

Motorising Set for Corgi "Cissie" Tram

The KW Trams (ex **BEC-KITS**) motorising set for the Corgi "Cissie" centre entrance Feltham tram contains 2 motorised equal wheel bogies (19mm wheelbase), with link wiring, and 2 bolsters. The following instructions should assist in fitting these motor bogies into your "Cissie" model. Glues such as rapid epoxy resin glue (e.g. Araldite 5 minute) or Evostik Impact Adhesive may be used for gluing the bolsters in place. Cyanoacrylate superglue may be used for gluing the press studs back in place, if they become detached.

The Corgi "Cissie" tram has several delicate plastic parts, such as the rear-view mirrors and the lifeguards, so please handle the model very carefully to avoid damaging any parts or paintwork. It is recommended that you have a box in which to keep all the component parts safe as you dismantle the tram.

Fitting instructions



1. The plastic headlamps must be removed from their housings first.

It is recommended that you put masking tape down either side of the headlamp to protect the paint. Then carefully lever out the complete black plastic headlamp moulding from each end with a small screwdriver or the point of a modelling knife, being careful not to scratch the model. Alternatively, drill a small hole in the centre of the headlamp and insert a thin rod to pull the headlamp out.

If you lose or damage them, Corgi may have supplied two spare clear plastic replacement headlamps in the clear envelope with the mailing request slip.

2. Underneath each headlamp is a small cross-head screw. Unscrew this and the plastic chassis unit, containing the separate seating unit, may be slid out of the die-cast tram body. Put away the seating unit and the die-cast body, with the transparent window strips, headlamps and screws for later use.

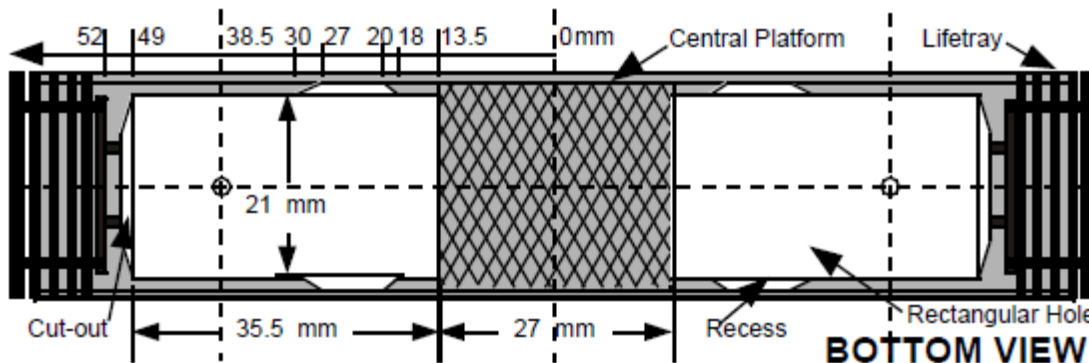




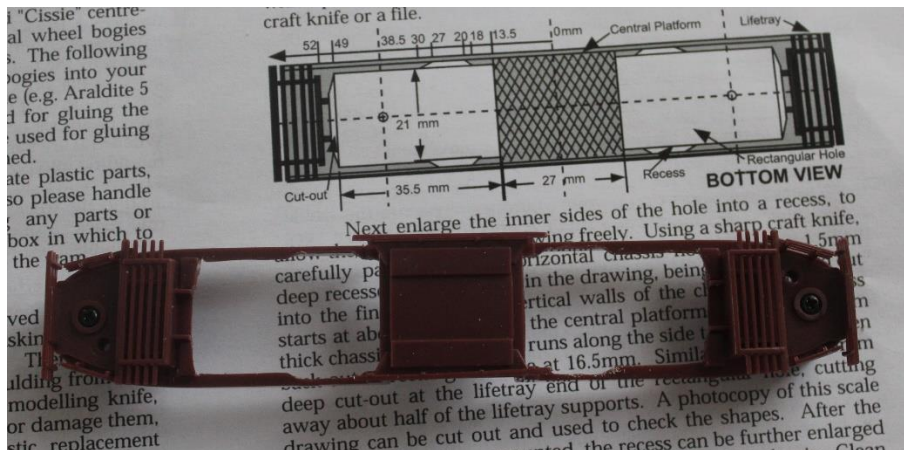
3. Note carefully the asymmetrical trucksides and how the bogies rotate through the side lifeguard. Unscrew the small crosshead screws on the centre line of the chassis unit, which hold the bogies in place. Remove and put away the bogies, as their truck sideframes will be required later for fitting to the motorised trucks.

4. The next stage is to cut 2 holes in the plastic chassis unit to give turning space for the 2 motorised bogies. These 2 holes fit in between the stepped down central platform section (with the side lifeguards, etc.) and the end lifetray sections. Part of the supports for the end lifetrays need to be pared away. During all these operations, be careful not to damage the lifeguards, etc.

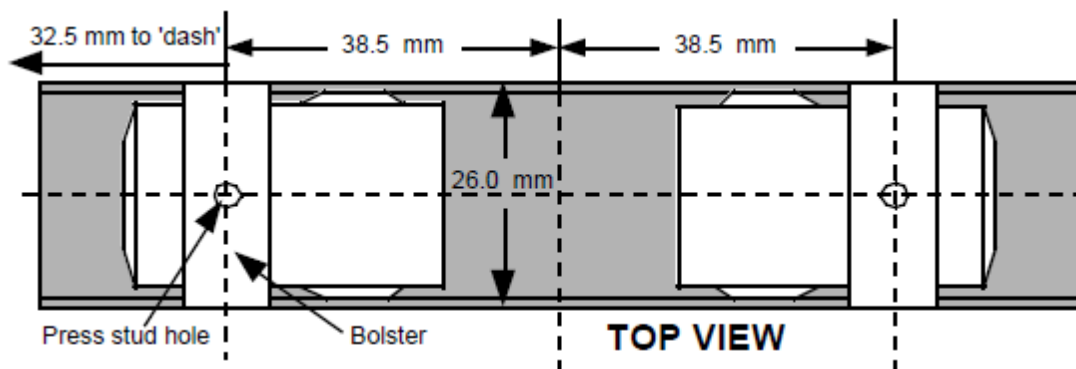
For each bogie, first cut a rectangular hole 35.5mm long by 21mm wide. This should leave a strip 2.5mm wide along each side of the 26mm wide chassis unit and the 27mm long central platform area. This hole can be made with a cutting disk in a mini-drill or with a piercing saw. Clean up all the edges of the hole with a sharp craft knife or a file.



Next enlarge the inner sides of the hole into a recess, to allow the tail of the truck to swing freely. Using a sharp craft knife, carefully pare away the horizontal chassis floor into the 1.5mm deep recessed shape shown in the drawing, being careful not to cut into the final 1mm thick vertical walls of the chassis. The recess starts at about 4.5mm from the central platform, touches the 1mm thick chassis side at 6.5mm, runs along the side to 13.5mm and then back out to rectangular hole at 16.5mm. Similarly create a 1.5mm deep cut-out at the lifetray end of the rectangular hole, cutting away about half of the lifetray supports. A photocopy of this scale drawing can be cut out and used to check the shapes.



After the bogie bolster has been mounted, the recess can be further enlarged a little more, if necessary, to allow free rotation of the bogie. Clean up all the edges of the hole.

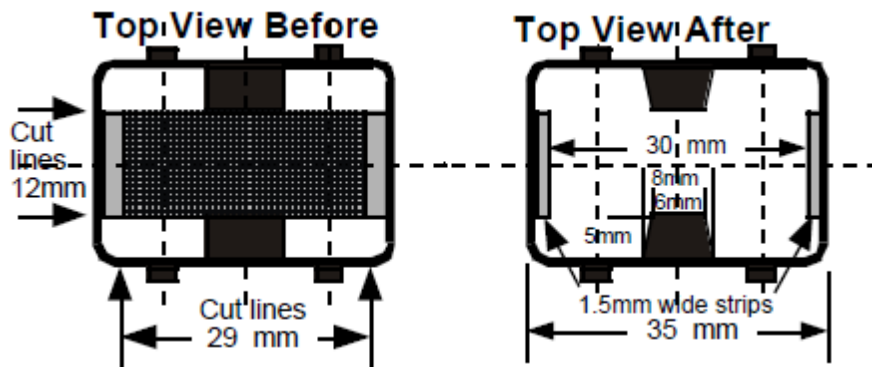


5. Glue the 2 U-shaped bolsters into the top of the plastic chassis unit. The 2 side arms are fitted down inside the sides of the chassis. The side steps rest on the top of the chassis sides and the bottom of the arms rest on the chassis floor. It is very important to space the bolster centres at the correct distance apart. The centre points of the bolsters, with the press stud holes, should be 77mm apart. Alternatively, the inside edges of the vertical 'dash' panels at the end of the chassis are 142mm apart, so the centre point of each of the bolsters should be 32.5mm in from the vertical 'dash' panels.

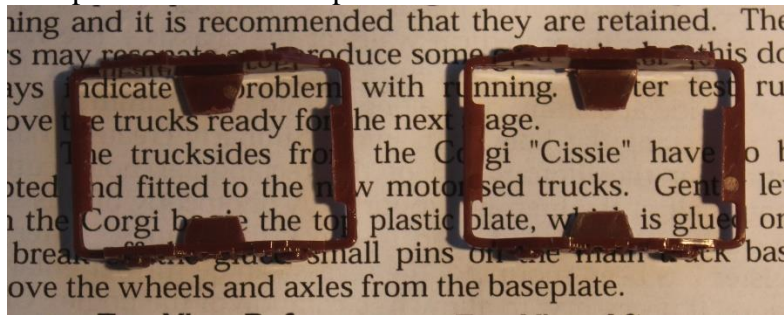
6. When the glue has set hard, test mount the motorised bogies in place by clipping the male press stud on the top of the bogie into the female press stud in the bolster. Free movement has been assisted by applying a small amount of grease, such as Vaseline petroleum jelly, into the female press stud. Check that the bogies rotate freely within the cut-out holes in the chassis. You may need to pare away a bit more of the chassis pan or remove a small part of the side lifeguards to allow free movement.

7. Connect the wires and socket from one truck to the plug on the other truck. This socket needs to be the correct way up or the 2 trucks will short circuit your controller. Test run the whole chassis unit. The unmotorised trailing wheels may not turn very freely due to the pressure of the pickups. However, the use of the electrical pickups on the trailing axles does improve smooth running and it is recommended that they are retained. The brass gears may resonate and produce some gear noise but this does not always indicate a problem with running. After test running, remove the trucks ready for the next stage.

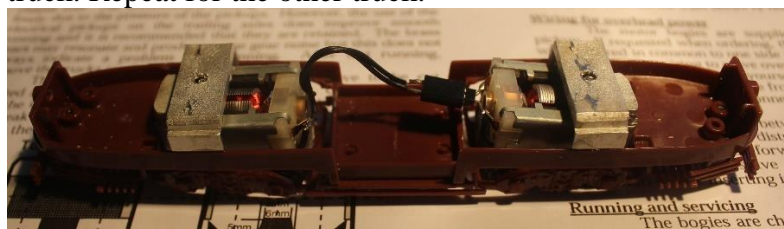
8. The trucksides from the Corgi "Cissie" have to be cut, adapted and fitted to the new motorised trucks. Gently lever off from the Corgi bogie the top plastic plate, which is glued on. This will break off the glued small pins on the main truck baseplate. Remove the wheels and axles from the baseplate.



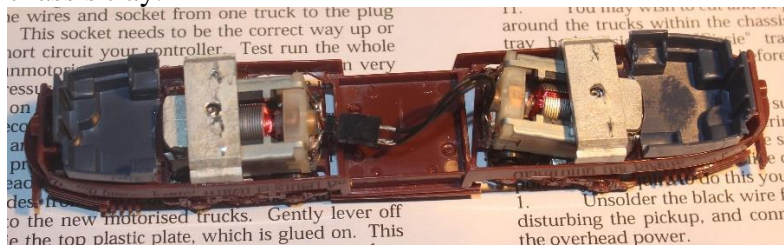
9. Now cut out and remove the rectangular area 12mm by 29mm, shaded on the left-hand drawing of the truck baseplate, to leave the complete truck sideframe moulding shown on the righthand drawing. Gradually enlarge the 29mm dimension to 30mm by using a sharp knife to shave down the two end strips so that each is 1.5mm wide. Leave the side cross-supports in place, marked black on the drawing, but trim them to be tabs 5mm deep and to narrow from 8mm at the frame ring to 6mm at the inside. A pair of sharp small side-cutters can be useful to clip the tabs to this shape.



10. Test fit the truck sideframe ring to the base of the motorised truck. The plastic sideframe ring should fit into the ledges at each end of the truck base. Ensure that the angled axle box edge is by the trailing axle. The side tabs should butt up against the pegs on the sides of the motorised truck. Trim the one corner of the side tab so it can clear the truck wire. There should be a small even clearance between the wheels and the plastic sideframe ring. When you are happy with how they fit together, glue the sideframe moulding into position on the truck. Repeat for the other truck.



11. You may wish to cut and fit parts of the plastic seating unit, around the trucks within the chassis tray.



Re-assemble the chassis tray back inside the "Cissie" tram, using the screws in the headlights. Test run the tram before re-fitting the headlamps.



Wiring for overhead power

The motor bogies are supplied ready wired for 2-rail pickup. If requested when ordering, they can be supplied with all wheels wired in common to one side of the motor and a wire from the other side for wiring to a live overhead pickup, such as a trolley pole. If you require to do this yourself:

1. Unsolder the black wire from the copper clad strip, without disturbing the pickup, and connect that insulated motor brush to the overhead power.
2. Solder a wire across between the 2 copper clad strips, inside the insulation cuts, without disturbing the pickups.
3. Determine the forward direction of travel of the mechanism, with positive power applied to the overhead connection before inserting into the tram, to match a tram driver.

Running and servicing

The bogies are checked, oiled and test run before they are packed. This oiling should be sufficient for many running sessions. If extra oil is required, use a light general purpose oil, such as bicycle oil. Apply a single drop about 1mm diameter on top of the worm gear, on the motor axle bearings only outside the motor (ensure none gets inside the motor) and underneath on the steel axles inside the copper-clad strips. Avoid oil and dirt contaminating the pickups on the backs of the wheels, which may cause insulation.

Clean the wheel treads regularly.

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