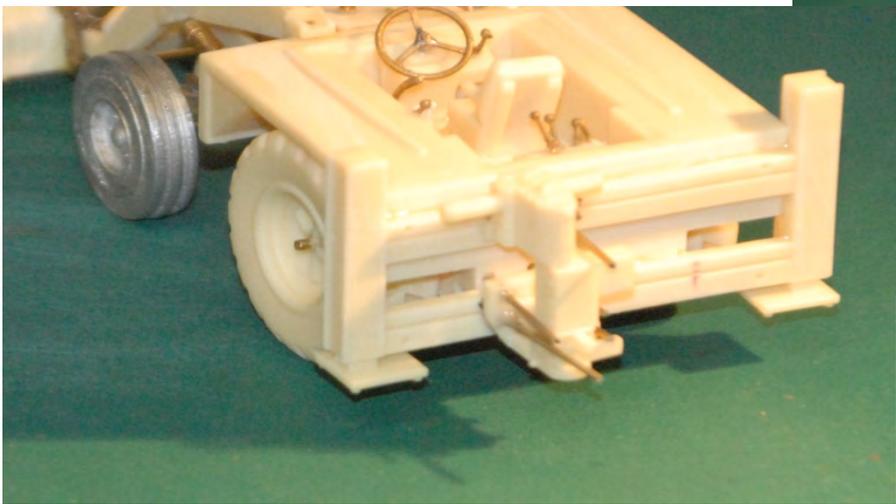
Glue the hydraulic ram & wire combo in place on the dipper as shown.
Allow to set.



Take the remaining hydraulic tube and solder a piece of 1.2mm NS wire into the hole such that 19mm protrudes.



Glue in place on the dipper as shown

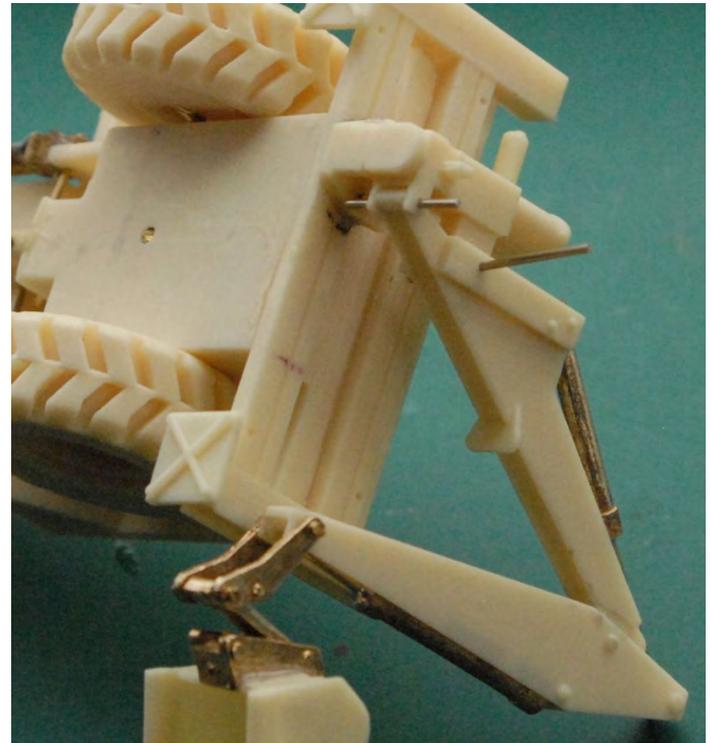
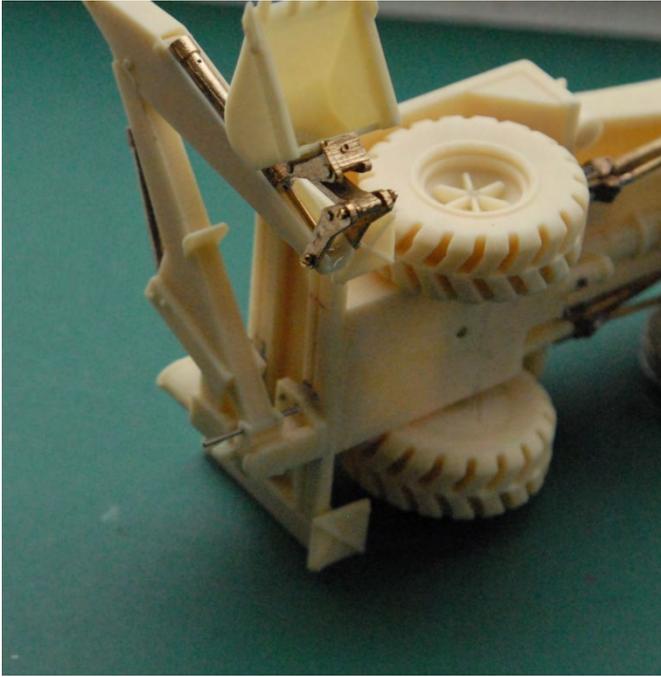


Using 5 pieces of 1.2 mm wire, glue and pin the kingpost in place on the back of the tractor unit as shown. Beware of allowing unseemly wire to show in the driver's

cockpit area.

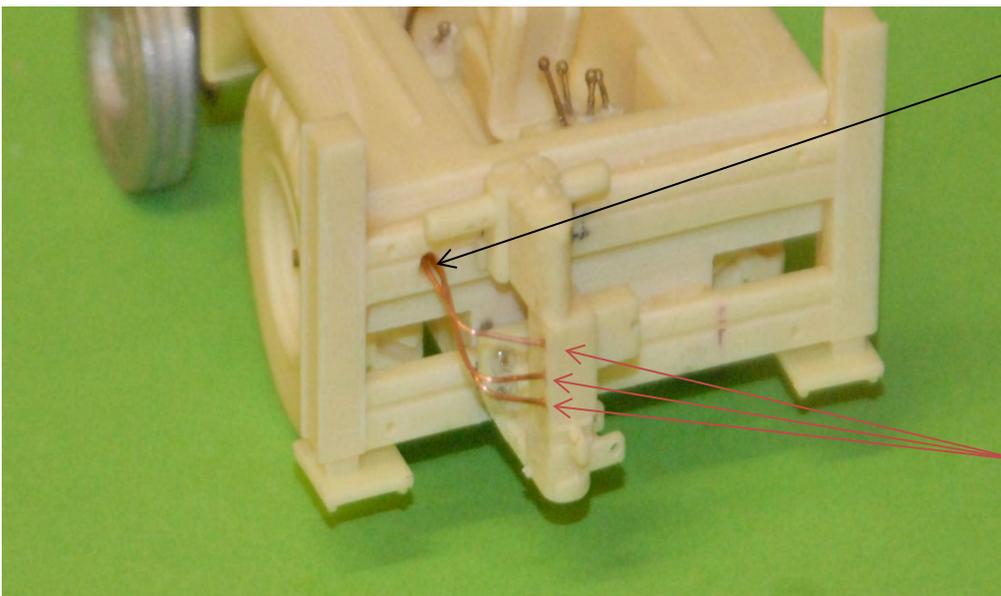
When secure and set, the wires may be trimmed flush with the back of the kingpost.

Using a short piece of 0.9mm wire, join the bottom of the boom to the bearing plates on the right hand side of the kingpost. DO NOT APPLY GLUE !



With the pin still in place, use a 0.9mm drill to drill through both the upright on the boom and the short horizontal block on the kingpost. Again pass a short length of 0.9mm wire through the drilled holes. AGAIN, DO NOT APPLY GLUE.

Now that these final securing holes have been drilled, remove the two pins and a start can be made on applying copper wire as a suggestion of hydraulic piping to the king post and boom-dipper assembly:

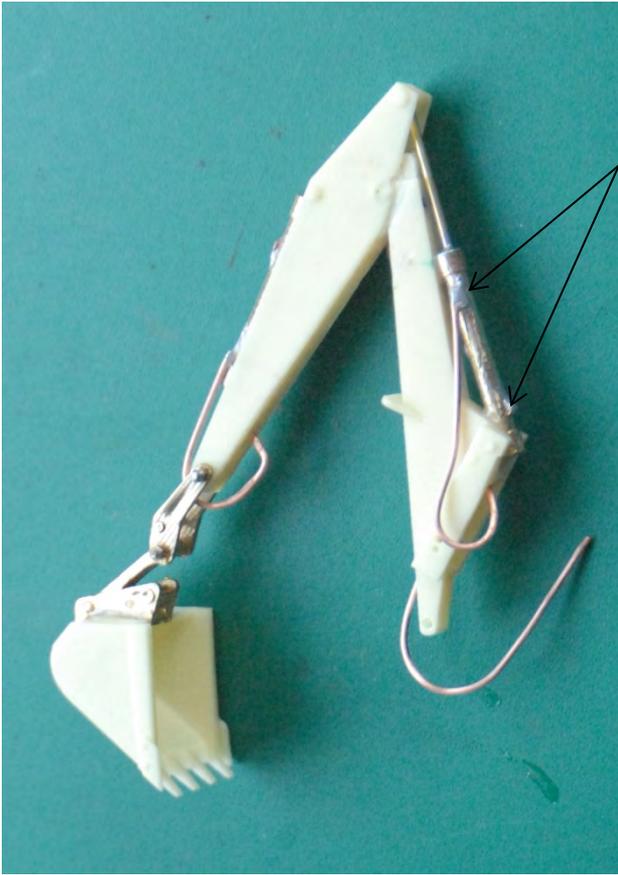


Drill a 2mm hole here. The exact position isn't critical to within a mm or two.

Take three pieces of 25swg copper wire [0.55mm] and glue into the three small vertical holes in the kingpost.

The other ends of these wires should pass into the hole

that you have just made and be glued in place with a drop of epoxy.



Essentially each hydraulic cylinder has a piece of 20swg [0.9mm] copper wire soldered to each of the top and bottom ends.

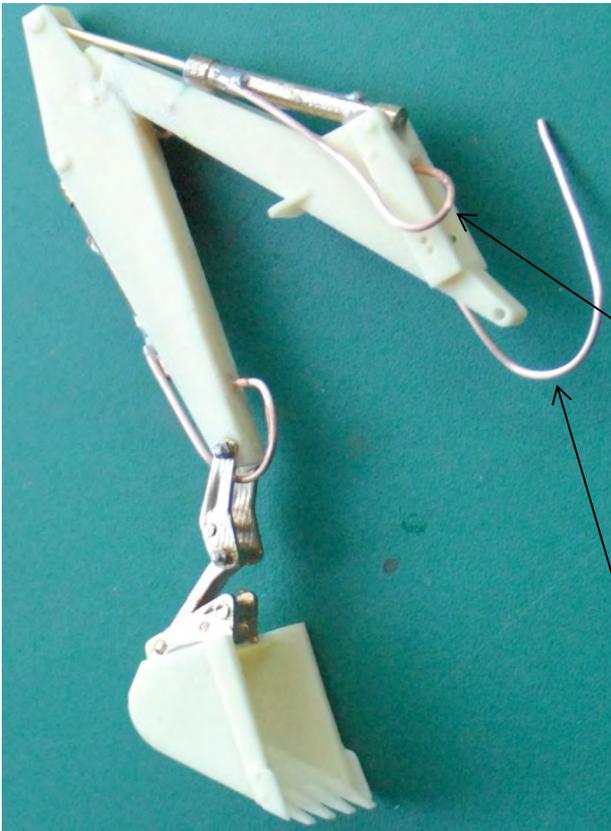
For example, the two wires on the boom.

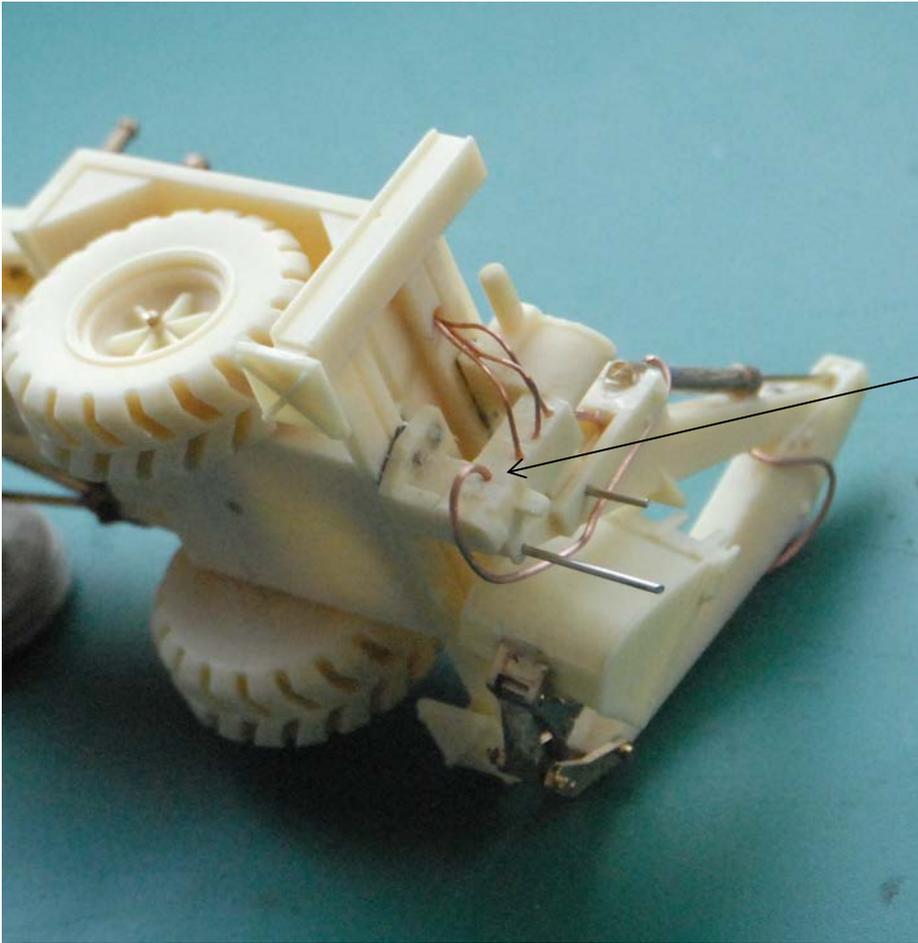
Hopefully this series of photographs shows where the various 20swg wires go.



These two loops need a suitable hole drilling in the boom and dipper as terminations.

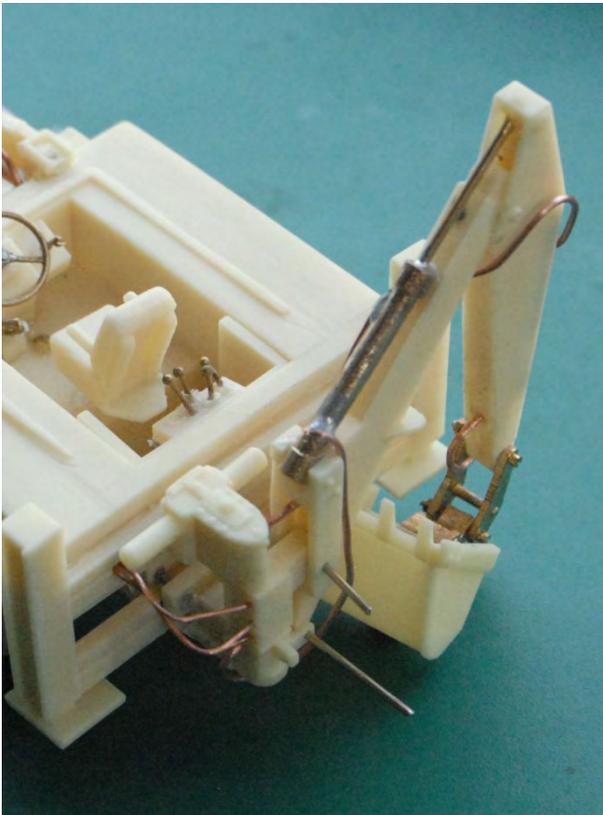
This long loop is dealt with in the next photograph on the next page.





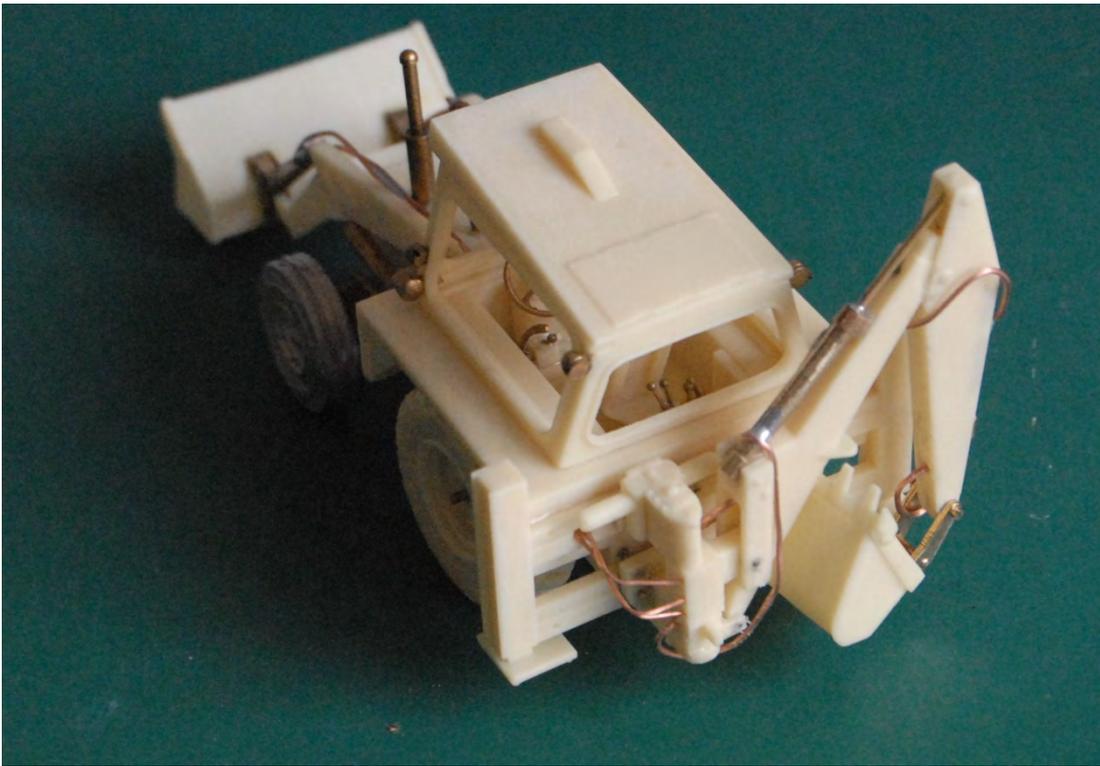
Replace the two pins so that the backhoe assembly is in place on the back of the tractor unit. These pins may now be glued in place and trimmed almost flush.

Drill a 0.9mm hole in the kingpost into the position shown and glue the trailing end of the long loop of wire in place.



Here, the two pins have yet to be trimmed but the wiring is essentially complete.

I would suggest that the bucket is folded up above the level of the "road surface" and tacked in position under the boom with a blob of PVA glue.



That completes construction of this kit. We hope you have enjoyed it. We welcome comments on our kits at www.radleymodels.com