

Build the  
**C57** Steam  
Locomotive

**Pack 12**



DE AGOSTINI  
**MODEL SPACE**™



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Editorial and design by Continuo Creative, 39-41 North Road, London N7 9DP.

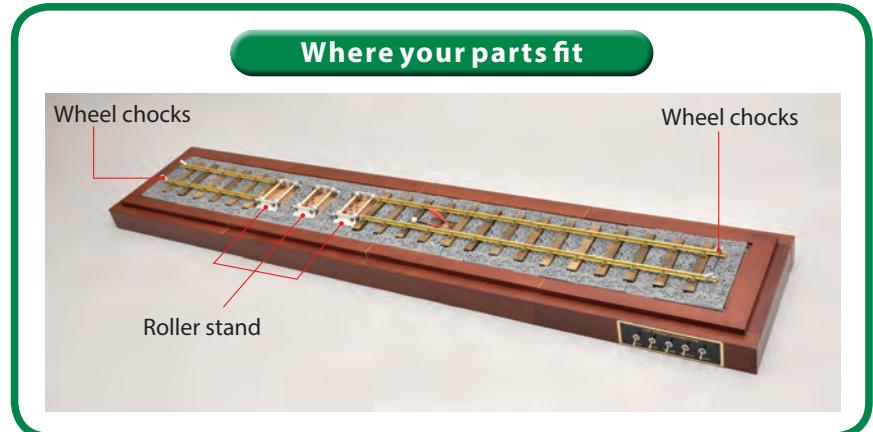
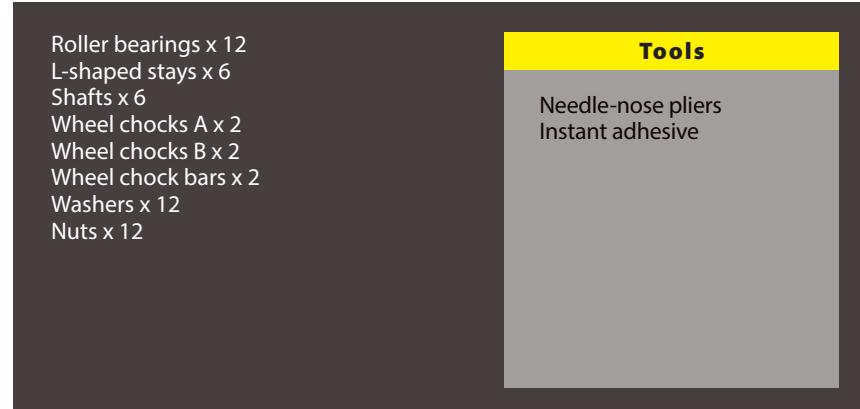
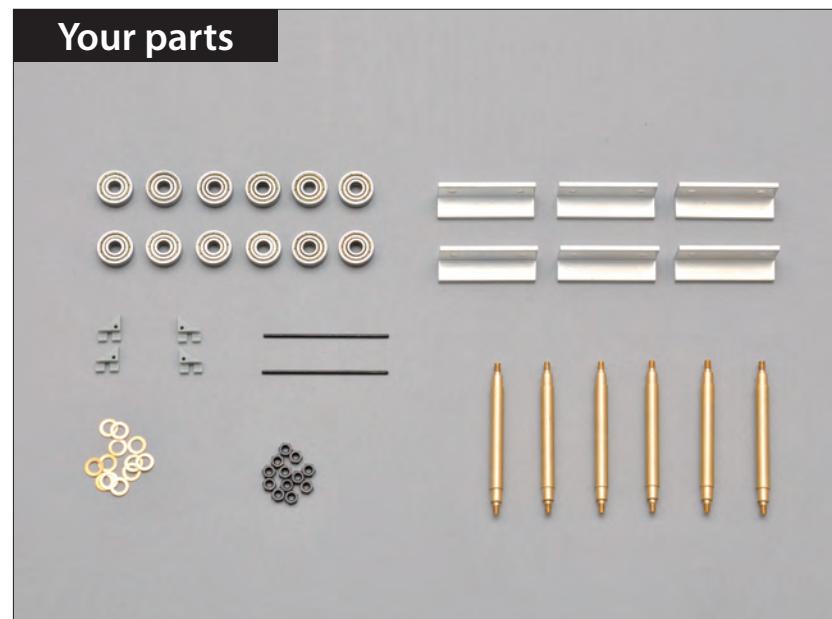
Published in the UK by De Agostini UK Ltd, Battersea Studios 2, 82 Silverthorne Road, London SW8 3HE.

Published in the USA by De Agostini Publishing USA, Inc., 121 E. Calhoun Street, Woodstock, IL 60098.

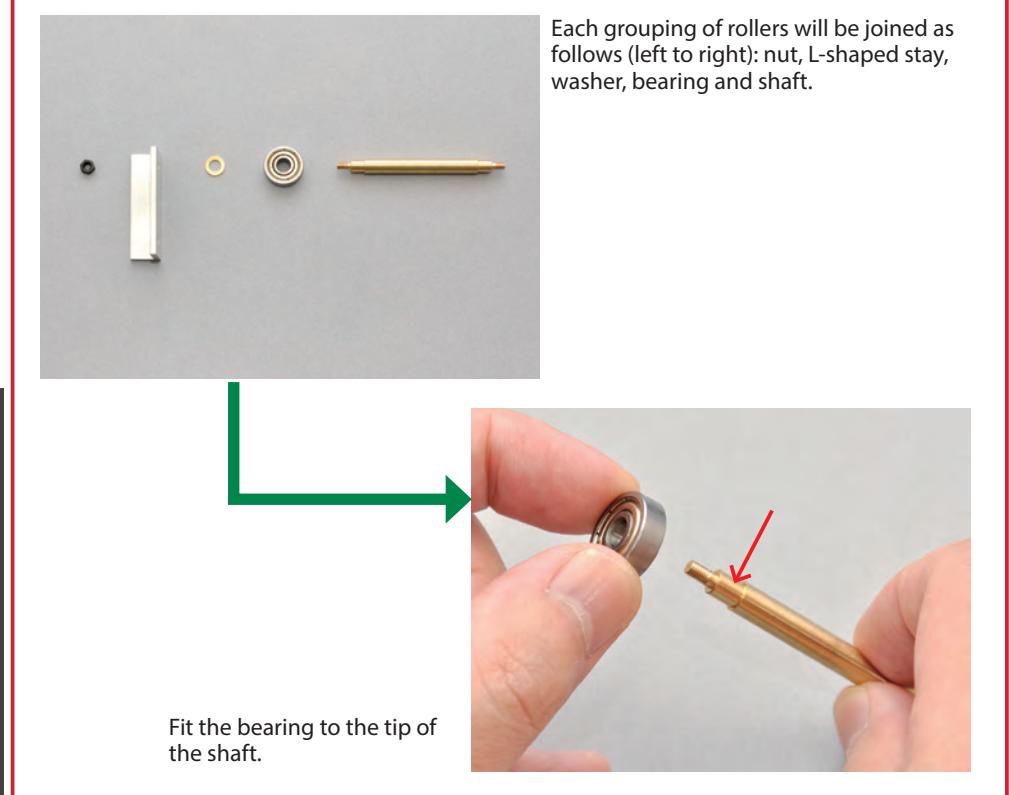
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Warning: Not suitable for children under the age of 14. This product is not a toy and is not designed or intended for use in play. Items may vary from those shown.

# The rollers and wheel chocks

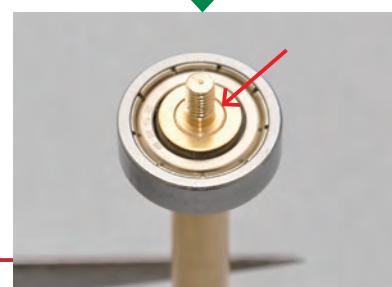


1

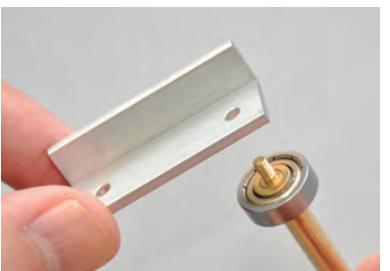


**2**

Now close this with a washer.



The washer will sit neatly around the base of the shaft's tip, as shown.



Next, take an L-shaped stay.



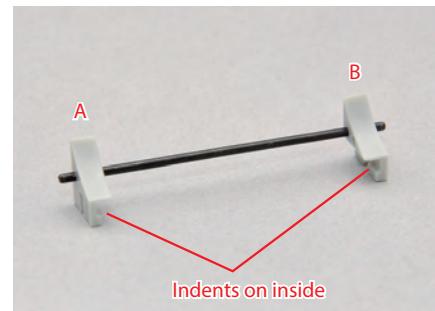
Fit this to the shaft, then use a pair of needle-nose pliers to tighten a washer to its tip to secure the parts.

**3**

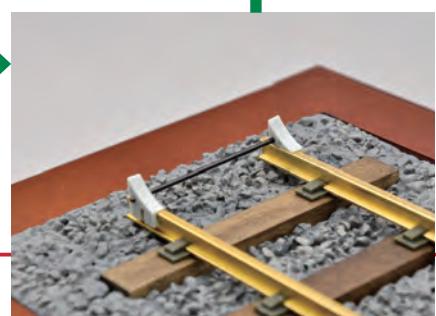
Repeat Step 2 until you have three sets of rollers and stays.



Place these into the correspondingly shaped recesses on the base.

**4**

Now fit a wheel chock bar to a wheel chock parts A and B, as shown.



Fit to the front end of the base's tracks. Adjust the bar if necessary.

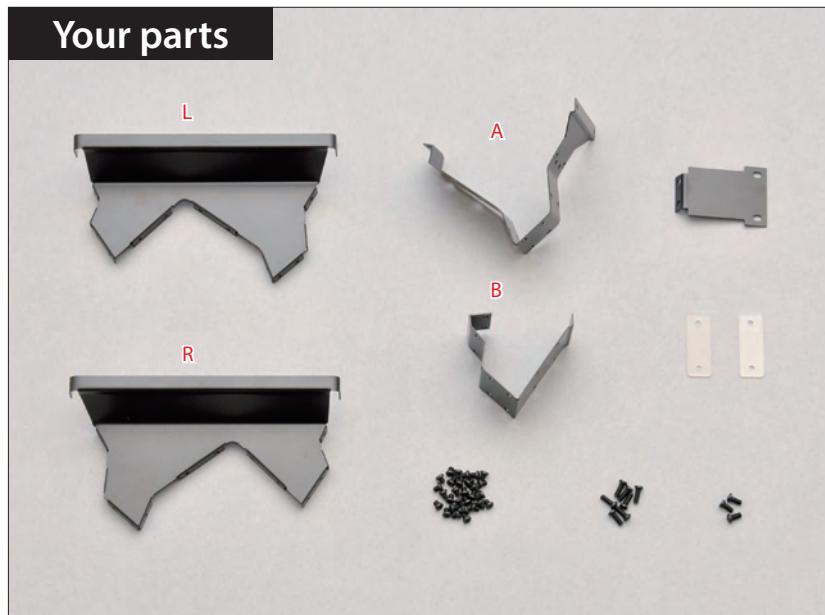


Once the positioning of the chocks and chock bar is set, secure the parts with instant adhesive. Do not glue these to the tracks, so you can remove the parts later.

**Complete**

# The ash box

## Your parts

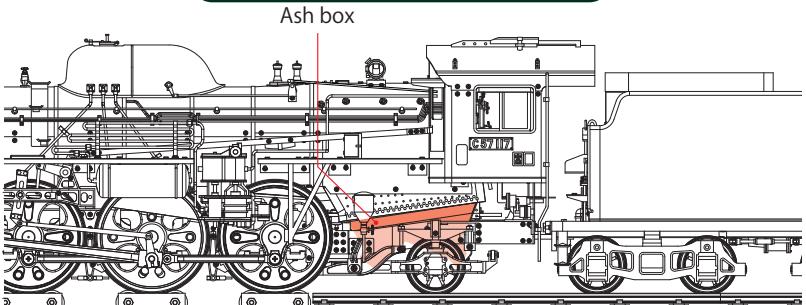


Ash box (left)  
 Ash box (right)  
 Ash box bottom A  
 Ash box bottom B  
 Ash box rear support  
 Silicone pads x 2  
 Screws (2 x 2mm) x 29  
 Screws (2 x 5mm) x 7  
 Screws (2 x 4mm) x 3

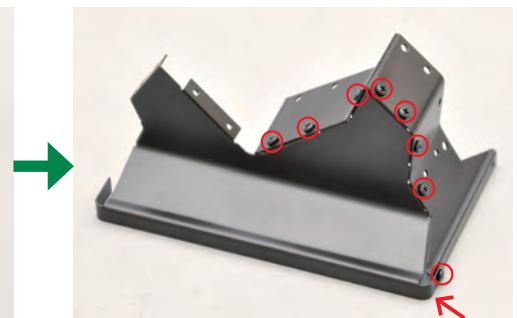
## Tools

Phillips screwdriver  
 Flat-head screwdriver  
 Needle-nose pliers

## Where your parts fit

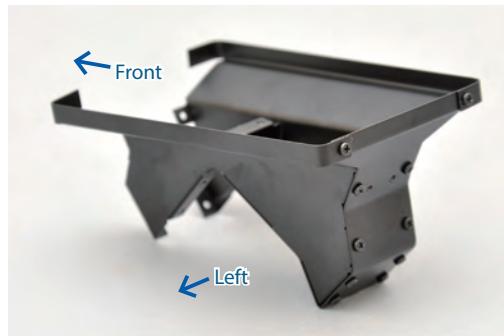


1



The left, right and bottom A ash box parts will fit together like this.

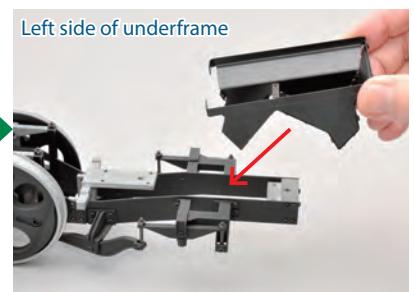
Use eight of the smallest screws (2 x 2mm) to secure the right and bottom parts via the circled holes.



Turn the assembly upside down and add the left part, securing with eight more screws as before.

**2**

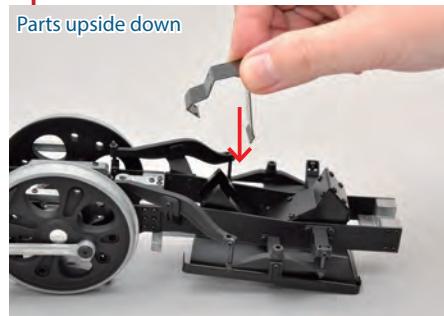
Next, remove the trailing truck from the underframe.



Slot the ash box into the rectangular space in the rear of the frame.

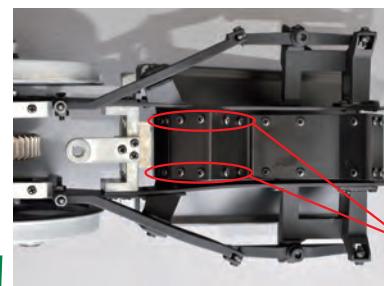


Line up the arrowed holes on the ash box tab to the underside of the underframe's beam.

**3**

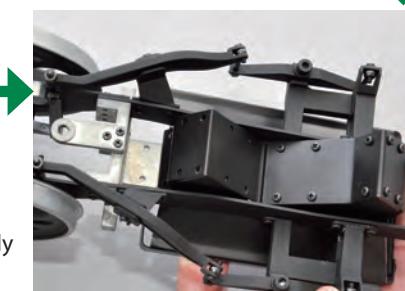
Parts upside down

Turn the assembly upside down, then lower the ash box bottom B onto its part A.

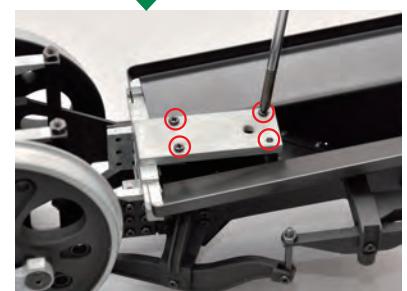


Use 12 more 2 x 2mm screws to secure the parts, six on each side.

Six screws on each side.



The parts will fit neatly together.



Turn the assembly back around and secure the ash box fully with four 2 x 5mm screws.

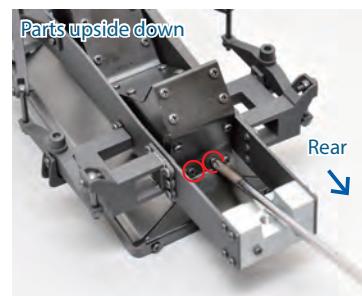
**4**

Place one silicone pad (the other may be added later in the assembly, depending on the gap) into the recess in the rear end beam.



Two more 2 x 5mm screws will secure this part. Only lightly turn them in at this stage.

Fit the ash box rear support so its circled holes all align with those on the rear end beam and ash box rear.

**5**

Parts upside down

Rear

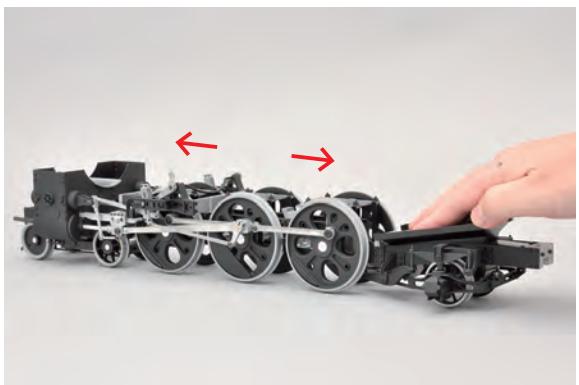
With the assembly upside down, use two 2 x 4mm screws into the circled holes to further secure the ash box.



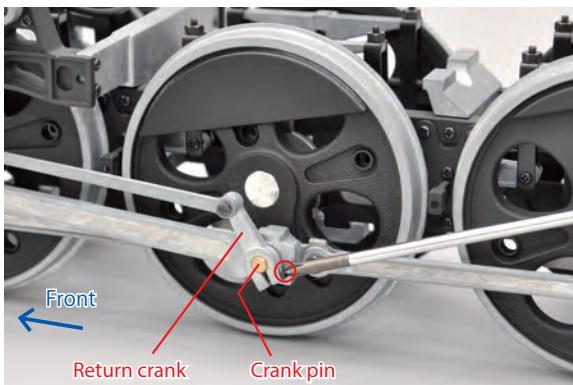
Reattach the trailing truck in the same way you first fitted it.



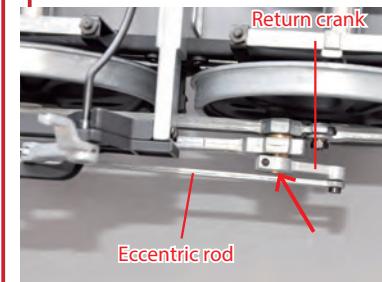
Turn the assembly back over again, and tighten the two 2 x 4mm screws into place.

**6**

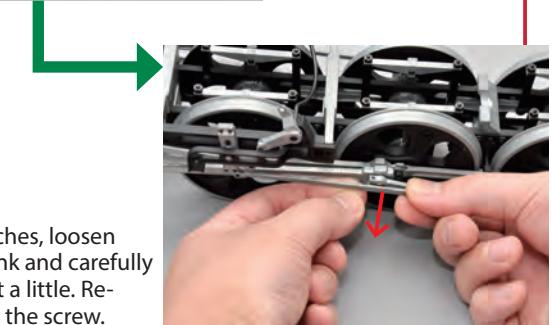
Move the underframe back and forth to check that the wheels rotate smoothly. If the wheels catch at all, the following steps will explain how to rectify this.

**7**

If the angle of the left and right return crank is incorrect, it may interfere with the movement of the adjustable link. The correct angle should be about 10 degrees forward of the vertical. If it is misaligned, fix the angle and retighten the screw.

**8**

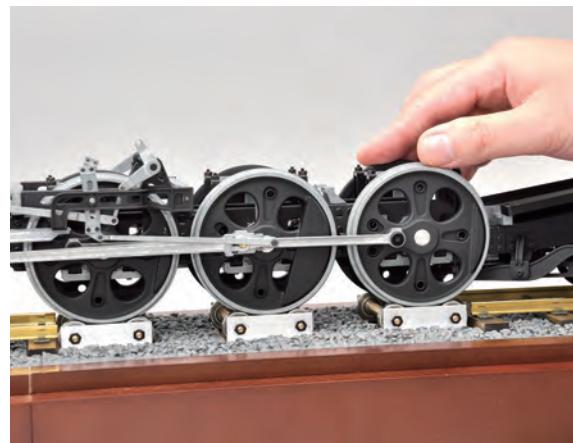
The clearance between the eccentric rod and the return crank is very small (arrow). If the eccentric rod warps inward, it may get caught here.



If it catches, loosen the crank and carefully pull out a little. Retighten the screw.

**9**

Check that all of the screws and fittings are tight. Tighten any that have come loose.

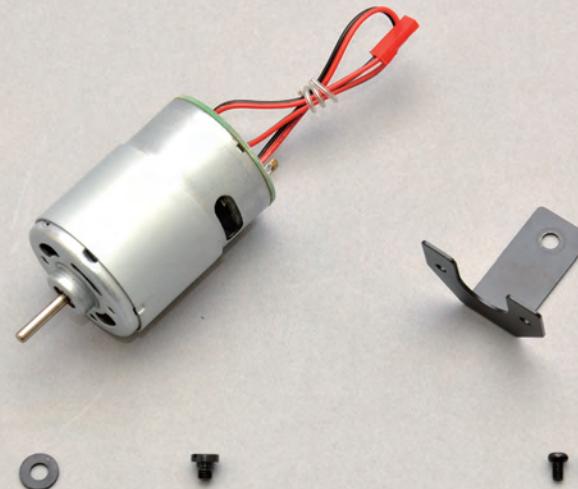
**10**

Place the lower assembly onto the base, with the wheels in the rollers, as shown. Check that the wheels now rotate smoothly.

**Complete**

# The motor

## Your parts

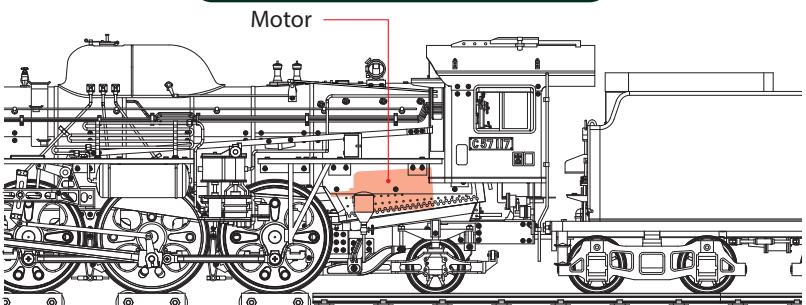


Motor  
Motor mount  
Rubber washer  
Motor screw  
Screws (3 x 6mm) x 2

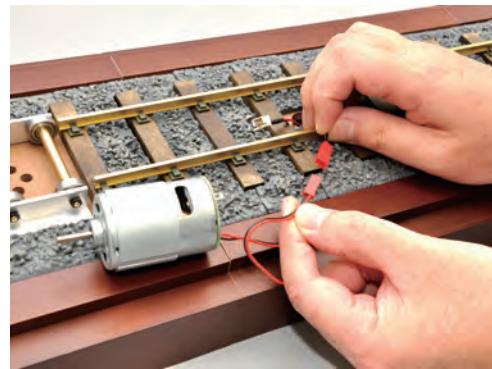
## Tools

Phillips screwdriver  
Flat-head screwdriver

## Where your parts fit



1



With the required batteries fitted inside the battery box, connect the motor's cable to the battery box's one.



Test the motor by turning on the MAIN and RUN switches on the base's switchplate.

**2**

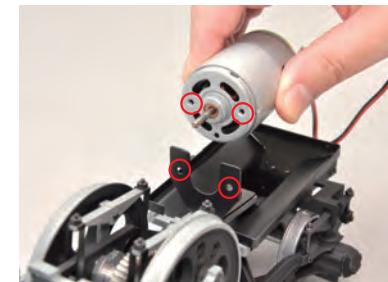
Place the rubber washer over the circled hole, above the ash box.



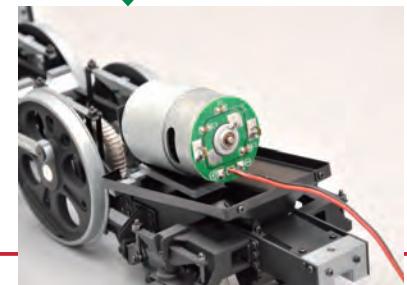
Line up the motor mount to the hole and washer, as shown.



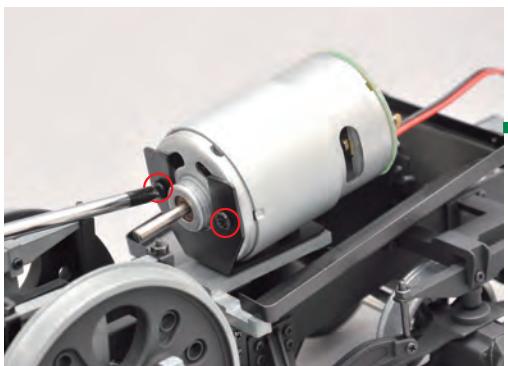
Use the motor screw to secure the parts.

**3**

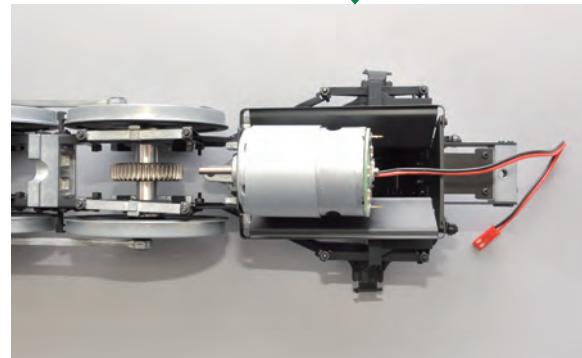
Line up the motor so its two circled holes match those on the mount.



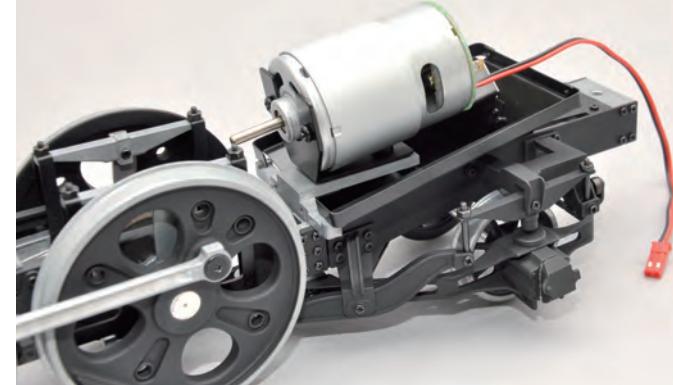
The wire at the rear of the motor should be at the bottom.

**4**

Secure the motor with the two smaller screws.

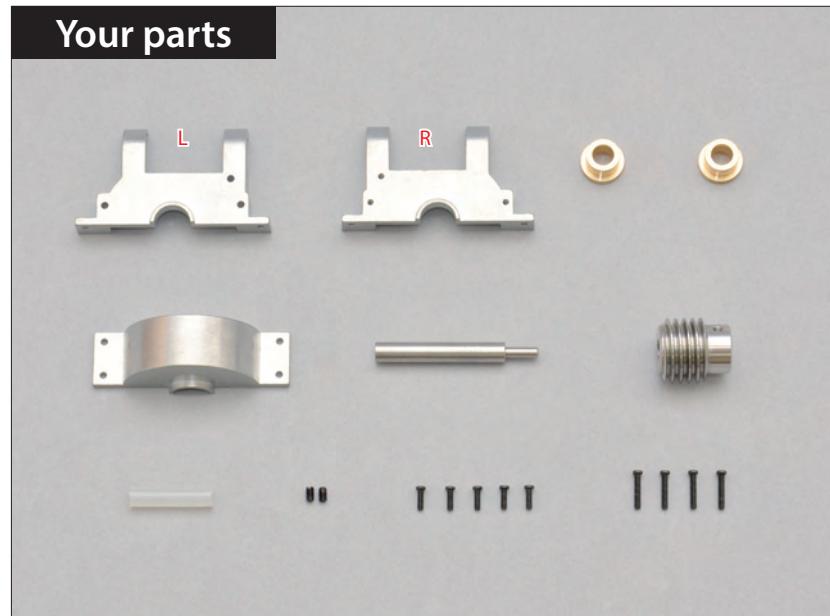


The motor, when viewed from above, should be perfectly aligned with the underframe.

**Complete**

# The gearbox

## Your parts

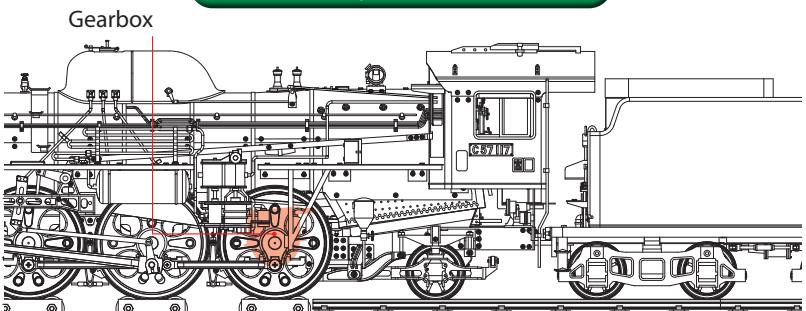


Gearbox (left)  
 Gearbox (right)  
 Gearbox bottom  
 Bushes x 2  
 Shaft  
 Worm gear  
 Silicone tube  
 Set screws (2.5 x 4mm) x 2  
 Screws (2 x 6mm) x 5  
 Screws (2 x 10mm) x 4

## Tools

Phillips screwdriver  
 Flat-head screwdriver

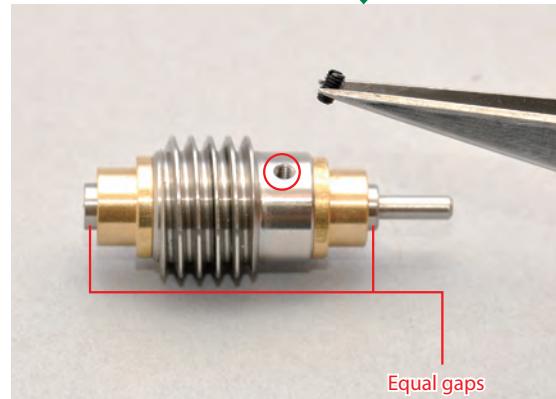
## Where your parts fit



1



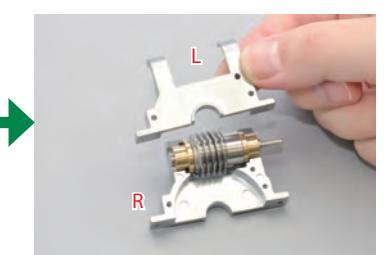
Fit the worm gear and both bushes onto the shaft, orienting the parts as shown.



Set the bushes and gear onto the thicker section of the shaft evenly, then fit a set screw into the circled hole.

**2**

Now take the gear assembly and lower it onto the gearbox right. It will sit in the shaped groove.

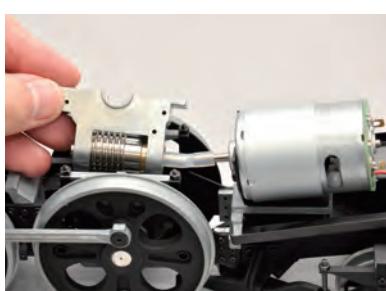


Place the gearbox flat on your work surface, then use three 2 x 10mm screws to seal it using the circled holes.

Close the gearbox by adding the left part.



Fit the silicone tube onto the tip of the shaft.

**3**

Now fit the free tip of the tube onto the shaft of the motor.



Use the tube's flexibility to raise the gearbox up and then into the space between the last set of wheels, so that it comes to rest with the worm gear's teeth engaged with those of the drive wheel.



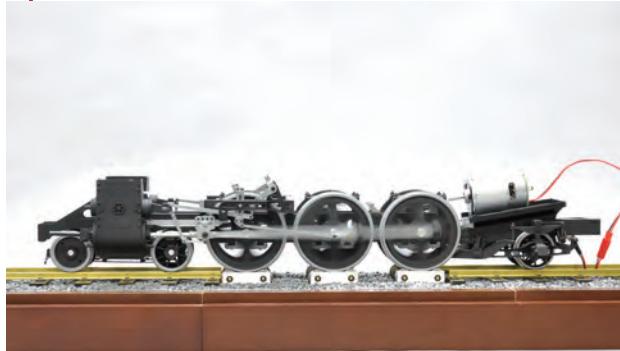
When set correctly, the gearbox will be straight, with its worm gear's teeth neatly engaged with the drive wheel, and the silicone tube almost perfectly straight.

**4**

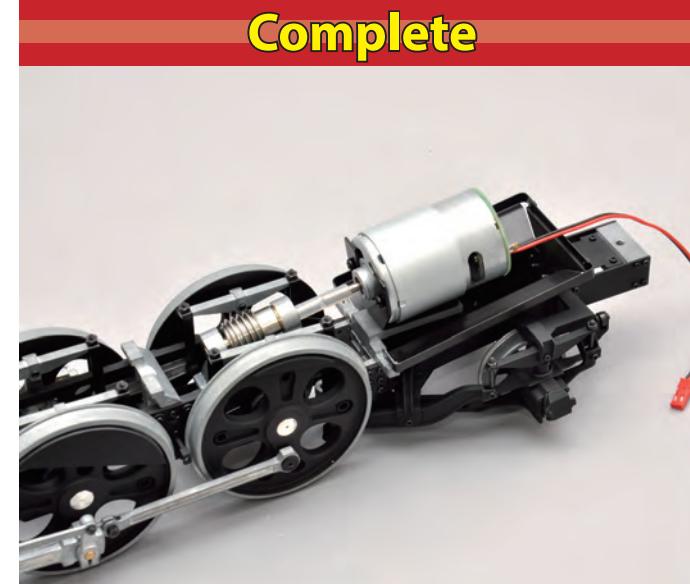
Turn your model over, holding the gearbox in place, and then fit the gearbox bottom over the gear.



Secure with four 2 x 6mm screws.

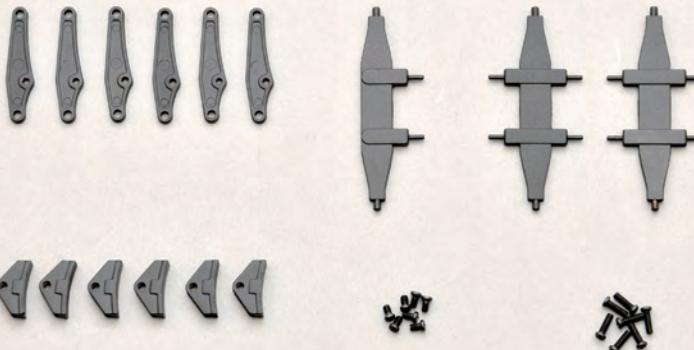
**5**

Place your model on the base's tracks, then connect its wiring and turn on the MAINS and RUN switches to see the wheels in action. If anything goes awry, go back and ensure all the parts assembled in Steps 2-4 of this stage were set correctly.

**Complete**

# The brake shoes

## Your parts



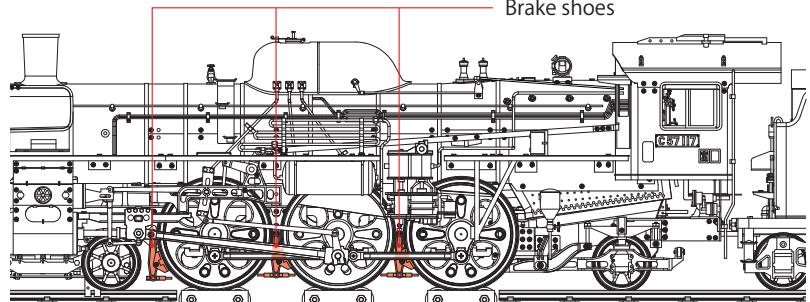
Brake shoe levers x 6  
Brake shoes x 6  
Brake beam A  
Brake beams B x 2  
Screws (2 x 3mm) x 7  
Screws (2 x 6mm) x 7

## Tools

Phillips screwdriver  
Instant adhesive

## Paint repair

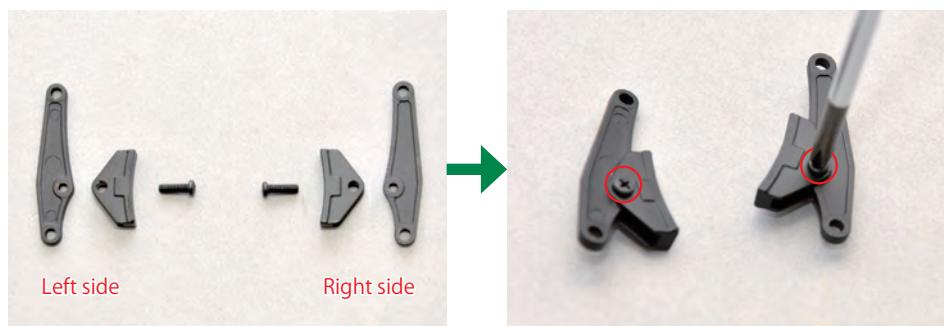
Water-based paint or  
paint marker  
Brush  
Paint dish



## Where your parts fit

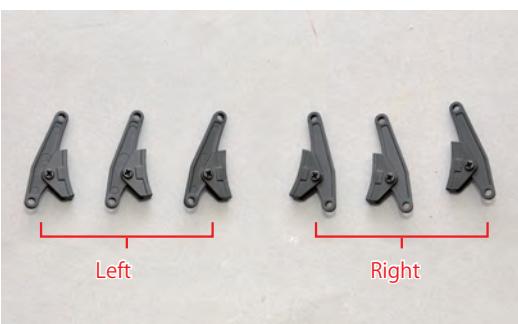
- Brake shoes

1



There are three brakes for each side of the engine, made up of a break shoe and a brake shoe lever, held together with a 2 x 6mm screw.

Place a brake shoe lever into a brake shoe, aligning the holes of both. Tighten a 2 x 6mm screw into the hole.

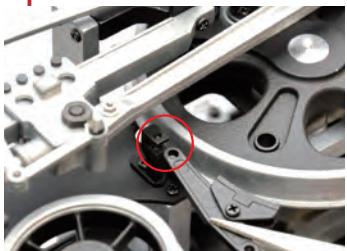


Assemble the six brake shoes, as shown.

**2**

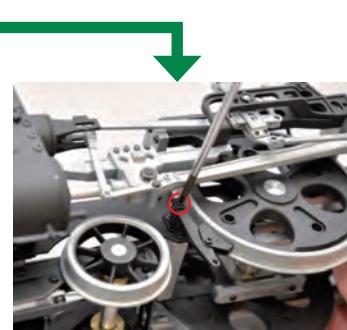
If you need to move the connecting rods, turn the motor shaft with your fingertips to alter the angle of the wheels.

Check that the brake mounting brackets are level and perpendicular to the frame. Adjust them via the screws. If any of these screws are loose, secure with some instant adhesive.

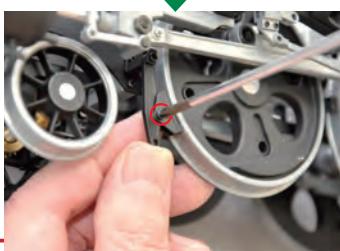
**3**

Align the hole at the top of one of the brake levers with the hole in the bracket behind the driving wheels, as shown.

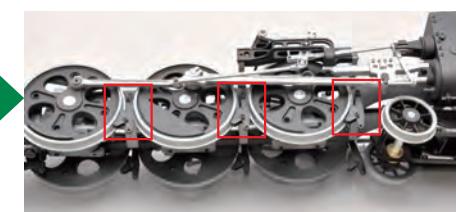
Align the angle of the brake shoe with the outer circumference of the wheel and tighten the screw.



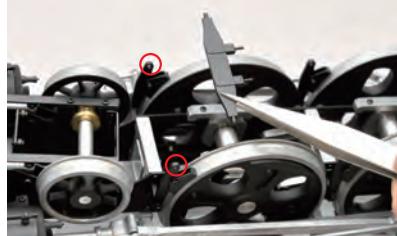
Secure the lever with a 2 x 3mm screw.

**4**

Now fit the other two brake shoes along the left side, as indicated above.



Following the same process, fit the three remaining brake shoes to the right side.

**5**

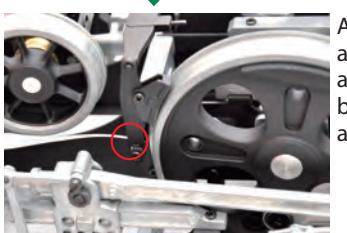
Place the underframe upside down, and insert the pins at the sides of brake beam A into the two circled holes in the ends of the levers.



Turn the beam to horizontal and move the levers so that there is a 1mm gap between the shoes and the wheels.



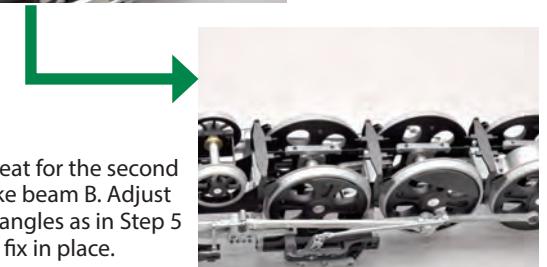
Apply a small amount of instant adhesive to the joins between the beam and levers.



Apply a small amount of instant adhesive to the joins between the levers and frame.

**6**

Insert the pins at the sides of brake beam B into the two circled holes in the ends of the levers.



Repeat for the second brake beam B. Adjust the angles as in Step 5 and fix in place.

## 7



As this series is nearing completion, you may have found areas of paint that are in need of repair. You can use either water-based paint or paint markers. If you are not experienced at repairing paint, we recommend practising using and mixing the paints and tools until you are comfortable.

Once you are more confident using the paint, you should practise on the inside of the cylinder.



## 9

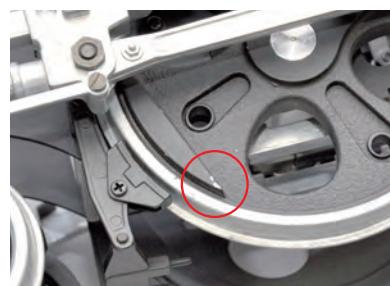


If there are any visible bits of dried instant adhesive, you can use a paint marker to colour them in.

Here you can see how the dried adhesive is no longer visible.



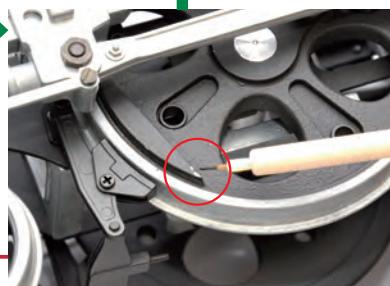
## 8



Here you can see where some of the paint has chipped off.



Apply a small amount of water-based paint to the tip of a thin brush and apply it to the damaged area. If the area is larger, use a larger brush.



When the paint has dried, the damaged part should have disappeared. Make sure you wash your brushes after each use.

## 10



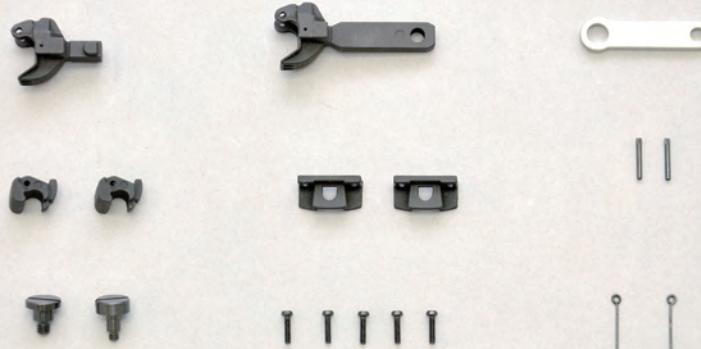
Repairing paint should be done at this stage, before any of the larger parts are combined, so check over the underframe and wheels, and the other large assemblies before proceeding.

## Complete



# The couplers

## Your parts

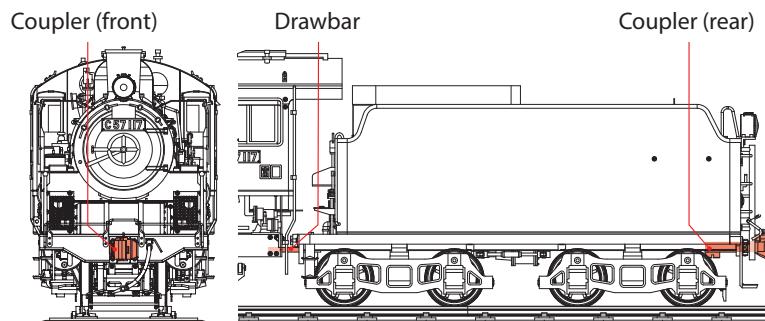


Coupler (front)  
 Coupler (rear)  
 Knuckles x 2  
 Coupler seats x 2  
 Drawbar  
 Knuckle pins x 2  
 Pivot screw (4 x 8mm)  
 Pivot screw (3 x 8.3mm)  
 Hex head screws (2 x 8mm) x 5  
 Locking pin x 2

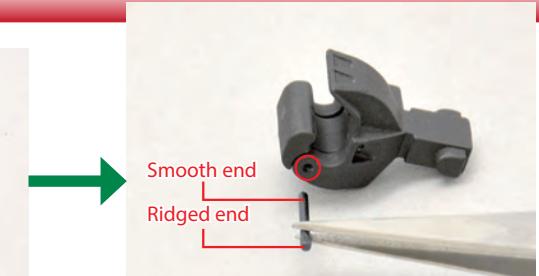
## Tools

Phillips screwdriver  
 Flat-head screwdriver  
 Wrench (Stage 27)  
 Pliers

## Where your parts fit



1



Insert the two knuckles into the ends of the two couplers, aligning the holes of both.

Keep the holes aligned and insert one of the knuckle pins through them, smooth end first.



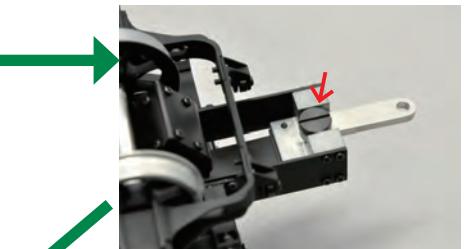
Here you can see the two assembled couplers. The arrows show where the ends of the pins are.



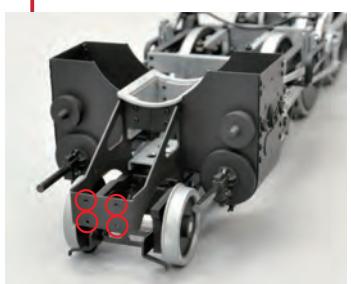
Insert the locking pins into the holes in the couplers (circled). If removed, they will allow you to open the knuckles.

**2**

Align the larger hole in the drawbar with the hole in the underside of the underframe.



Secure the drawbar with the 4 x 8mm pivot screw.



Turn the underframe back over and locate the four holes at the front. This is where the coupler seats will be secured to.

**3**

Place the upper assembly onto the underframe, passing the wires from the cab through the frame below, and fasten the two parts together with two 2 x 4mm screws (Stage 18).



Secure one of the coupler seats to the front beam with two hex head screws. Use the wrench (Stage 27) or some pliers.



Place the front coupler in the seat, and then place the second seat on top.



Tighten a hex screw into the two circled holes to secure the seat.

**4**

Place the tender upside down and position the rear coupler over the hole at the back. Make sure the locking pin doesn't fall out.



Tighten the 3 x 8.3mm pivot screw into the aligned holes.

## Complete



# The reverse bar

## Your parts

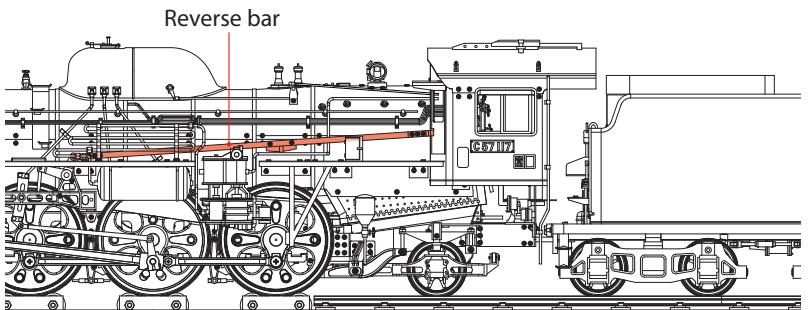


Reverse bar  
Reverse bar link  
Reverse bar end  
Reverse bar guide  
Set screws (2 x 5mm) x 2  
Screws (2 x 4mm) x 9

## Tools

Phillips screwdriver  
Flat-head screwdriver  
Glue

## Where your parts fit



1

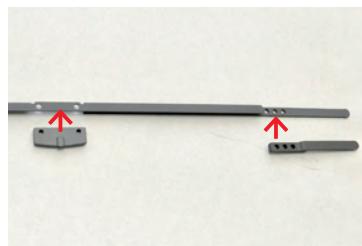


Tighten the set screw.

Insert one of the set screws into the hole at the end of the reverse bar link, as shown.



Secure the parts together with three 2 x 4mm screws.

**2**

Align the reverse bar end and guide with the corresponding sections on the reverse bar.



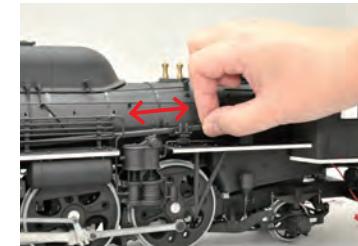
Tighten a 2 x 4mm screw into each of the five holes.

**3**

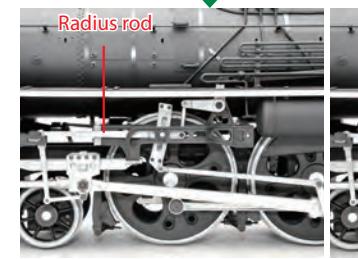
Pass the reverse bar end under the pipe (circled) and through the hole at the front of the cab (arrowed).



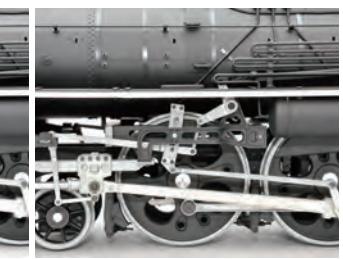
Push the set screw in the link into the top of the reverse arm below.

**4**

By moving the reverse bar back and forth you can adjust the position of the radius rod, as shown below.



Moving the reverse bar back will raise the radius rod, putting the engine into 'neutral'.



Sliding the reverse bar forward will lower the radius rod. This is the 'advance' position.

**5**

Place the main assembly on the base and connect the light and motor wiring.



Turn the 'MAIN' and 'LIGHT' switches on.



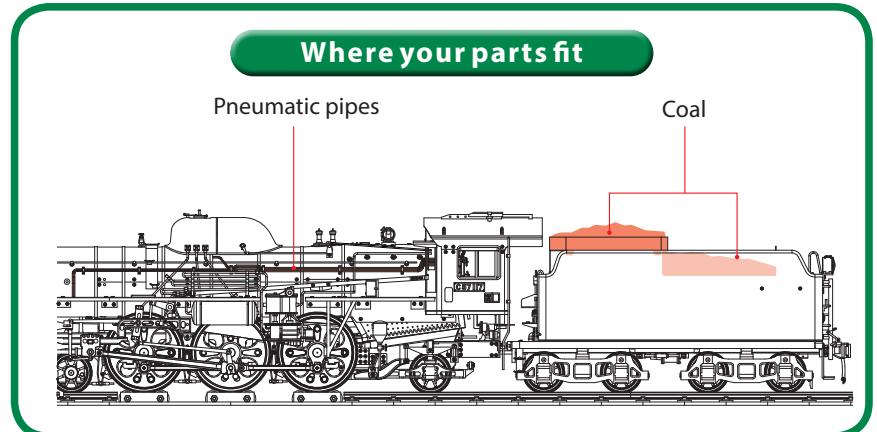
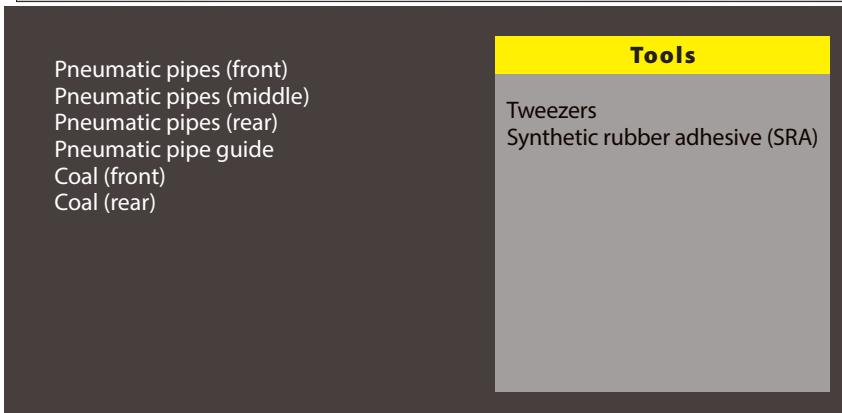
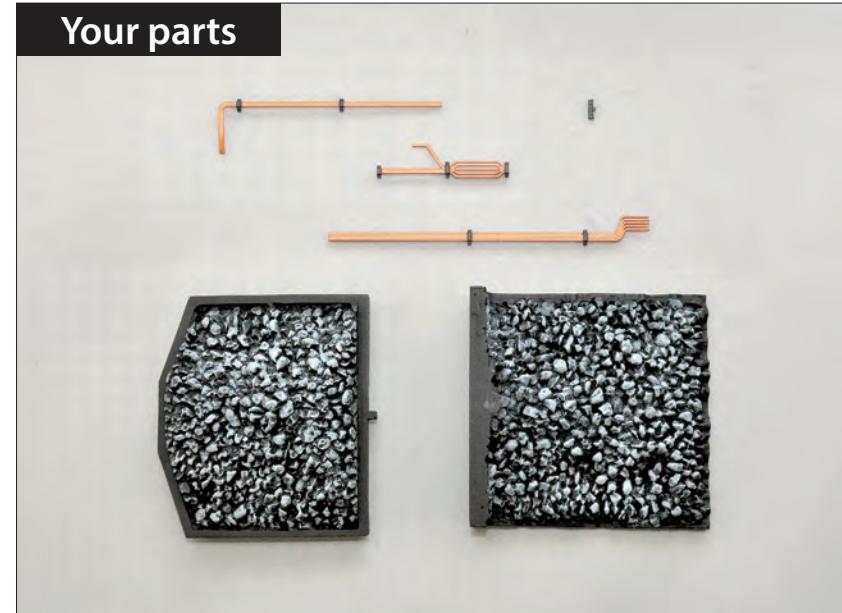
The headlamp should turn on.



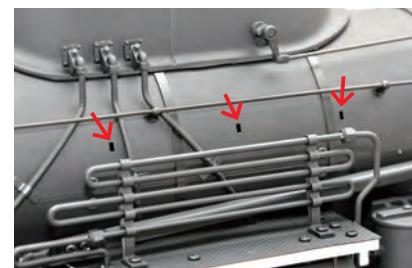
Now glue the lens (Stage 31) into the headlamp, with the pattern positioned vertically.

**Complete**

# The pneumatic pipes and coal



1



Locate the rectangular holes along the side of the boiler, which will take the black guides along the pneumatic pipes.



Test-fit the pneumatic pipe guide into the hole in the side of the boiler to see how it fits.



Temporarily insert the rear end of the pneumatic pipes (rear) into the five corresponding holes in the front of the cab (arrowed).



Insert the rearmost guide on the pipes into the hole indicated in the boiler, and then remove it.

**2**

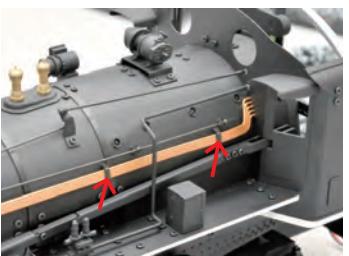
Apply a small amount of synthetic rubber adhesive to the tip of the guide.



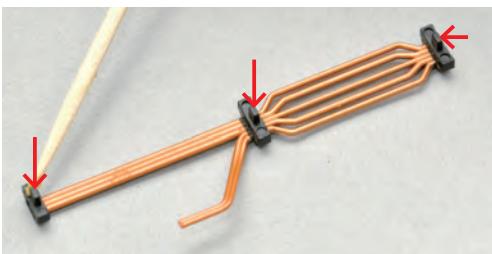
Push the tip of the guide into the hole.



Insert the pneumatic pipes (rear) through the front of the cab and into the holes in the guide.



Insert the other two guides of the tube into the two corresponding holes in the boiler.

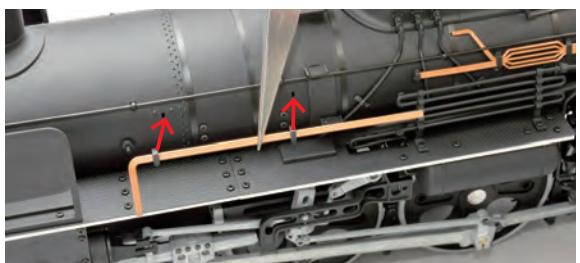
**3**

Apply a small amount of synthetic rubber adhesive to tips of the guides (arrows) of the pneumatic pipes (middle).



Place the upper part of the pneumatic pipes (middle) under the handrail and align the tips of the guides with the holes in the boiler.

Push the tips into the corresponding holes, as shown.

**4**

Apply a small amount of synthetic rubber adhesive to the tips of the guides of the pneumatic pipes (front) and push them into the holes in the side of the boiler, as indicated.



Here's how it should look when fitted.

**5**

Place the coal (rear) in the rear section of the tender.



Place the coal (front) in the front section of the tender.

**Complete**

# The number plates and district tags

## Your parts

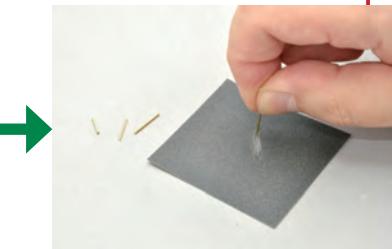


Number plates A  
(No holes) x 2  
Number plate B  
(Holes in the four corners)  
Brass wire  
District name cards x 2

## Tools

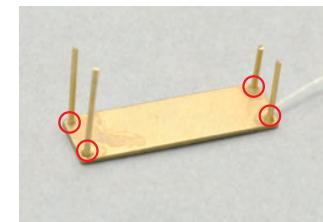
Side cutters  
Tweezers  
Sandpaper  
Instant adhesive  
Synthetic rubber adhesive (SRA)

1



Cut the brass wire into four lengths. These will be the rods that hold number plate B in position.

Smooth the ends of the rods flat with sandpaper or a file.



Place number plate B face down and glue one of the rods into each of the holes in the corners.

2



Insert the rods projecting from the rear of number plate B into the four circled holes in the rear of the tender.

Apply a small amount of SRA to the four rods.

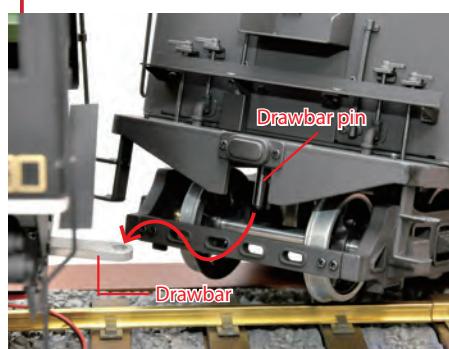


Push the number plate towards the tender, leaving a 1mm gap between it and the wall.

**3**

Glue one number plate A and one of the district cards to the left side of the cab, as shown.

Repeat this on the right side of the cab.

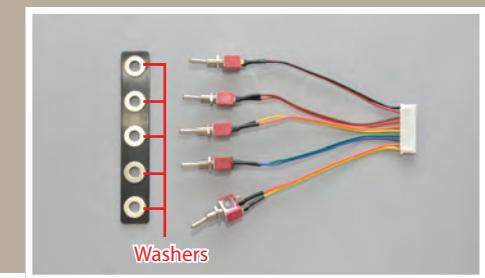
**4**

Insert the drawbar pin at the front of the tender into the hole of the drawbar at the rear of the main body.

Now that the parts are combined and on the base, your assembly is complete.

**Tip**

When the switches were fitted in Stage 89, they should have been oriented so that 'up' was 'on' and 'down' was 'off', but it is possible that they were fitted the wrong way around. In this case, remove the switches from the base, then unscrew them from the plate and change the orientation. Refit the parts once corrected. To change the orientation of the switches, you will need to rotate the washers from the plate. To do this, you will need to remove the tab from the washer so that it can rotate, but it will then need gluing into place, so make sure the orientations are correct. Refer to Stage 89 to help you.

**Complete**

Congratulations – your C57 is now complete!

