FDNY®

FIRE TRUCK
TOWER LADDER 9

Pack 09

BUILD INSTRUCTIONS

STAGE 58: ASSEMBLING THE TURNTABLE STORAGE UNIT

STAGE 59: ASSEMBLING THE BOOM SUPPORT AND ATTACHING THE MAIN BODY TO THE CHASSIS

STAGE 60: COMPONENTS FOR THE LEFT-HAND BOOM SECTION

STAGE 61: COMPONENTS FOR THE RIGHT-HAND BOOM SECTION

STAGE 62: FITTING THE BOOM SECTION TO THE BOOM SUPPORT

AGORA MODELS

Advice from the experts

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.

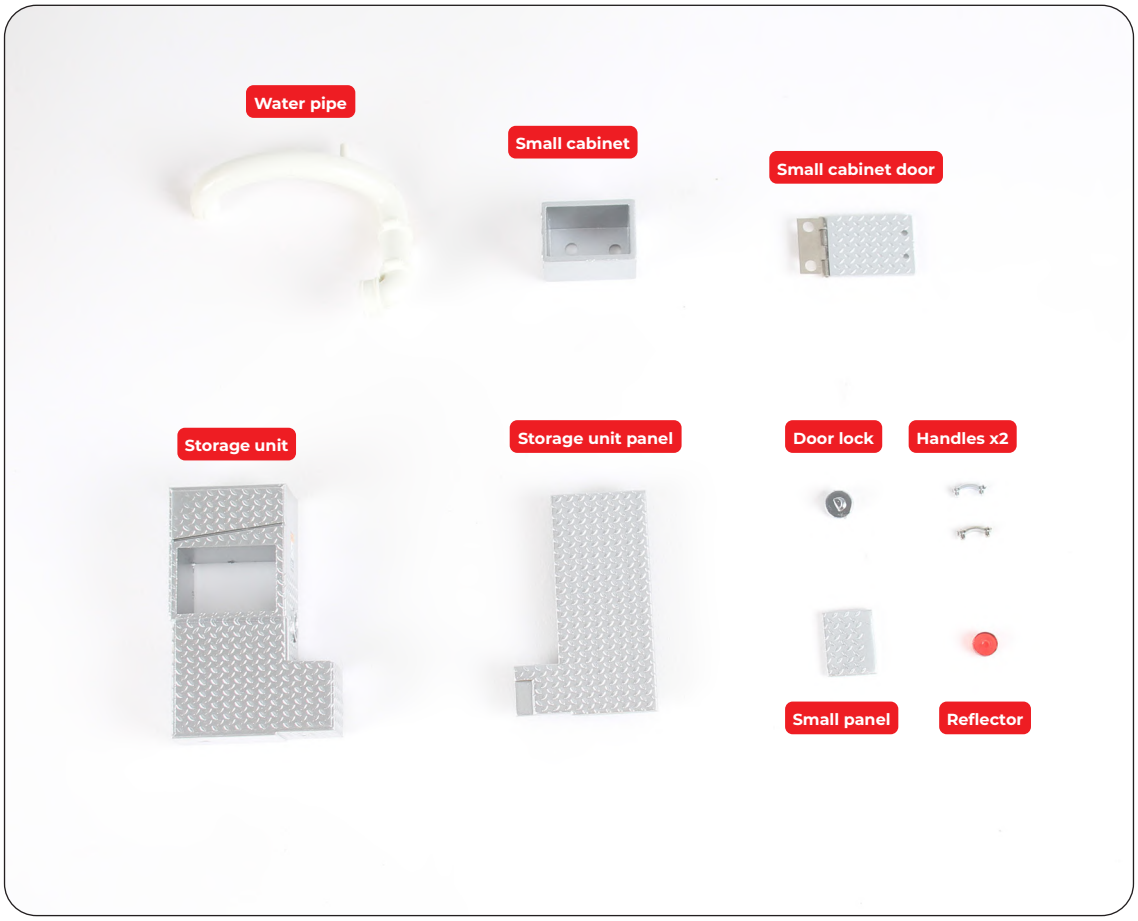
WARNING: Some parts are assembled using magnets. These magnets can cause serious injury if they are swallowed. Keep away from children. If you suspect a magnet has been swallowed, seek medical help straight away.

Stage 58: Assembling the Turntable Storage Unit

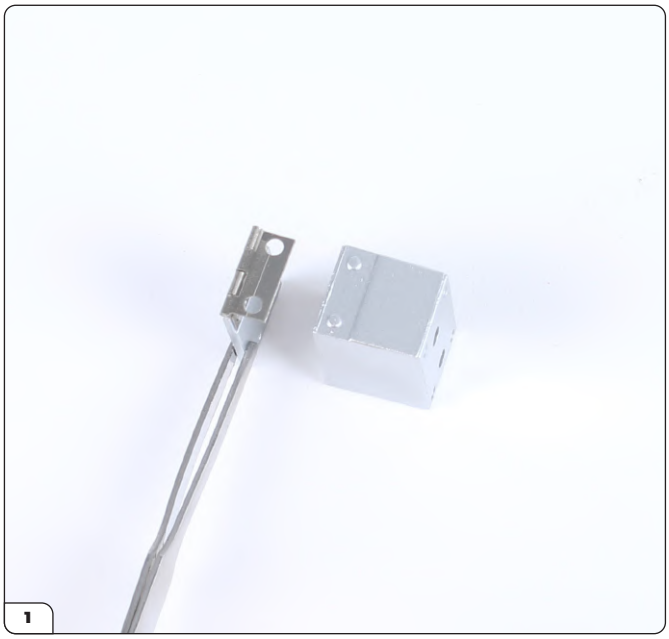
In pack 9, the focus will be on the all-important boom. You'll begin by assembling the storage unit located on the turntable.

STAGE 58 PARTS LIST

Name
Water pipe
Small cabinet
Small cabinet door
Storage unit
Storage unit panel
Door lock
Handles x2
Small panel
Reflector

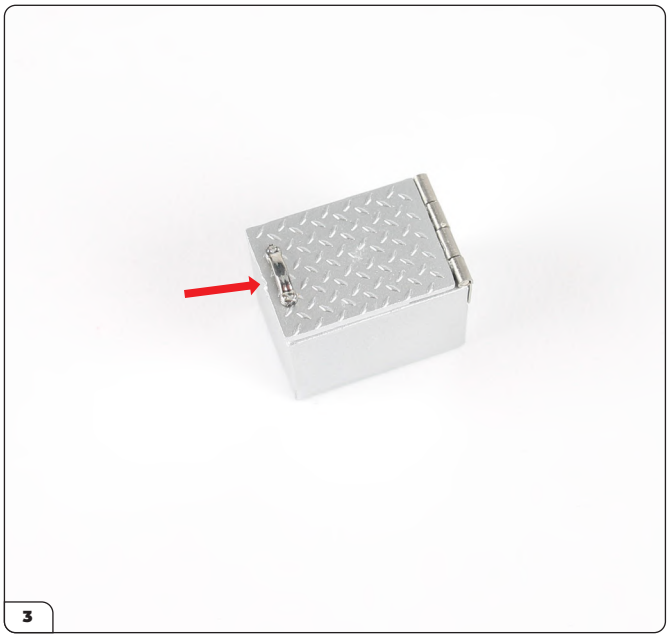


Stage 58: Assembling the Turntable Storage Unit

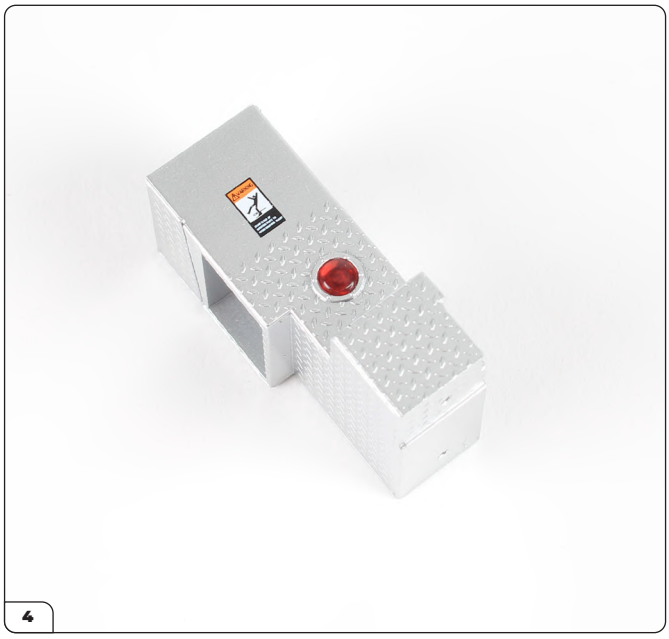


ASSEMBLING THE STORAGE UNIT
First, you'll assemble the small cabinet that sits within the storage unit. Start by aligning the hinge on the cabinet door with the corresponding recess on the cabinet. Apply a little glue.

Press the hinge securely onto the door.

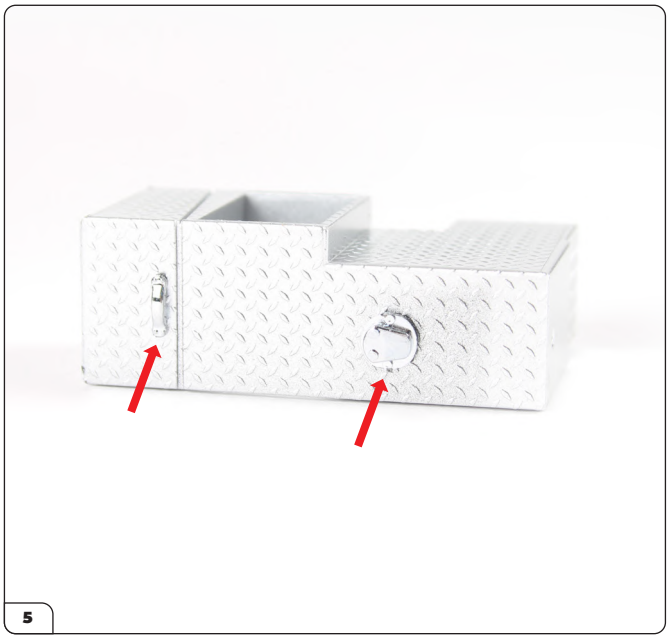


Take one of the handles (they are both the same) and press it firmly into the holes in the door.

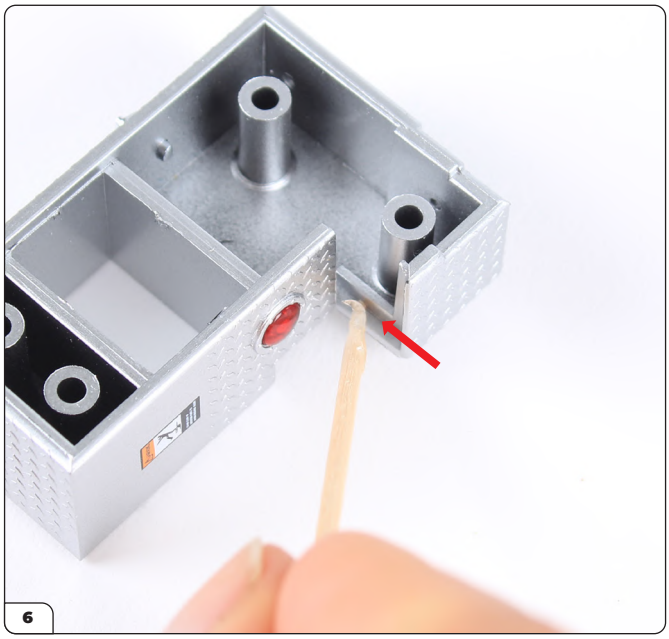


Fit the reflector into place on the front of the storage unit.

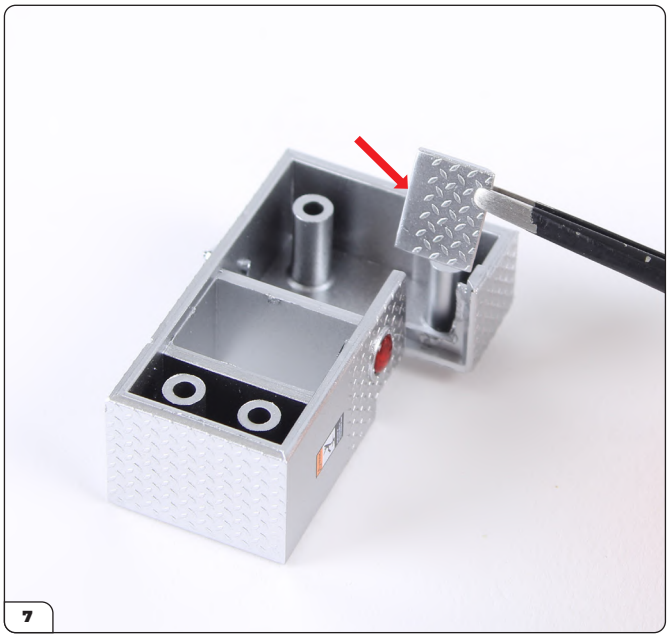
Stage 58: Assembling the Turntable Storage Unit



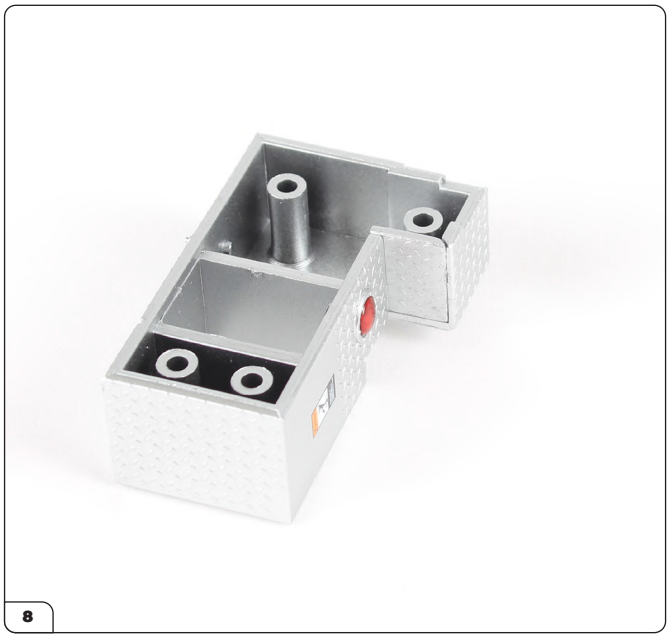
Fit the second handle and door lock onto the opposite side of the storage unit.



Apply a little glue to the recess on the storage unit as indicated in the picture above.

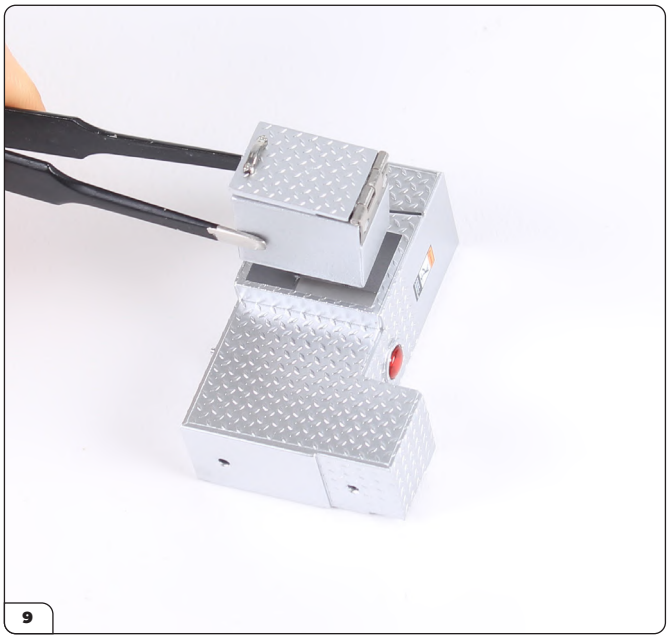


Slide the small panel into place in the recess - note the orientation of the smooth edge (arrow).



This shows the small panel correctly in position. Check the edges are nice and flush.

Stage 58: Assembling the Turntable Storage Unit

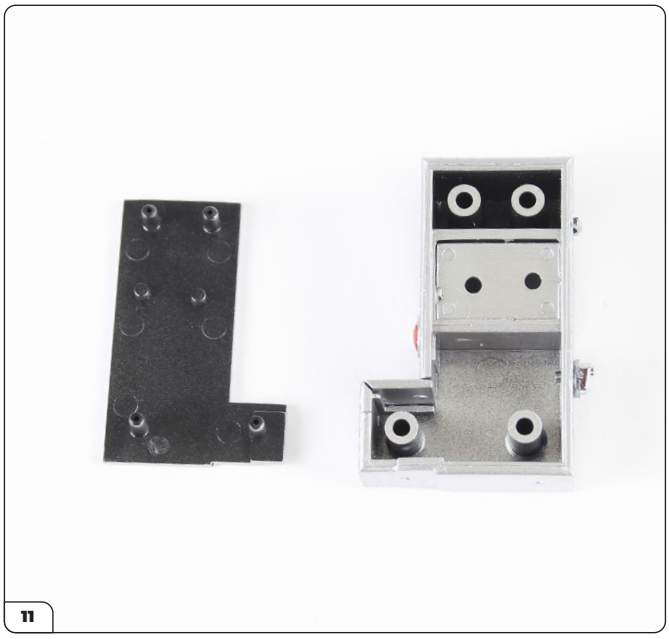


9

Align the small cabinet with the storage unit in the orientation shown.

10

Push the small cabinet into position.



11

Take the storage unit panel and note how the fixing points on the back correspond to the holes on the storage unit. Fit the parts together.

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Press firmly to fix into position, applying a little glue if necessary.

Stage 58: Assembling the Turntable Storage Unit

STAGE COMPLETE

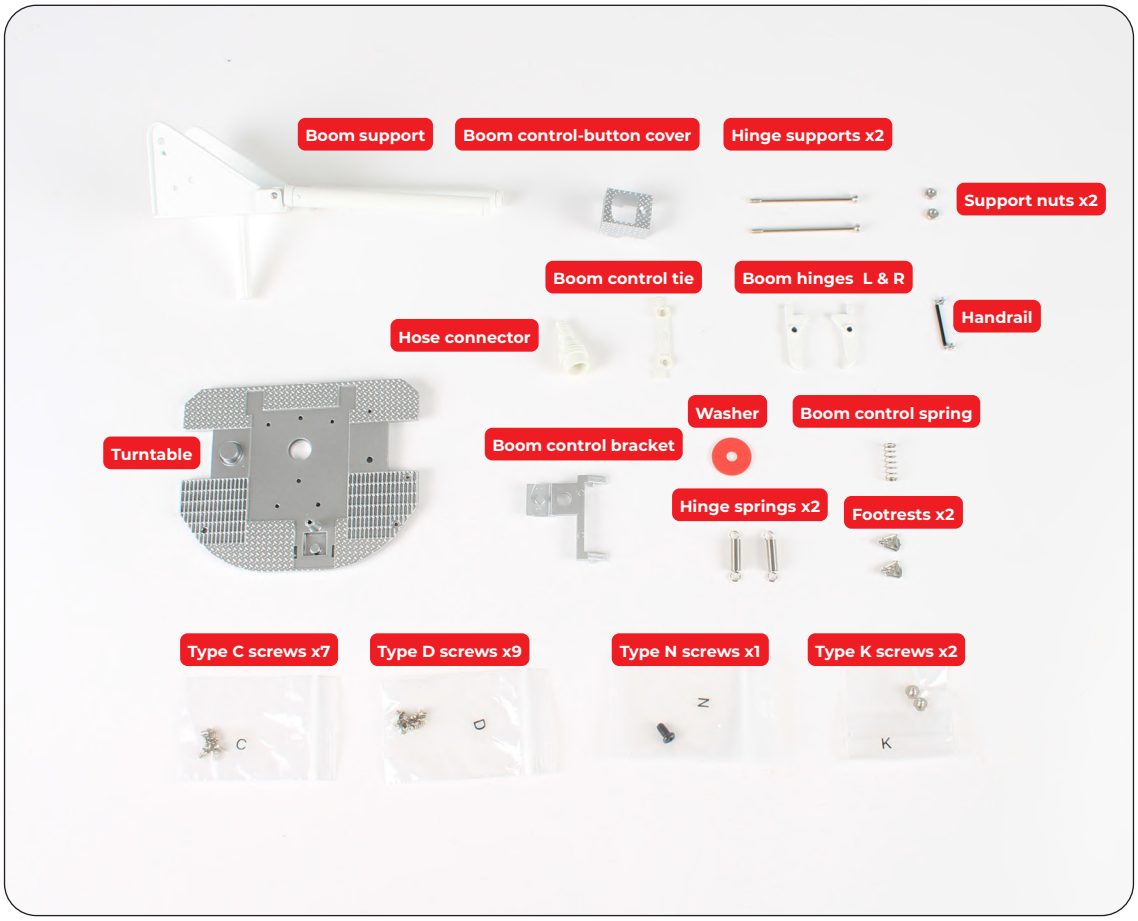
Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis

Your Ladder 9 Fire Truck will start to take shape as you attach the boom support to the turntable, attach the turntable, and connect the main body to the chassis.

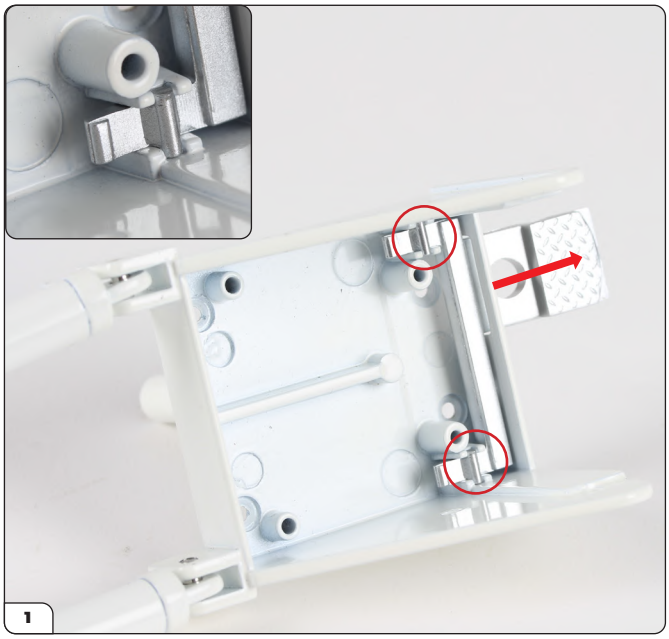
STAGE 59 PARTS LIST

Name
Boom support
Boom control-button cover
Hinge supports x2
Support nuts x2
Hose connector
Boom control tie
Boom hinges L & R
Handrail
Turntable

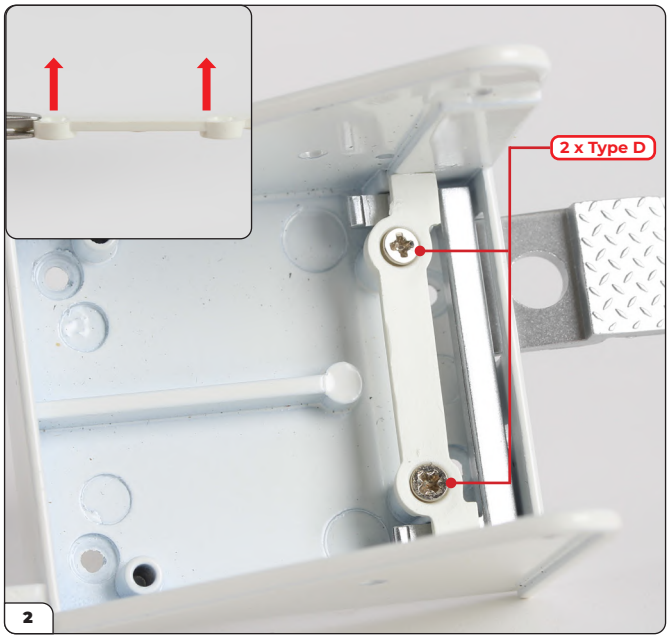
Name
Boom control bracket
Washer
Boom control spring
Hinge springs x2
Footrests x2
Type C screws x7
Type D screws x9
Type N screws x1
Type K screws x2



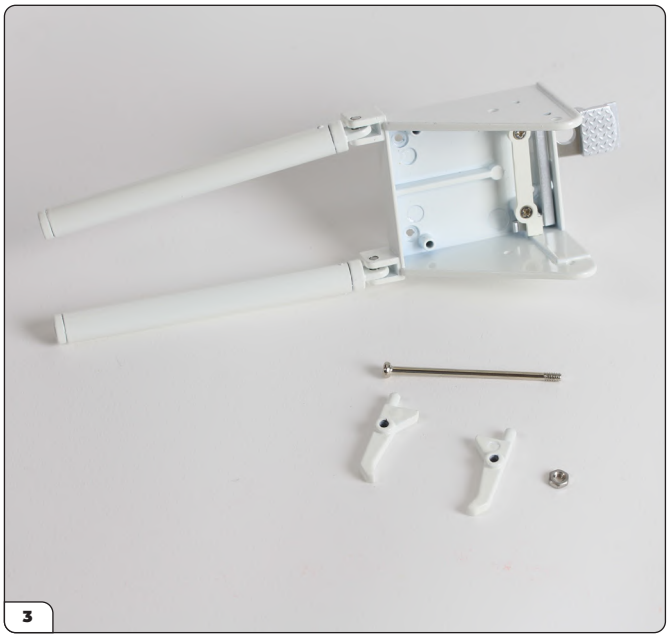
Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis



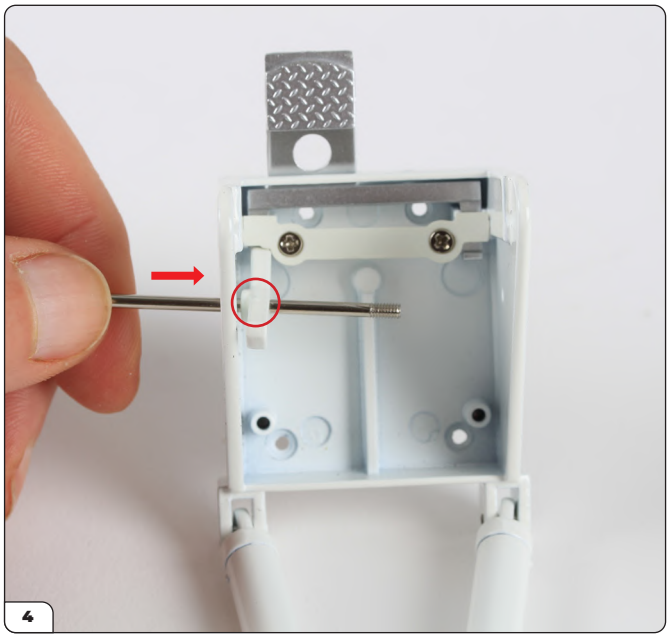
ASSEMBLING THE BOOM SUPPORT AND TURNTABLE
Take the boom support with the underside facing you, and the boom control bracket. Feed the rectangular part of the bracket through the slot in the support (arrow), then secure it in place by hooking the pins into position on each side (circled).



Place the boom control tie onto the raised screw holes, and push firmly over the pins. Note, the flat side of the control tie must face up (shown inset). Fix into place using 2 x Type D screws.

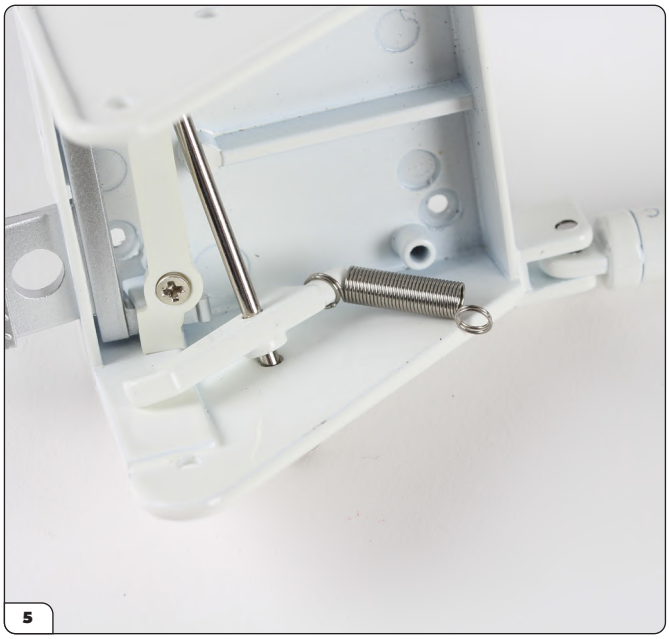


Get ready the boom hinges, 1 x hinge support, and 1 x support nut.

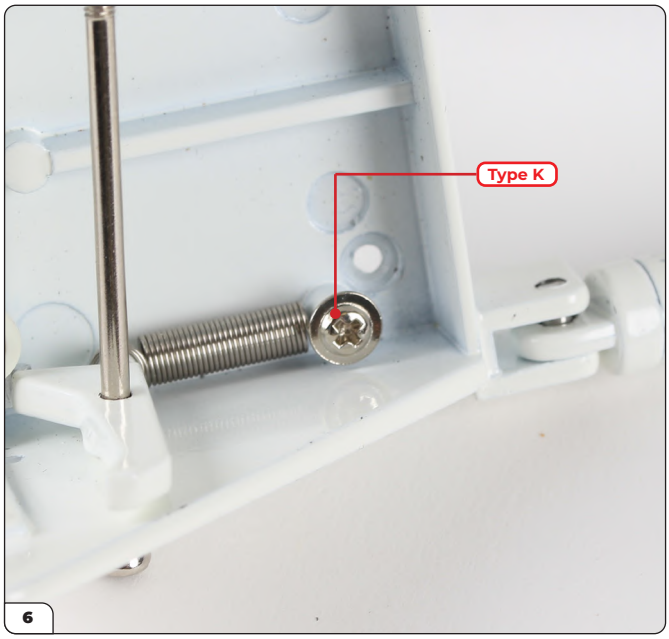


Feed the threaded end of the hinge support through the side of the boom support. Feed the left boom hinge onto the hinge support, checking that the flat side faces inwards against the inside wall of the boom support (circled).

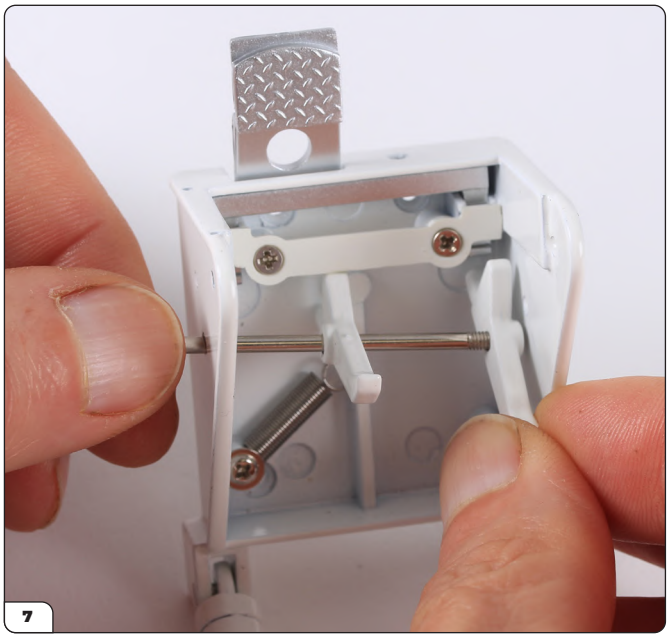
Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis



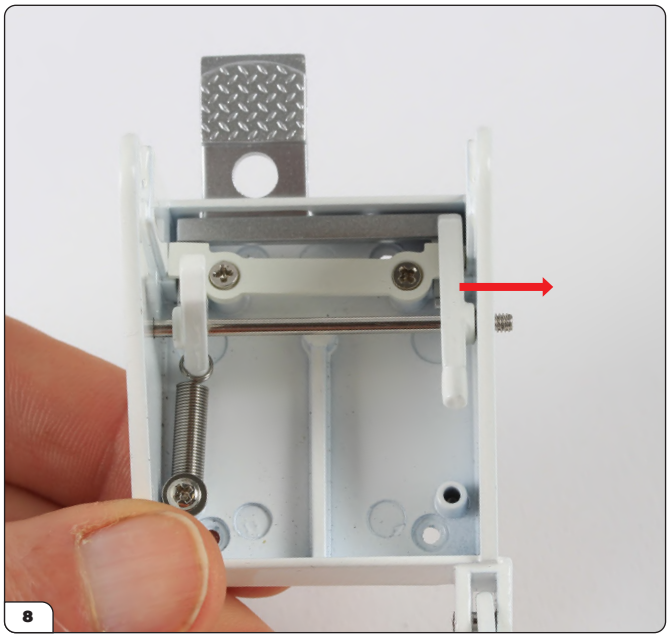
Hook 1 x hinge spring onto the straight end of the left boom hinge.



Hook the free end of the spring onto the raised screw post and secure in place using a Type K screw.

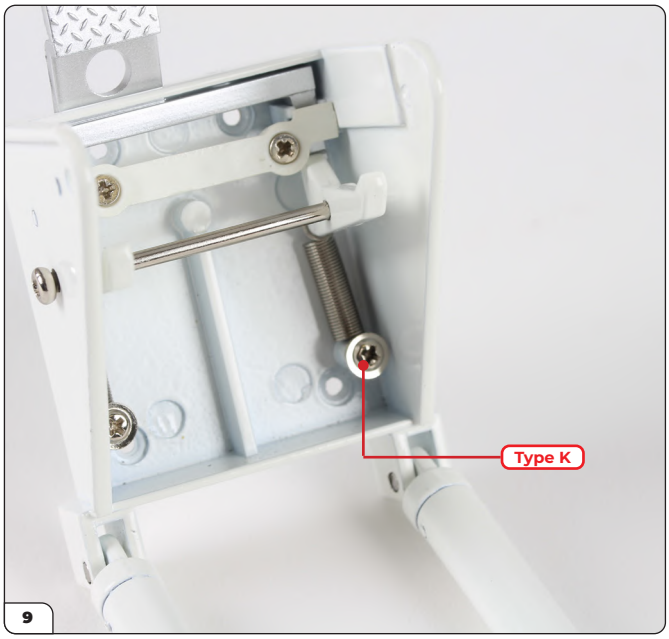


Feed the right boom hinge onto the hinge support so that the flat side faces inwards.



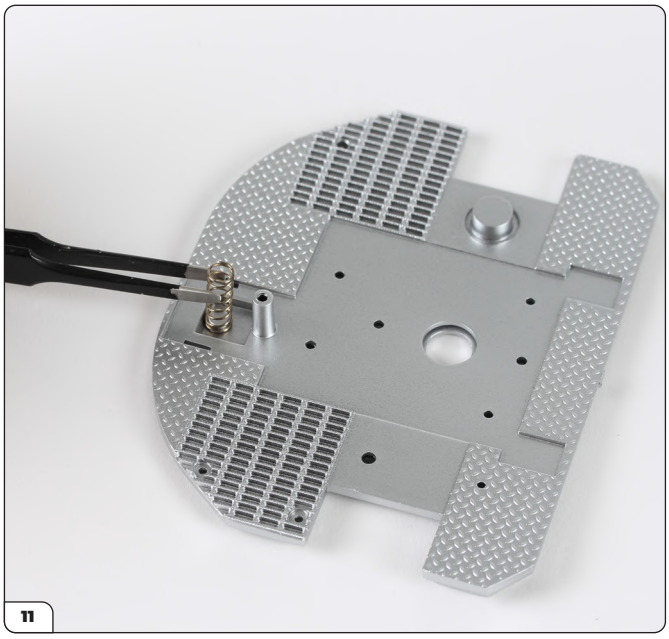
Continue to feed the hinge support through to the other side of the boom support.

Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis

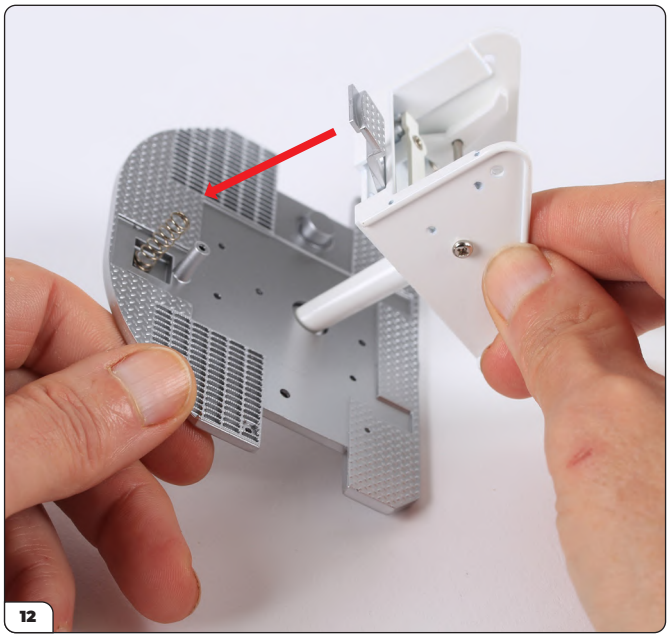


Hook the remaining hinge spring onto the straight end of the right boom hinge. Then hook the other end of the spring onto the raised screw post and secure in place using another Type K screw.

Once both hinges and springs are in place on the hinge support, secure the hinge support from the outside of the boom support using the support nut.

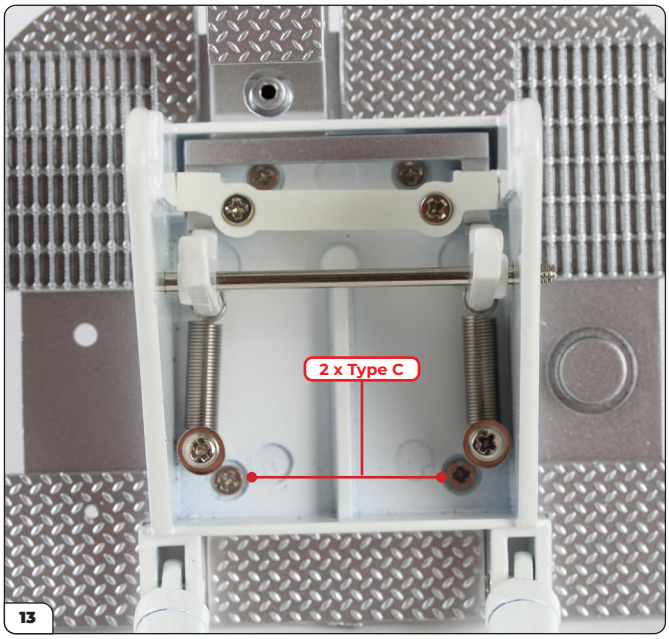


Take the turntable and place it on your work surface with the textured side up. Drop the boom control spring into the recess behind the raised screw post as shown.

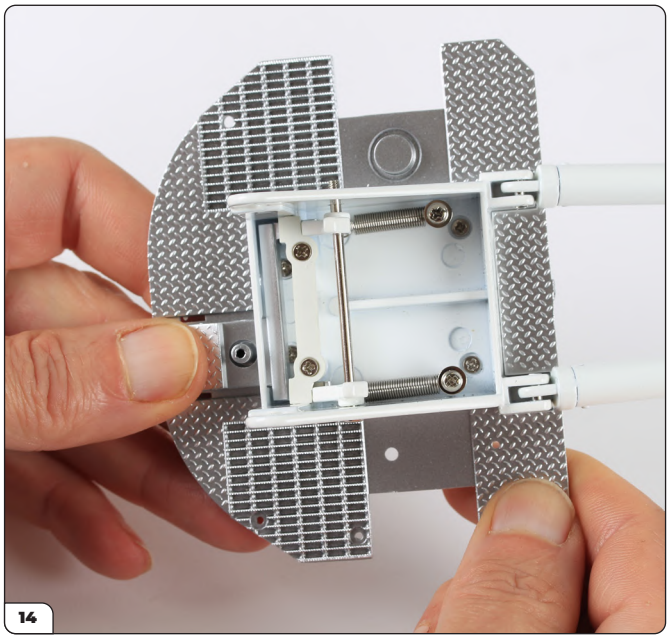


Feed the post on the boom support assembly into the large hole in the turntable. The boom control button should sit firmly over the boom control spring.

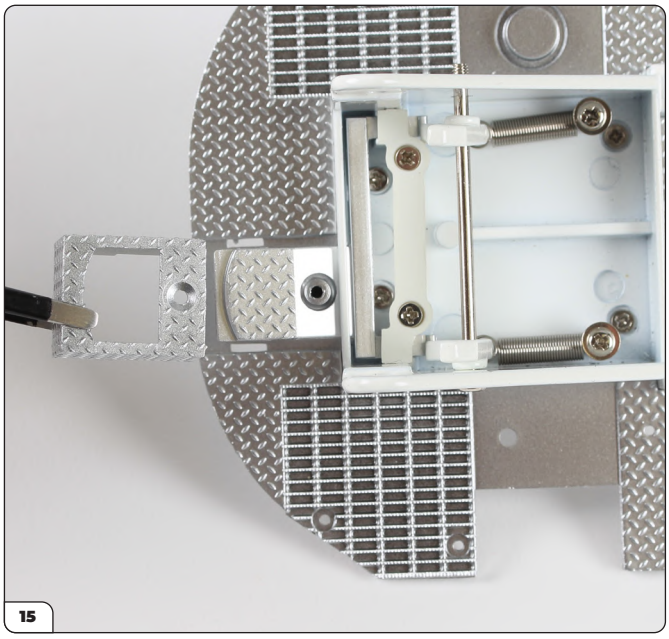
Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis



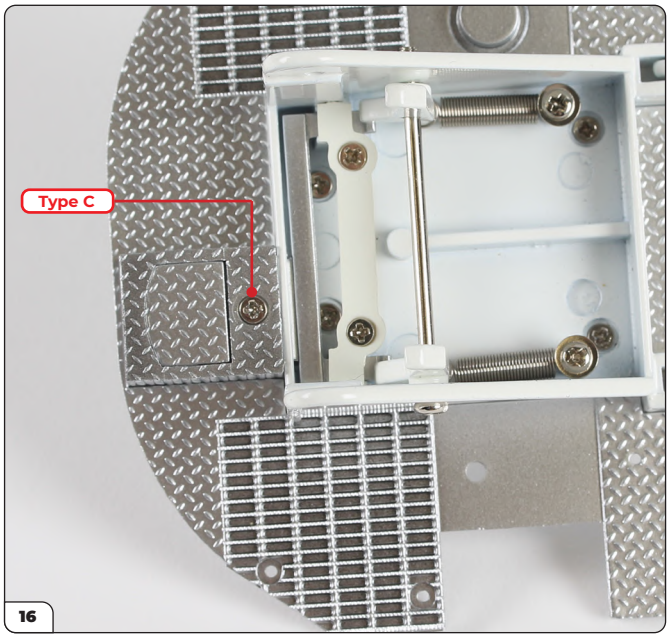
Secure the boom support to the turntable using 2 x Type C screws.



Check that the boom control button operates the spring.

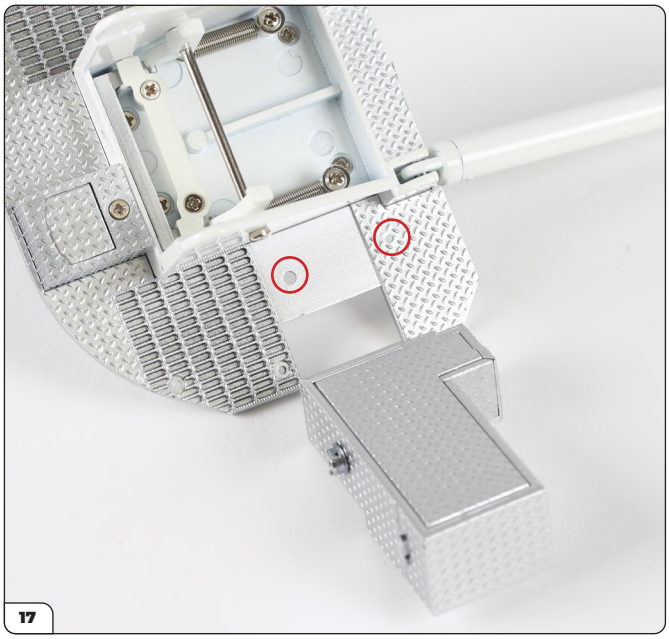


Position the boom control-button cover over the button.

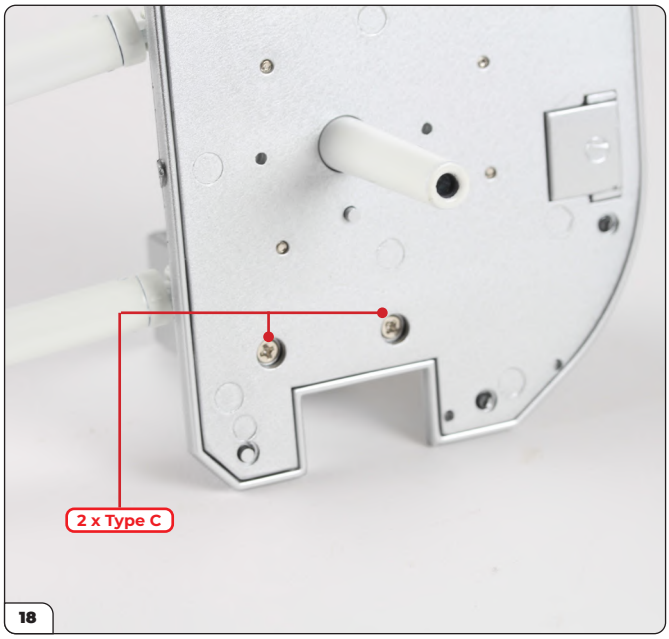


Secure it in place using a Type C screw.

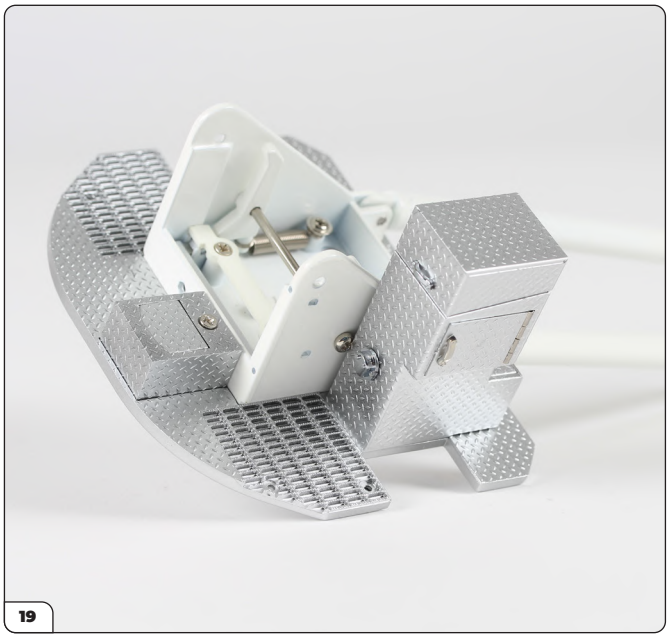
Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis



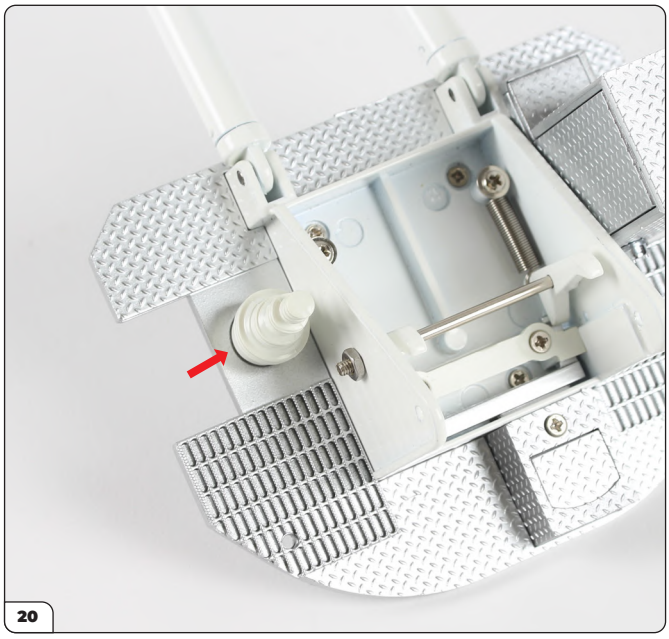
Prepare to fix the storage cupboard assembled in stage 58 to the turntable. Locate the fixing points on the bottom of the cupboard and align them with the 2 holes on the turntable (circled). Place in position.



Flip the turntable over and secure the cupboard from the underside using 2 x Type C screws.

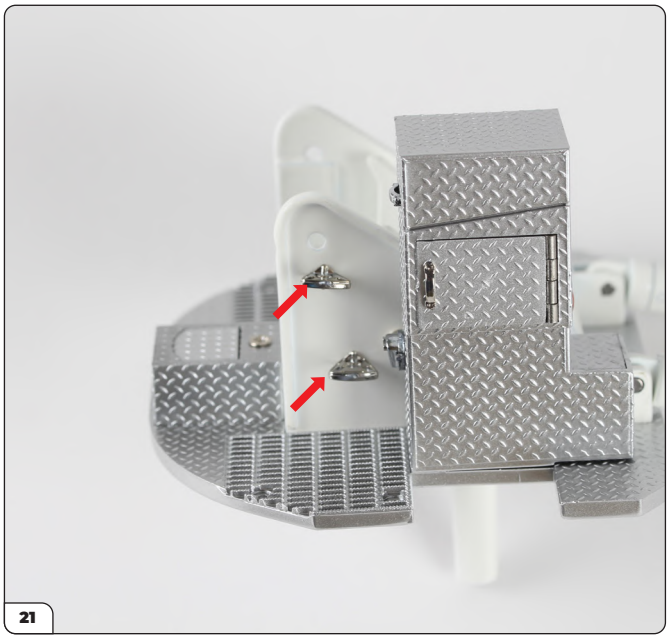


This is how your turntable should now look.

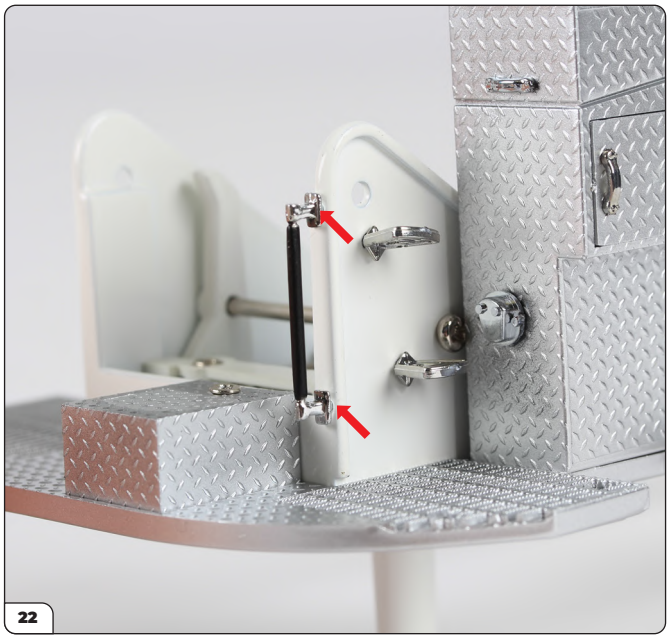


Push the hose connector into the circular recess on the turntable.

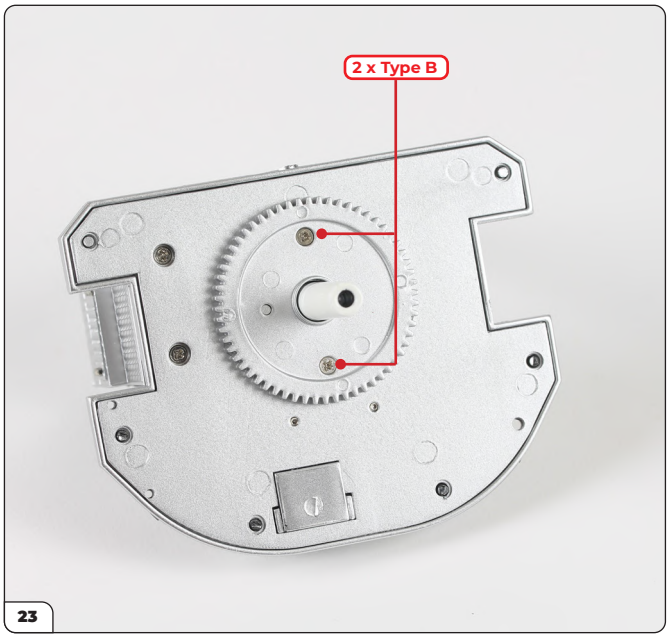
Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis



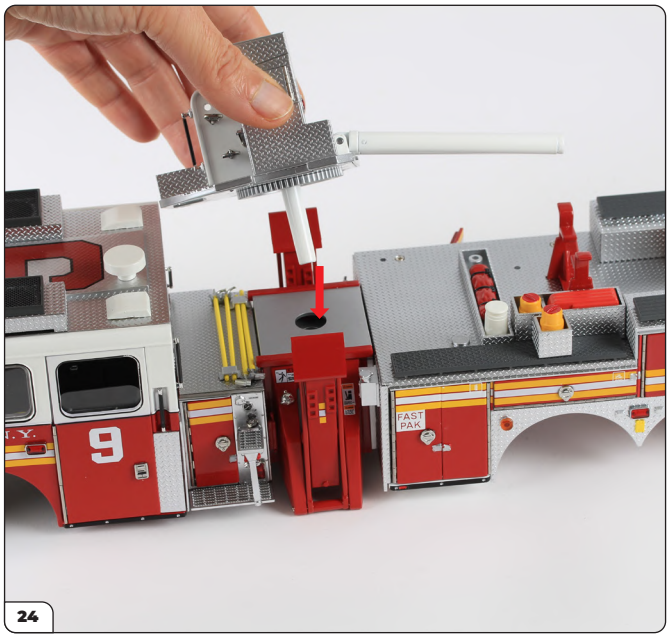
Push the 2 x footrests into the small holes on the boom support as shown. The flat side of each footrest faces up.



Push the handrail into position on the narrow edge of the boom support.



Take the turntable gear from stage 47 and slide it onto the boom support post that projects through the underside of the turntable, as shown in the picture. Secure it place using 2 x Type B screws.



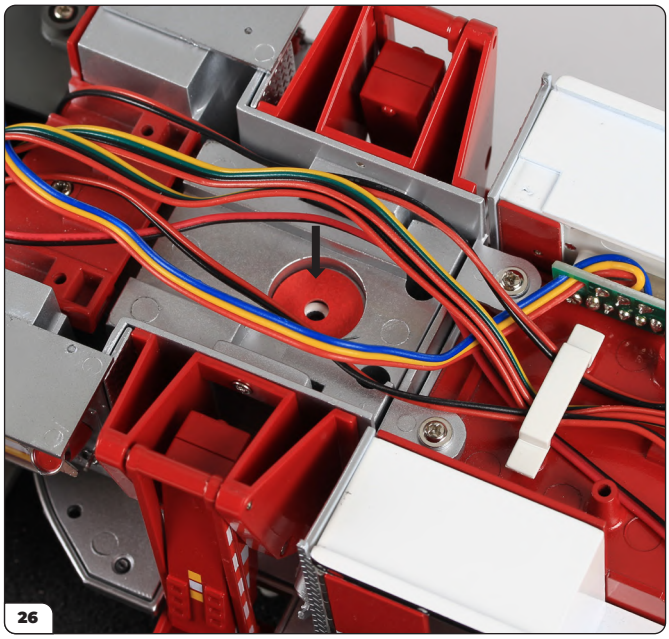
ATTACHING THE BOOM SUPPORT AND TURNTABLE TO THE MAIN BODY

With the main body of the fire truck now on your work surface, locate the turntable base. Lower the turntable assembly onto the base, feeding the boom support post through the central hole.

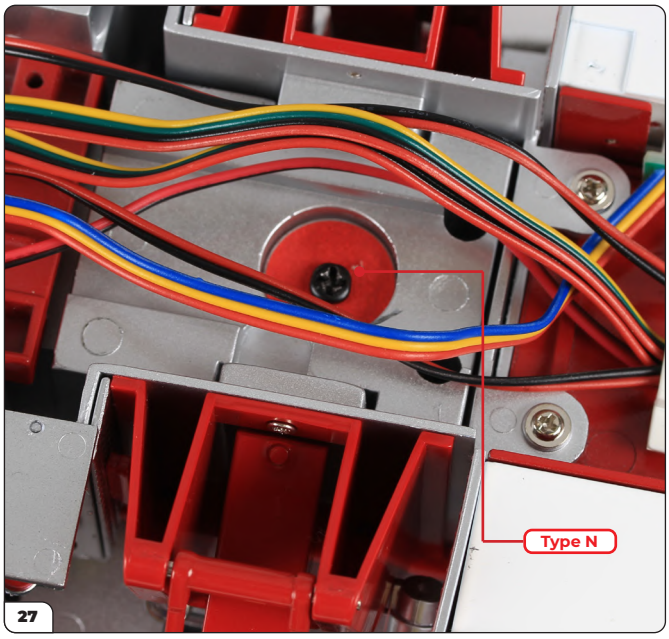
Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis

25

The turntable should sit comfortably in position.

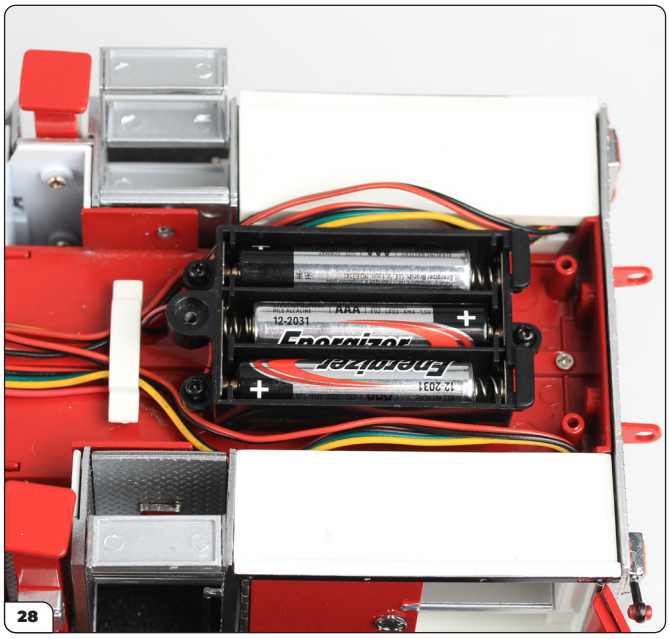

26

You'll now need to work on the underside of the model. We recommend using two pieces of thick foam as supports at both ends. When you are ready to work on the underside, take the washer and drop it into the hole on the underside of the turntable base (black arrow).



27

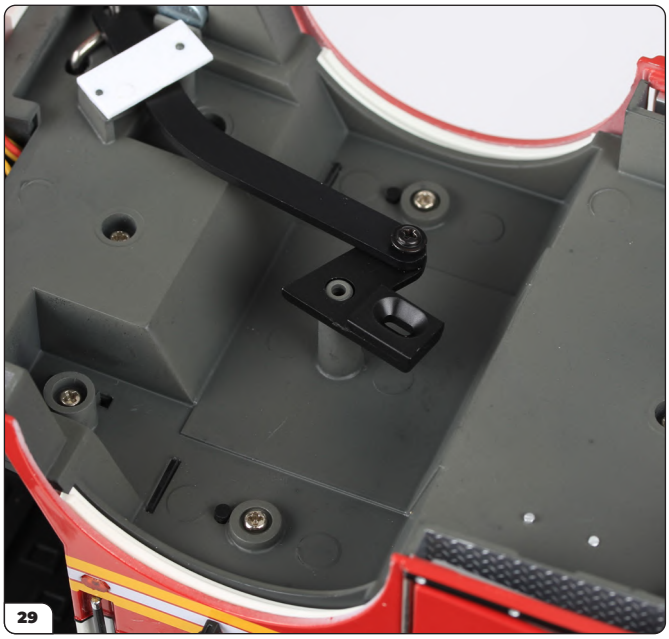
Secure the turntable and to the base using 1 x Type N screw.



28

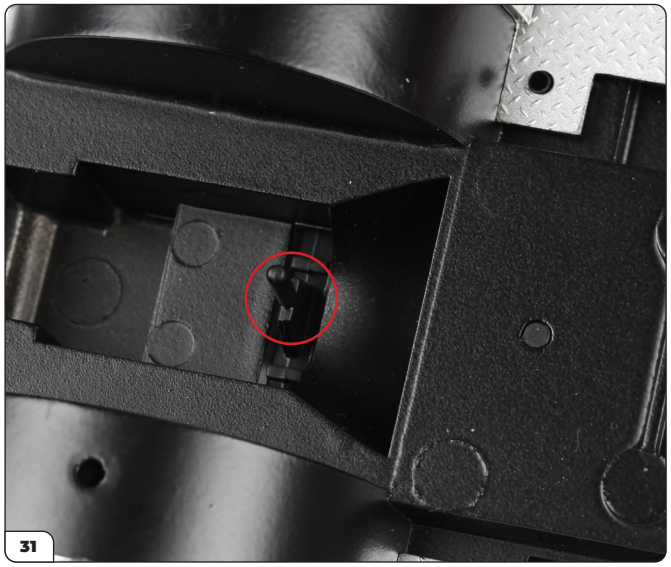
Before beginning the next steps, please remove the battery cover from the battery compartment.

Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis



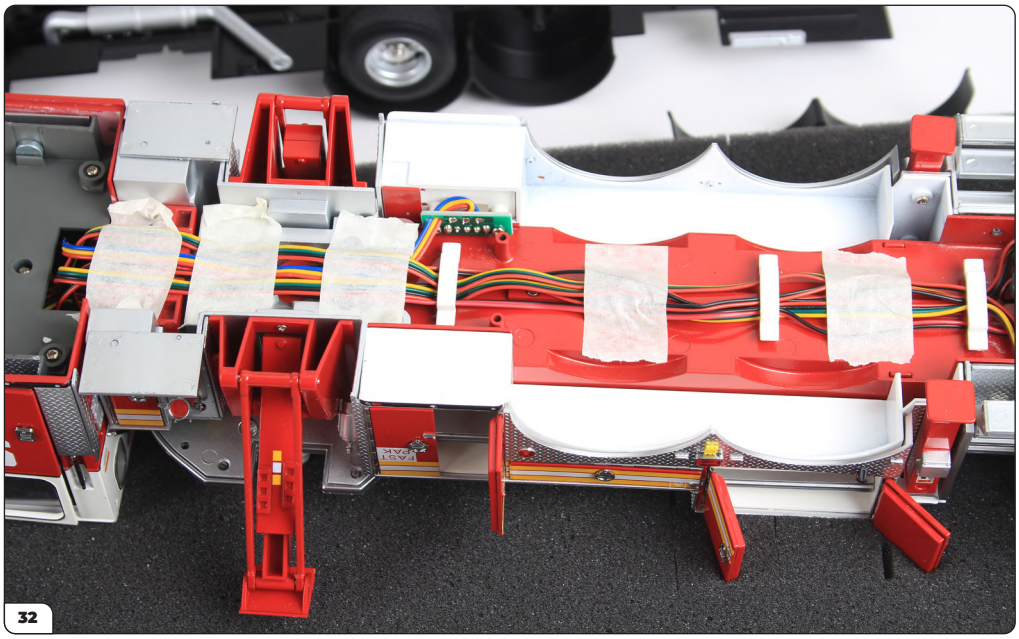
Hook the steering bracket to the post on the underside of the cab as shown.

Prepare to attach the main body to the chassis by aligning the two sections. You will also need the Type J screws.



Start by locating the short peg on the chassis, inbetween the 2 front wheels (circled).

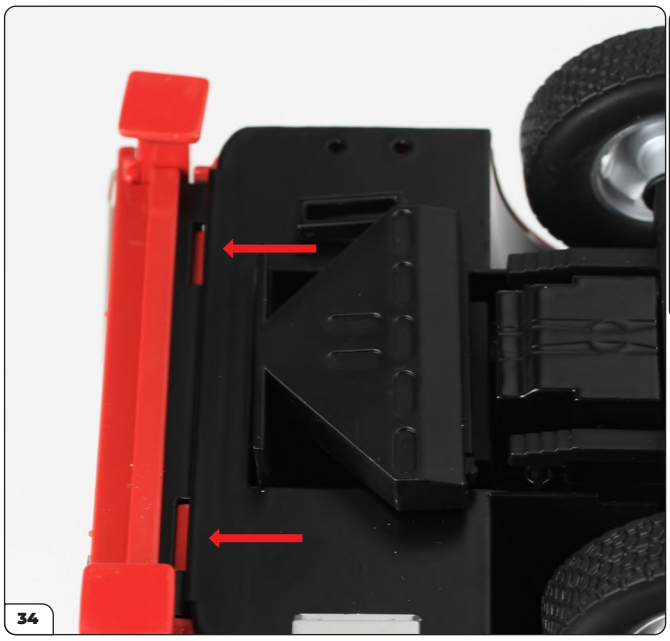
Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis



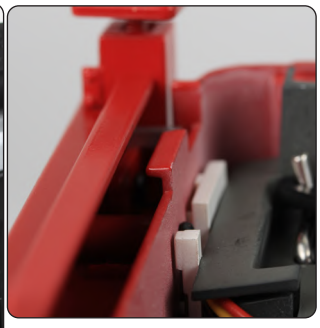
Flatten all the cables on the main body, taping them down to keep them in place. This is necessary to ensure a good fit between the body and the chassis.

Lower the chassis onto the main body, starting at the front end. The front egde must hook around two brackets under the front bumper - please see step 34.

Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis

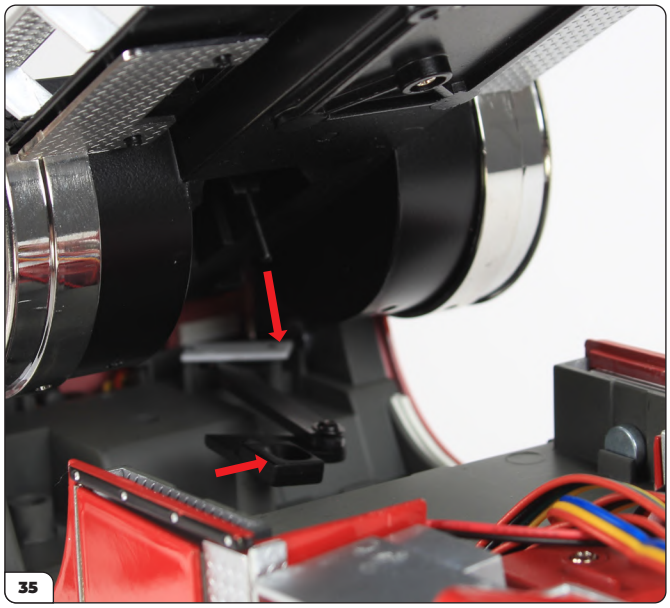


34

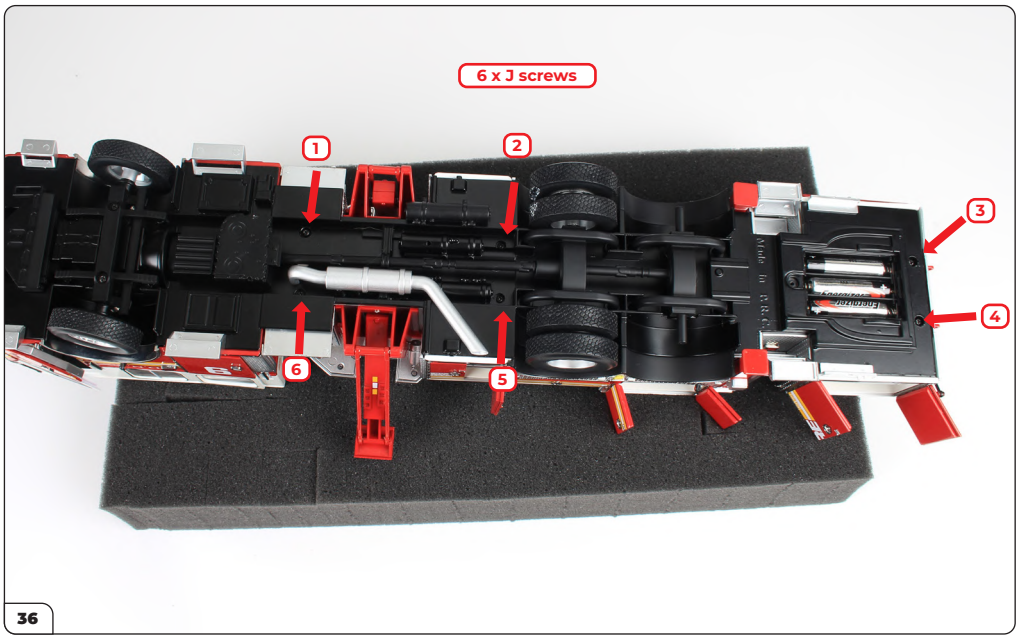


Here you can see the brackets under the front bumper that the chassis must hook around (inset), and also the chassis correctly fitted (arrows, main image).

Once the front edge is hooked around the brackets shown in step 34, lower the chassis onto the body. The peg indicated in step 31 must engage with the hole on the steering barcket.



35



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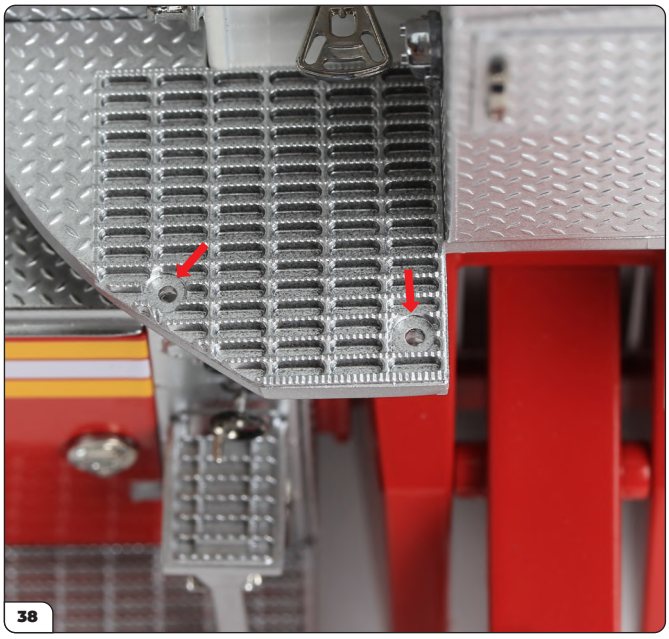
Continue to lower the chassis onto the main body, firmly pressing it into place, checking that the cables are not obstructing the screw holes. Squeeze the two sections together as you drive 6 x J screws from pack 2B into the positions indicated.

Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis

37

Prepare the handrail and handrail washers from Stage 47



38

Locate the 2 small holes on the turntable.

39

Place a handrail washer in each hole.

Stage 59: Assembling the Boom Support and Attaching the Main Body to the Chassis

Apply a little glue to the handrail posts before fixing it into the washers.

STAGE COMPLETE

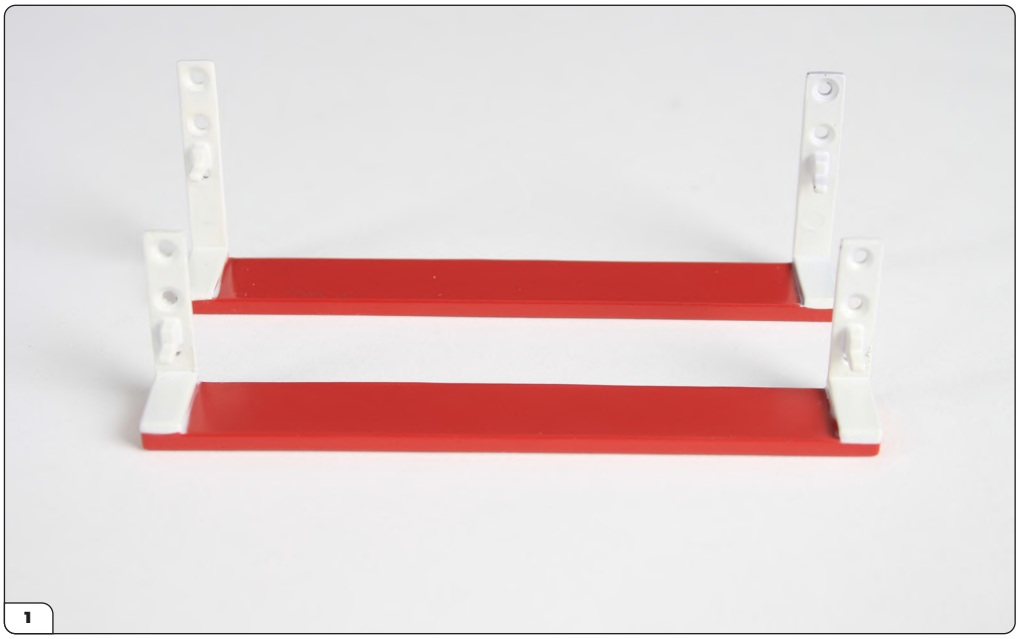
Stage 60: Components for the Left-hand Bed Section

In the next two stages, you'll start to assemble the first boom section, known as the Bed Section. Stage 60 adds components to the left-hand side, stage 61 mirrors these steps for adding components to the right-hand side.

STAGE 60 PARTS LIST

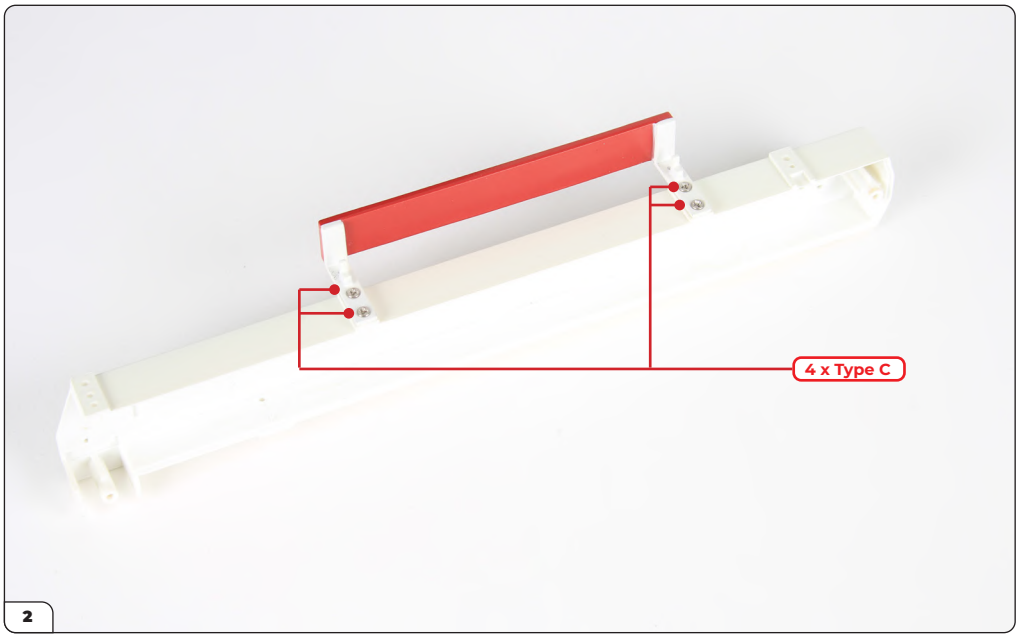
Name
Left-hand bed section
Spotlight
Spotlight lens
Name plate
Type C screws x5
Type I screws x2

Stage 60: Components for the Left-hand Bed Section



1

Take the ladder name plates supplied with stage 1 and stage 9. Note that the fixing brackets on either side are of different lengths.



2

Fix the name plate with the shorter brackets to the left-hand bed section using 4 x Type C screws.

Stage 60: Components for the Left-hand Bed Section

3

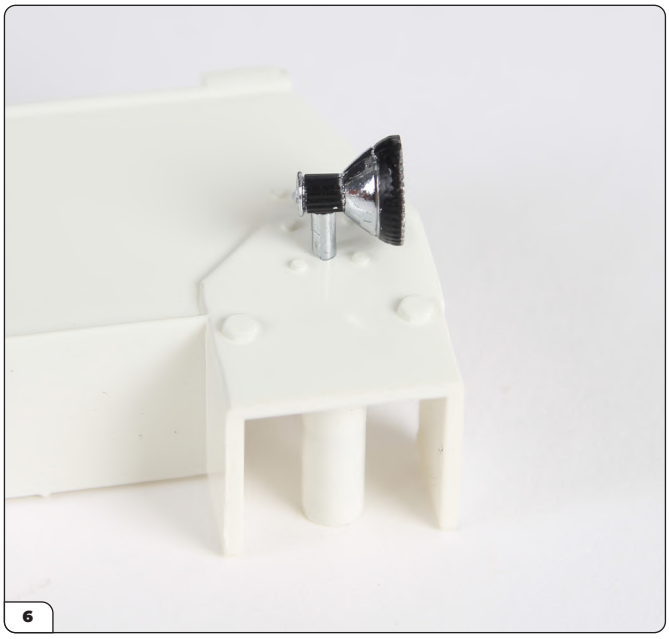
Apply a little glue and fix the *Aerialscope 75* name plate in the recess on the front of the bed section.


4

Take the spotlight and spotlight lens.


5

Apply a little PVA glue before attaching the lens to the spotlight.


6

Push the spotlight into the hole at the end of the bed section in the orientation shown. The light should face the end of the boom.

Stage 60: Components for the Left-hand Bed Section

STAGE COMPLETE

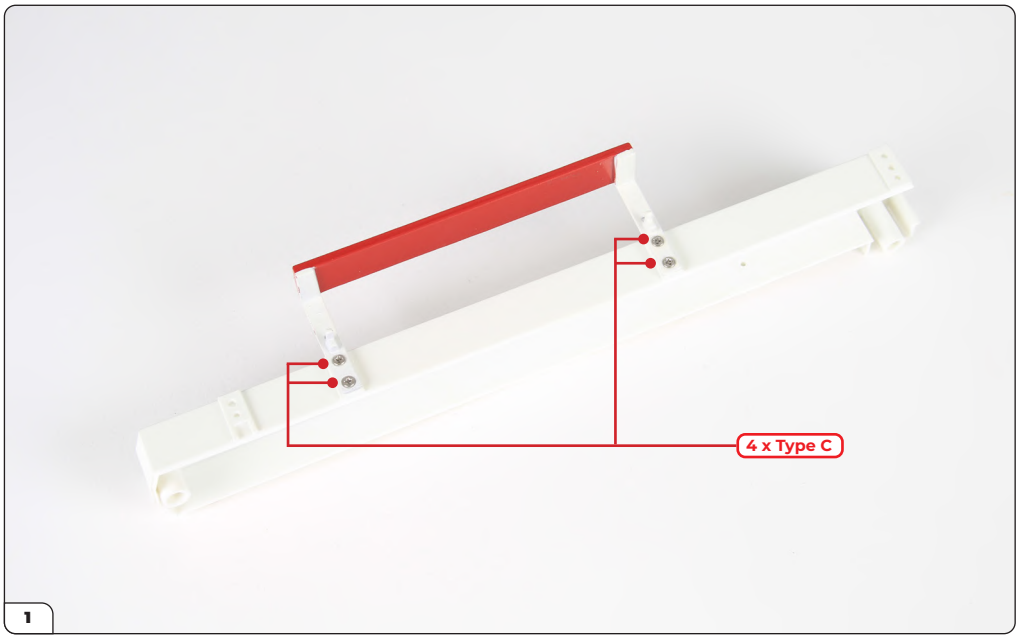
Stage 61: Components for the Right-hand Bed Section

The same steps are repeated for adding components to the right-hand boom section.

STAGE 61 PARTS LIST

Name
Right-hand bed section
Name plate
Spotlight lens
Spotlight
Type C screws x4

Stage 61: Components for the Right-hand Bed Section



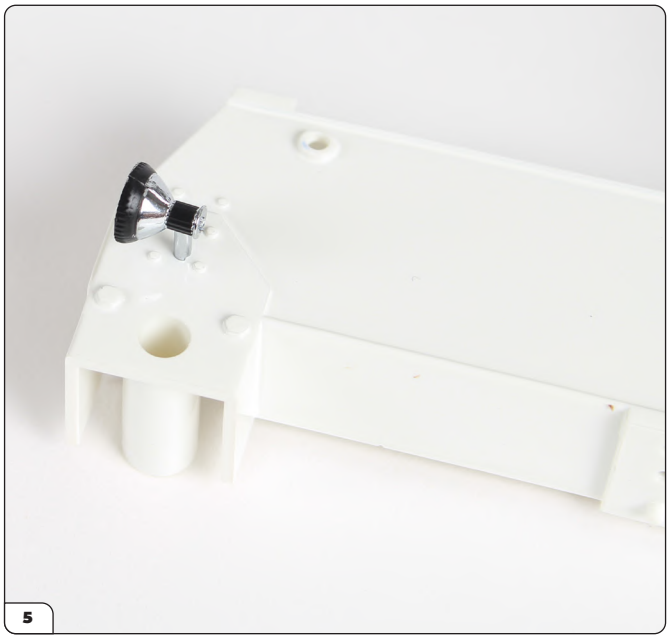
Fix the name plate with the longer brackets to the right-hand bed section using 4 x Type C screws.

Apply a little glue and fix the *Aerialscope 75* name plate in the recess on the front of the bed section.

Stage 61: Components for the Right-hand Bed Section

Take the spotlight and spotlight lens.

Apply a little PVA glue before attaching the lens to the spotlight.



Push the spotlight into the hole at the end of the bed section in the orientation shown. The light should face the end of the section.

STAGE COMPLETE

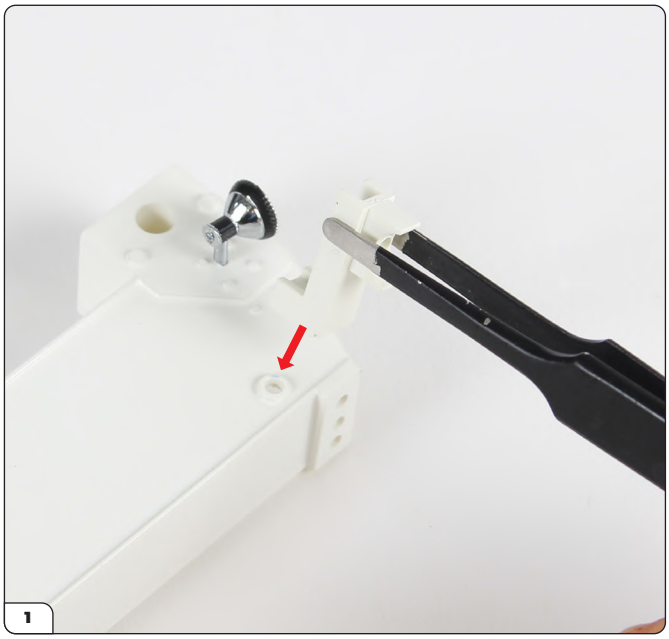
Stage 62: Fitting the Bed Section to the Boom Support

In the next stage, the two halves of the bed section are fitted together. The cogs will be attached before fixing the bed section to the boom support. This pack is then completed with the start of the hose assembly.

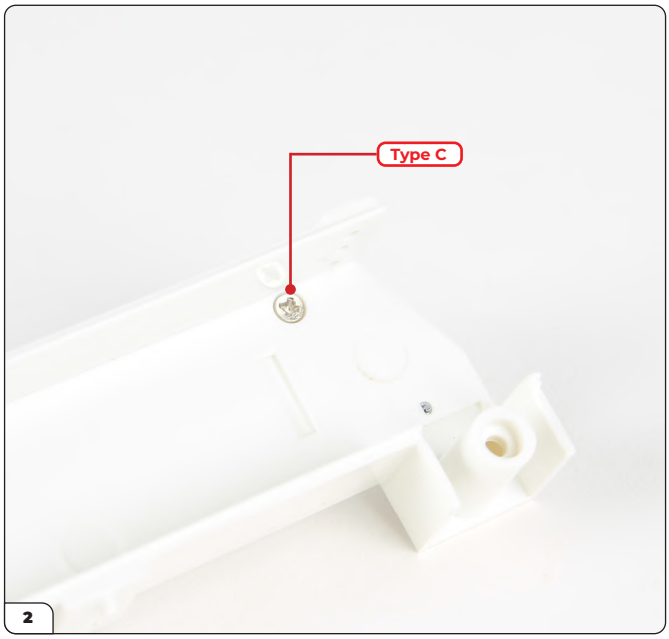
STAGE 62 PARTS LIST

Name	Name
Right boom cog	Left Piston bracket
Right Piston bracket	Pipe c
Pipe a	Pipe d
Pipe b	Type G screws x2
Ladder bracket	Type C screws x4
Left boom cog	Type H screws x2

Stage 62: Fitting the Bed Section to the Boom Support

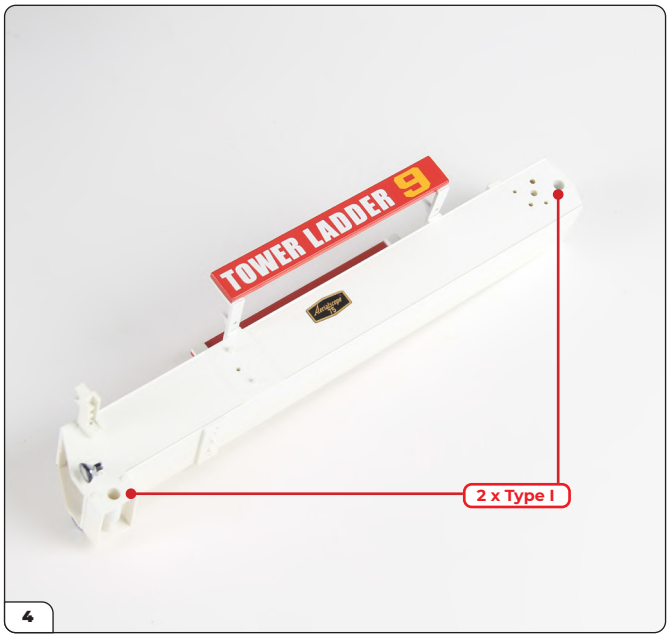


ASSEMBLING THE BED SECTION
Take the ladder bracket and the right hand bed section. Align the screw holes as shown.



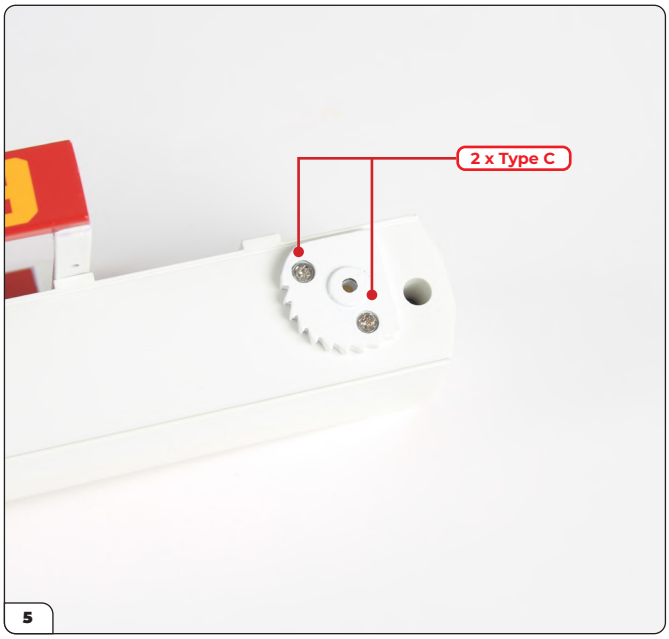
Flip the bed section over and fix the ladder bracket in place from the underside using a Type C screw from stage 60.

Line up the two bed sections, ready to fix them together. Check the spotlights are at the same end on both sides.

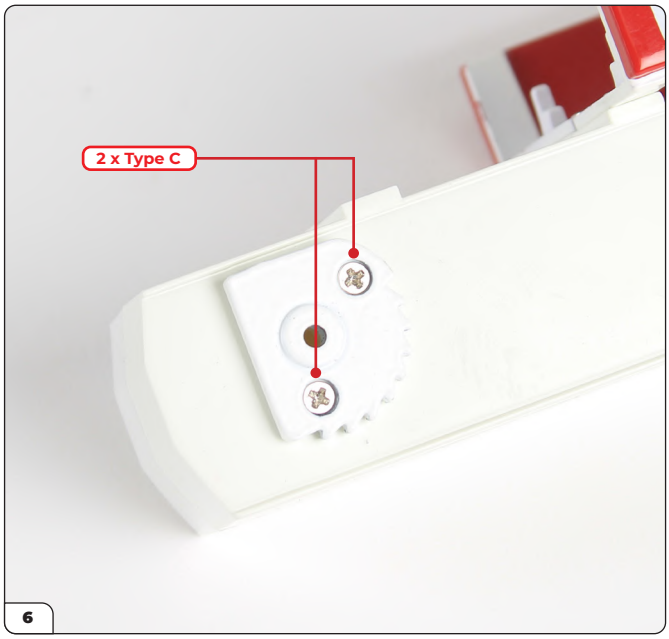


Join the two sections together, then secure them using 2 x Type I screws from stage 60.

Stage 62: Fitting the Bed Section to the Boom Support

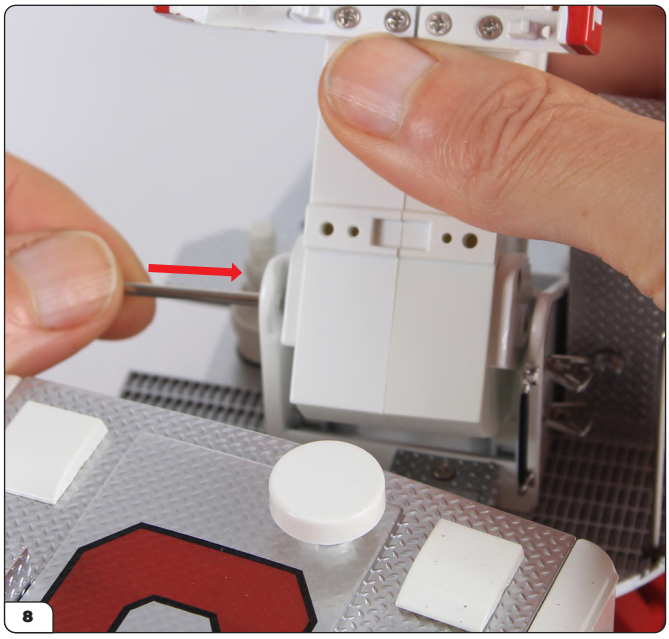


Fit the right boom cog to the right-hand side of the bed section using 2 x Type C screws.



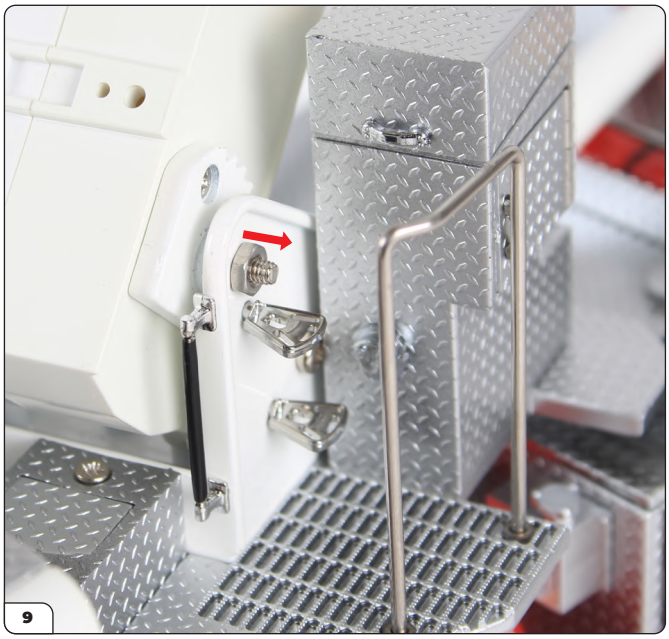
Repeat this step to fit the left boom cog to the left-hand side, and fix in place using another 2 x Type C screws.

The first bed section of the boom can now be attached to the boom support. Start by lowering the end of the bed section with the cogs into the boom support brackets.

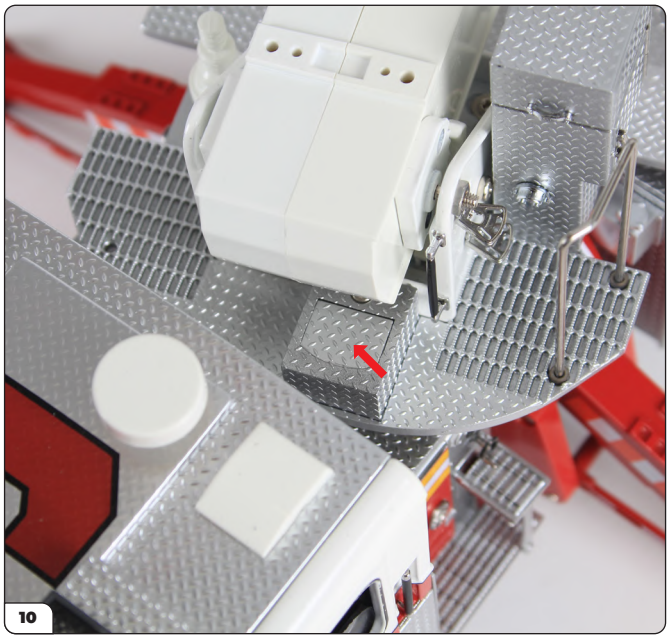


Feed the remaining hinge support from stage 59 through the hole in the outside face of the boom support bracket, through the bed section, and out through the other side (see step 9).

Stage 62: Fitting the Bed Section to the Boom Support


9

Secure the hinge support by screwing on the remaining support nut from stage 59.


10

Movement of the boom is operated by the boom control button. Check its operation now by pressing it firmly. As you press the button, gently lift the boom to disengage it from the cog before raising and lowering.

11

Fix the left piston bracket to the left-hand side of the bed section using a Type H screw.

Stage 62: Fitting the Bed Section to the Boom Support

12

The elevator pistons from stage 47 can now be fitted. Slide one of the pistons into the piston tube on the boom support.

13

Fit the free end of the piston into the piston bracket.

14

Fix it in place with a Type G screw.

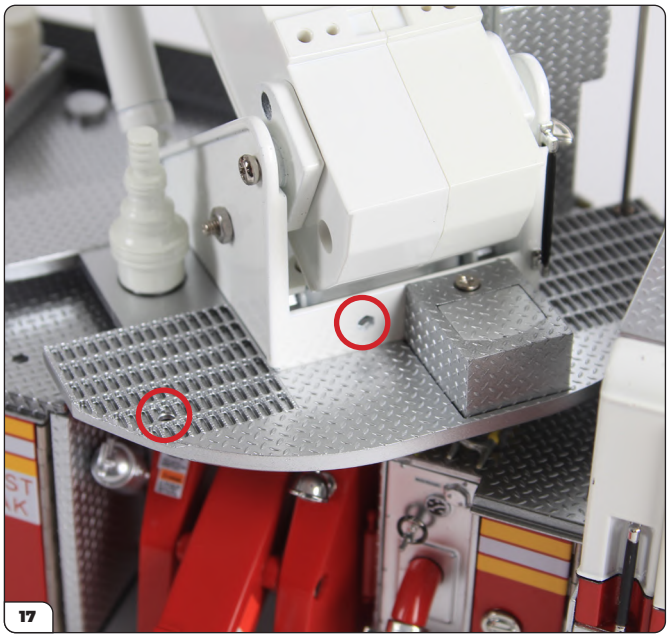
Stage 62: Fitting the Bed Section to the Boom Support

15

Repeat steps 11–14 on the opposite side. First attach the right-hand piston bracket using a Type H screw.

16

Slide the remaining piston from stage 47 into the piston tube. Fix the free end of the piston to the piston bracket with another Type G screw.


17

Locate the two fixing points for the water pipe from stage 58, circled above.

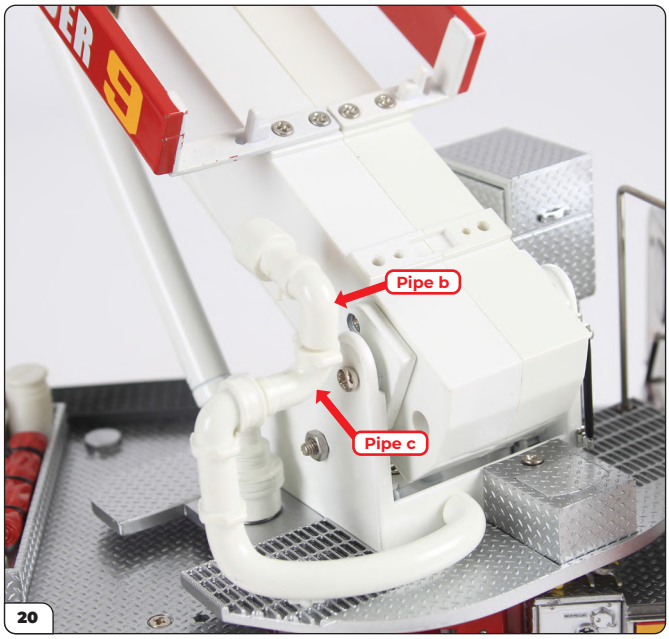

18

The corresponding fixing points on the water pipe are circled in the picture above.

Stage 62: Fitting the Bed Section to the Boom Support

19

Push the water pipe into the fixing points in the orientation shown.



20

Push pipe c into the end of the water pipe; then add pipe b so that it faces in the same direction as the boom. **Do not glue** pipe b to pipe c as they must be free to move.

STAGE COMPLETE