



# FDNY®

## FIRE TRUCK TOWER LADDER 9



# Pack 07

## BUILD INSTRUCTIONS

**STAGE 44: RIGHT-SIDE STORAGE  
COMPARTMENT FRAME**

**STAGE 47: COMPARTMENT INNER AND FIRST  
LADDER PARTS**

**STAGE 45: ASSEMBLING A STORAGE  
COMPARTMENT**

**STAGE 48: REAR-RIGHT LIGHT CLUSTER &  
ACCESSORIES**

**STAGE 46: REAR RIGHT STABILIZER  
AND STEPS**

**STAGE 49: REAR BEACON LIGHTS AND  
ROOF SECTION**

## Advice from the experts

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 **Please keep ALL unused screws as they will be required in a later stage.**

Please make sure you don't mix up the screws. They look quite similar, but the threads do vary slightly. Using the wrong screws may damage the parts.

When securing parts together using multiple screws, fit each screw loosely to ensure all the parts are correctly aligned before gently tightening them firmly, but not overtight, in the order in which you placed them.

The screwdriver can be magnetized by stroking it with a magnet (fridge magnet, etc.) enabling it to hold the screws and make assembly easier.

If a screw is tight going into a metal part, do not force it as you may shear the head off. Remove it and put a tiny smear of Vaseline, soap or light oil on the thread. That will lubricate it and make it easier to drive home.

During the course of this build, you will receive many pieces that you will assemble immediately – following the instructions in the corresponding stage – and other pieces that you should store safely to one side, for use in future assembly stages.

Left and Right! When building your fire truck, the left or right hand side refers to each side as you are sitting in the cab.



**WARNING:** Some parts are assembled using magnets. These magnets can cause serious injury if they are swallowed. Keep away from children. If you suspect a magnet has been swallowed, seek medical help straight away.

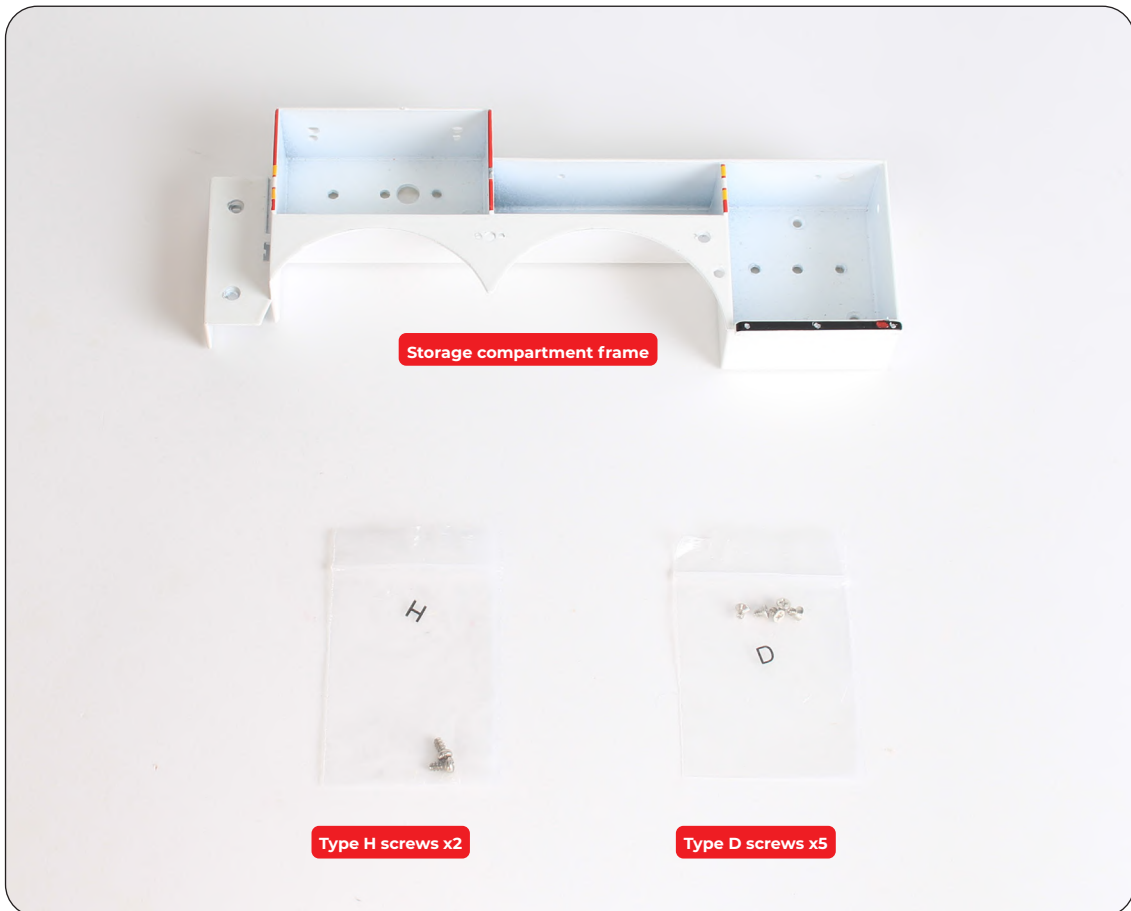
# Stage 44: Right-side Storage Compartment Frame

There is no assembly in this stage. Unpack the parts and move straight to stage 45 to continue with your build.



## STAGE 44 PARTS LIST

Name
Storage compartment frame
Type H screws x2
Type D screws x5



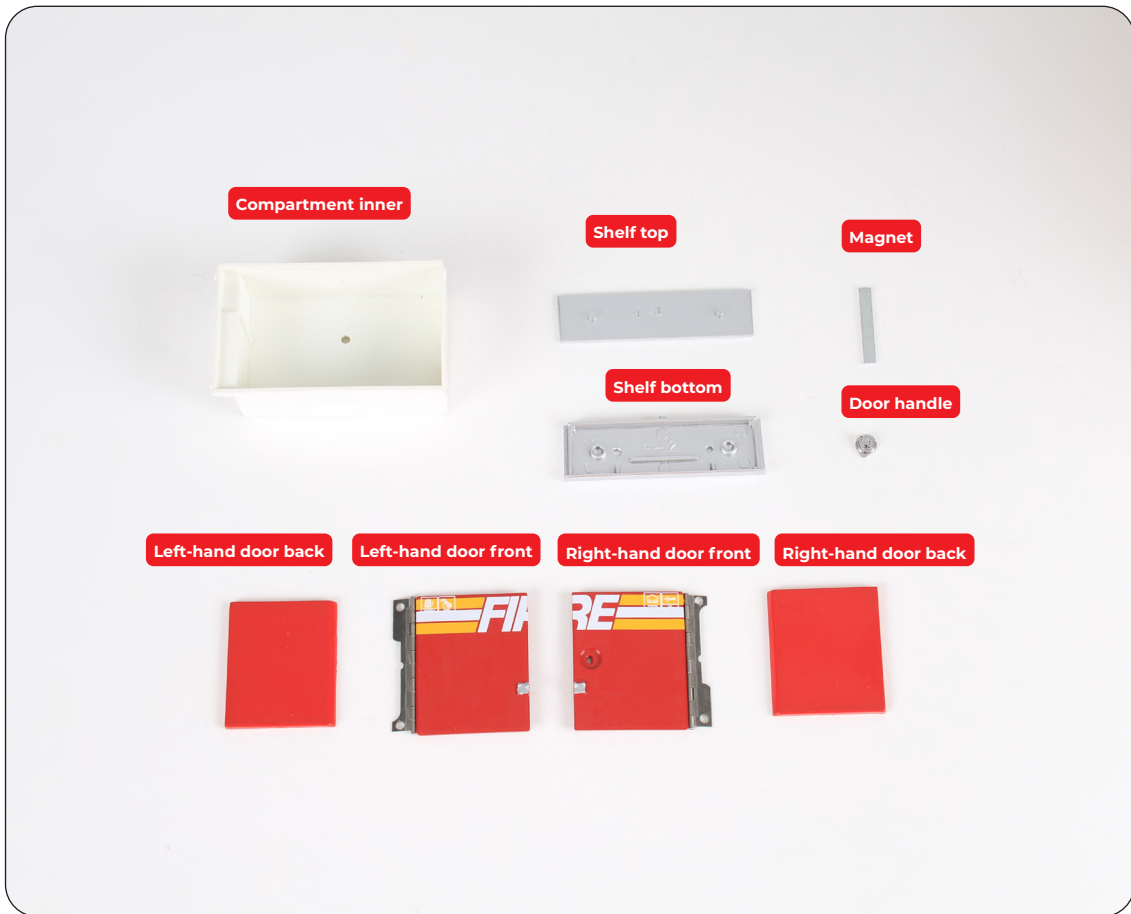
# Stage 45: Assembling a Storage Compartment

Pack 7 continues with assembly of the rear-most compartment on the right-hand side.



## STAGE 45 PARTS LIST

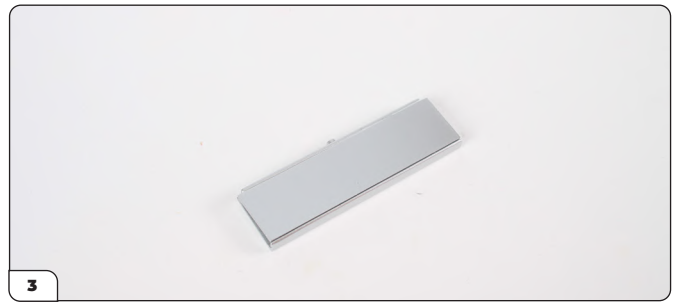
Name
Compartment inner
Shelf top
Magnet
Shelf bottom
Door handle
Left-hand door back
Left-hand door front
Right-hand door front
Right-hand door back



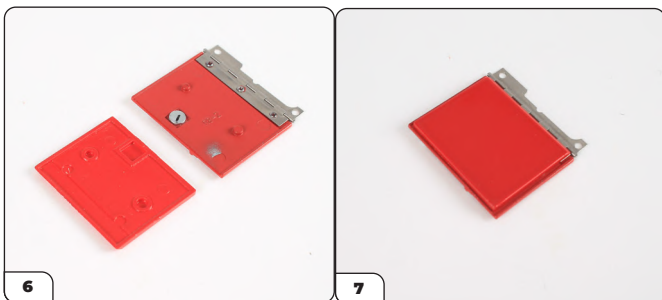
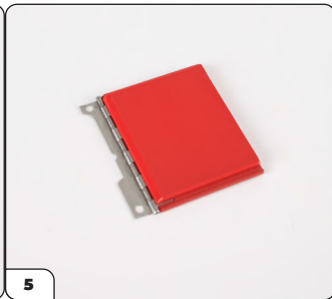
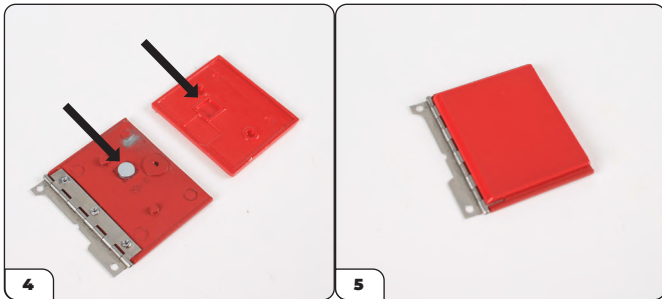
## Stage 45: Assembling a Storage Compartment



To assemble the shelf, place the magnet in the channel at the front edge of the shelf top.



Take the shelf bottom and line up the lugs with the fixing points in the shelf top (2). Apply glue before pressing the bottom part firmly into the top part (3).

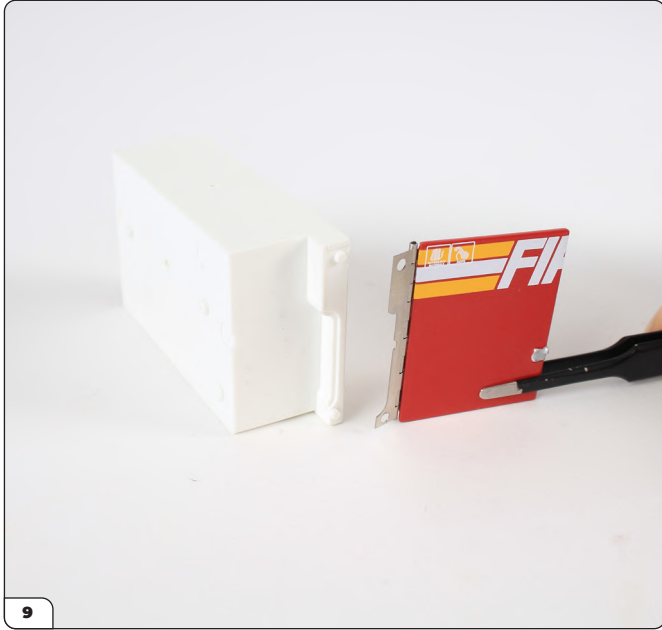


Take the right hand door front and right-hand door back (both parts marked R8-1). Align them so that the magnet recesses are lined up correctly (arrows). Apply glue before pressing the front and back firmly together (4 & 5 above). Repeat to assemble the left hand door (marked R8-2, shown in 6 & 7).



Glue and fit the handle to the right-hand door.

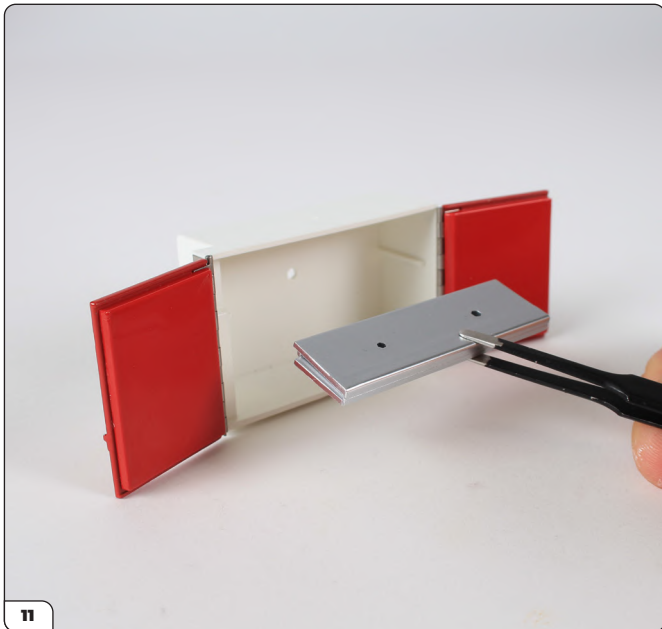
## Stage 45: Assembling a Storage Compartment



Take the compartment inner and note the different shapes of the hinges correspond to the shaped hinge-mounts on the compartment. Apply a little glue to the hinge mount. Fit the hinge onto the mount, checking the door closes correctly.



Repeat to fix the right-hand door in place on the opposite side, applying a little more glue to the hinge-mount surface.



Slide the sides of the shelf over the channels in the compartment. The two holes in the shelf should face upwards and will be used for storing a tool at a later stage. Check that the small lug on the back of the shelf is located within the hole at the back of the compartment.



This is how the shelf should look when correctly installed.

# Stage 45: Assembling a Storage Compartment



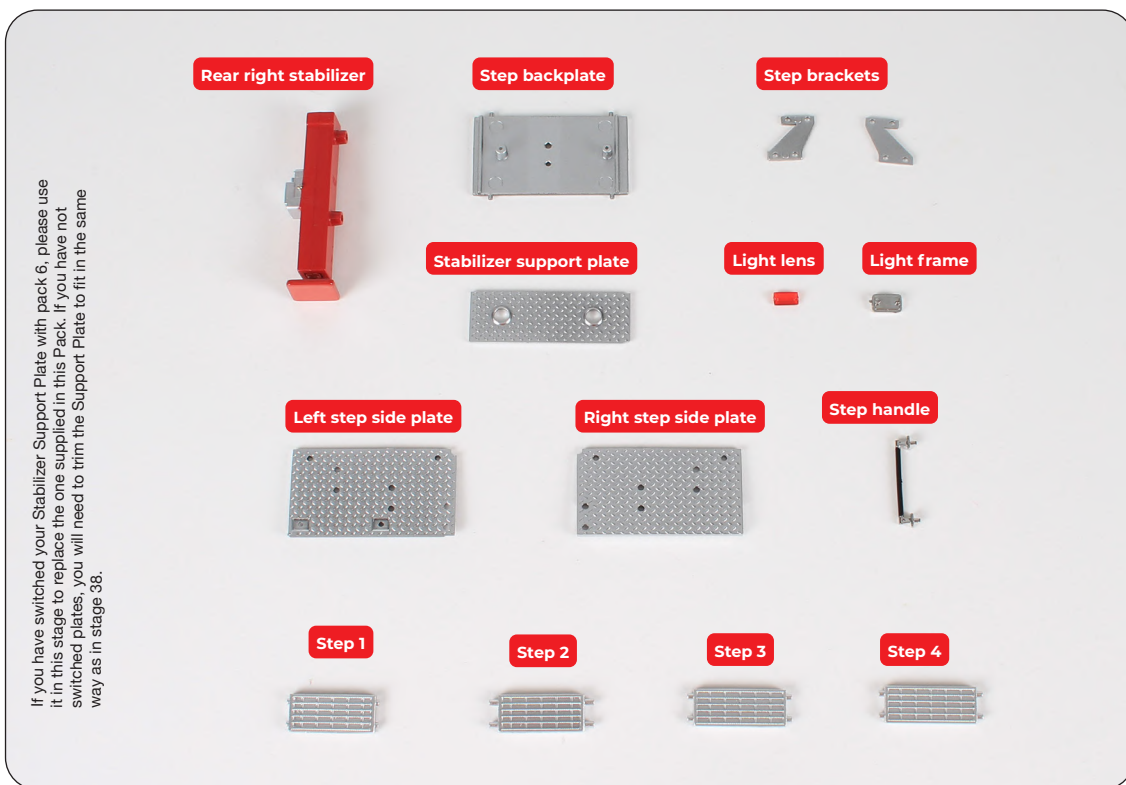
# Stage 46: Rear Right Stabilizer and Steps

The next stage follows the same process as described in Stage 38 to build the steps and install the rear right stabilizer.



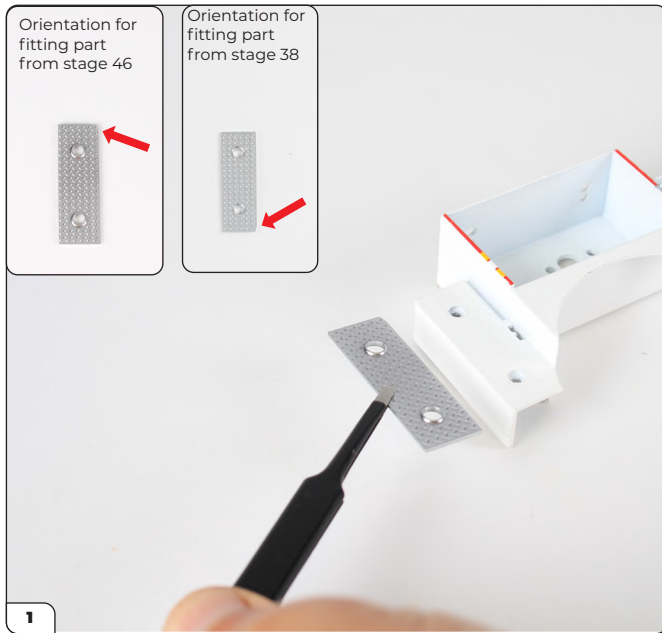
## STAGE 46 PARTS LIST

Name
Rear right stabilizer
Step backplate
Step brackets
Stabilizer support plate
Light lens
Light frame
Left step side plate
Right step side plate
Step handle
Step 1
Step 2
Step 3
Step 4





## Stage 46: Rear Right Stabilizer and Steps

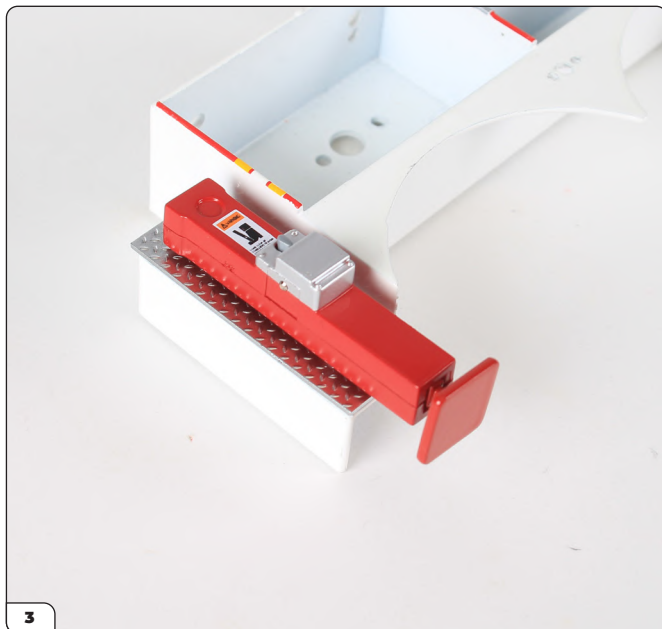


### INSTALLING THE REAR RIGHT STABILIZER

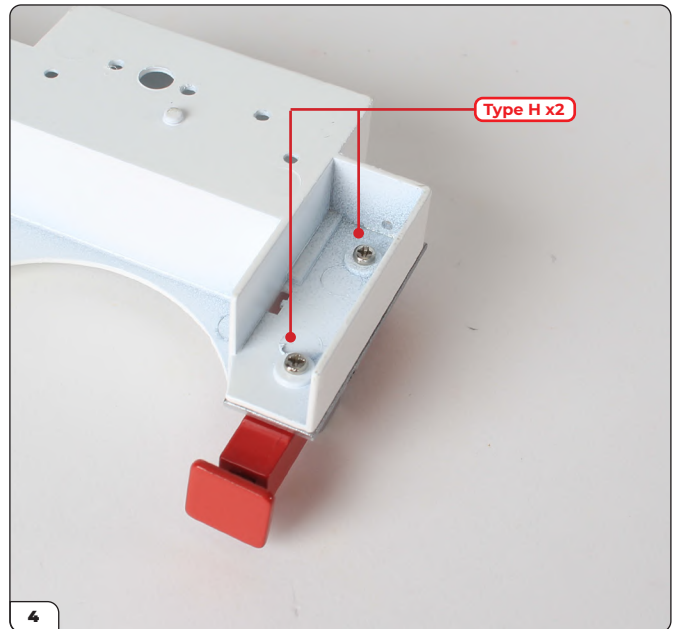
Take the storage compartment frame supplied in stage 44 and the stabilizer support plate. If you have swapped this part with stage 38, fit the notch at the bottom right, against the wheel arch. Otherwise, fit the notch at the top right, as shown in the inset pictures above. With the notch in position, align the plate on the end of the storage compartment frame.



With the support plate resting in place over the two fixing points, position the right stabilizer on top so its lugs project into the fixing holes.



Hold the components in place as you turn the frame over to fix everything from the opposite side.

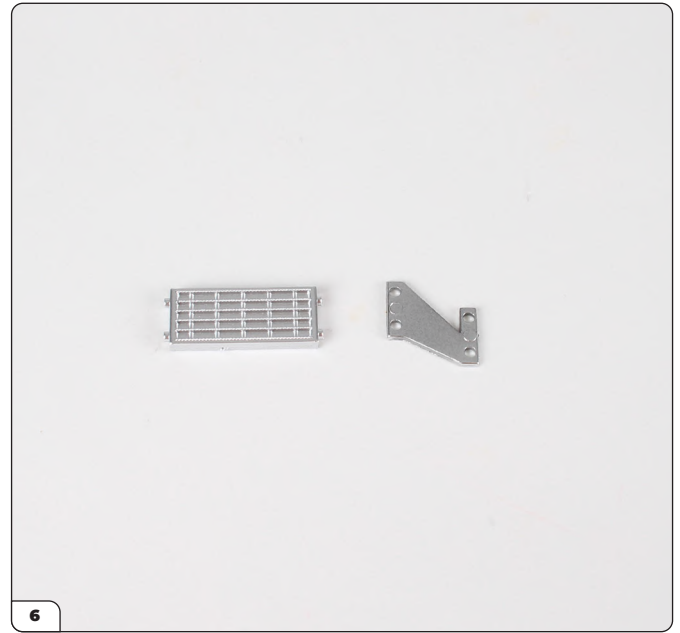


Fix the stabilizer in place using 2 x Type H screws supplied with stage 44. If you need to trim the Support Plate so it fits flush to the storage compartment frame, do this now following the same steps described in stage 38.

## Stage 46: Rear Right Stabilizer and Steps



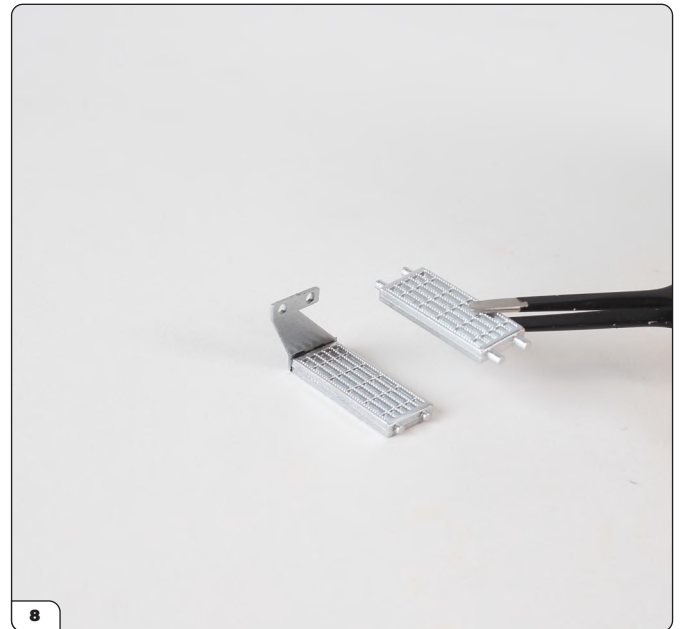
Take the four steps and note the differences in their size and their lugs: Step 1 has very short lugs; Step 2 has long lugs, Steps 3 & 4 are identical.  
Tip: scrape excess paint off the lugs as necessary when you fit them.



Take Step 1 with the very short lugs and align them with a step bracket in the orientation shown. Apply a drop of glue to the lugs before pushing them into the holes in the bracket as shown.



The long rectangular tab of the bracket should be further away from the step, as shown in this and the next photograph.



Take Step 2 with the longest lugs and push them into the free end of the bracket, above step 1. Check that the grids on the steps face the same direction.

## Stage 46: Rear Right Stabilizer and Steps



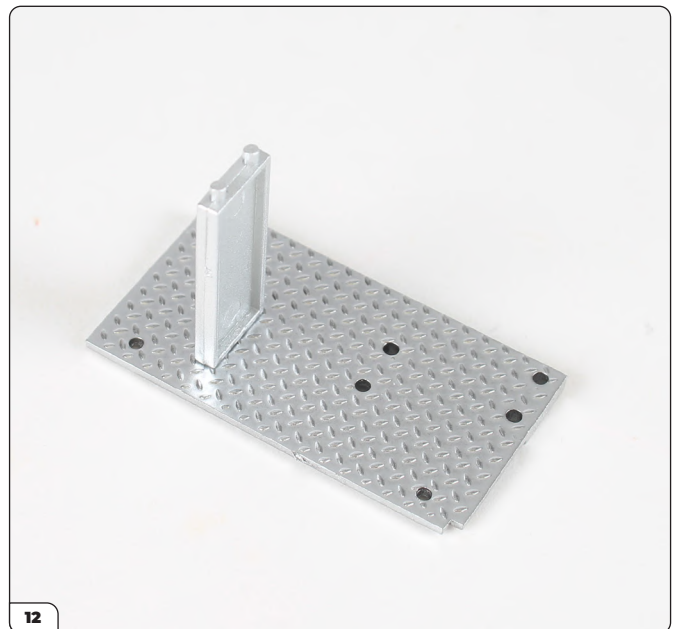
Fix the remaining step bracket to the opposite end of the steps, checking the orientation mirrors the first bracket.



The step bracket looks like this when correctly fitted.



Turn the steps over and check they look like this, with the longer lugs of the second step clearly visible.



Next, take step 3 (3 & 4 are identical) and push it into the holes in the right step side-plate.

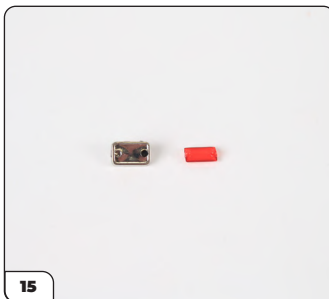
## Stage 46: Rear Right Stabilizer and Steps



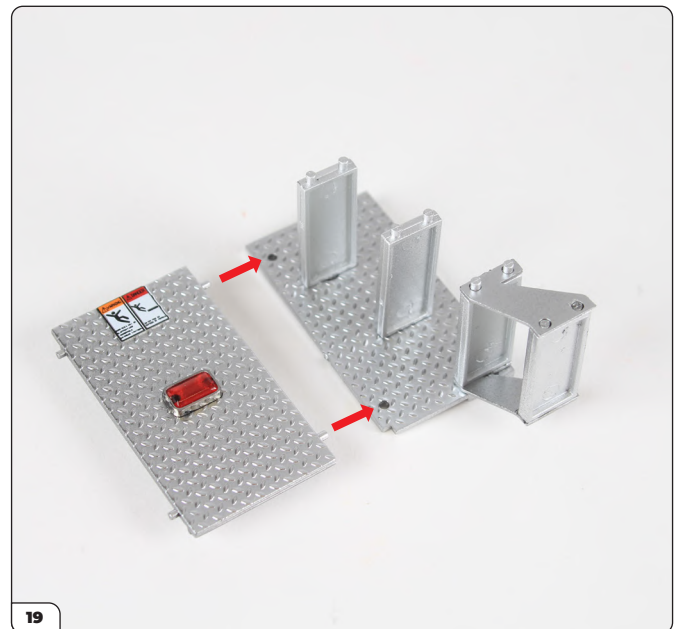
Then take step 4 and push it into the right step side plate, just below step 3.



The longer lugs on step 2 can now be pushed into the holes along the bottom edge of the side plate. Again, check you have the correct orientation with the steps 'climbing' in the same direction.



Assemble the light by pushing the light lens into the light frame, then push the assembled light unit into place on the back plate (17). Then, fix the handle to the left side plate. Apply a little glue to keep the components in place.



Align the back plate with the step assembly. Glue the lugs and along the edge of the back plate.

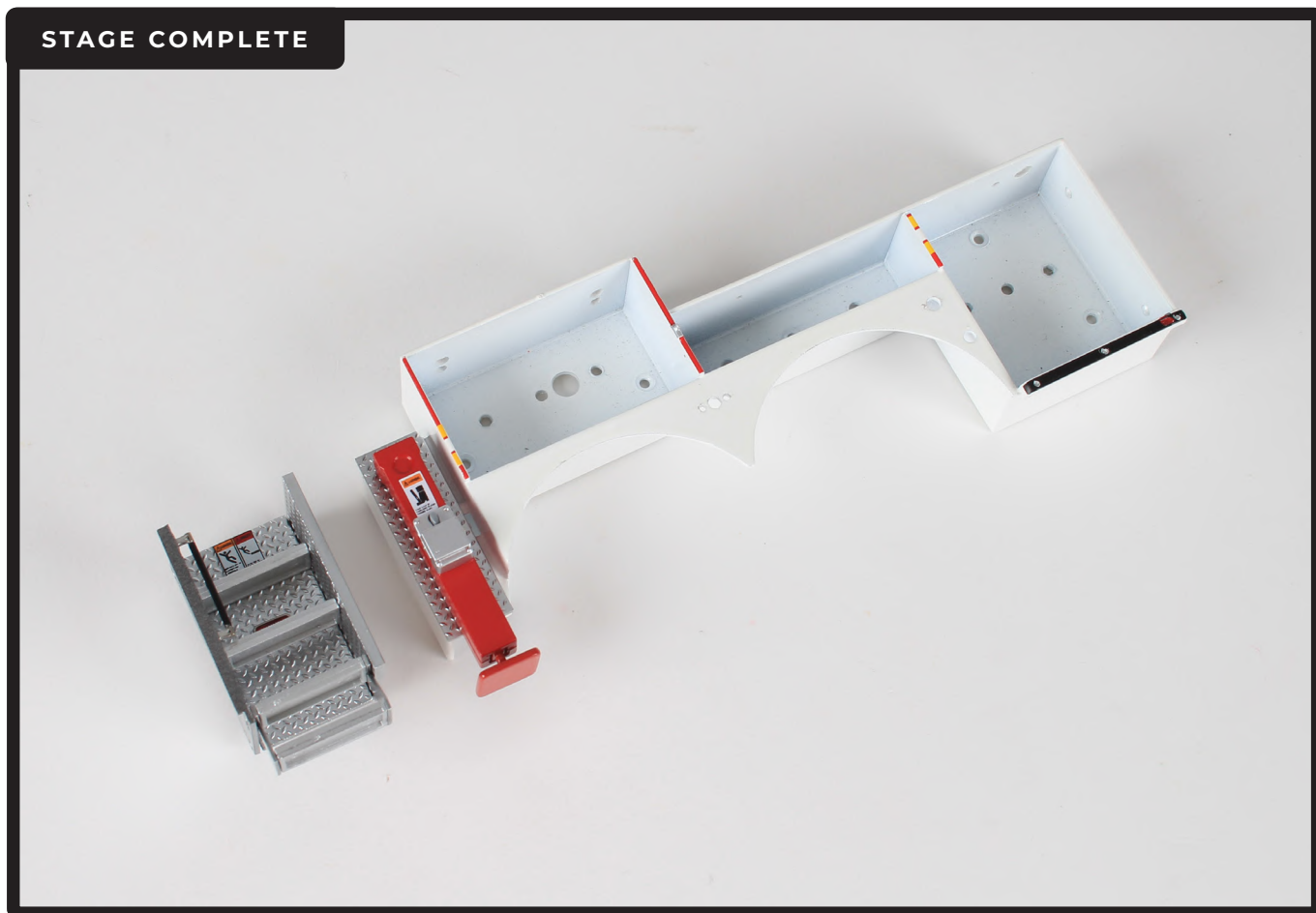
## Stage 46: Rear Right Stabilizer and Steps



Push the plates together.



Take the left hand side plate and, with the handle facing inwards, press into place fitting over the lugs on the back plate and the three upper steps. Use a little more glue to ensure a good fix.



# Stage 47: Compartment Inner and First Ladder Parts

In this next stage you'll fit the compartment frame to the box shell, and add a compartment inner to the rear of the truck. Keep the remaining parts safe, they will form part of the ladder.

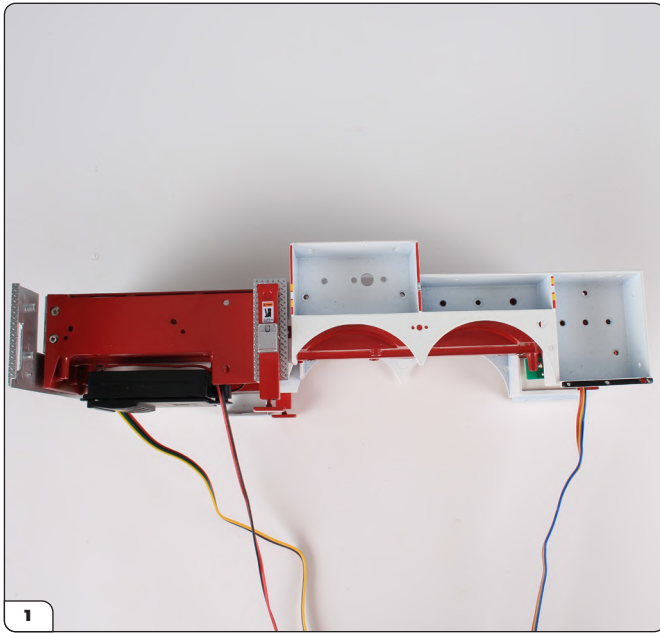


## STAGE 47 PARTS LIST

Name
Compartment inner
Turntable gear
Elevator piston
Handrail
Handrail washer
Type D screws x2

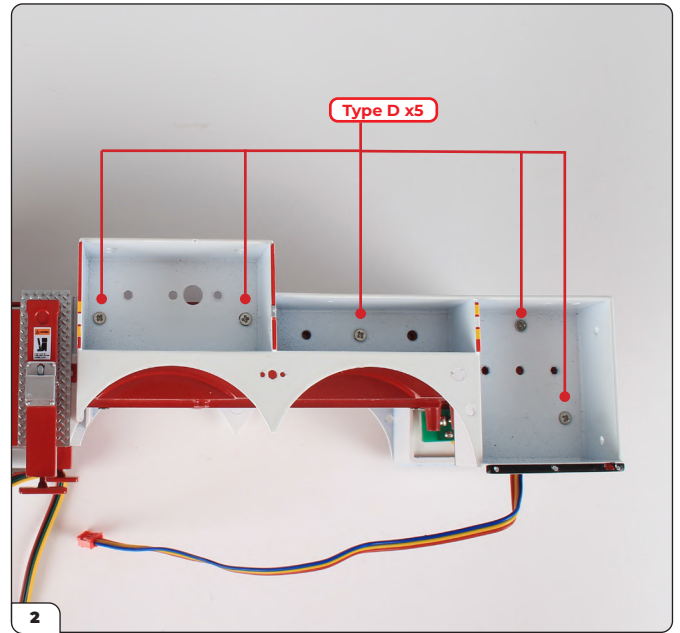


## Stage 47: Compartment Inner and First Ladder Parts

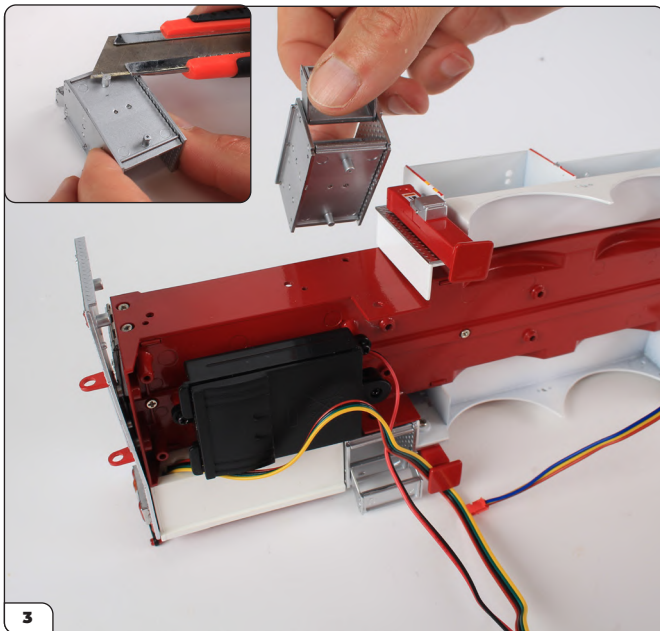


Take the box frame assembly and carefully rest it on its left side as shown. Position the storage compartment frame from stage 46 just in front of the stabilizer, aligning the screw holes.

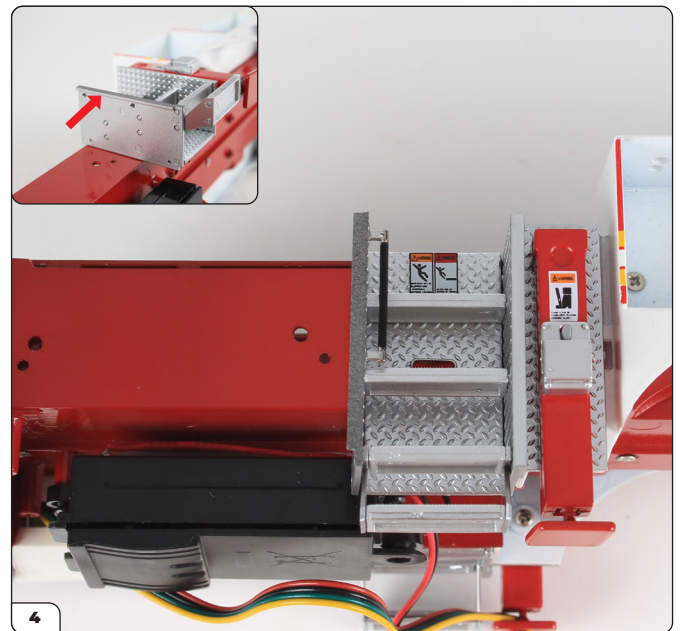
Tip: In all the following steps, take care when moving the box frame and check that the cupboards remain closed. You may want to keep them taped shut with a little masking tape to prevent them getting damaged.



Fix the storage compartment frame in place using 5x Type D screws supplied with stage 44. Put a tiny drop of glue on the end of each screw to ensure a good hold.

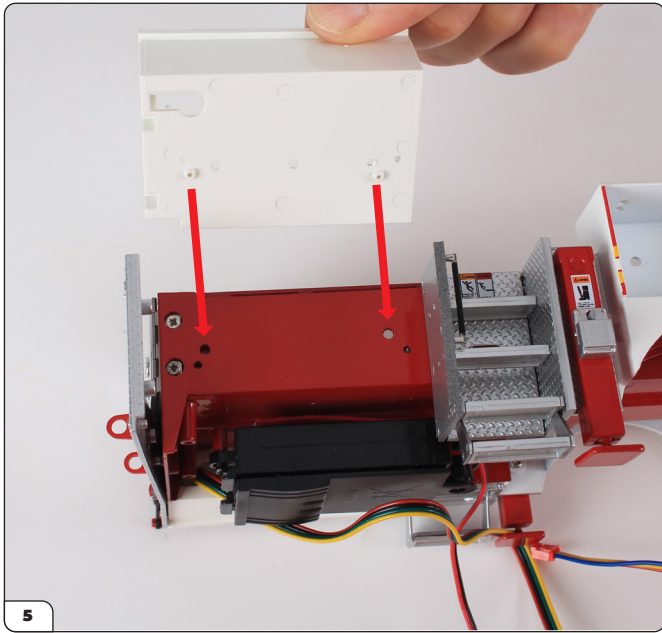


Take the step assembly and align the two lugs on the back plate with the corresponding holes to the left of the stabilizer. Press firmly until the steps click into place. If the lugs won't fit, try shaving a little excess paint from them using a sharp blade.

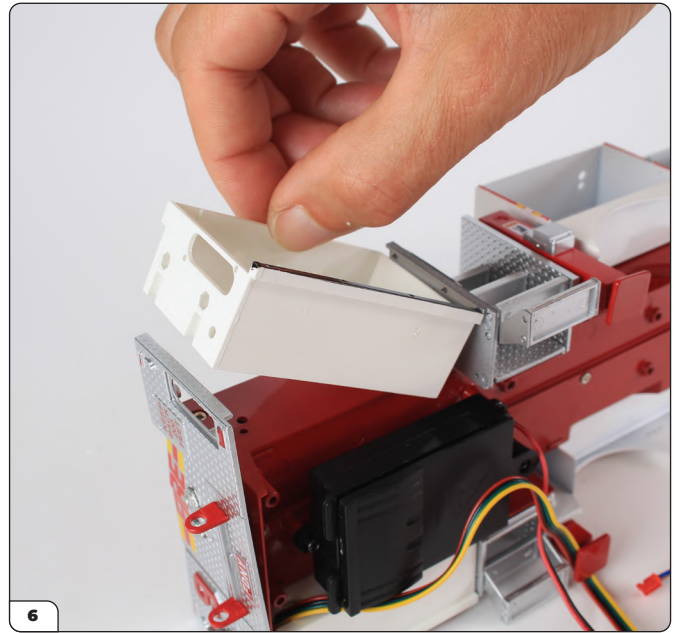


Check that the edges of the step side plate is flush (inset).

## Stage 47: Compartment Inner and First Ladder Parts



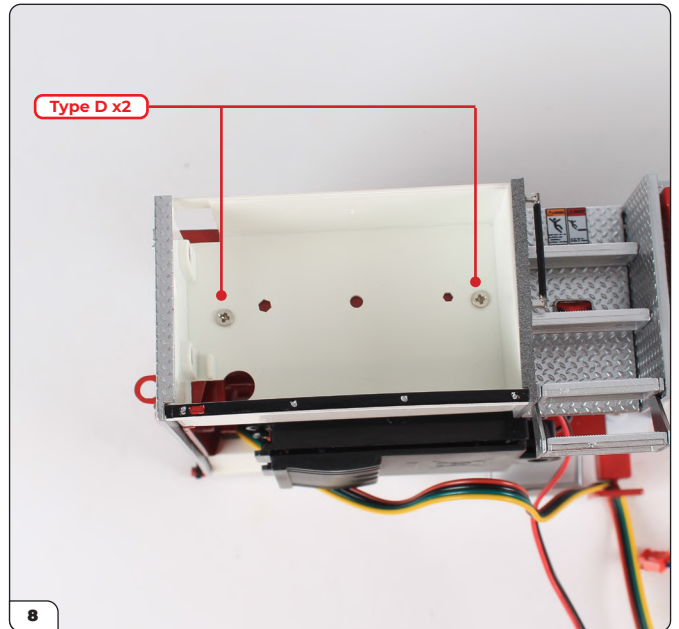
The compartment inner slots into place next to the steps. The two lugs indicated above are the fixing points.



Fit the right-hand edge under the lip on the step plate.



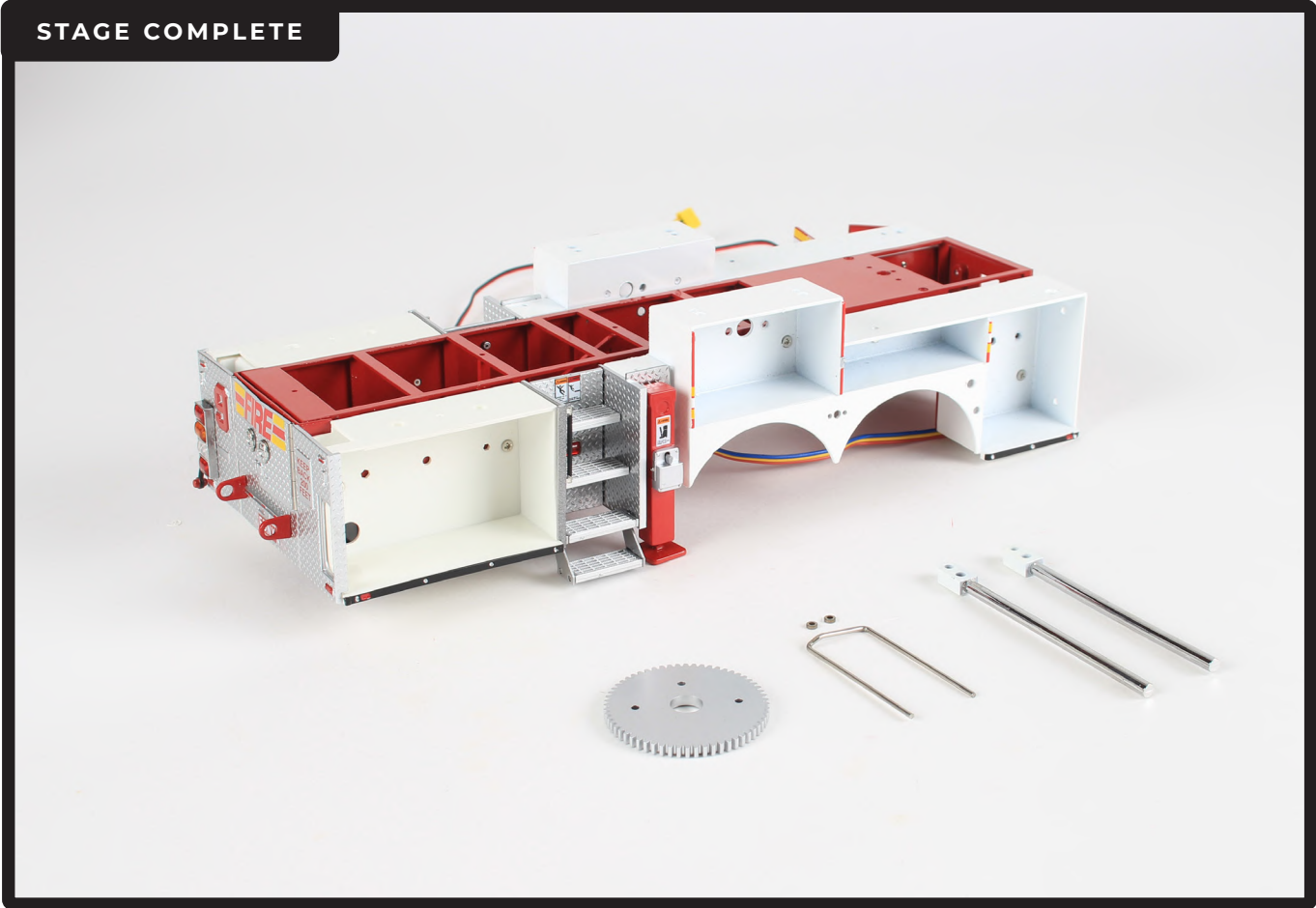
On the left-hand side, fit the lugs on the rear panel into the side of the compartment inner.



Press everything together and secure using the 2 x Type D screws supplied with this stage, applying a tiny drop of glue to the end of each screw.



# Stage 47: Compartment Inner and First Ladder Parts



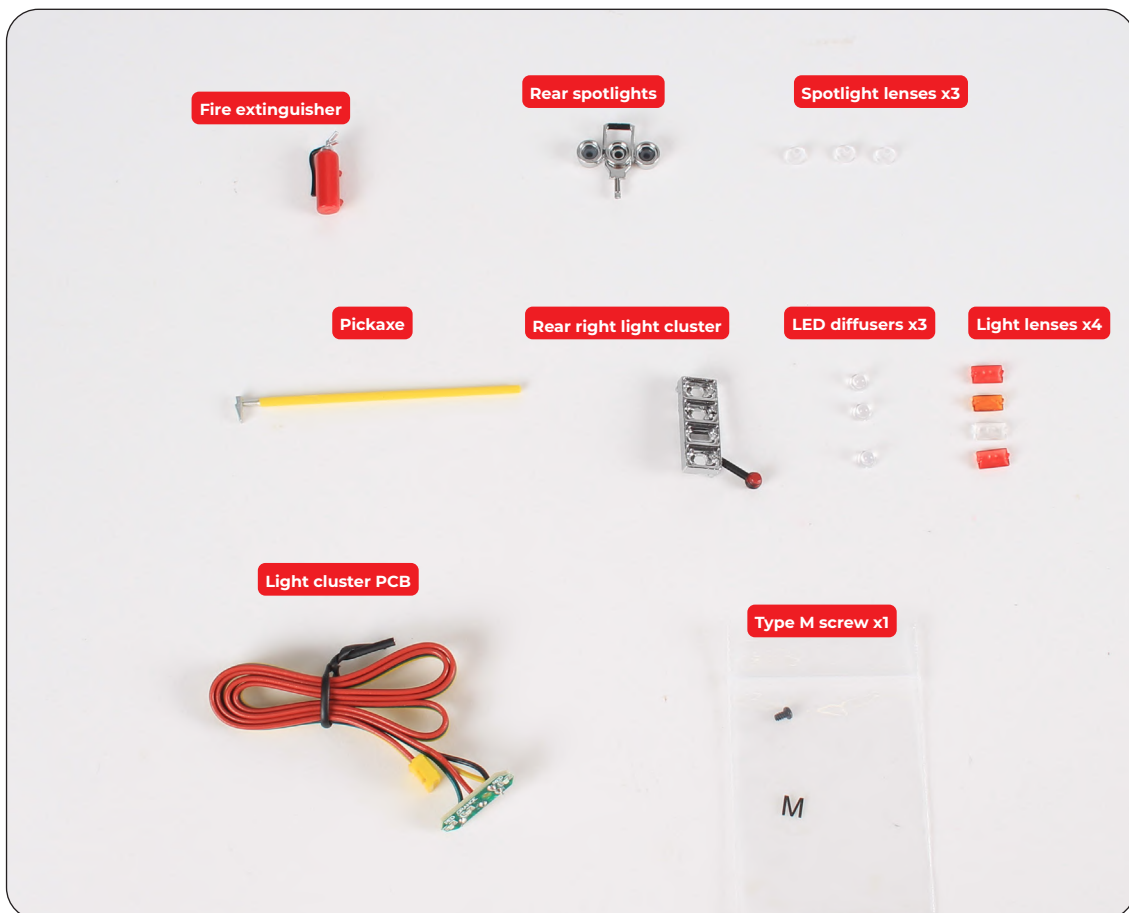
## Stage 48: Rear-Right Light Cluster & Accessories

Next, you'll assemble the rear-right light cluster and some accessories before attaching the three cupboards to the right-hand side compartment frame.



### STAGE 48 PARTS LIST

Name
Fire extinguisher
Rear spotlights
Spotlight lenses x3
Pickaxe
Rear right light cluster
LED diffusers x3
Light lenses x4
Light cluster PCB
Type M screw x1



## Stage 48: Rear-Right Light Cluster & Accessories



### ASSEMBLING THE LIGHT CLUSTER

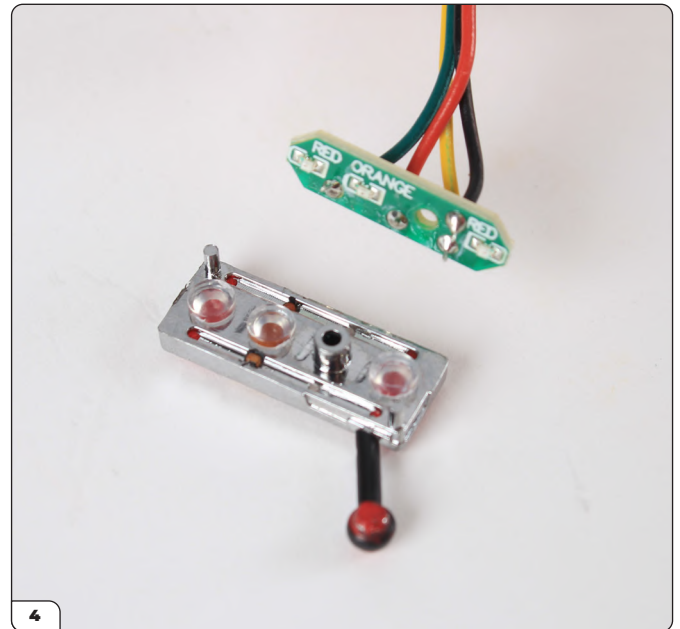
Take the rear right light cluster and the four lenses. Line them up ready to fix in place as shown to ensure the correct order. Check that the orange directional arrow is facing right. Apply a little PVA glue (which dries transparent) to the lugs of each lens before fixing them in place. Refer to the next image.



The rear lights function as follows: (from the bottom up) bottom red LED = warning light; clear LED = back up; Amber LED = arrow signal light; top red LED = brake/ tail light.

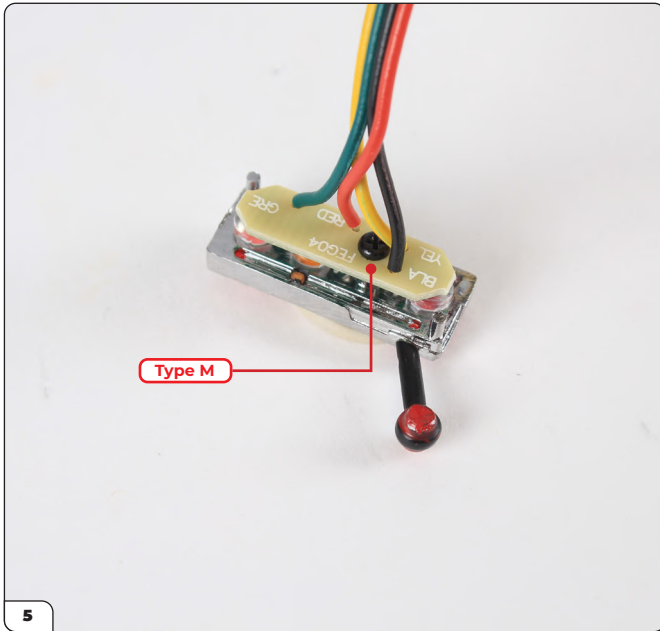


Turn the light cluster over and place an LED diffuser in the red and amber holes.



Lower the light cluster PCB over the LED diffusers.

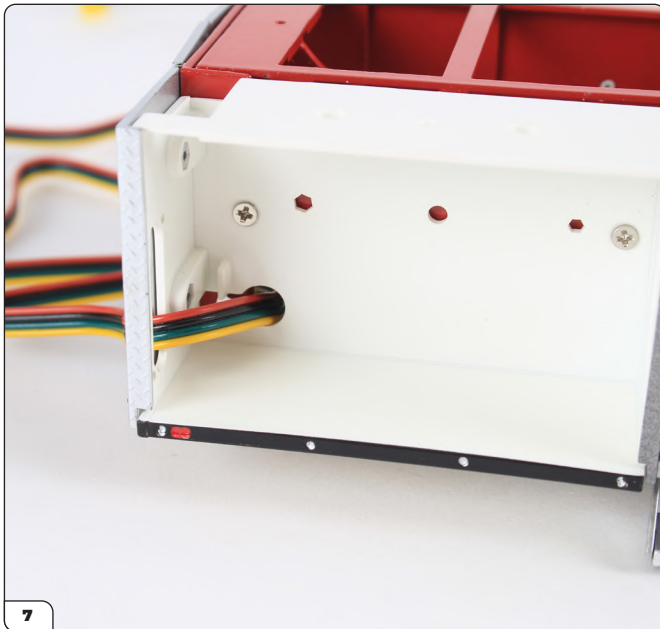
## Stage 48: Rear-Right Light Cluster & Accessories



Secure the PCB in place with the Type M screw.



Feed the plug end of the PCB through the rear panel, and through the opening in the compartment.



Continue to feed the plug back out through the round hole in the bottom left corner of the compartment.



Pull the cable through as far as it will go until the PCB is held against the rear panel. Push the light cluster firmly into place so it sits flush.

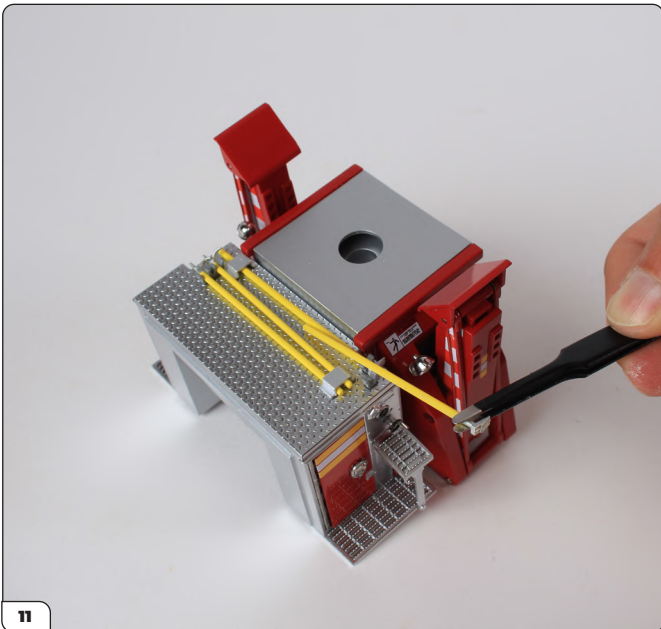
## Stage 48: Rear-Right Light Cluster & Accessories



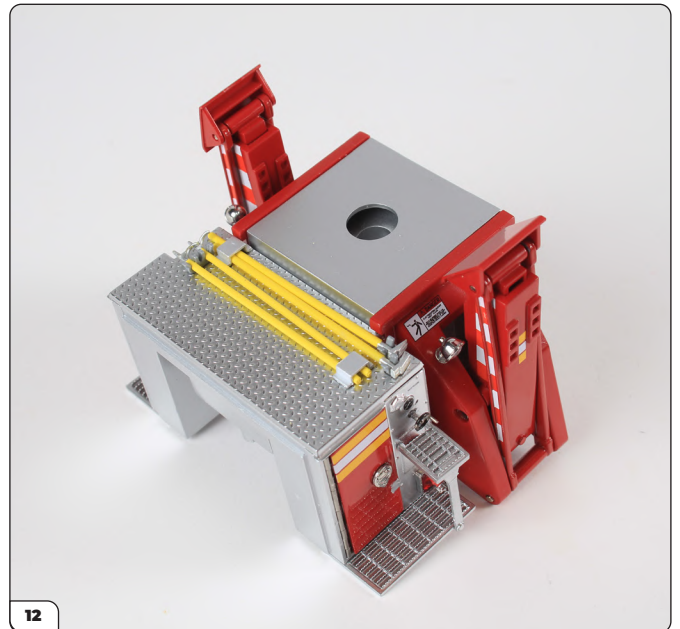
Take the rear spotlight unit and the three lenses.



Apply a little PVA glue around the circular recesses before dropping the lenses into place.

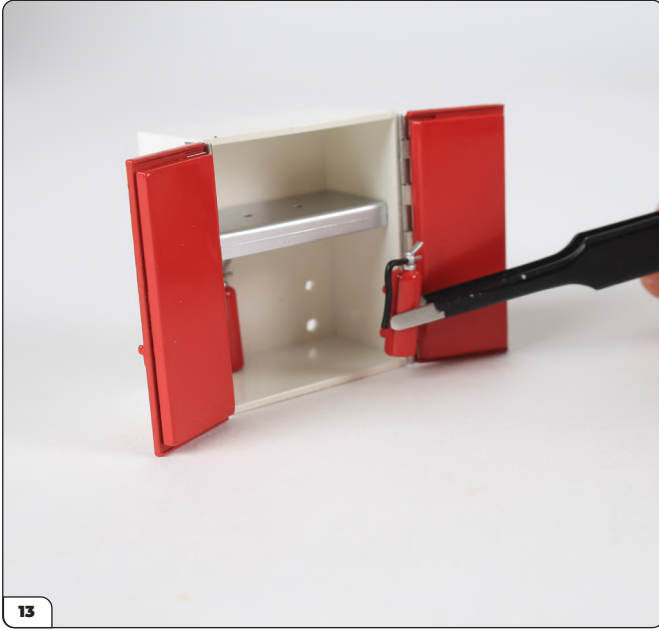


Fix the pickaxe to the midsection base, next to the pike poles.



You should now have four tools securely attached to the midsection base.

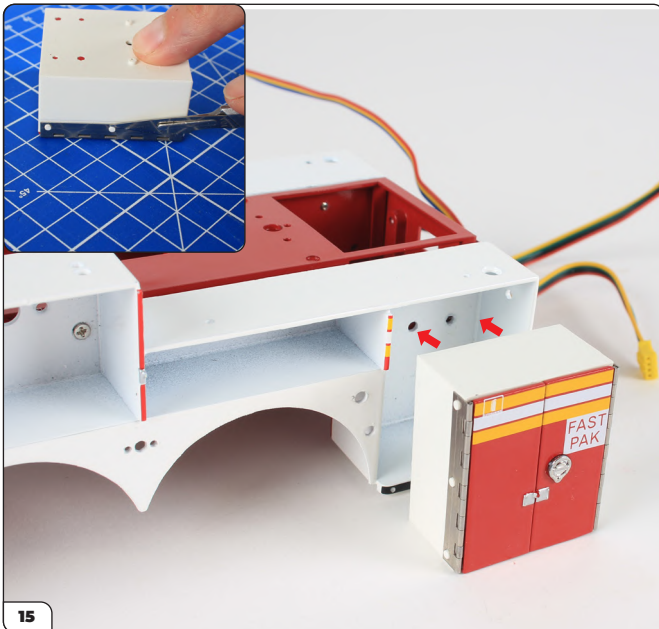
## Stage 48: Rear-Right Light Cluster & Accessories



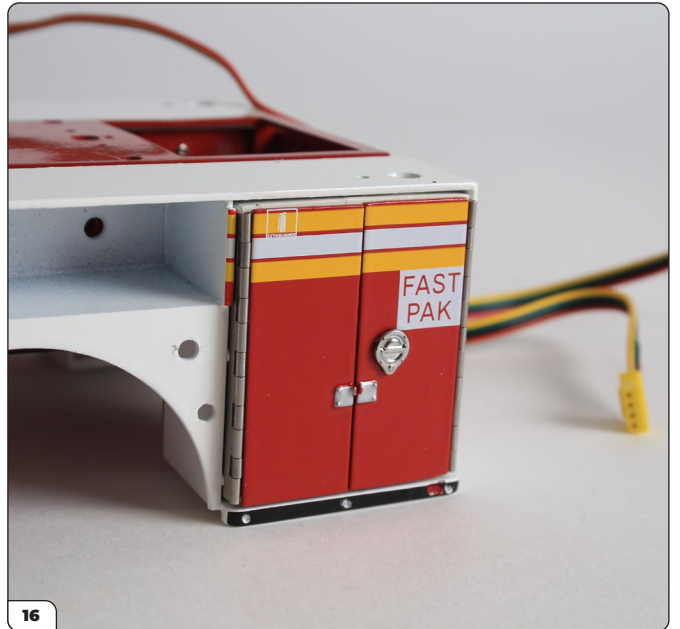
Place the fire extinguisher inside the tall compartment from stage 43, fixing its lugs into the back wall.



There should now be two fire extinguishers stored in this compartment.

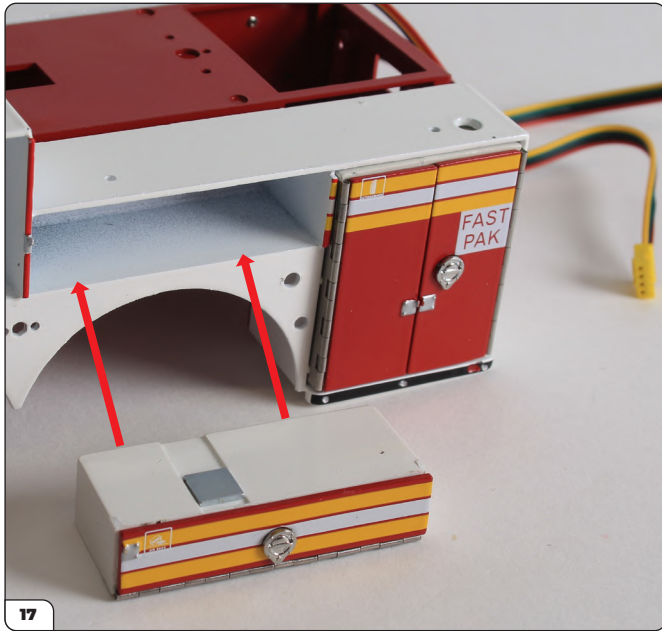


Align the tall compartment from stage 4 with the compartment frame. Push it firmly into place. You may need to trim the pegs on the side of the cabinet with a sharp blade if the fit is a little tight (inset).

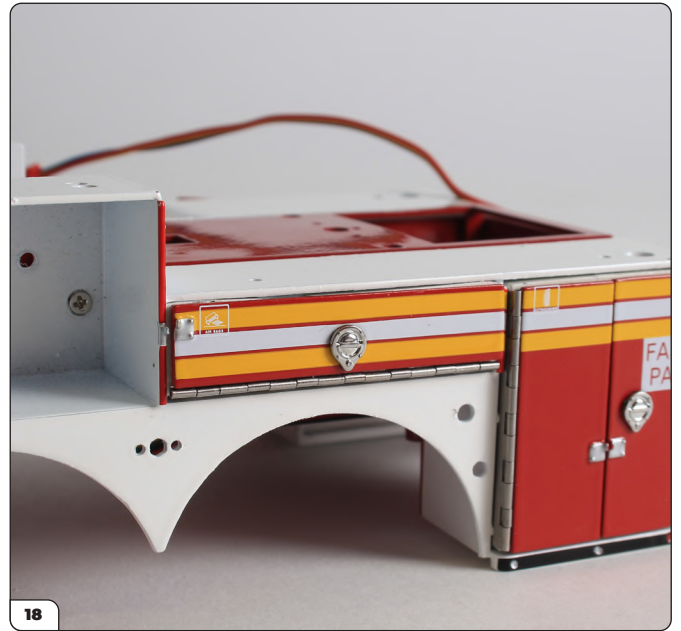


This is how the compartment should look when correctly installed.

## Stage 48: Rear-Right Light Cluster & Accessories



Next, take the narrow compartment from stage 42 and align in with the compartment frame. The door hinge should be along the bottom edge.



Push the compartment into position.

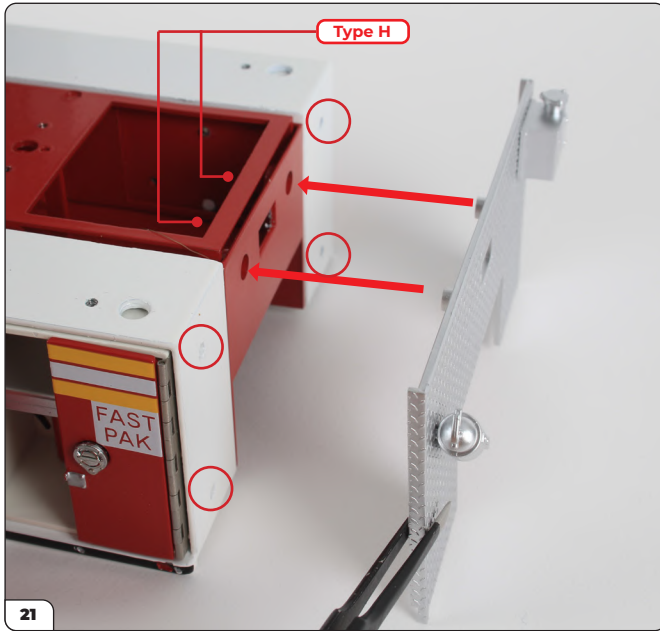


Lastly, align the two-door compartment from stage 41 with the frame.



Push firmly into place.

## Stage 48: Rear-Right Light Cluster & Accessories



Finally, take the rear body section front panel from stage 30 and line it up with the end of the box frame and compartment frames as shown. Firmly press the two pairs of lugs on the inner side of the panel into the compartment frames (circled). Check the narrow side sections hook flush into the compartment frames. Fix the panel in place from inside the frame using 2 x H screws from stage 32.



This picture shows a narrow side section hooked correctly into the compartment frame.

### STAGE COMPLETE



This image shows the rear cupboard from stage 45 in place but this will be installed after the emergency lights are in place in the next stage.



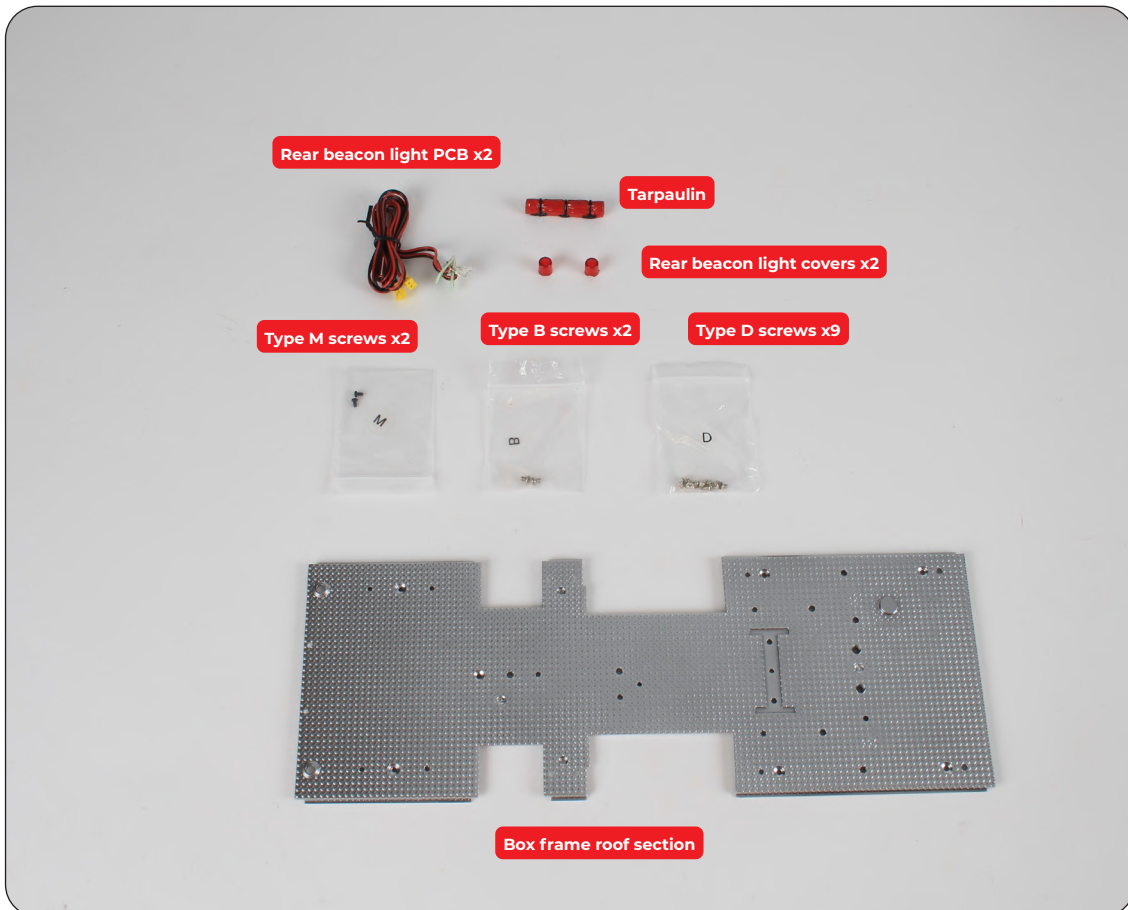
## Stage 49: Rear Beacon Lights and Roof Section

In this final stage of Pack 7, you'll install the rear beacon lights and the box frame roof section.

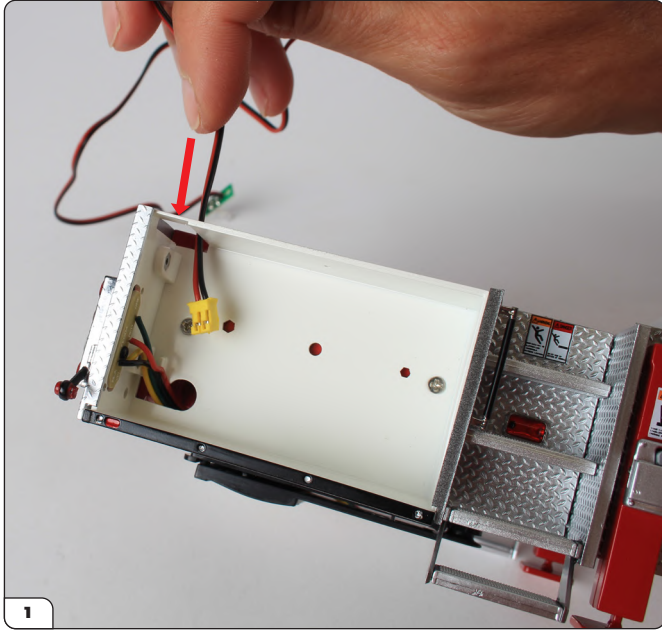


### STAGE 49 PARTS LIST

Name
Rear beacon light PCB x2
Tarpaulin
Rear beacon light covers x2
Type M screws x2
Type B screws x2
Type D screws x9
Box frame roof section

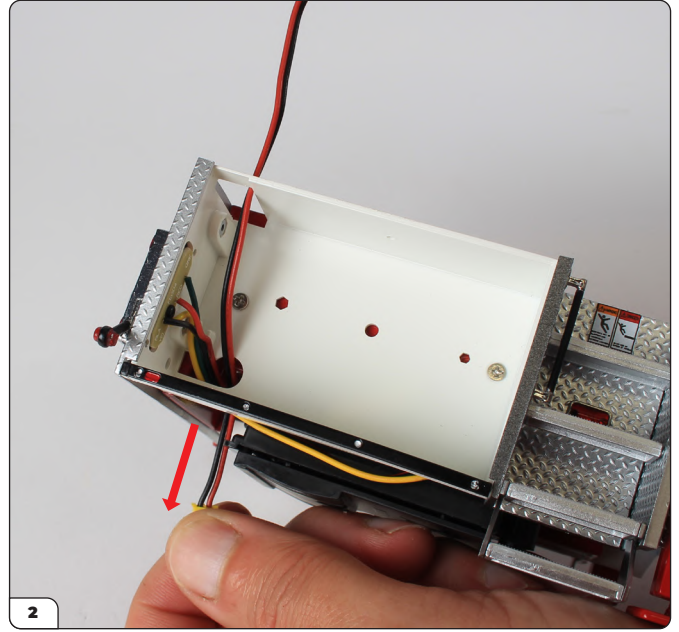


## Stage 49: Rear Beacon Lights and Roof Section

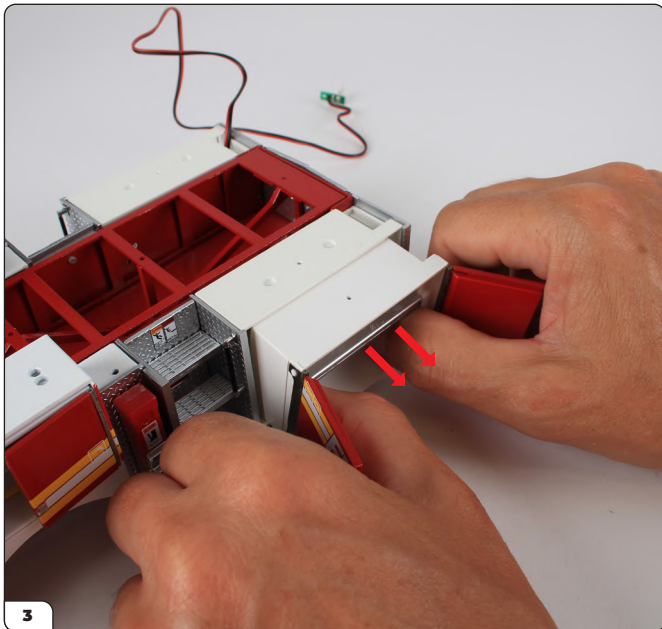


### INSTALLING THE REAR BEACON LIGHTS

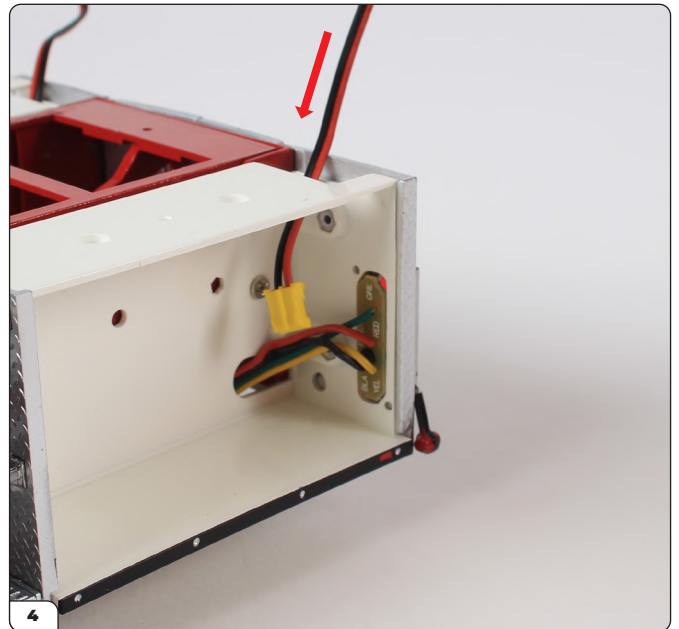
Take one of the beacon light PCBs and feed the plug end through the hole in the top of the rear-right compartment inner.



Continue to feed the plug back out through the opening in the bottom left corner.

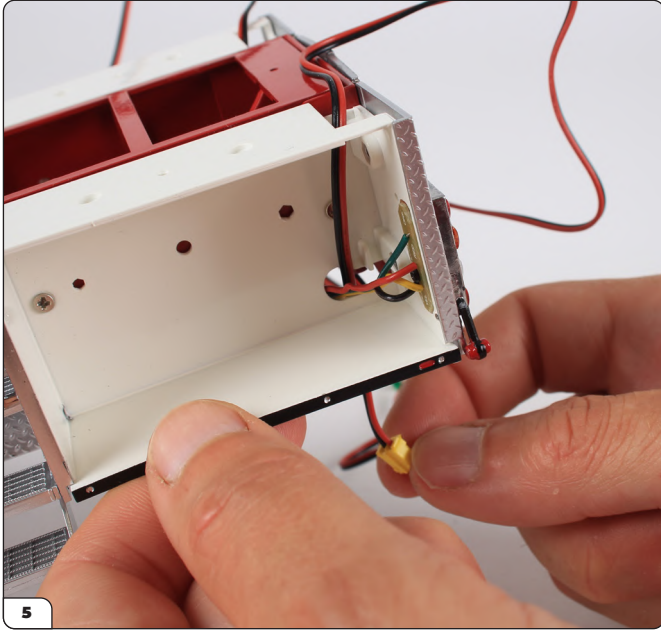


Gently remove the rear-left cupboard by securing your grip on the compartment inner rather than the doors and gently wiggle and pull.

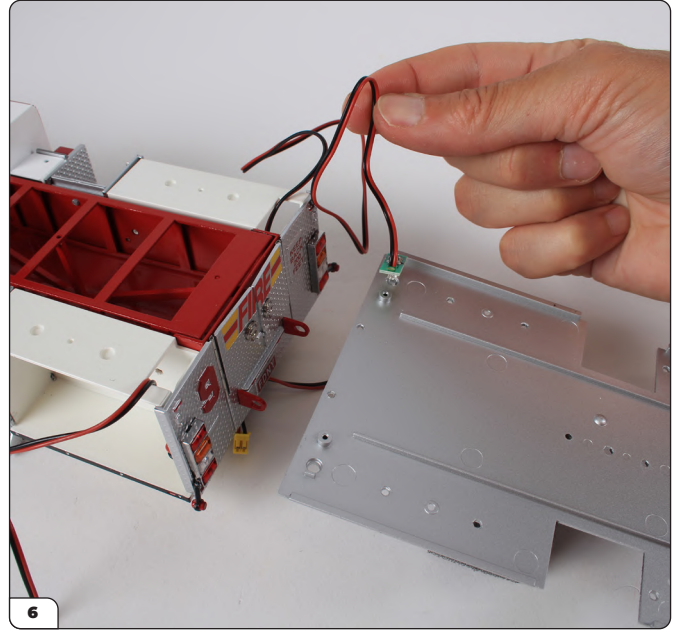


Feed the remaining beacon light PCB through the hole in the top of the rear-left inner.

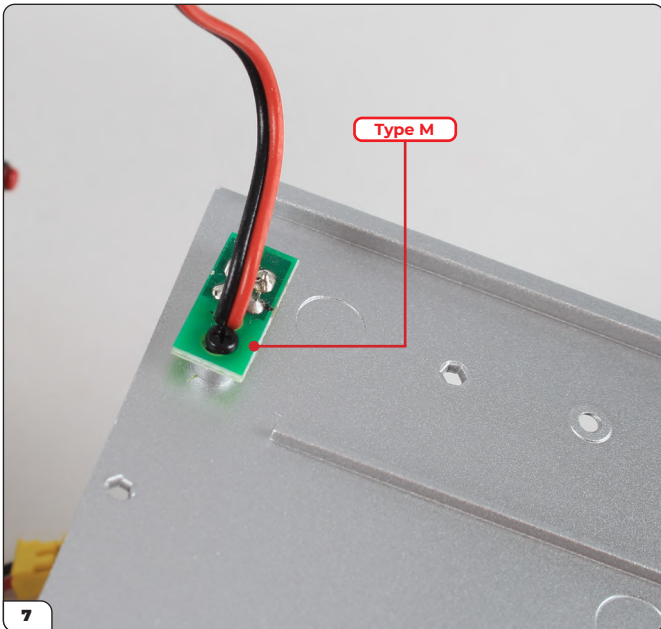
## Stage 49: Rear Beacon Lights and Roof Section



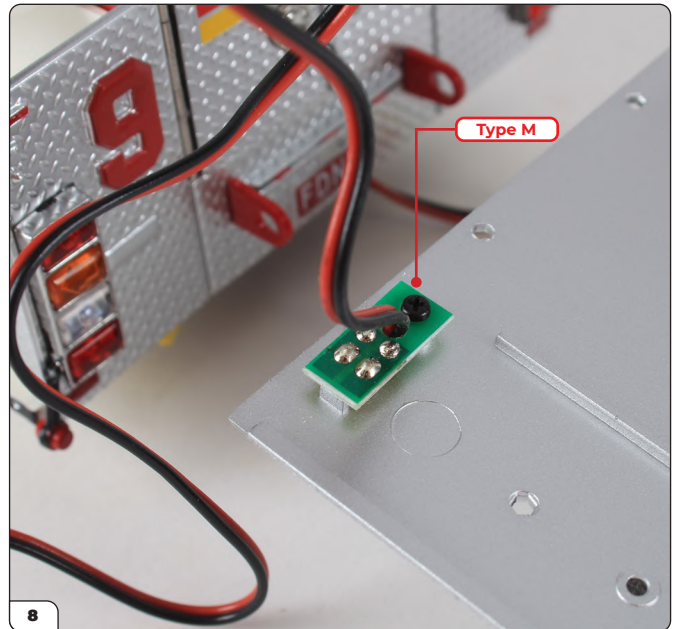
Pull the plug on the end of the cable out through the opening in the bottom right corner.



Take the box frame roof section and line it up with the rear of the truck as shown. The smooth side should face up. Push the LED on the end of the right-hand PCB through the hole in the corner of the roof.

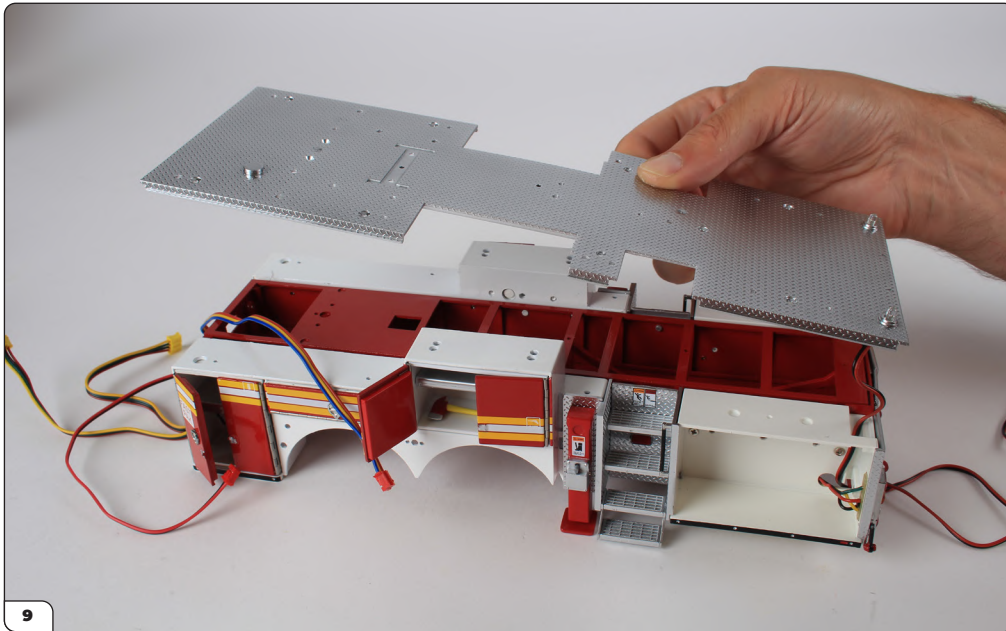


Secure the LED in place using a Type M screw.



Repeat to fix the left-hand LED to the opposite side of the roof section using another Type M screw.

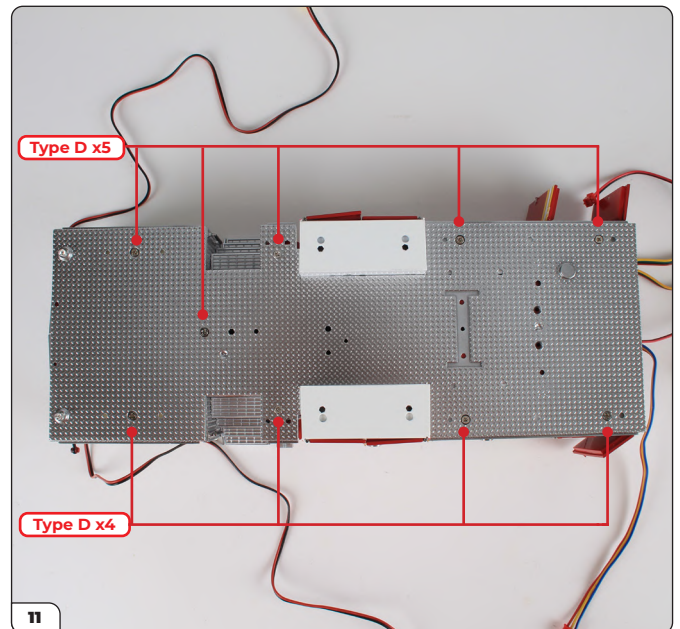
## Stage 49: Rear Beacon Lights and Roof Section



Now flip the roof over so that the patterned side faces up as you lower it onto the box frame assembly.

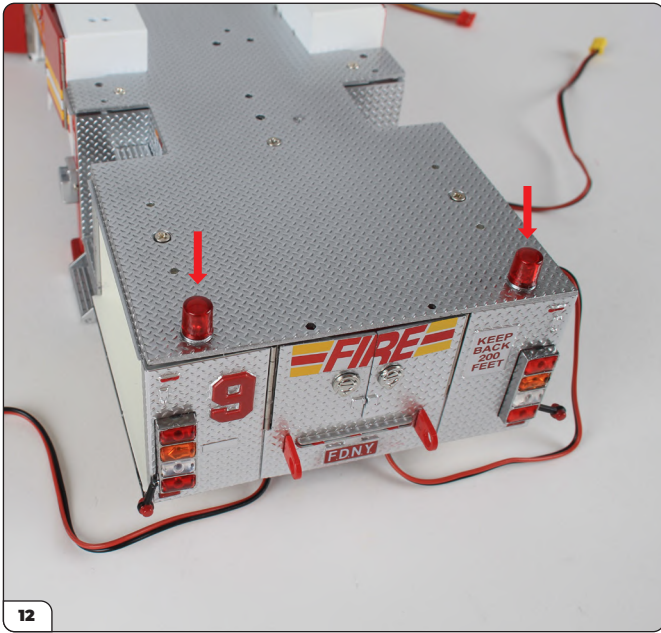


Pull the PCB cables through as far as they will go.

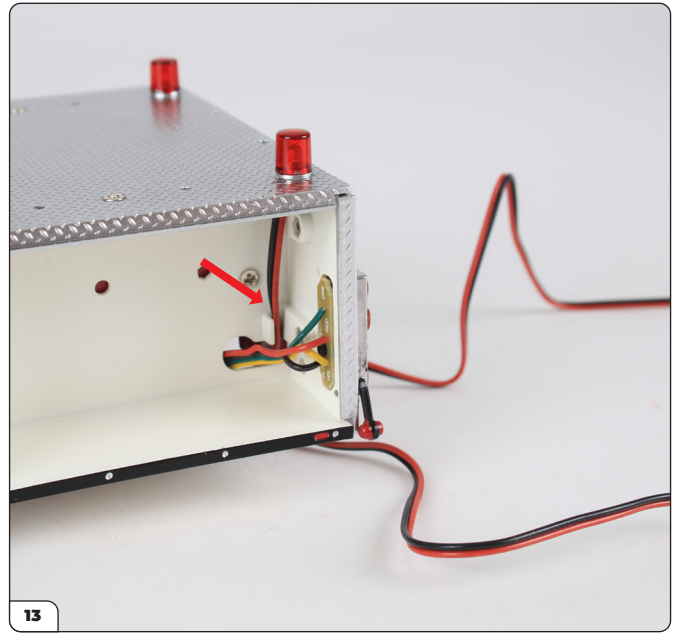


Secure the roof section in place using 9 x Type D screws.

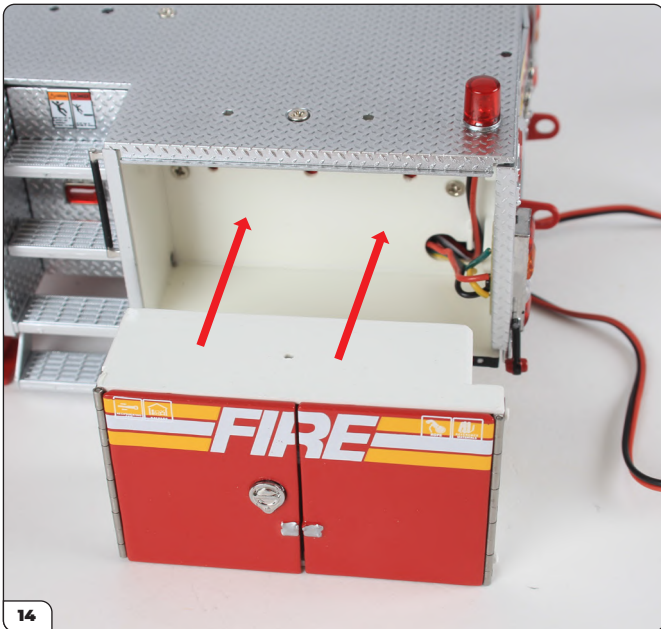
## Stage 49: Rear Beacon Lights and Roof Section



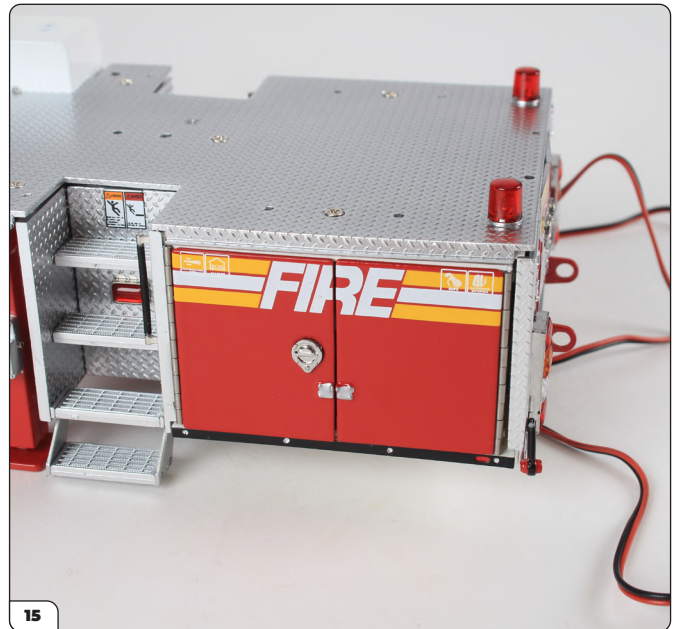
Push the beacon light covers onto the LEDs.



Feed the beacon light cables through the channel in the corner of the compartment inner.

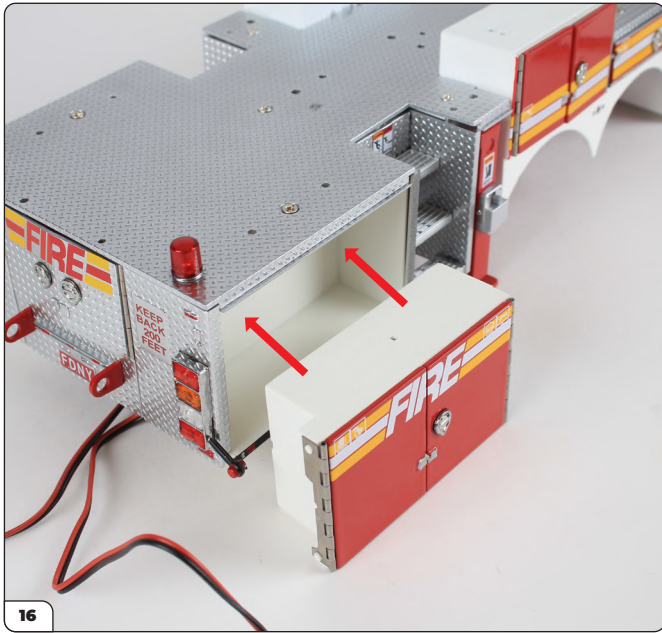


Align the left-hand compartment removed in step 3.



Push it back into place.

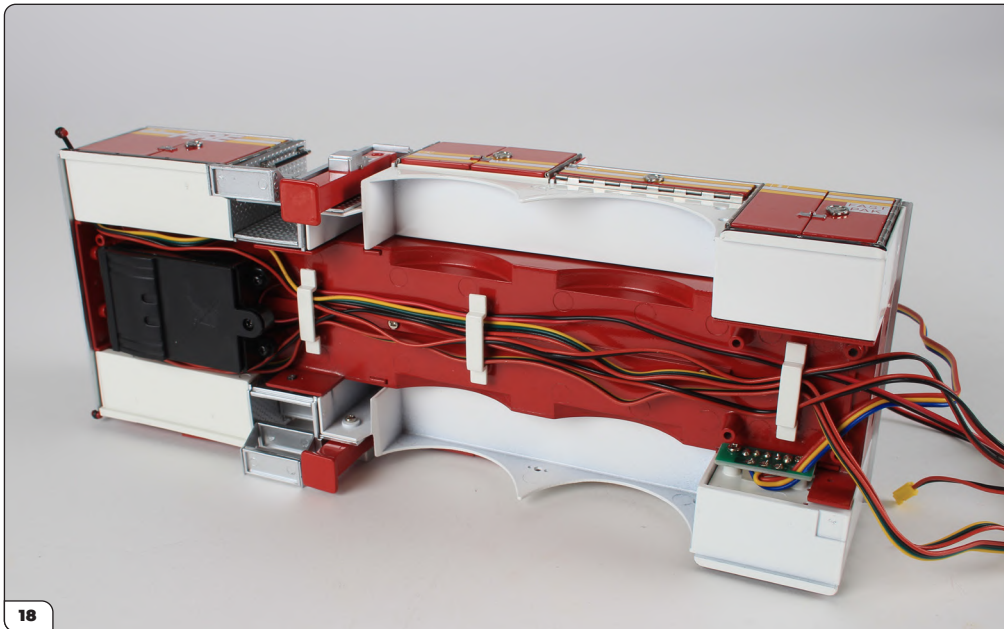
## Stage 49: Rear Beacon Lights and Roof Section



Align the compartment for the right-hand side from stage 45.



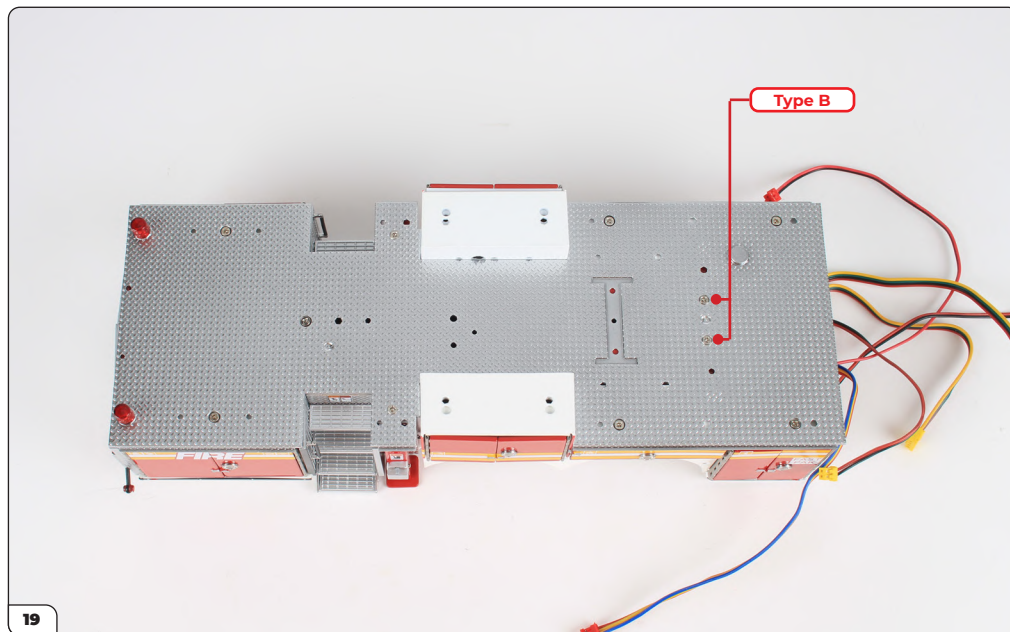
Push firmly into place.



Feed the cables along the central section on the underside of the box frame. Secure them in place using the three cable ties that came with stage 39.

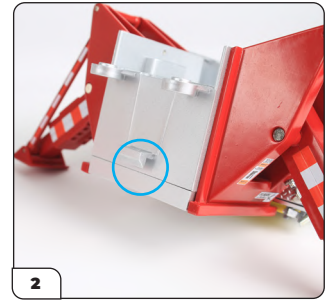
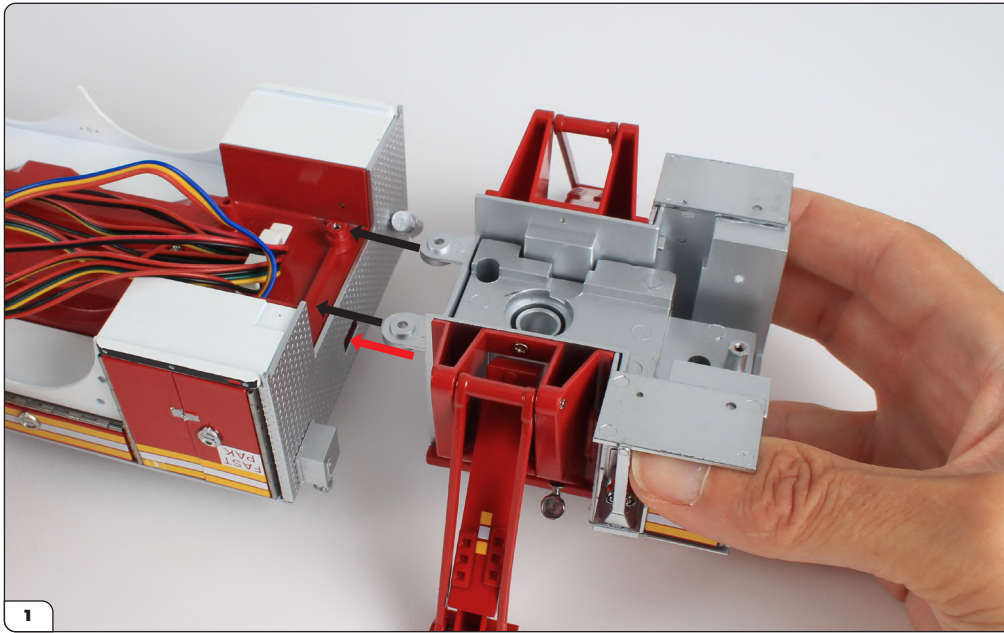
## Stage 49: Rear Beacon Lights and Roof Section

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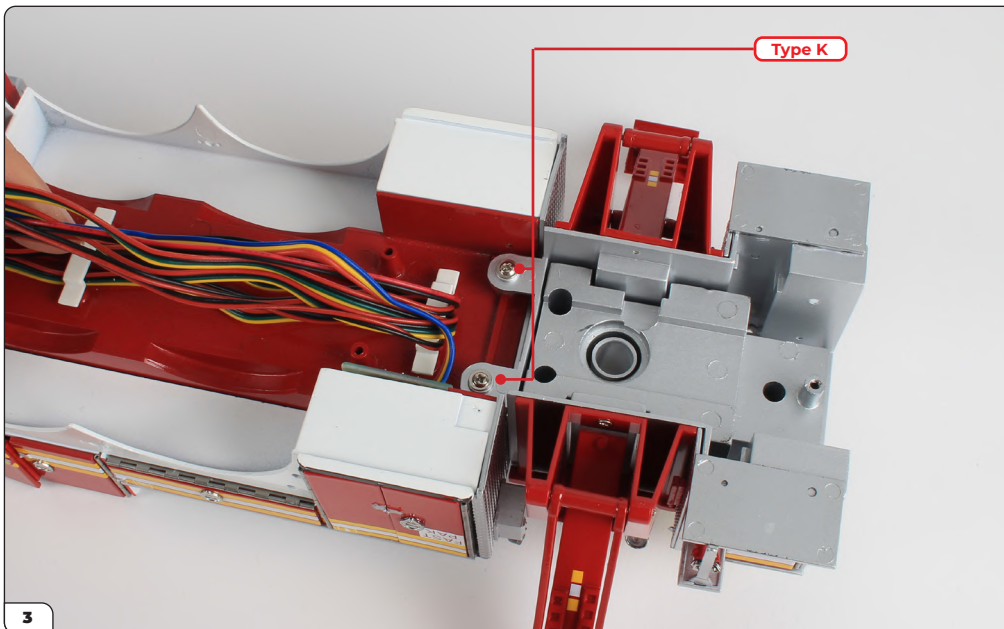
Use the 2 x Type B screws to finish securing the roof section in place. In the following pages, you'll start attaching the three sections of the Aerialscope truck together.

# Connecting the Cab, Midsection and Truck



Take the midsection with outriggers, and the main chassis section with storage compartments, and align them, upside down on your workspace. It's a good idea to have some pieces of foam or polystyrene to support the components in this next stage of the build.

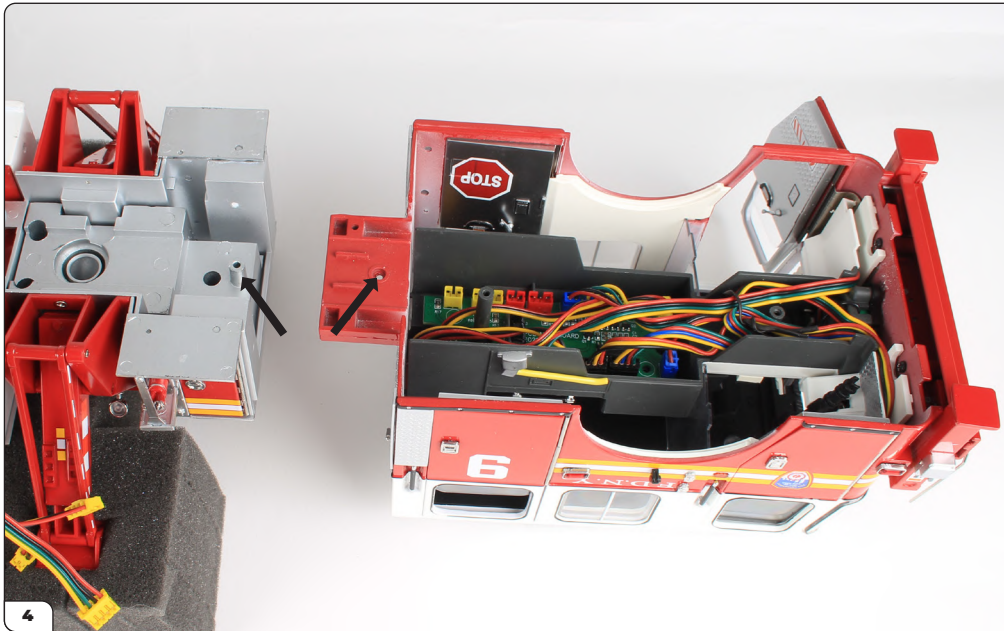
The two projecting tabs on the midsection fit over the posts on the chassis section (black arrows). The lower tab on the midsection (picture 2) fits into the slot in the main chassis (red arrow). Fit the two sections together.



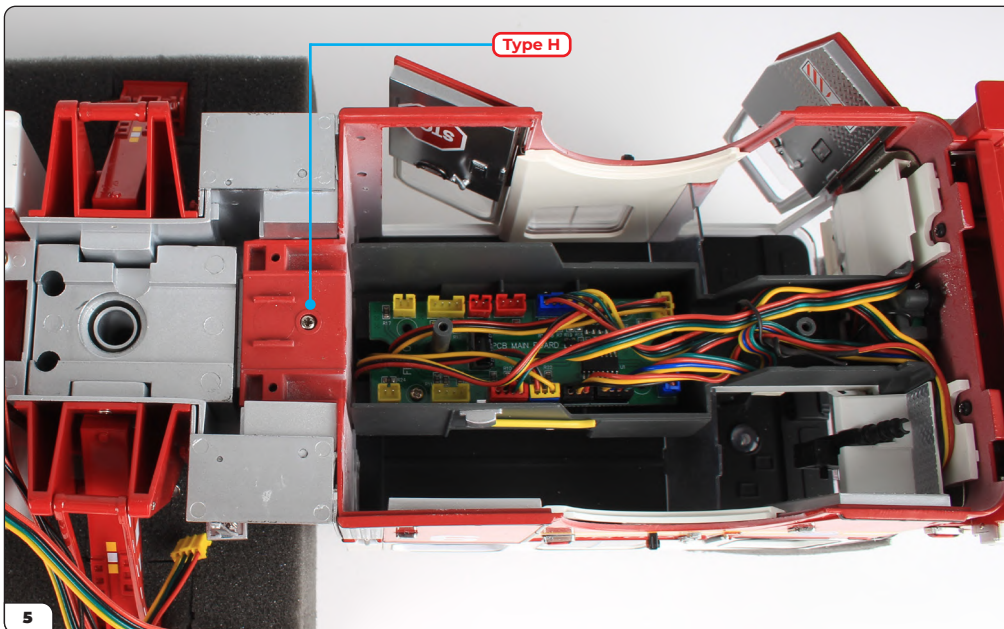
Secure the two sections together using 2 x Type K screws from stage 35.



## Connecting the Cab, Midsection and Truck

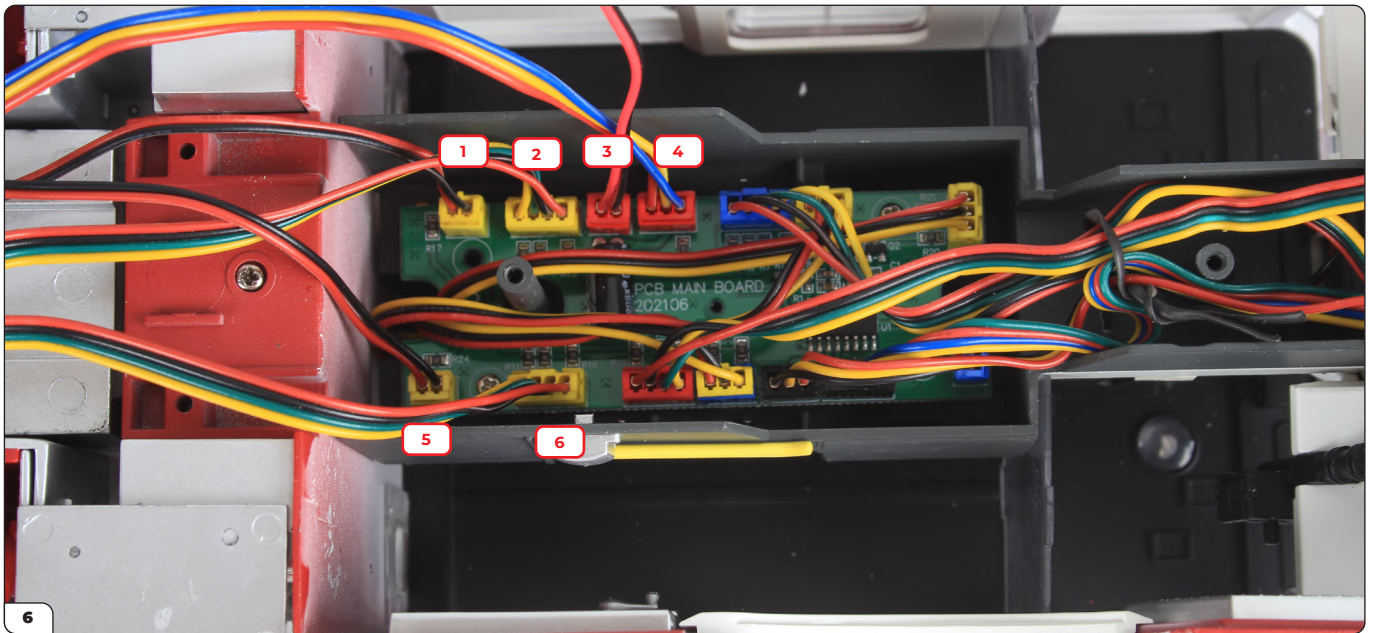


Now you will attach the cab. First, support both sections with foam or other protective support so that the fixing parts are level with each other. Align the red mounting platform on the cab with the rectangular recess on the midsection. Hook the hole in the platform over the post in the recess (arrows).

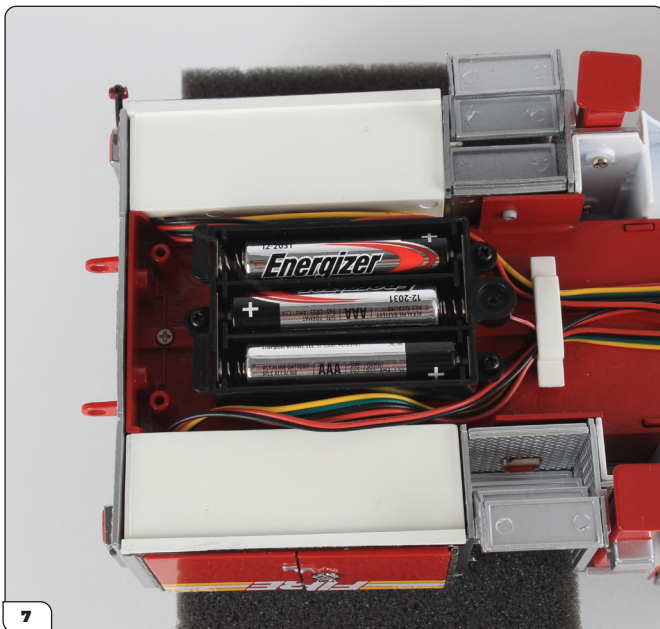


Secure the two sections together using a type H screw from stage 32

## Connecting the Cab, Midsection and Truck

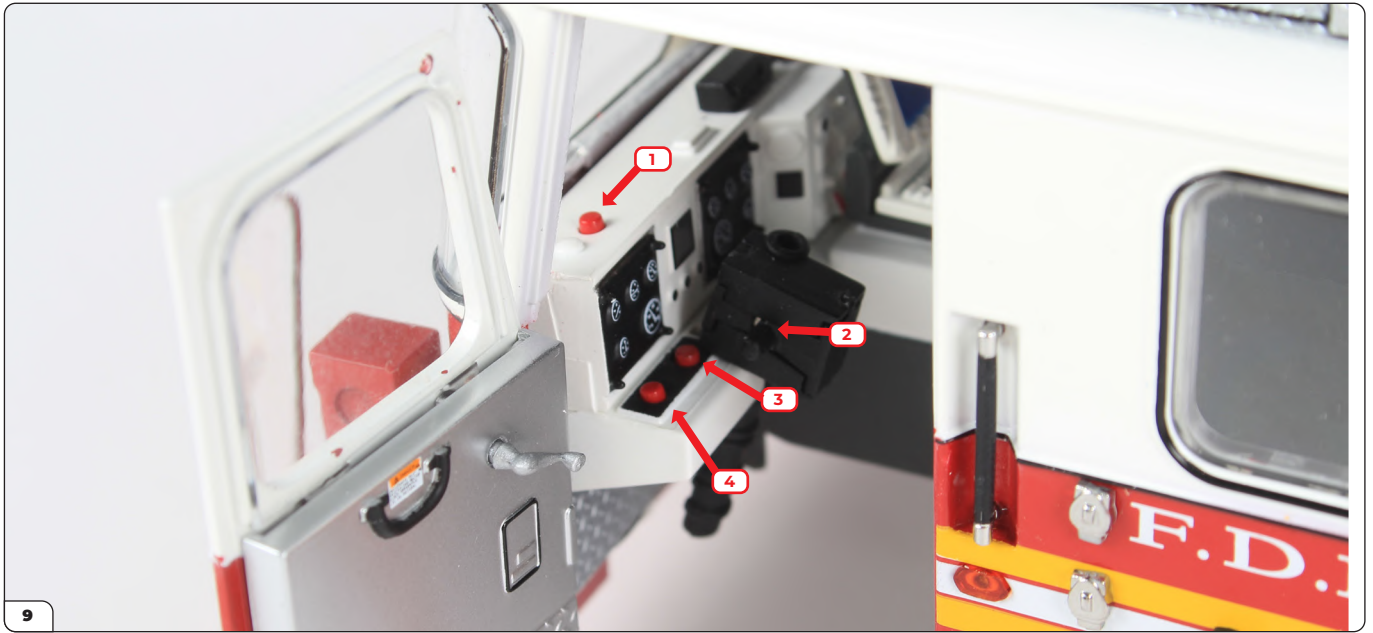


Now the two sections are joined, the electrical cables from the main section can be plugged into the PCB underneath the cab. There are six cables to connect at this stage: 2 x red and 4 x yellow. Match the colour and size of the plug to the colour and size of the socket. The sockets are the same on both sides, so as long as the colours and size match, they will be correctly fitted.



It's a good idea to check the electrical connections at this point. Start by installing 3 x AAA batteries in the battery box (picture 7) before sliding the ON/OFF switch to the 'ON' position (picture 8). The switch can be found on the left-hand side, in the cupboard next to the outrigger marked 'FAST PAK' (inset).

## Connecting the Cab, Midsection and Truck



Check the switches on the dashboard. No.1 = horn sound; No. 2 = turn signals; No. 3 = beacon lights; No.4 = headlights/tail lights.



The lights should now operate. Try dimming your room lights for best effect to see the front lights...

... and the rear lights.

# Connecting the Cab, Midsection and Truck

