

# LOCOTRACTEUR CROCHAT TYPE 14 L - 4 - 60 (DL)

**009 - 1/76 SCALE**



## INTRODUCTION

This model has been developed from drawings published by Dr Christian Cénac in his book “La Voie de 60 Militaire de la Guerre de 14 -18 en France” together with photos of surviving loco.

The nickel silver etch contains parts for the body and overlays for the bogies.

## POWER BOGIES

There are several possible chassis that can be used to power your model. These are N gauge locomotive for US diesel locomotives such as NW2 examples are available from Kato and Lifelike.

The body was original designed around a pair of Bullant Bogies and therefore the wheelbase is about 1mm longer than scale. The Bullant may no longer be available from <http://www.hollywoodfoundry.com/default.htm>. I recommend using two powered bogies.

The specification for each Bullant bogie is:

- Bullant Multi-gauge Power Bogie
- N or 9mm Gauge
- 2 Axle with 9.6mm(.378”) Code 88 NS Disc wheels
- 15.5mm wheelbase
- Mashima MHK1015 Motor
- Gearbox 31:1 Reduction
- 20mm cross mount swivelling bolster
- Standard wiring scheme

I suggest that you purchase the flywheel unmounted.

## TOOLS

### ***Essential:***

Modelling Knife or Cutters

Small Files, flat and half round

Soldering iron

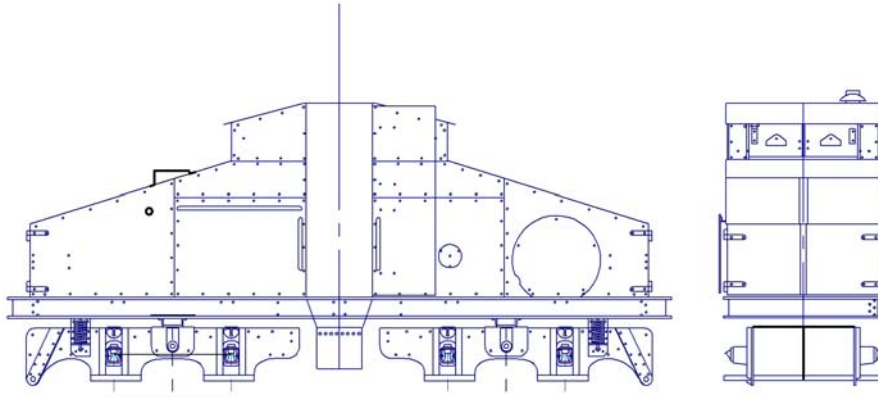
Solder (I recommend 179°C melting point)

Cyanoacrylate/super glue

1.5 mm drill or cutting broach

***Optional:***

Carr's Hot Tape



**INSTRUCTIONS**

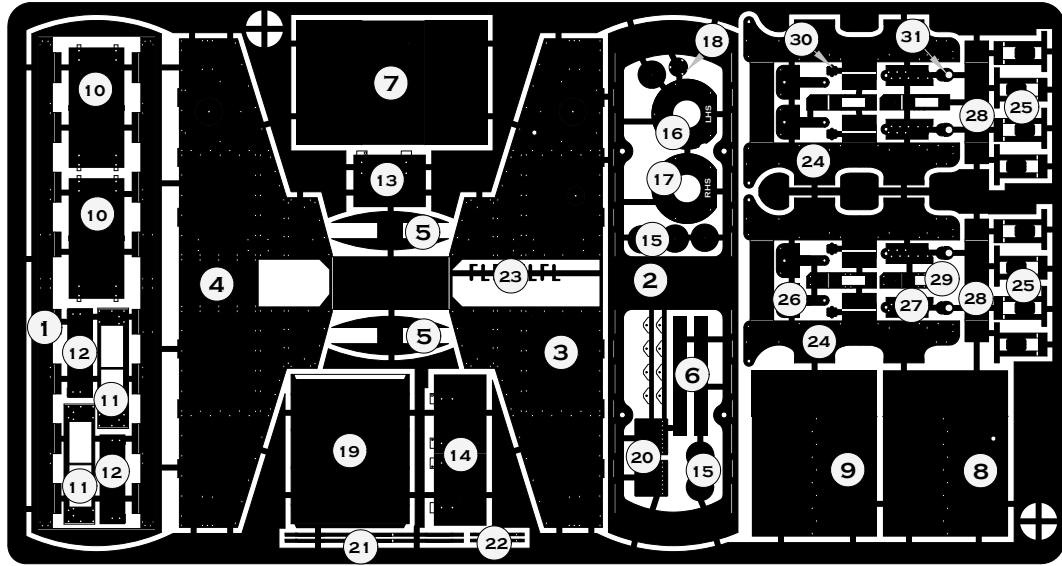
***General***

1. I use a modelling knife to remove the pieces from the fret. This must be carried out on a resilient surface such a cutting mat.
2. Folding jig. A folding jig can made from two pieces of brass say 100mm x 25mm x 64 thou joined together by 3 or more bolts. Once bolted together it may be necessary to file the working edge square.

***Rivetting***

Before removing any pieces from the fret you must press out the rivets. This is carried out by placing the fret on a resilient surface (I use a cutting mat) and then pressing a sharp pointed instrument, such as a compass point, into each of the half-etch holes on the reverse side of the fret. Be careful not to apply too much pressure otherwise you will push the point right through. Don't worry if some of the pieces curl slightly. They can be carefully straightened when removed from the fret.

An alternative to the compass point is the riveting tool supplied by Eileen's Emporium.



**Etched Parts List**

**Body**

- |                        |                           |                           |
|------------------------|---------------------------|---------------------------|
| 1 – Lower chassis      | 11 – Windscreen           | 22 – Bonnet Bracket       |
| 2 – Upper chassis      | 12 – Windscreen armour    | 23 – Door hinges          |
| 3 – Left hand side     | 13 – Right hand door      |                           |
| 4 – Right hand side    | 14 – Left hand door       | <b>Bogie</b>              |
| 5 – Chassis end former | 15 – Air vent spacer      | 24 – Bogie sides          |
| 6 – Chassis end        | 16 – Left hand air vent   | 25 – Axle box overlay     |
| 7 – Roof               | 17 – Right hand air vent  | 26 – Spring hanger        |
| 8 – Front bonnet       | 18 – Left hand plate      | 27 – Stiffening plate     |
| 9 – Rear bonnet        | 19 – Battery box          | 28 – Bogie rear stiffener |
| 10 – Front/Rear Door   | 20 – Battery box ends     | 29 – Spring box           |
|                        | 21 – Battery box supports | 30 – Axle box plate       |
|                        |                           | 31 – Bogie detail         |

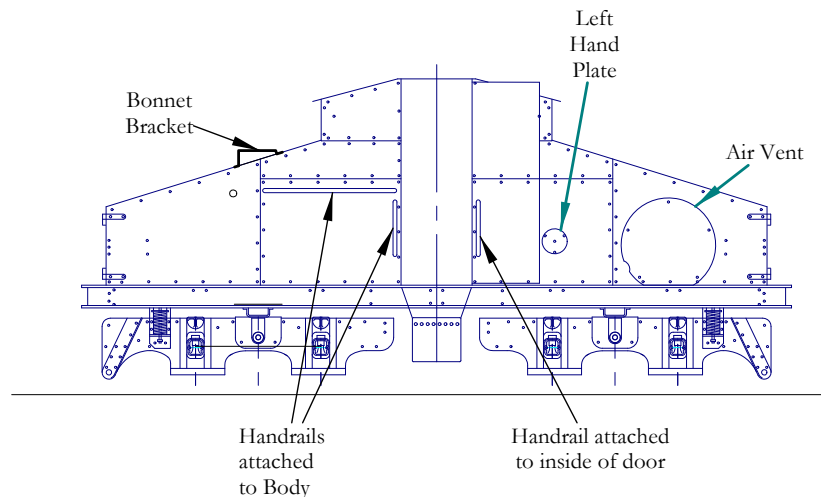
**Body**

1. Remove the Lower chassis (1) from the fret. Bend the first web ensuring that the tabs are not bent. This is best carried out using the folding jig described in the general instructions.
2. Bend the other web.
3. Remove the upper chassis (2) from the fret. Insert the lower chassis tabs through the upper chassis slots. These slots are necessarily tight. When all the tabs are inserted place the chassis back into the jig and fold each tab over towards the middle. Solder the lower and upper chassis together.
4. The body is connected to the *Bullant* chassis using 12BA bolts. To facilitate this solder four 12BA nuts to the lower chassis as indicated.
5. Remove the chassis end formers (5) and chassis ends (6) from the fret. Bend the formers to shape. Gently curve the chassis ends to fit the former and solder together and then solder onto the chassis. Alternatively the formers could be soldered to the frame and then the ends soldered to them.
6. Remove the sides (4) & (5) from the fret and solder them to the chassis. Take care to ensure that the sides are vertical and that the rivet detail is on the

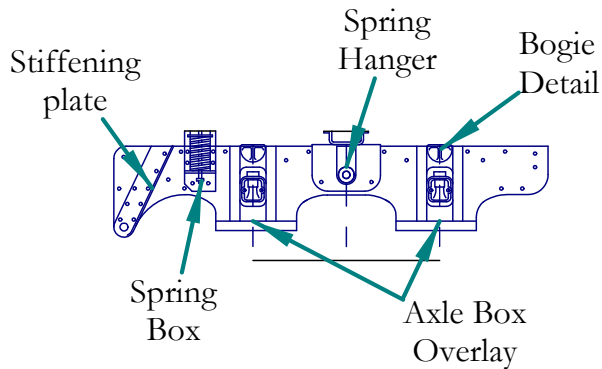
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outside. The tabs should fit tightly into the slots. The correct dimension between the body sides is 19.6mm.

7. From this point on it will be necessary to identify the left and right hand sides of the model. The LHS has a full height doorway.
8. Remove the roof (7) from the fret. Before soldering the roof to you may wish to scribe two lines between each of the parallel lines if rivets to accentuate the plates. The roof is correctly orientated when the square feature is over the right hand side. Carefully fold the roof to fit the body and solder to the body
9. Remove the front bonnet (8) from the fret. Before soldering the bonnet to the body you may wish to accentuate the panel line by scribing between the two line of rivets. Ensure the long panel is towards the front and solder the bonnet to the body sides.
10. Remove the rear bonnet (9) from the fret. Before soldering the bonnet to the body you may wish to accentuate the panel line by scribing between the two line of rivets. Ensure the long panel is towards the back and solder the bonnet to the body sides.
11. Remove the front and rear doors (10) from the fret. And solder to the front and back of the body respectively.
12. Windscreen (11)
13. Armour plate (12)
14. Doors (13) and (14)
15. The air vent is formed from four pieces; three air vent spacers (15) and the air vent (16)/(17) itself., I recommend that these are assembled prior to attaching the whole sub-assembly to the body. Please remember that the air vents are handed and the left hand vent has a very small piece missing. There are holes in the centre of the spacers to assist with alignment during assembly.
16. Plate on left hand side (18)



17. Battery box (19) ends (20) and brackets (21)
18. Bonnet bracket (22)
19. Front/rear door hinges (22)
20. Handrails.



***Bogies***

1. Remove the bogie sides (24) and bogie overlays (25) from the fret. Fold the ends of the overlays. This will assist with locating and holding them during soldering.
2. Remove the spring hanger (26) from the fret. Fold into shape and solder onto the bogie side.
3. Remove the stiffening plates (27)) from the fret and fold into channels. Using a piece of 0.9mm wire locate them on the bogie side and solder as shown above.
4. Fold the bogie sides to shape. Check that they fit over the Bullant bogies and solder a 0.9mm diameter wire 21mm long through the holes in the stiffening plates.
5. Remove the bogie rear stiffener (28) from the fret. Fold the two ends up. Please note that the centre line is not a fold. Solder the stiffener between the bogie sides.
6. Remove the Spring box (29) fold into shape and solder to the bogie
7. Remove the bogie detail (31) from the fret and fold to 90° and solder to the bogie side.

**REFERENCES**

***Books:***

Cénac C. La Voie de 60 Militaire de la Guerre de 14 -18 en France. Autoédition. 2003.

***Internet:***

Les origines de la voie de 60 militaire  
<http://perso.orange.fr/ammann/html/texte/origine.html>

Locomotive Workshop – Henry Crochat, Paris  
<http://www.rail.lu/crochat.html>

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