



Build the

# Beetle

## *1303 Cabriolet*

### Pack 7



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Build the



# Beetle

*1303 Cabriolet*

## STAGE

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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.



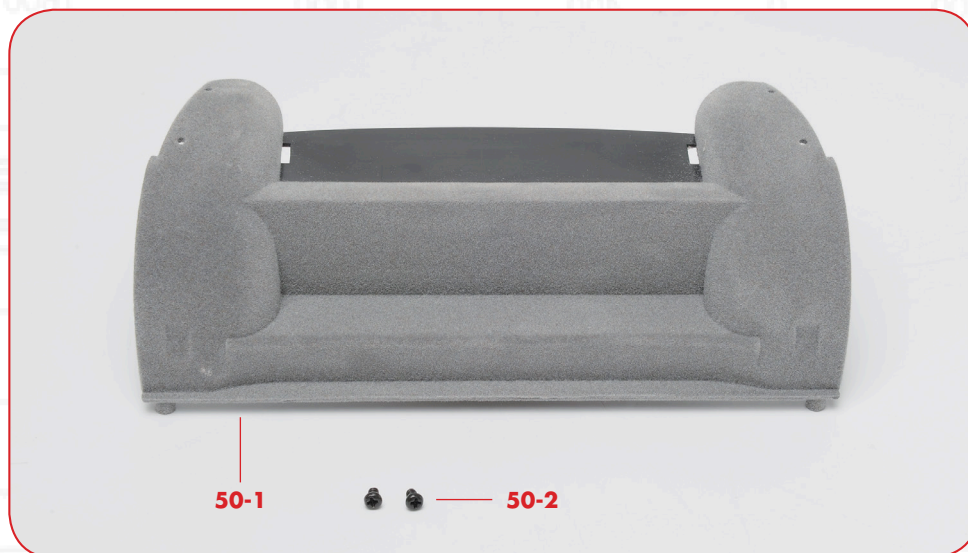
# Stage 50: Rear luggage compartment lining

This stage involves fitting the back of the luggage space behind the folding rear seat, which also forms the internal trim around the rear arches and engine compartment.

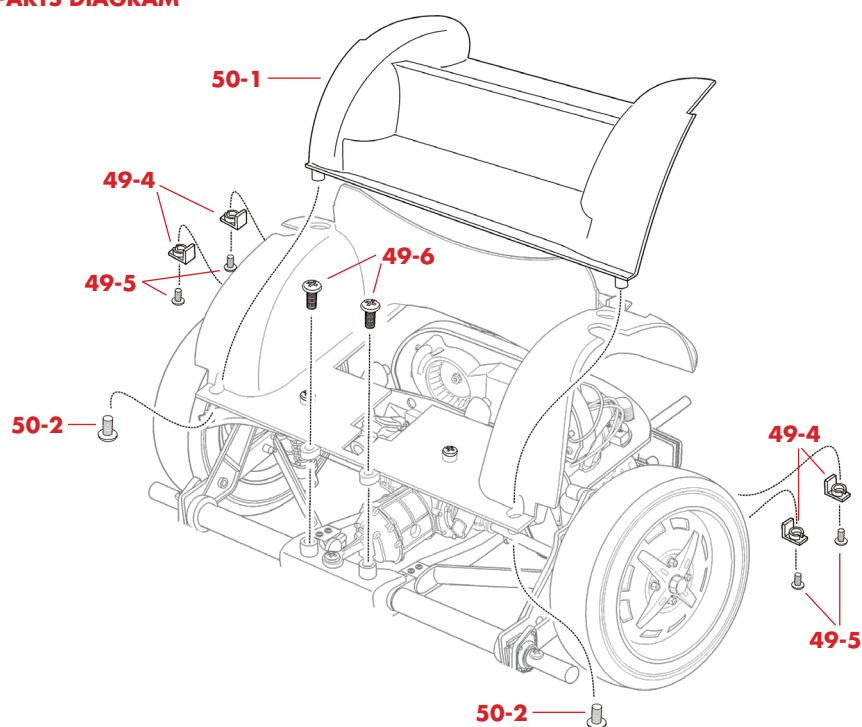
## PARTS

**50-1** Rear luggage compartment lining

**50-2** SP13 screws



## PARTS DIAGRAM



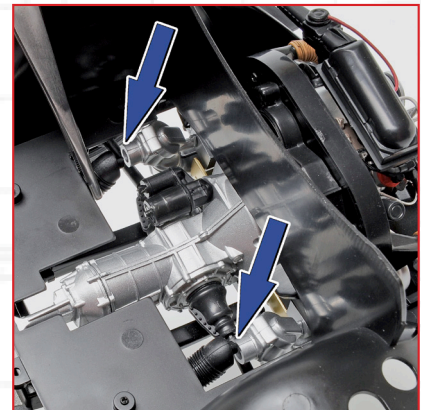
NOTE: The appearance of the parts you receive may be slightly different from the parts pictured in these pages.





### STEP 50-A

Start by taking the chassis assembly, the rear interior floor that you put together in Stage 49, plus the supports and screws that you retained from the pack of parts. Fit the rear interior floor over the rear wheels and chassis as shown.



### STEP 50-B

As you put the rear interior floor in place, fit the ends of the connection hoses that you fitted to it into the heat exchanger outlets indicated by the arrows.

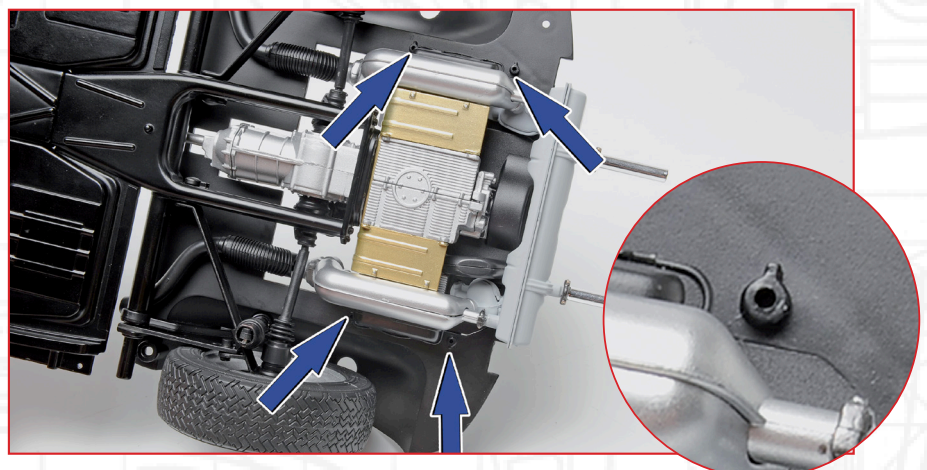
### STEP 50-C

As shown in the inset circle, make sure that none of the ignition cables are trapped under the rear interior floor, then fix the front of the floor to the chassis with two SD08 screws at the points arrowed in the main picture.



### STEP 50-D

Turn the assembly over, ready to fit the four supports (49-4) on the pins projecting from the rear interior floor at the points indicated on the picture. The shape of these pins means that the supports only fit one way round.

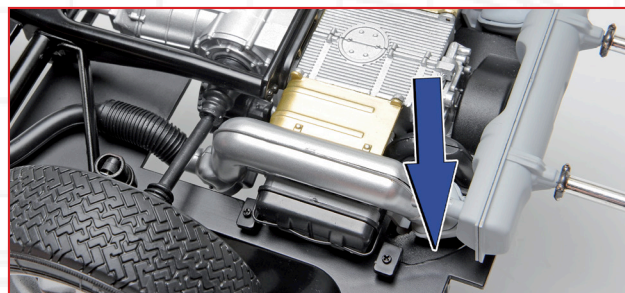






### STEP 50-E

Fit the two supports on the right and secure them with two SP07 screws.



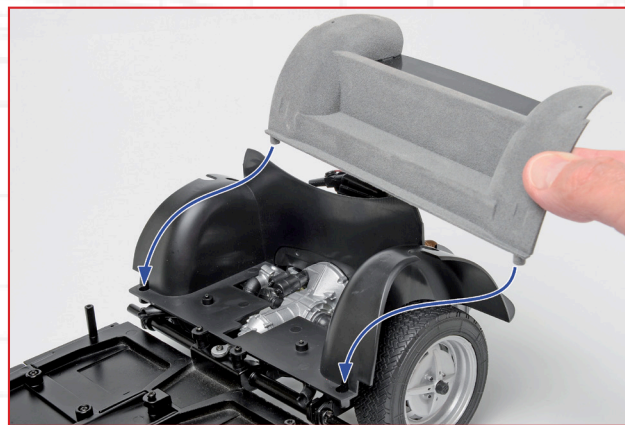
### STEP 50-F

Check that the supports are arranged as shown in the photo and that the cut-out in the floor fits snugly around the engine cradle at the point indicated.



### STEP 50-G

Mirror Step 50-E on the right-hand side of the chassis.



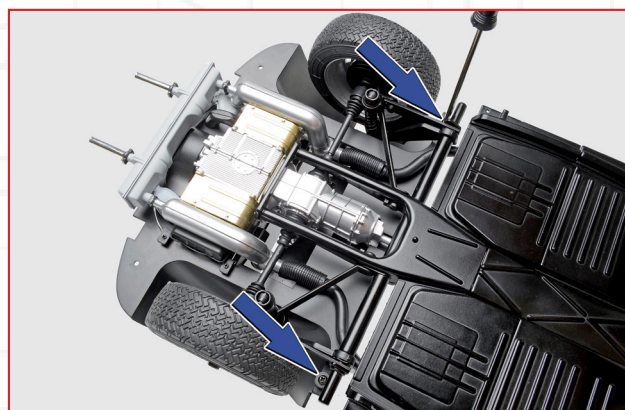
### STEP 50-H

Next, fit the rear luggage compartment lining (50-1) over the rear interior floor so that the lugs projecting from the corners fit into the holes indicated in the picture.



### STEP 50-I

Press the lining into place, making sure it fits flush.



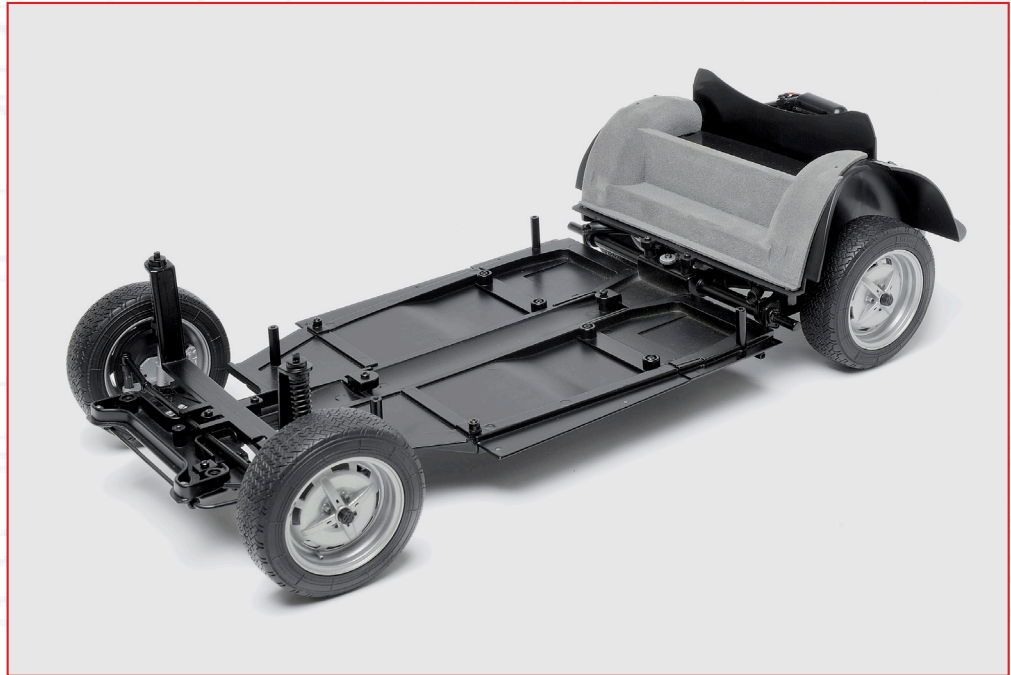
### STEP 50-J

Finish off by fixing the two lugs from Step 50 using two SP13 screws.



## VW BEETLE 1303 CABRIOLET

This shows the chassis with the rear luggage compartment lining in place.







# Stage 51: Pedals

In this stage, as well as fitting the control pedals to the floor of the passenger compartment, you start installing the first parts of the car's electronics by fitting the switches controlled by the accelerator and brake pedals.

## PARTS

**51-1** Accelerator pedal

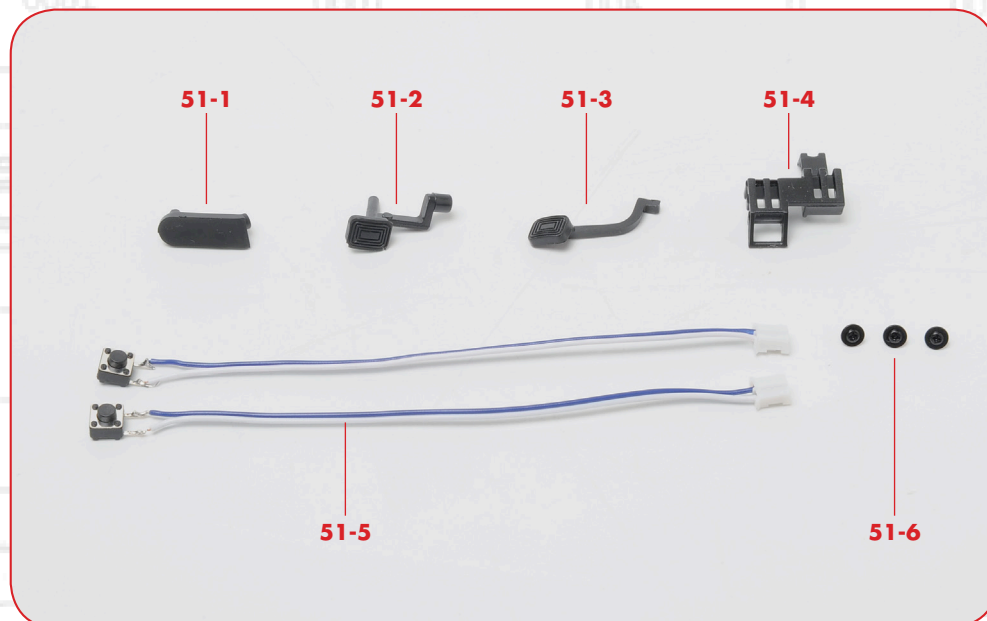
**51-2** Brake pedal

**51-3** Clutch pedal

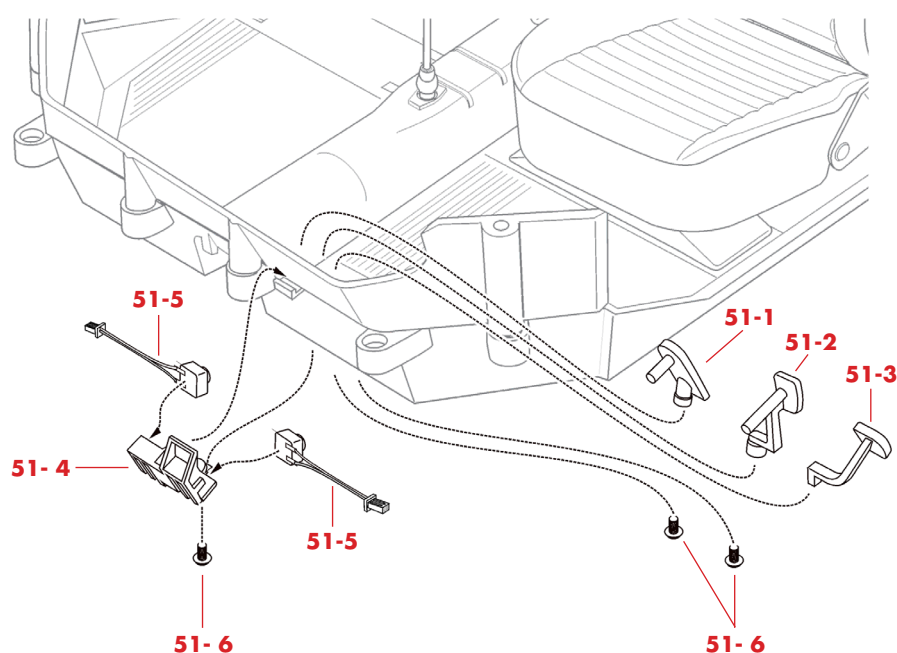
**51-4** Switch support bracket

**51-5** Microswitches

**51-6** SP09 screws



## PARTS DIAGRAM



NOTE: The appearance of the parts you receive may be slightly different from the parts pictured in these pages.

### STEP 51-A

The accelerator pedal (51-1) has two pins of different size. Fit the larger one into the indicated hole on the floor and press it down until the smaller pin is level with the upper hole.



### STEP 51-B

Fix the pedal to the floor by inserting an SP09 screw from below, and check that the pedal can move back and forth slightly.



### STEP 51-C

Fit the brake pedal (51-2) into the holes next to the accelerator pedal.

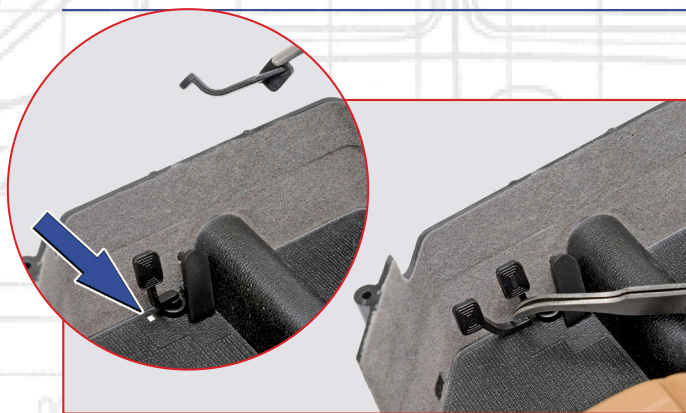


### STEP 51-D

As before, fix the pedal in place with an SP09 screw, and check that the pedal can move back and forth slightly.

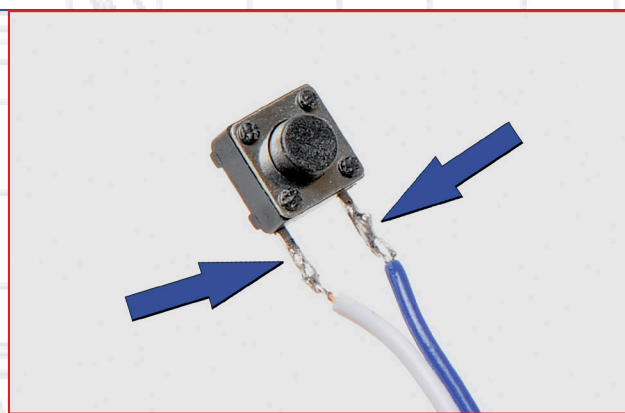






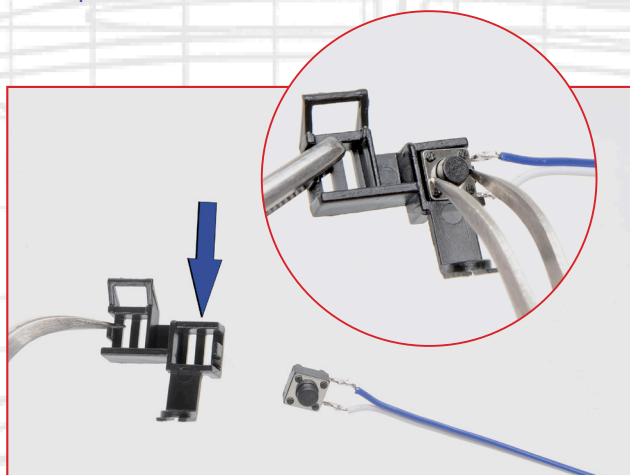
### STEP 51-E

The clutch pedal (51-3) is simply fitted into place by pressing it into the square hole in the floor, arrowed in the picture on the left.



### STEP 51-F

The two microswitches (51-5) have white and blue wires soldered to the connection tabs. Handle the switches carefully so as not to damage the connections.



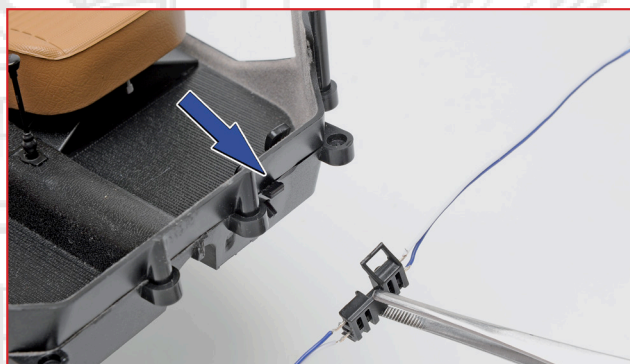
### STEP 51-G

Fit one of the microswitches into the square recess in the switch support bracket (51-4) indicated by the arrow, leading the wires off to the right. Press the switch all the way down into the recess.



### STEP 51-H

Fit the second switch in a similar way, with its wires leading off to the left, checking that the assembly looks like the inset picture.



### STEP 51-I

Now fit the top of the switch support bracket onto the projecting tab indicated by the arrow.



### STEP 51-J

Check that the switch mounting is positioned as shown, and fix it from underneath using an SP09 screw.





## STEP 51-K

To protect the switch wires from damage, we recommend using masking tape to fix them temporarily to opposite sides of the passenger compartment floor at the points indicated.

The assembly should now look like this.

## STAGE COMPLETE







# Stage 52: Passenger's seat mounting

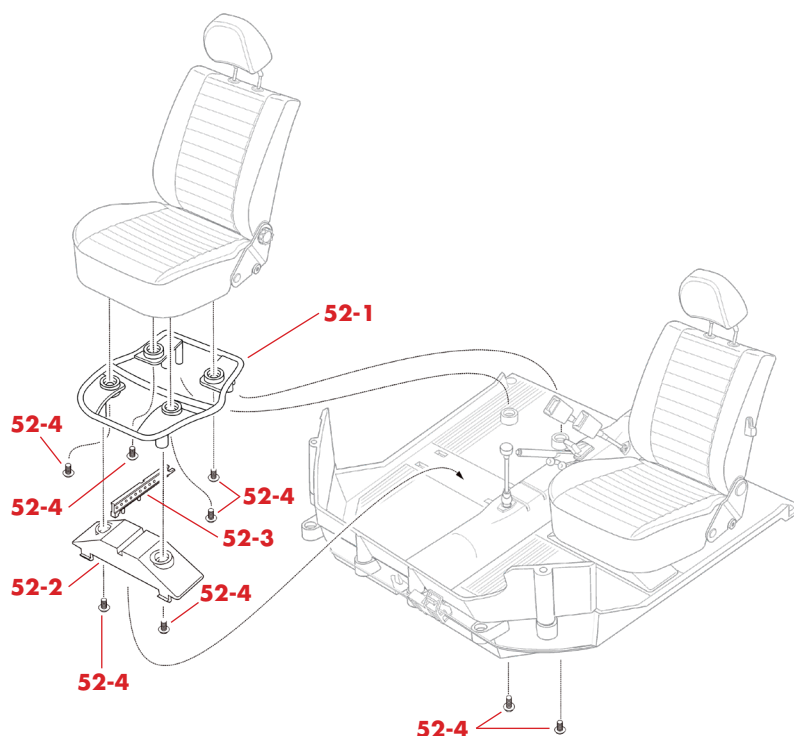
The parts provided will enable you to fit the passenger's seat to the floorpan alongside the driver's.

## PARTS

- 52-1** Passenger's seat frame
- 52-2** Forward seat support
- 52-3** Seat runner slider
- 52-4** SP12 screws



## PARTS DIAGRAM



NOTE: The appearance of the parts you receive may be slightly different from the parts pictured in these pages.



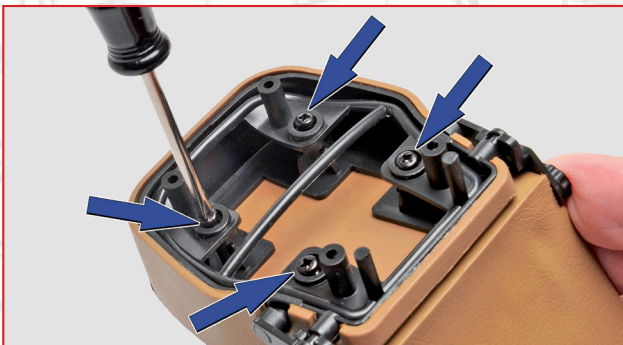
### STEP 52-A

Take the passenger's seat assembly and align it with the seat frame (52-1).



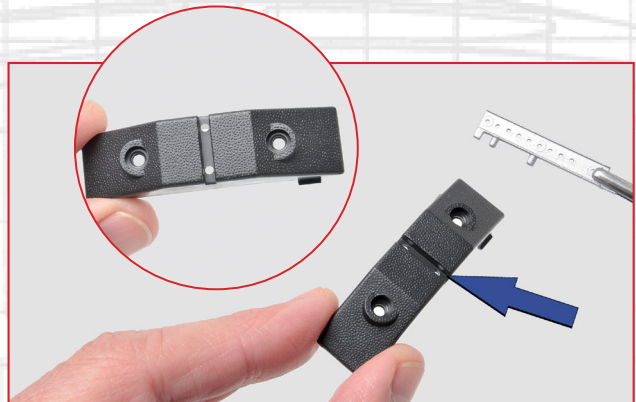
### STEP 52-B

Press the seat frame firmly into place



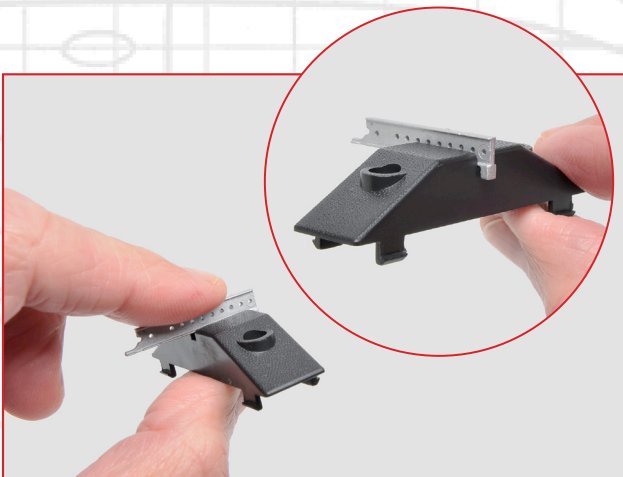
### STEP 52-C

Fix the frame in place with four SP12 screws.



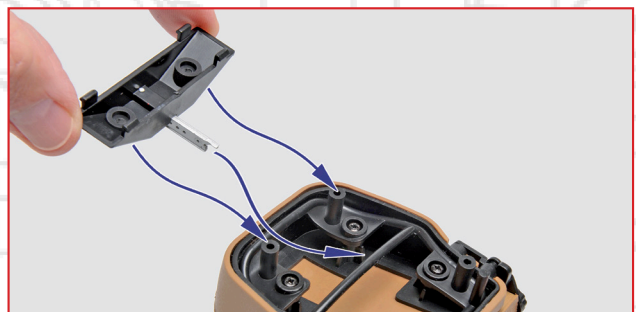
### STEP 52-D

Fit the seat runner slider (52-3) into the grooves in the seat support (52-2), pressing the locating pins into the holes.



### STEP 52-E

The assembly should look like this.



### STEP 52-F

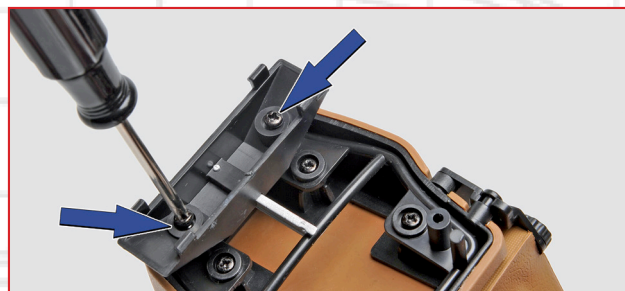
Fit the assembly onto the seat frame, so that the holes in the seat support fit over the two mounting posts at the front and the rear of the slider engages with the crossbar of the seat frame.





### STEP 52-G

Press the assembly into place, making sure that the slider is hooked onto the crossbar as indicated.

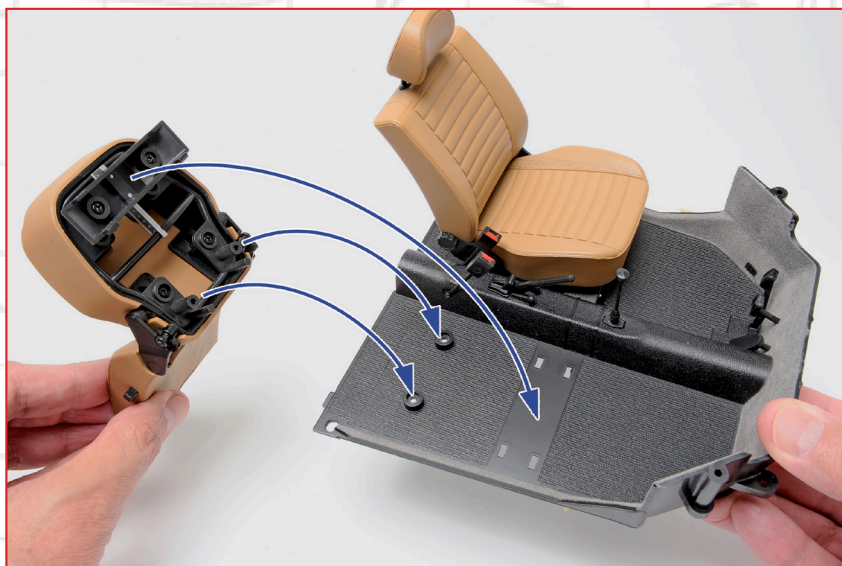


### STEP 52-H

Fix the seat support to the frame with two SP12 screws.

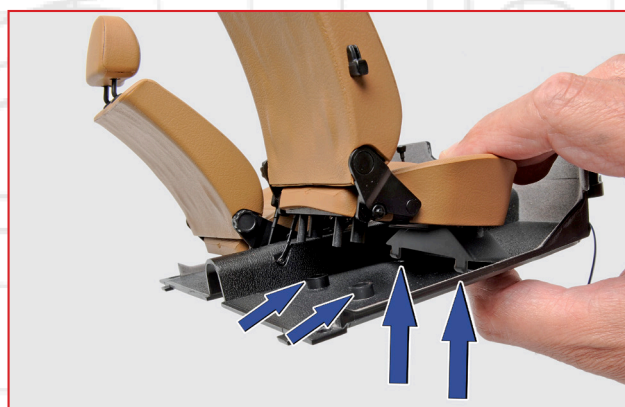
### STEP 52-I

Fit the seat onto the floor of the passenger compartment so that the two posts at the back fit into the holes indicated and the seat support fits over the rectangular recess with the four slots near the corners.



### STEP 52-J

Make sure the two tabs at the front of the seat support snap into the slots at the front...



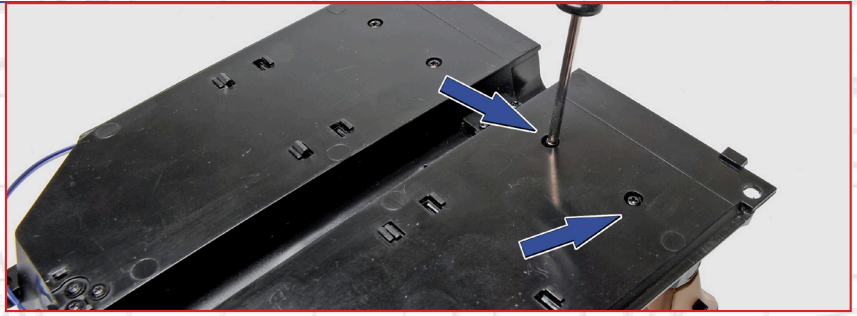
### STEP 52-K

...and the two tabs at the back snap into the other pair of slots. This should allow the two posts at the back to fit down over the holes.



## STEP 52-L

Turn the assembly over and secure the back of the seat with two SP12 screws.



After fitting the seat, the passenger compartment should look like this.



## STAGE COMPLETE





# Stage 53: Rear seat base

In this stage, you will be preparing the rear of the passenger compartment, ready to fit the back seat. The first job is to fit some components inside the seat base.

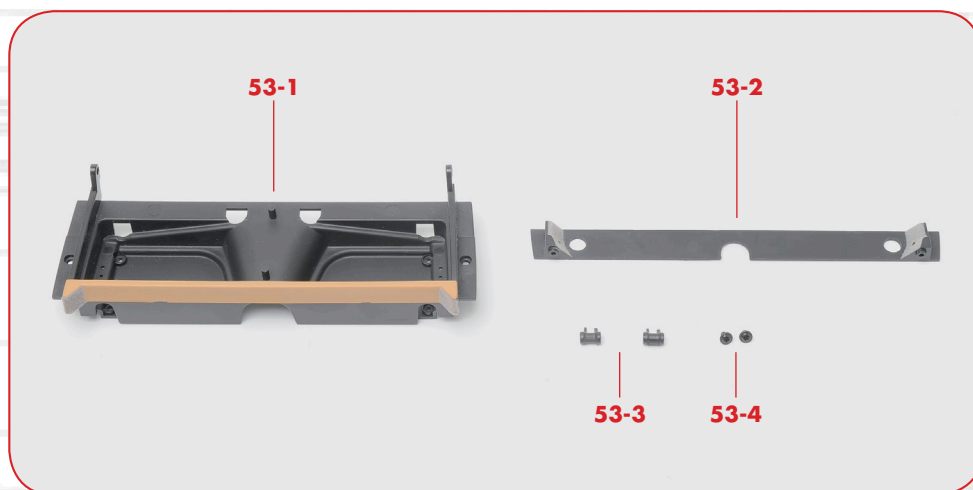
## PARTS

**53-1** Rear seat base

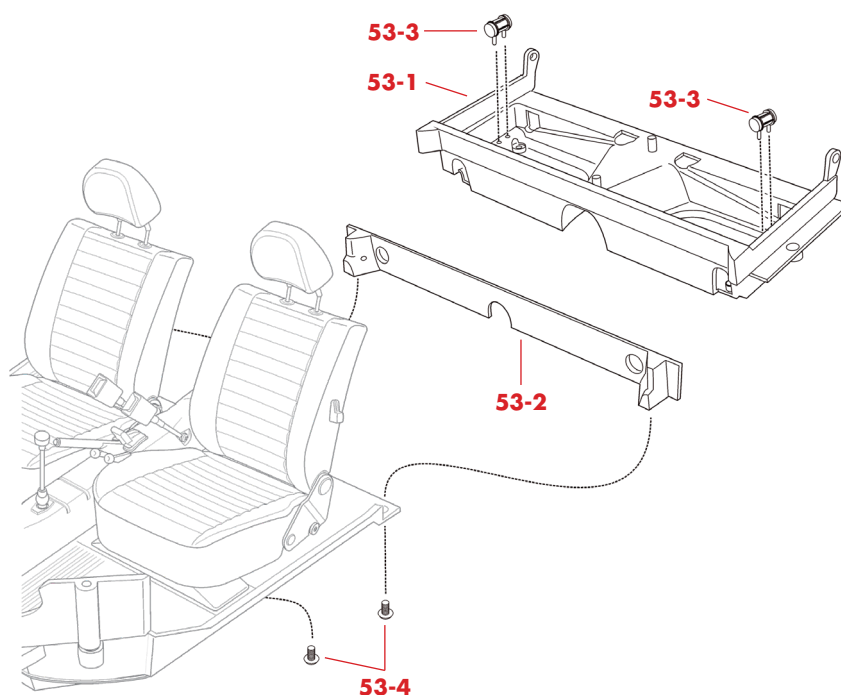
**53-2** Passenger compartment rear cross-member

**53-3** Rear seatbelt reels

**53-4** SP05 screws



## PARTS DIAGRAM



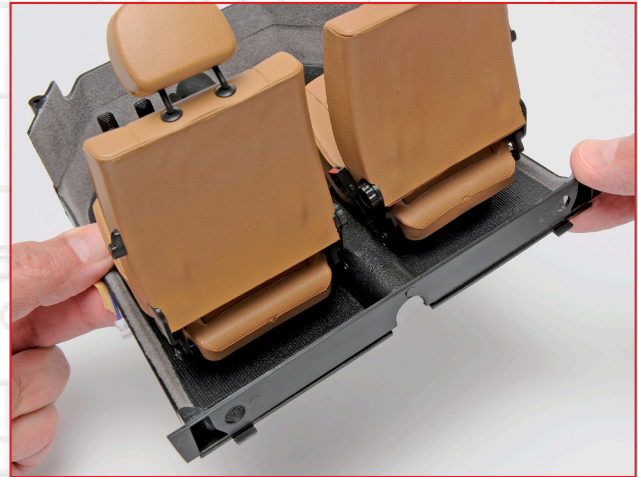
NOTE: The appearance of the parts you receive may be slightly different from the parts pictured in these pages.





### STEP 53-A

Fit the rear cross-member (53-2) to the rear of the passenger compartment so that the mounting posts fit into the indicated holes.

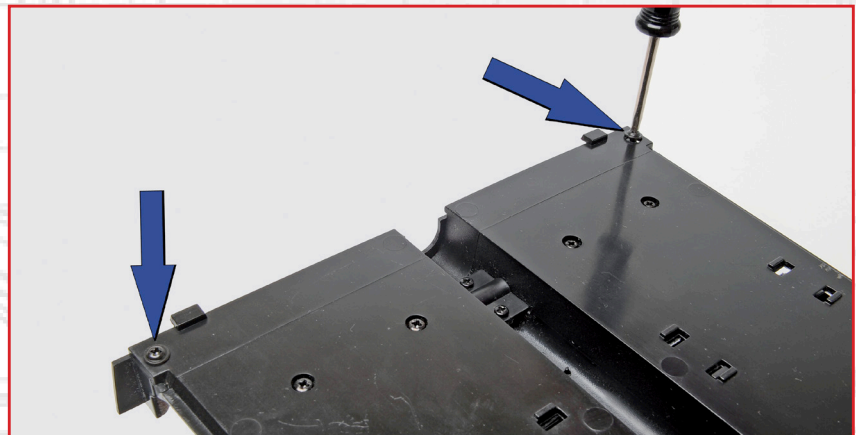


### STEP 53-B

Press the cross-member firmly into the holes.

### STEP 53-C

Join the parts with two SP05 screws.



### STEP 53-D

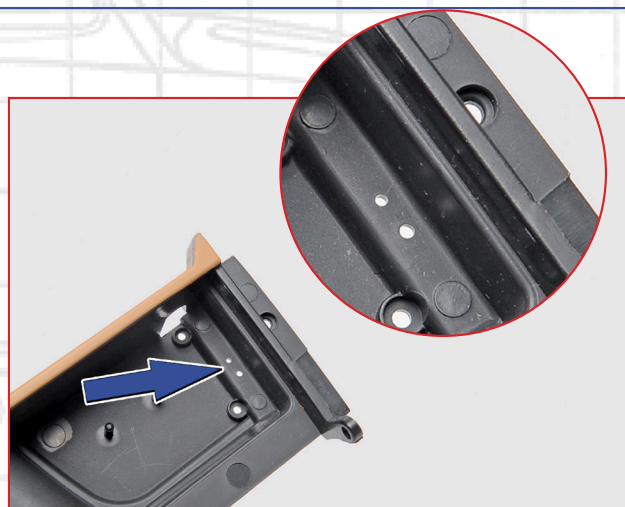
Check that the cross-member fits flush, and that the ends finished in grey flock fit into the matching flock parts of the passenger compartment.





### STEP 53-E

The rear seatbelt reels (53-3) have two mounting pins that are different thicknesses to ensure they fit the right way round.



### STEP 53-F

These photos of the right-hand side of the rear seat base (53-1) show the holes into which the pins fit.



### STEP 53-G

Fit one of the seatbelt reels into the holes, making sure that the larger pin goes in the larger hole.



### STEP 53-H

Press the reel all the way into the holes.

### STEP 53-I

Mirror Steps 53-G and H to fit the second reel on the left of the seat base.





## VW BEETLE 1303 CABRIOLET

The assemblies should now look like this.



### STAGE COMPLETE



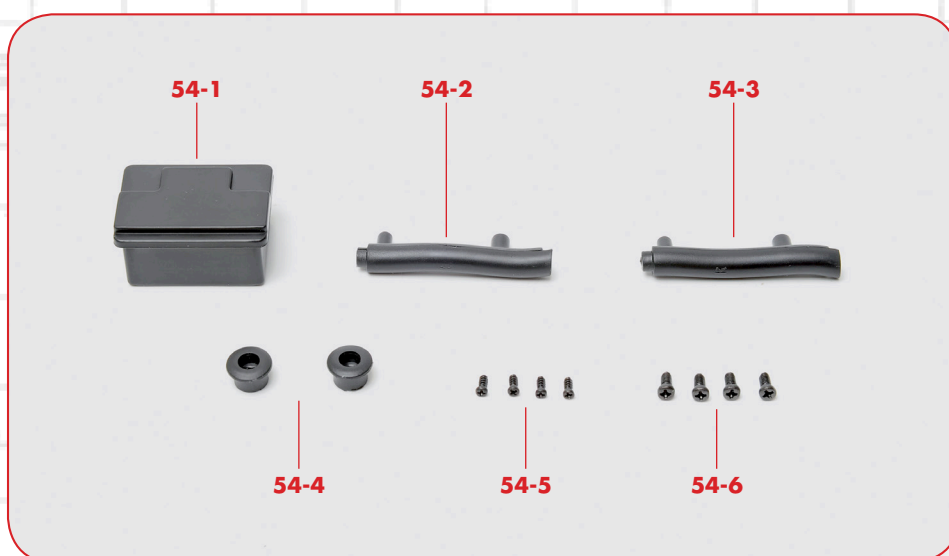


# Stage 54: Battery and heating ducts

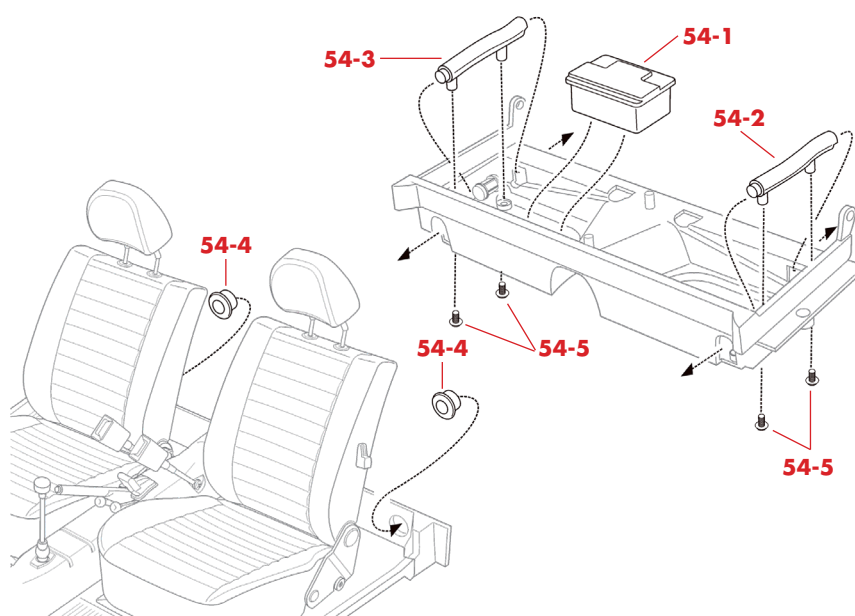
In this stage, you fit two different sub-assemblies into the seat base that you started work on in Stage 53.

## PARTS

- 54-1** Battery
- 54-2** Left heating duct
- 54-3** Right heating duct
- 54-4** Heating duct outlets
- 54-5** SP07 screws
- 54-6** SD11 screws



## PARTS DIAGRAM



NOTE: The appearance of the parts you receive may be slightly different from the parts pictured in these pages.





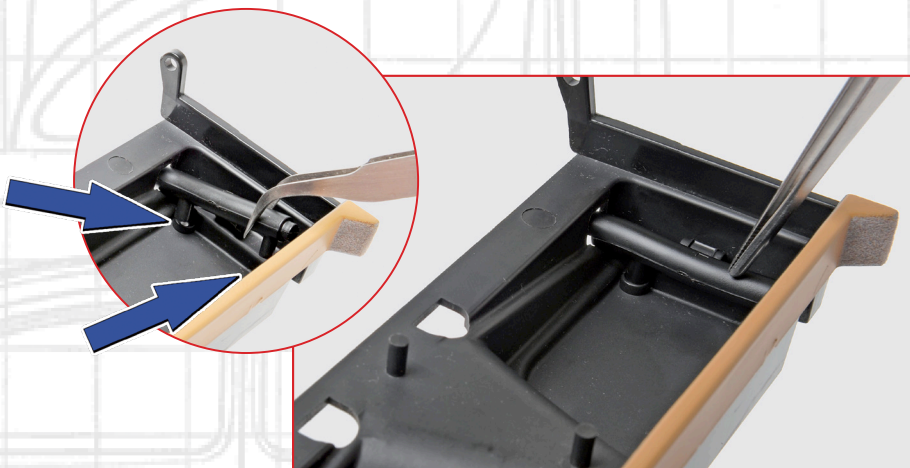
### STEP 54-A

The heating ducts have moulded letters to identify them as the left (54-2) and right (54-3) fitting.



### STEP 54-B

Hold the left-hand heating duct (L) this way round and insert the end into the arrowed hole in the rear seat base.



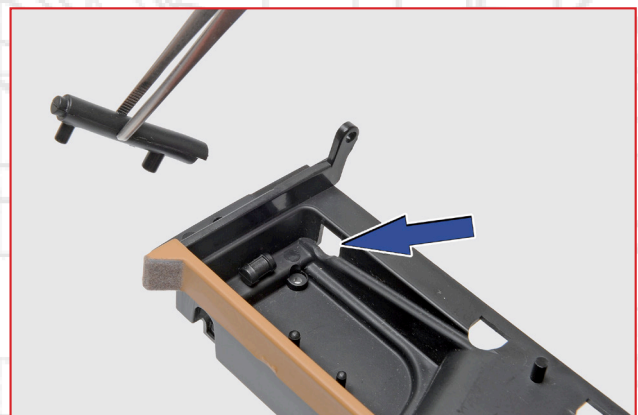
### STEP 54-C

Press the two mounting posts firmly into the holes in the rear seat base.



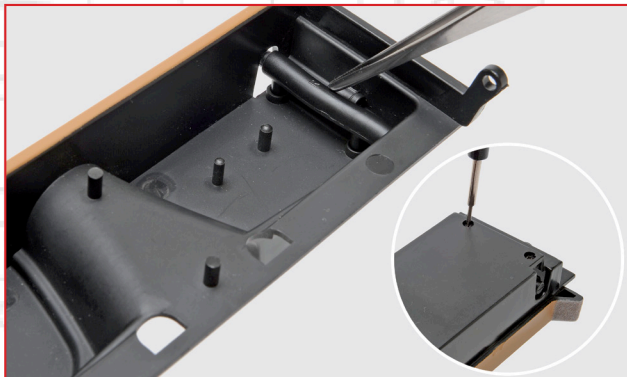
### STEP 54-D

Turn the assembly over and use two SP07 screws to hold the duct in place.



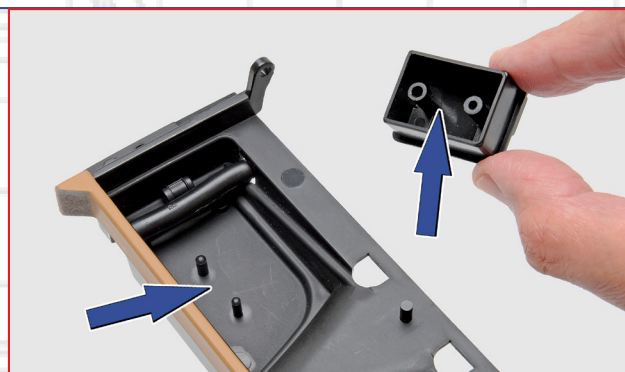
### STEP 54-E

Fit the right-hand duct in a similar way.



### STEP 54-F

Press the duct into place and use two more SP07 screws to secure it.



### STEP 54-G

Now take the battery (54-1). There are two supports underneath, which have holes of different sizes to match the indicated pins in the seat base. This ensures that the battery only fits one way round.



### STEP 54-H

Press the battery firmly onto the pins.



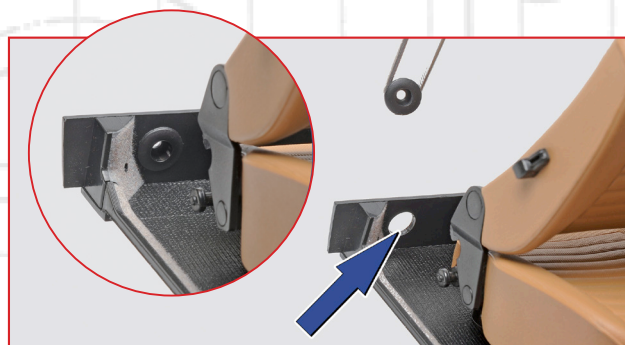
### STEP 54-I

Now fit one of the heating duct outlets (54-4) into the hole in the cross-member behind the driver's seat.



### STEP 54-J

Press the outlet all the way in.



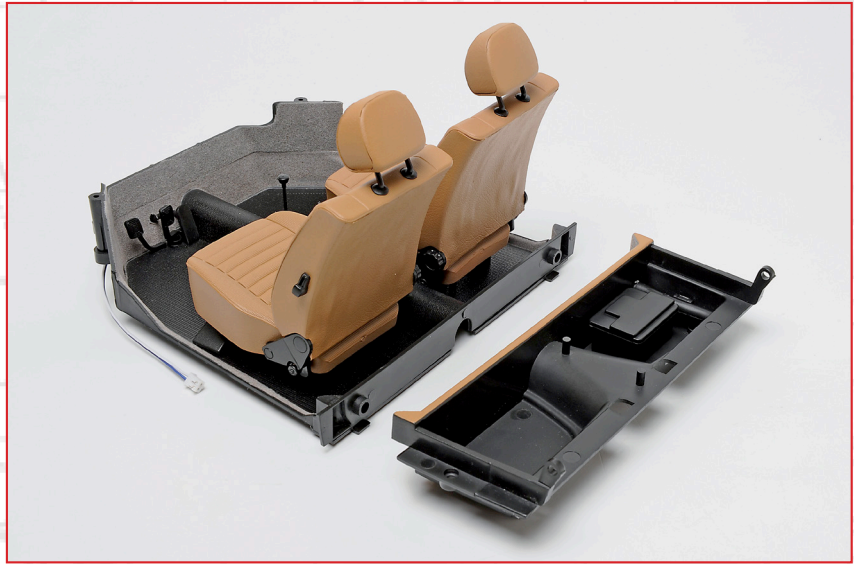
### STEP 54-K

Mirror Steps 54-I and J to fit the second heating duct outlet behind the passenger's seat.



## VW BEETLE 1303 CABRIOLET

The two sub-assemblies should now look like this. They will be fitted together in the next stage.



### PARTS TO RETAIN

The four SD11 screws will not be used until the next stage, so keep them in the packaging for easy identification.



## STAGE COMPLETE



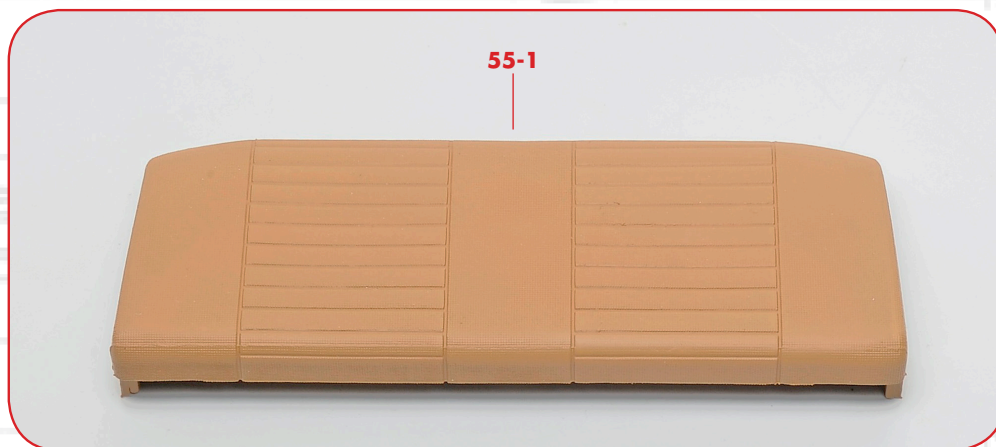


# Stage 55: Rear seat cushion

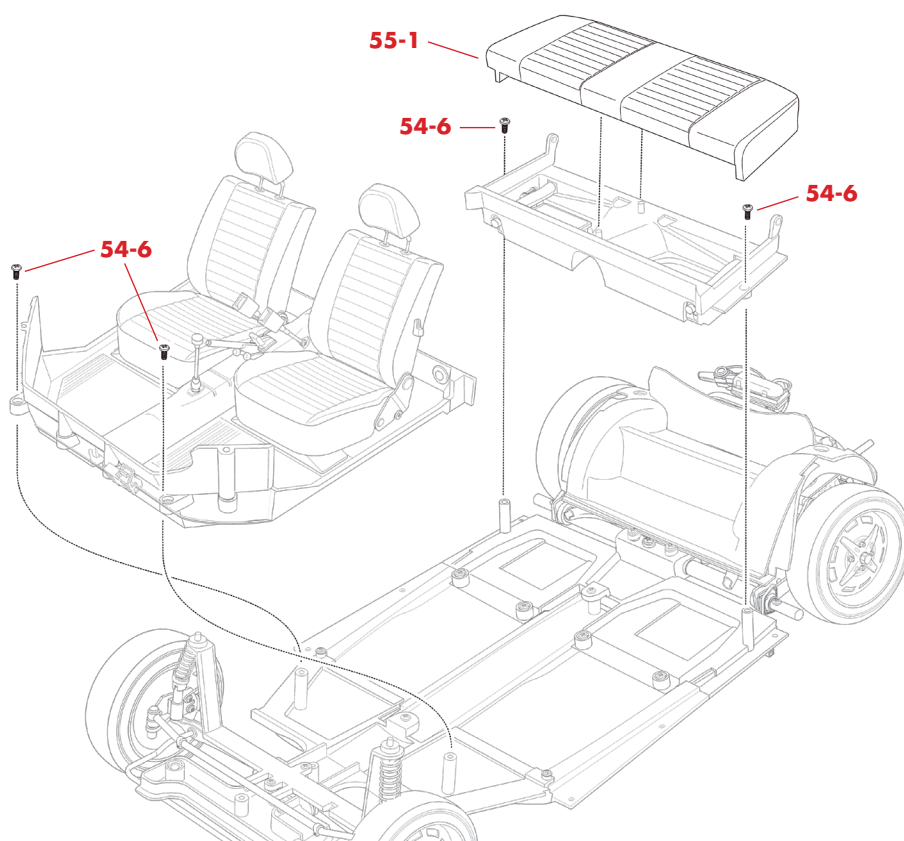
In this stage, you fit the rear seat base behind the front seats and attach the cushion.

## PART

**55-1** Rear seat cushion



## PARTS DIAGRAM

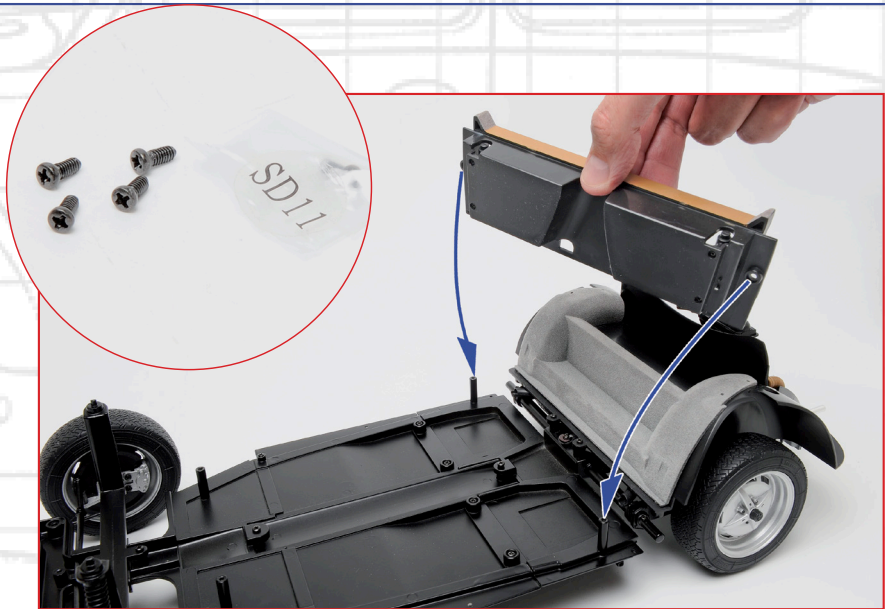


NOTE: The appearance of the part you receive may be slightly different from the part pictured in these pages.



### STEP 55-A

Take the chassis assembly from Stage 50 and fit the two holes in the seat base from Stage 54 onto the posts indicated by the arrows. You will also need the SD11 screws that you have retained.



### STEP 55-B

Press the seat base firmly onto the posts making sure they have gone all the way in.



### STEP 55-C

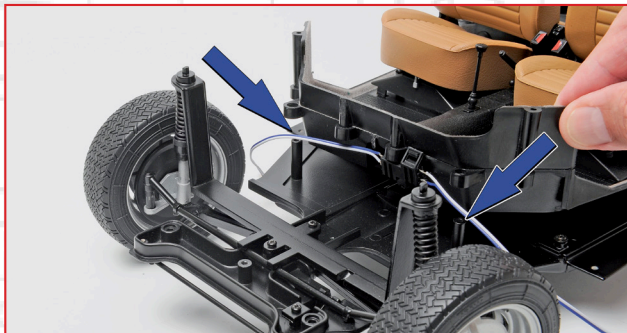
Secure the seat base to the posts with two SD11 screws at the indicated points.

### STEP 55-D

Fit the passenger compartment to the chassis, starting from the rear, so that the two heating duct outlets in the rear cross-member fit into the heating ducts that you installed in the rear seat base.

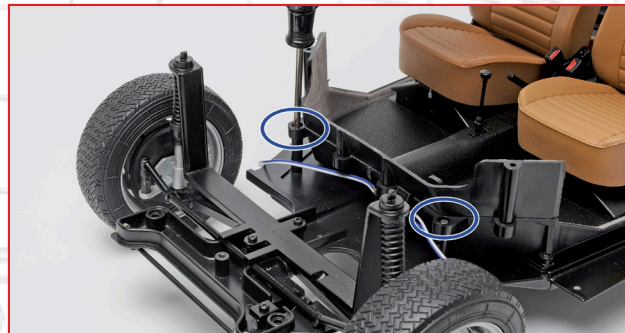






### STEP 55-E

Lower the front of the passenger compartment so that the two projecting lugs fit over the indicated mounting posts. Ensure that the wires from the pedals are routed in front of the posts, and not trapped underneath.



### STEP 55-F

Fix the passenger compartment to the two projecting lugs with SD11 screws.



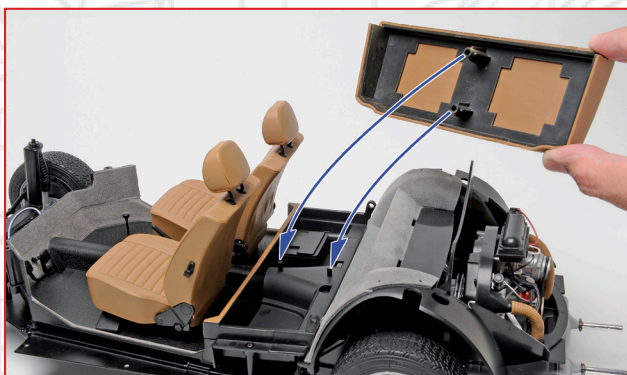
### STEP 55-G

Check that the rear end of the passenger compartment is fitted flush on both sides.



### STEP 55-H

Loop the cables from the pedals around the chassis to avoid damaging them.



### STEP 55-I

Take the rear seat cushion (55-1) and fit the two mounting posts over the pins projecting from the seat base as indicated by the arrows.



### STEP 55-J

Press the seat base firmly into place.



## VW BEETLE 1303 CABRIOLET

The chassis should now look like this.



## STAGE COMPLETE





# Stage 56: Rear seat back

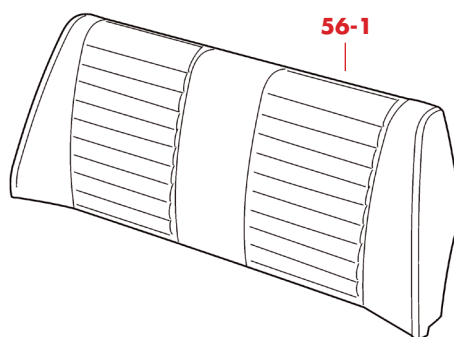
This stage includes the cushioned side of the folding rear seat, which you won't fit until Stage 57, when you add the trim panel to the open back.

56-1



PART DIAGRAM

56-1



PART

56-1 Rear seat back

NOTE: The appearance of the part you receive may be slightly different from the part pictured in these pages.

## WHERE THE PART FITS





## REAR-ENGINEED DESIGN

Now that the chassis is nearing completion, the unconventional arrangement of the Beetle's mechanical elements become clear. A key feature of the space-saving layout is the rear-mounted engine.

The air-cooled engine, another unconventional characteristic of the Beetle, is mounted behind the rear wheels, with the gearbox in front of it. This layout makes it possible to drive the wheels via a compact 'transaxle' arrangement, without the need for a complex transmission running back through the car. This means that the cabin floor is flat and unobstructed by mechanical components.

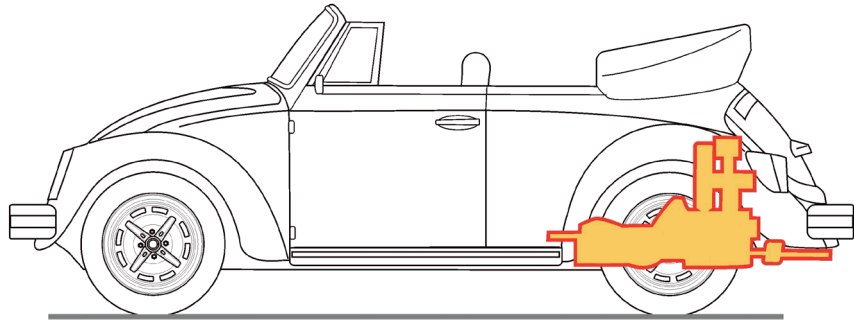




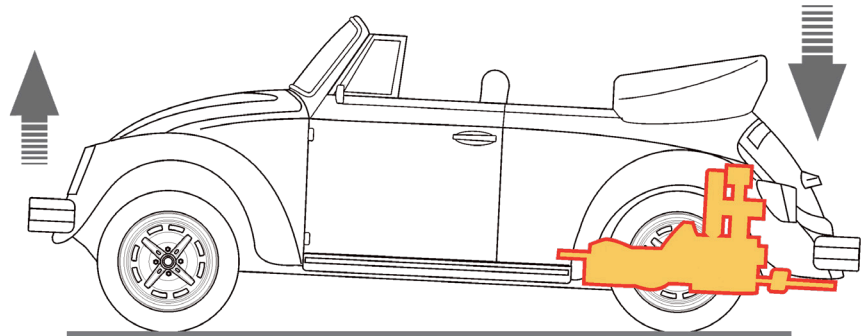


## EFFECTS OF THE REAR-ENGINED LAYOUT

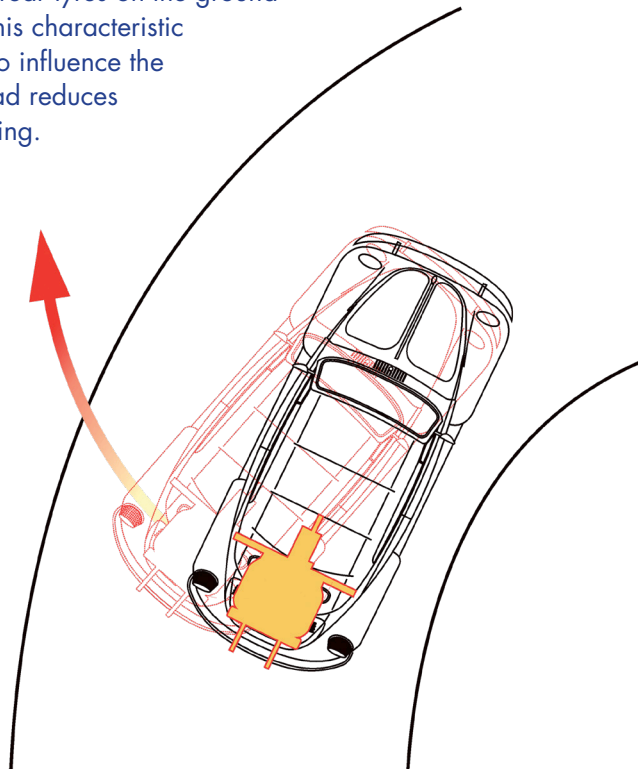
The position of the engine and gearbox (picked out in colour) at the extreme rear of the Beetle produces distinctive driving characteristics.



During acceleration, the front of a car tends to lift due to the rotation of the driving wheels. Taken to the extreme, this is what produces a 'wheelie'. The effect is emphasized by the concentration of weight at the back. One result is that the pressure of the rear tyres on the ground increases, which results in excellent traction. This characteristic is beneficial during acceleration, but it can also influence the steering, since the front wheels' grip on the road reduces during acceleration and increases during braking.



The rearward weight bias also affects cornering. The force that pushes the car towards the outside of the circle tends to be more extreme at the rear of the vehicle, where the mass is concentrated, and can destabilise the car (producing oversteer) when it reaches the limit of the grip of the tyres.





# Stage 57: Rear seat back trim panel

This stage completes the rear seat assembly, with the installation of the trim panel that forms the front of the rear luggage compartment, and the installation of the folding backrest in the car.

## PARTS

**57-1** Rear seat back trim panel

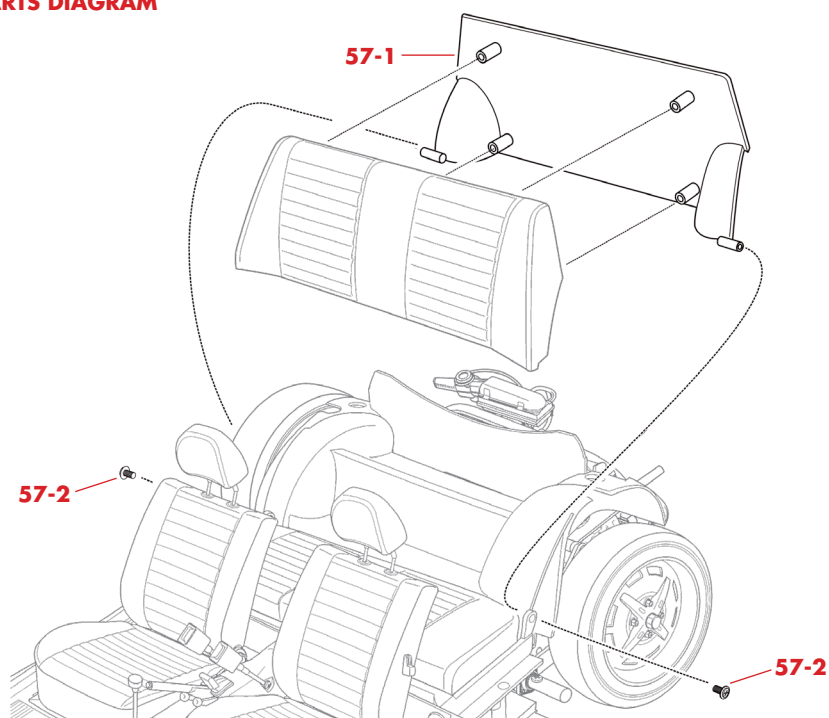
**57-2** SP09 screws



57-1

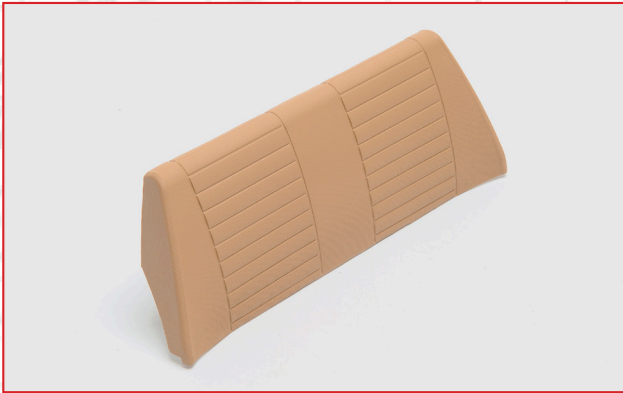
57-2

## PARTS DIAGRAM



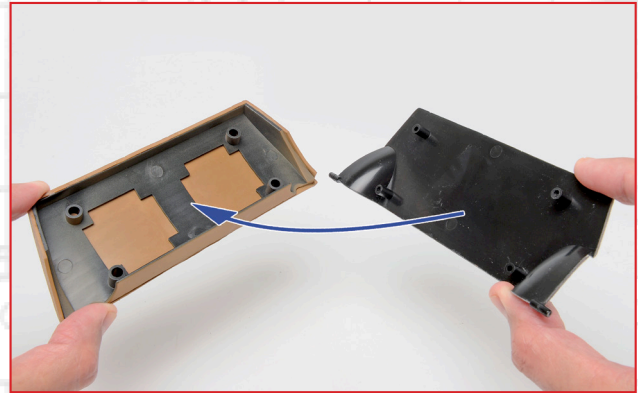
NOTE: The appearance of the parts you receive may be slightly different from the parts pictured in these pages.





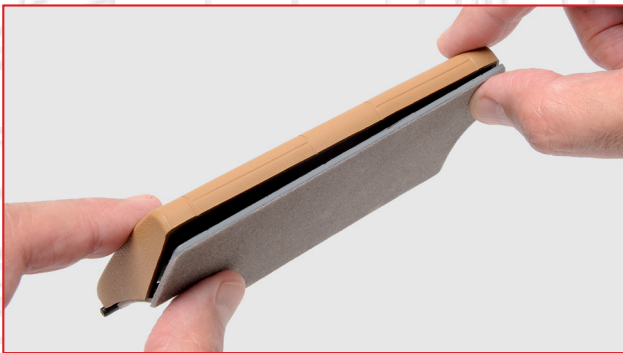
### STEP 57-A

Take the rear seat back provided in the previous stage.



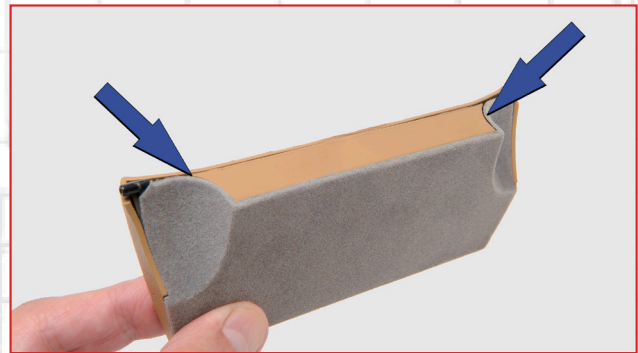
### STEP 57-B

Align the rear seat back trim panel (57-1), matching up the four mounting posts with the corresponding holes.



### STEP 57-C

Press the two parts together firmly.



### STEP 57-D

Make sure the trim fits flush, particularly around the two cutouts for the wheel arches.

### STEP 57-E

Now fit the rear seat back into the car. Start by fitting the mounting post on the bottom left corner into the hole in the corner of the rear seat frame, as indicated by the arrow.



## STEP 57-F

Make sure the mounting post is fitted as shown.



## STEP 57-G

Gently push the seat back to the left so you can fit the right mounting post into the hole on the right of the seat frame.



## STEP 57-H

Screw an SP09 screw into the hole in the centre of the left mounting post, leaving enough slack to permit the backrest to fold forward.



## STEP 57-I

Secure the right-hand side of the backrest in the same way.



## STEP 57-J

Check that the backrest easily folds forward and back. If it is stiff, you may need to loosen the two screws you just fitted.



The chassis should now look like this.



## STAGE COMPLETE

