

U 96

U-BOAT

Pack 16

Assembly Instructions

Kit 61: Five LED cables

Kit 62: The third magnet

Kit 63: Starboard hull section

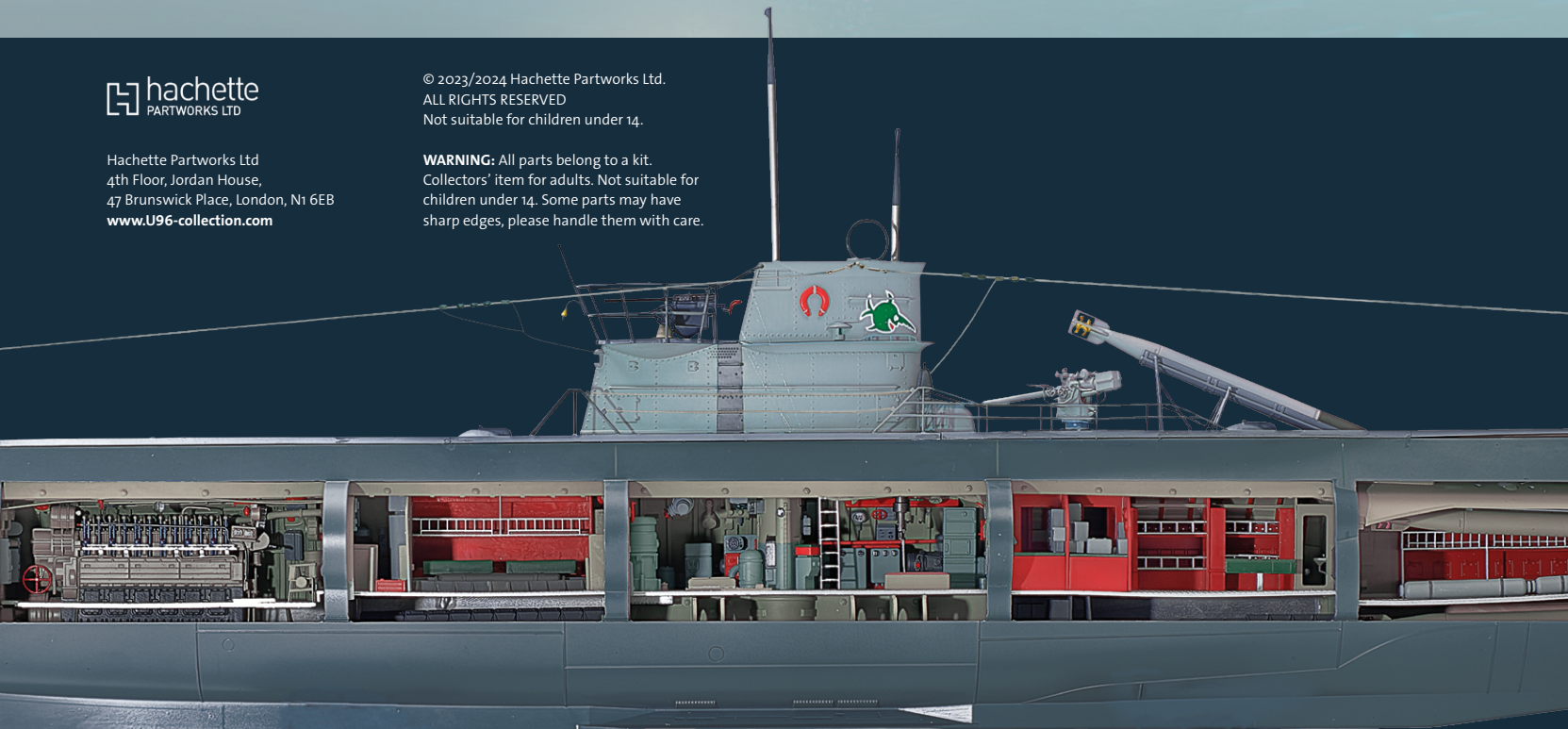
Kit 64: The engine room



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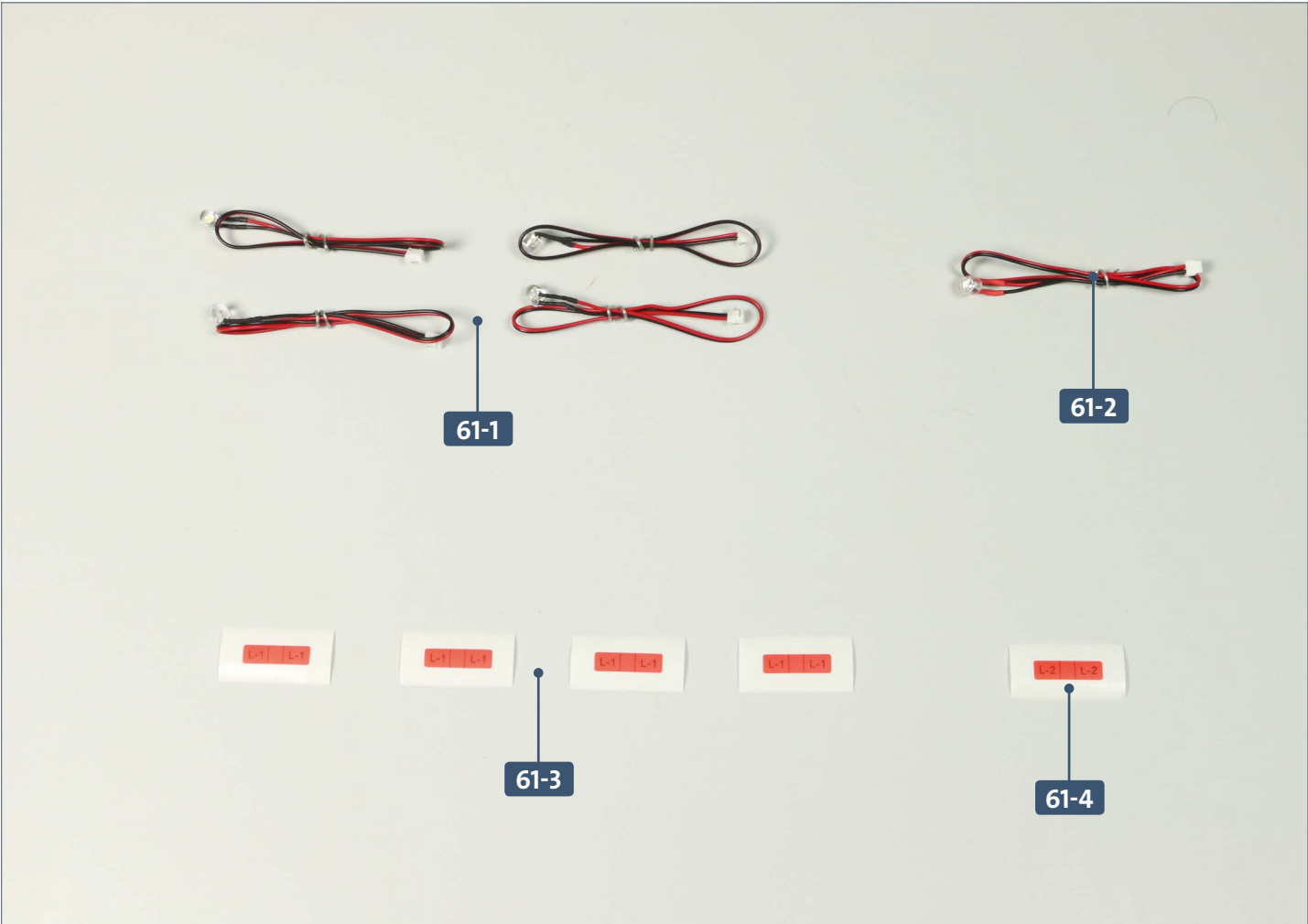
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Not suitable for children under 14.

WARNING: All parts belong to a kit.
Collectors' item for adults. Not suitable for
children under 14. Some parts may have
sharp edges, please handle them with care.



Kit 61: Five LED cables

The five supplied LEDs are installed in the deckhead of the fourth compartment before assembly work on the compartment is completed.



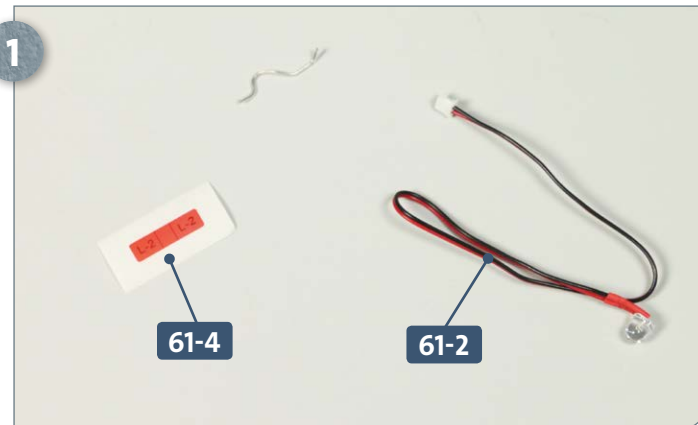
Parts reference list	
Part no.	Name
61-1	White LED cable (x 4)
61-2	Red LED cable
61-3	Cable labels (L-1)
61-4	Cable labels (L-2)



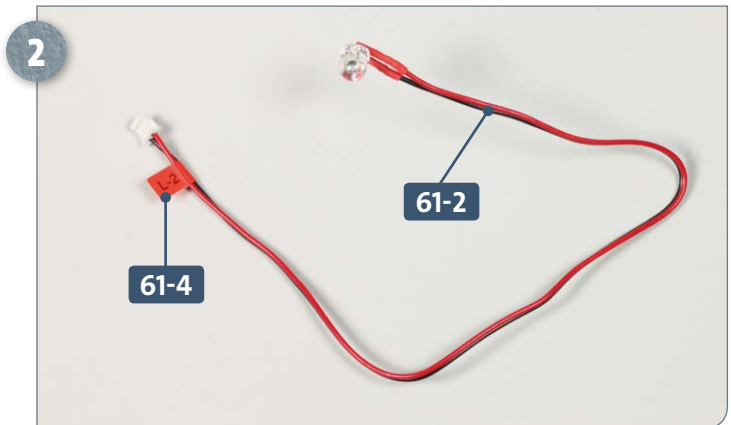
Screws		
Ref	No.	Dimensions
EP	8+1	2.3 x 6 mm

Kit 61: Five LED cables

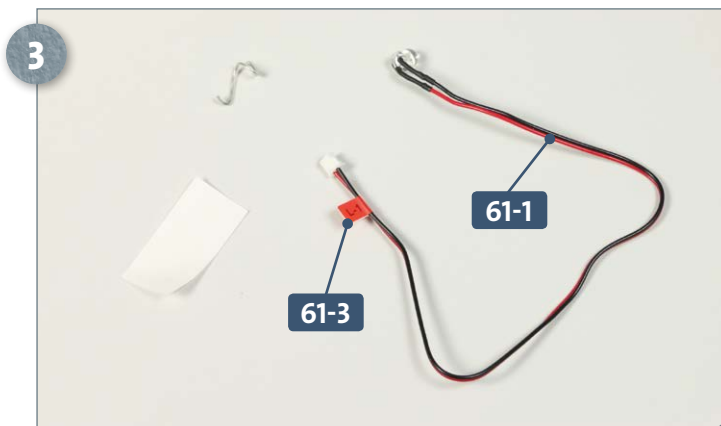
STAGE 1 → Routing the five cables



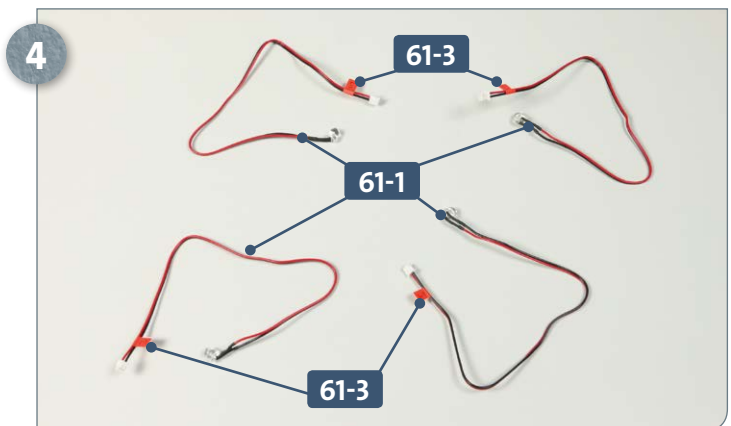
Remove the tie from the red LED cable (with the red sleeve) **61-2** and take the cable label **61-4**.



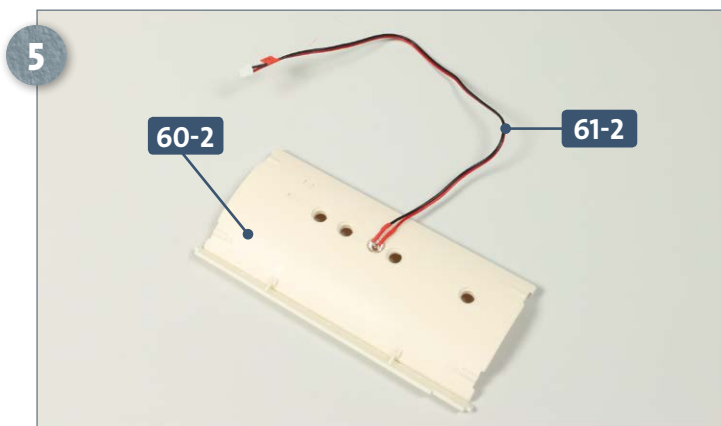
Remove the cable label **61-4** with 'L2' printed on it from the backing film, and wrap it around the LED cable **61-2**, approximately 8mm from the connector end.



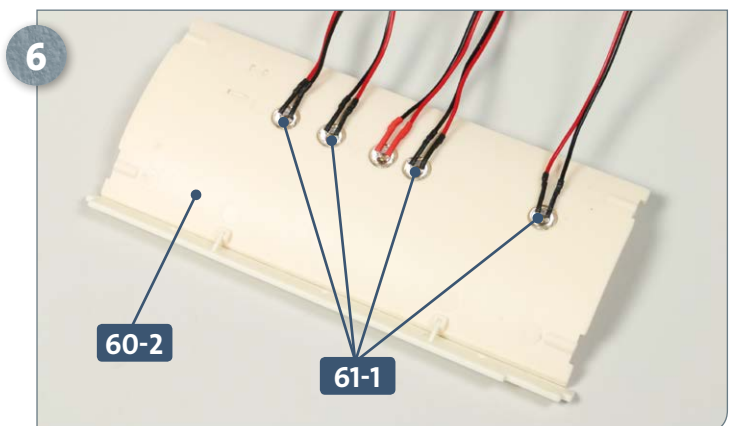
Take one of the white LED cables **61-1** (with the black sleeve). Remove one of the corresponding cable labels **61-3** labelled 'L1' from the backing film and wrap it around the connector end of the cable, as pictured.



Repeat the previous step with the three remaining white LED cables **61-1** and cable labels **61-3**. Check the five LED cables are working correctly by connecting them to the test PCB **3-8** (refer to kit 43 for instructions, if needed).

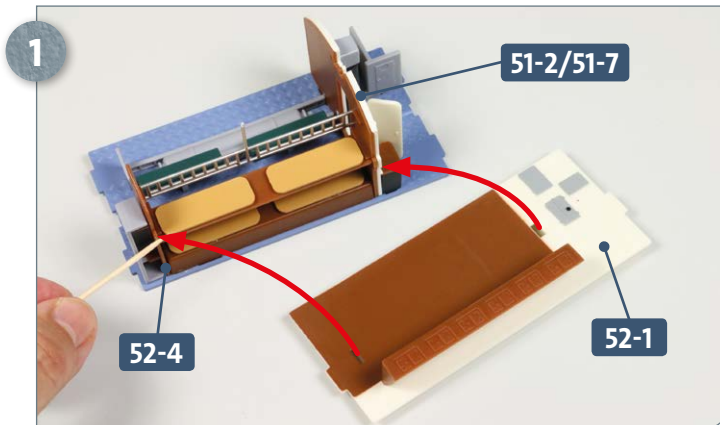


Insert the red LED **61-2** into the hole in the fourth compartment deckhead panel **60-2**, as pictured above.

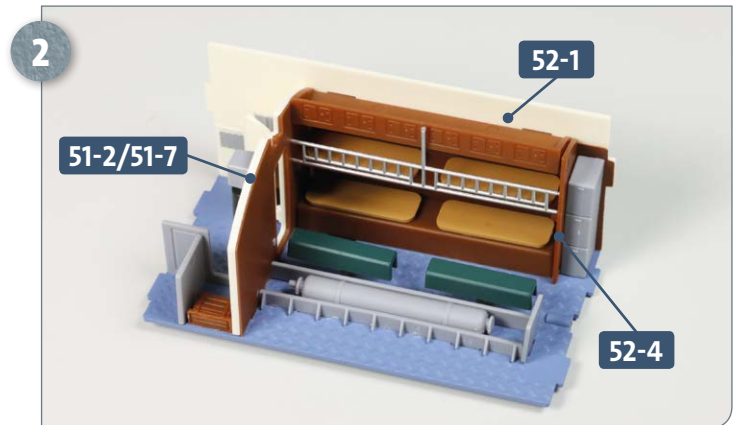


The four white LEDs **61-1** are to be inserted in the remaining holes in the deckhead panel **60-2**, as pictured.

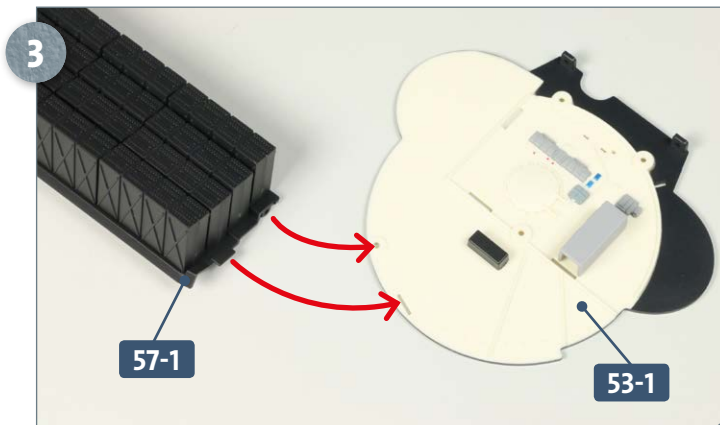
STAGE 2 → Assembling the fourth compartment



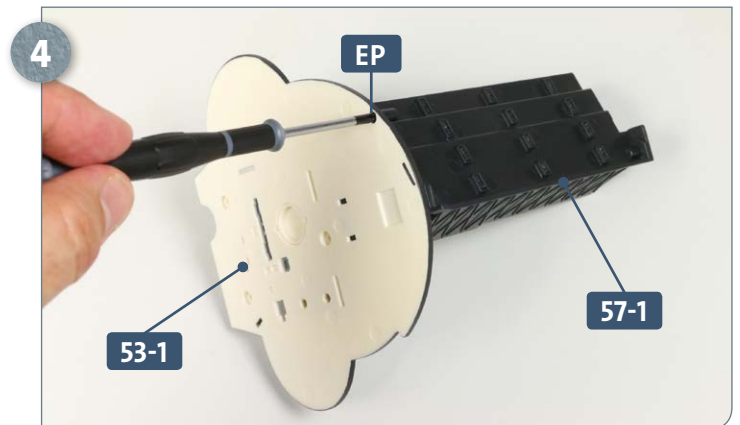
Place the main fourth compartment assembly and the back panel **52-1** on your work surface. Apply some glue to the pegs on the back of the partition **51-2/51-7** and the side bulkhead **52-4**, as shown above.



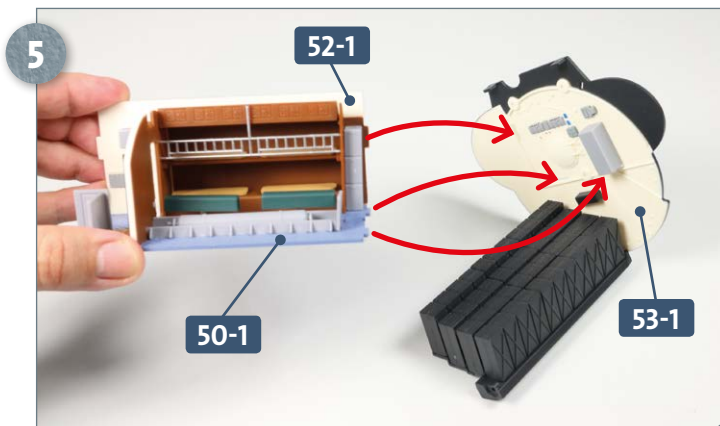
Glue the back panel **52-1** to the room divider **51-2/51-7** and side panel **52-4**, as shown.



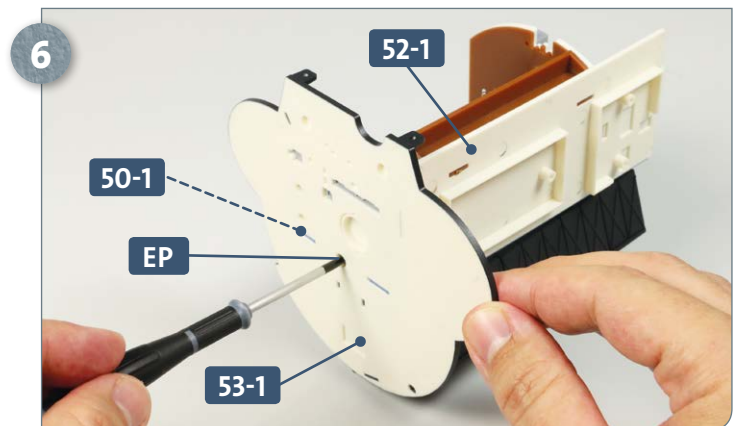
Take the battery compartment assembly and the fourth compartment forward bulkhead **53-1**. Fit the tab on the installation rail **57-1** into the corresponding slot in the bulkhead **53-1** and align the screw holes as indicated by the arrows.



With the tab on the installation rail **57-1** seated inside the slot in the bulkhead **53-1**, secure the parts together with an **EP** screw, fastened through the hole from the outside of the bulkhead, as shown.

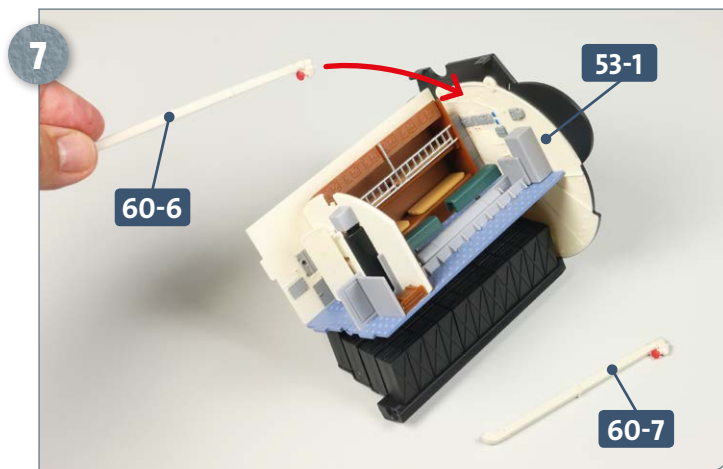


Offer up the main fourth compartment assembly to the forward bulkhead **53-1**: the tab of the back panel **52-1** and the two tabs of the compartment deck **50-1** fit through the corresponding slots in the bulkhead, as indicated by the arrows.

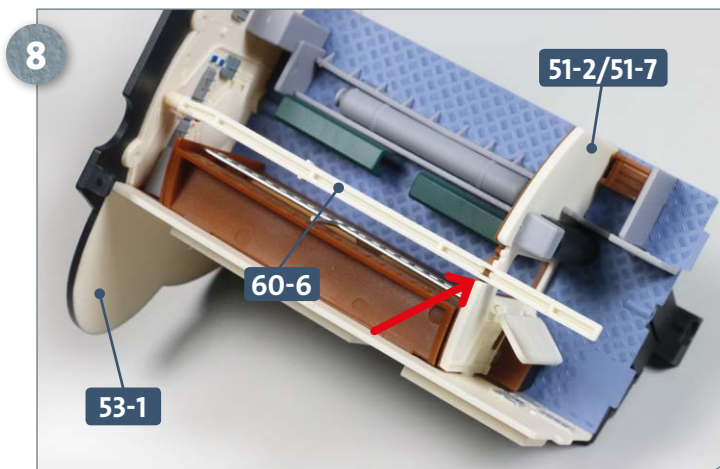


Once the tabs of the compartment deck **50-1** and back panel **52-1** are seated in the slots in the bulkhead **53-1**, secure in place using an **EP** screw, as shown.

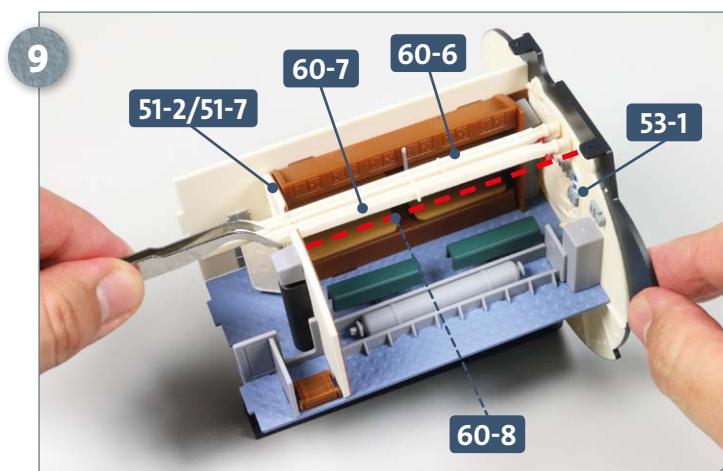
Kit 6l: Five LED cables



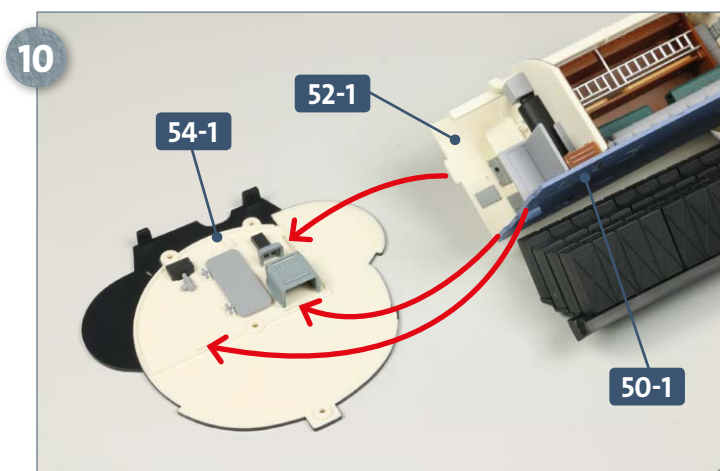
Take the ventilation pipes **60-6** and **60-67**, and the linkage **60-1** (not pictured). Firstly, guide gate valve **60-6** into the small horizontal slot in the bulkhead **53-1**, indicated by the arrow.



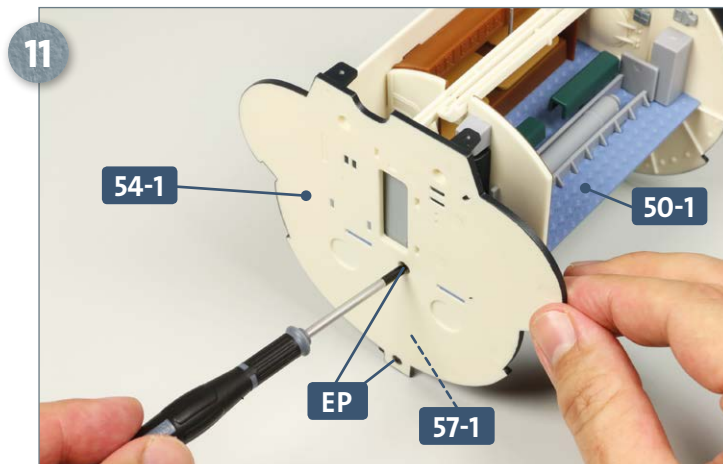
The gate valve of ventilation line **60-6** is seated in the slot in the bulkhead **53-1**. The opening at the bottom of the line fits onto the peg on top of the partition **51-2/51-7**, shown by the arrow.



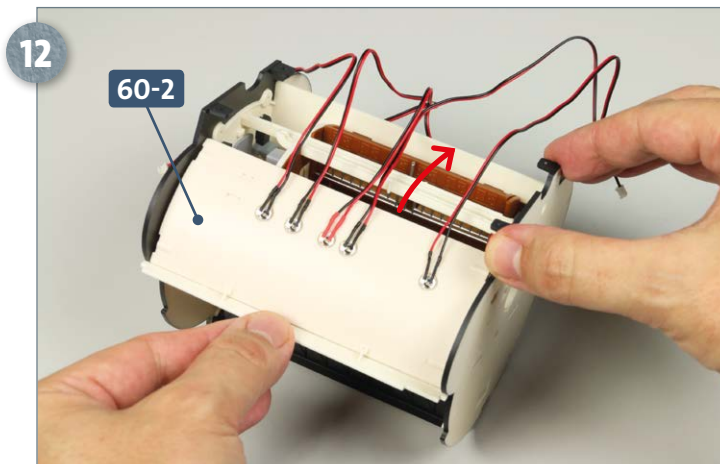
Ventilation line **60-7** fits directly next to line **60-6** where it connects to both the bulkhead **53-1** and the partition **51-2/51-7**. Now fit the linkage **60-1** (not pictured) into the adjacent holes, in the position shown by the red dotted lines. When sure of a good fit, glue these three pipes, **60-6**, **60-7** and **60-8**, in place.



Fit the three tabs at the aft end of the back bulkhead **52-1** and the deck **50-1** into the corresponding slots in the aft bulkhead **54-1**, as pictured.

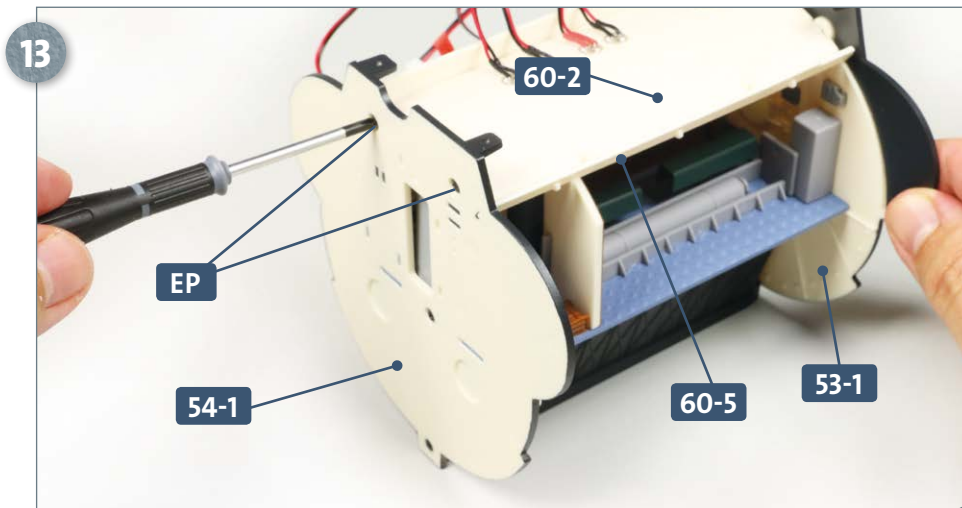


Secure the bulkhead **54-1** to the deck **50-1** and battery assembly **57-1** using two **EP** screws in the positions indicated above.

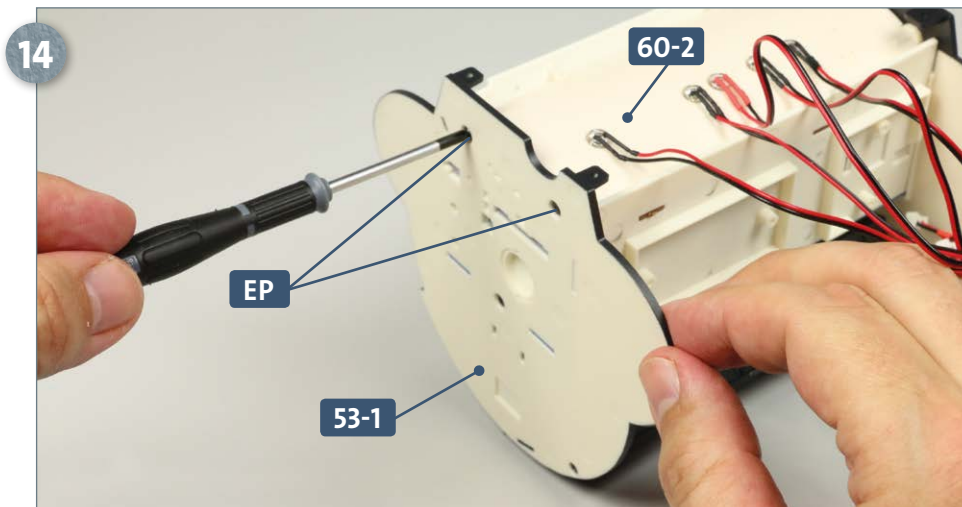


Fit the deckhead panel **60-2** onto the assembly by sliding it into place, as shown.

Kit 61: Five LED cables

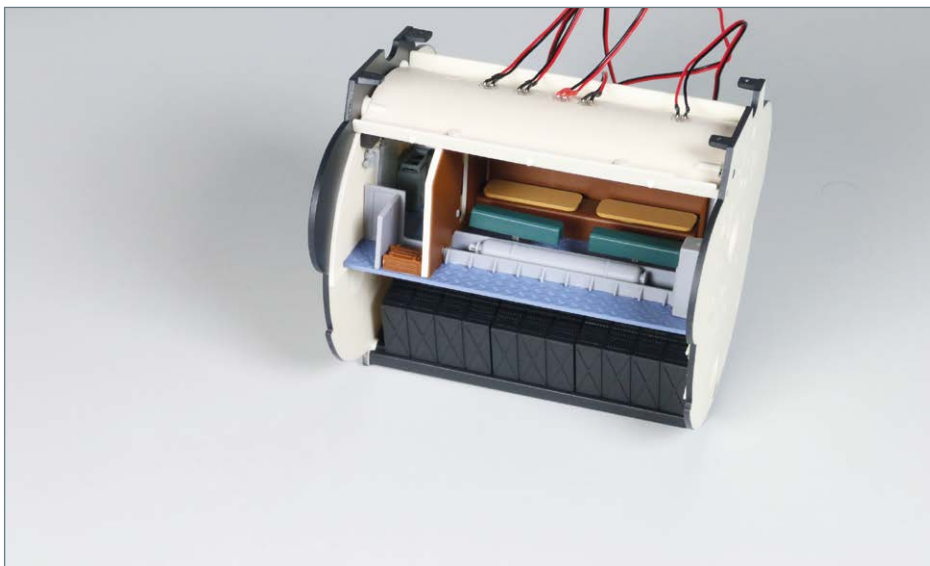


Fit the two tabs of the deckhead panel **60-2** into the slots of bulkheads **53-1** and **54-1**. Fix the aft bulkhead **54-1** to the bulkhead panel **60-2** using two **EP** screws, as shown. The photo below shows the linkage **60-1** fitted in place.



Finally, fix the forward bulkhead **53-1** to the deckhead **60-2** using two **EP** screws.

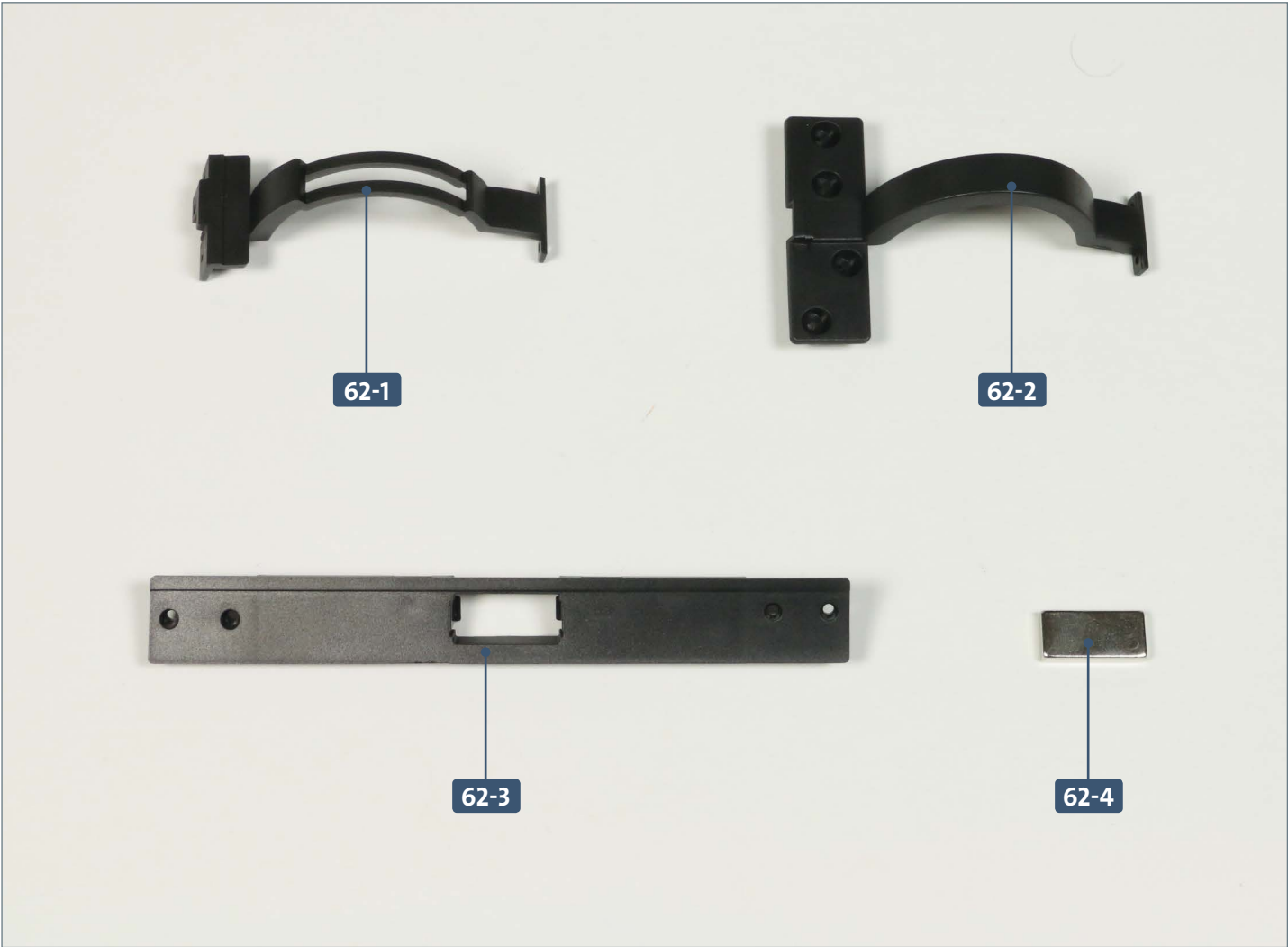
COMPLETED WORK



The completed fourth compartment is now ready for installation within the main superstructure.

Kit 62: The third magnet

The aft end of compartment three, which has already been added to the main hull assembly, is given additional stability with the addition of two more connectors. The third magnet is fitted to a mounting plate, which is attached to the hull.



Parts reference list	
Part no.	Name
62-1	Connector
62-2	Connector
62-3	Mounting plate
62-4	Magnet

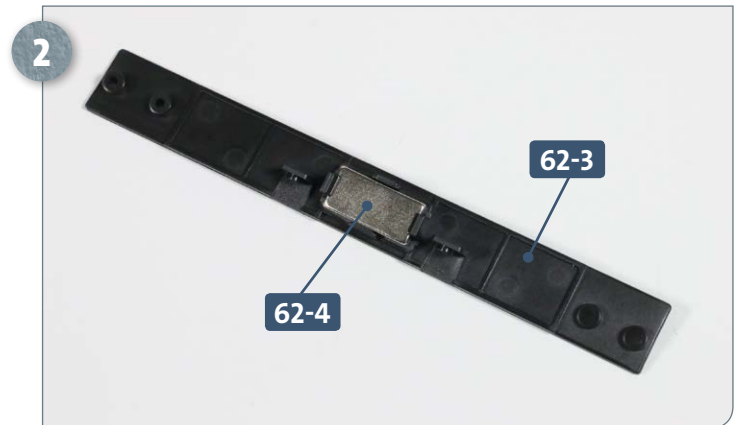


Screws		
Ref	No.	Dimensions
DP	10+1	2 x 6 mm

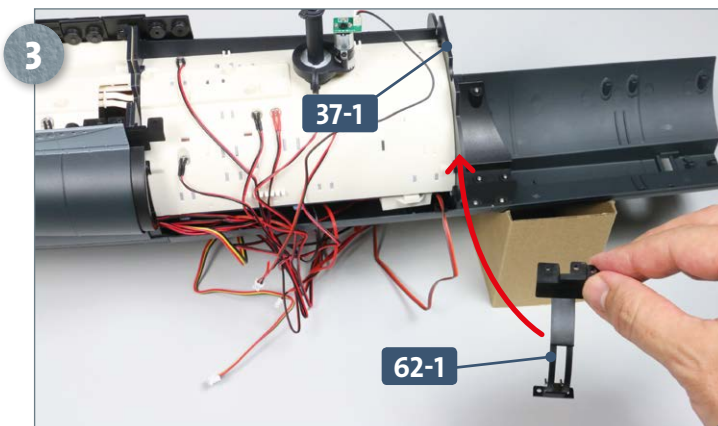
STAGE 1 → Attaching the connectors and mounting plate



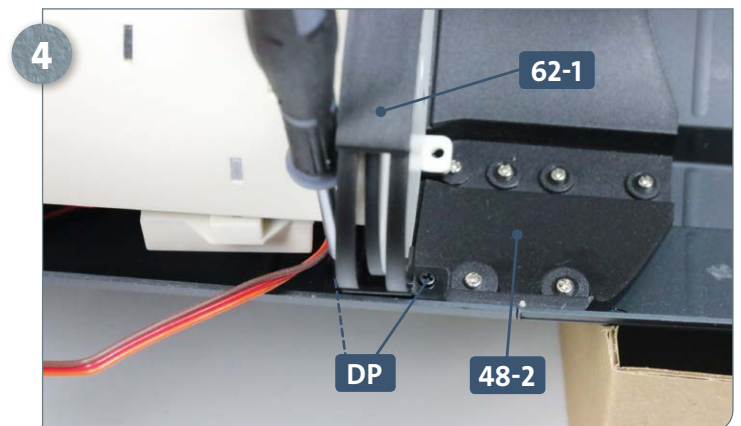
Place the mounting plate **62-3** with the reverse side facing up on your work surface. Taking the magnet **62-4**, insert it into the holder, as indicated by the arrow.



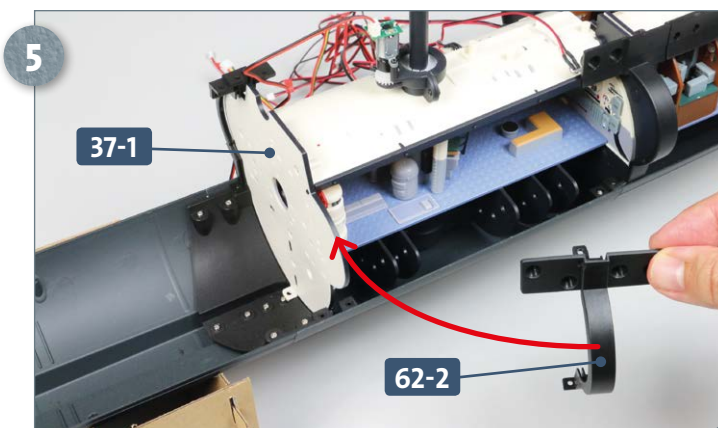
This photograph shows the magnet **62-4** correctly fitted into the plate **62-3**.



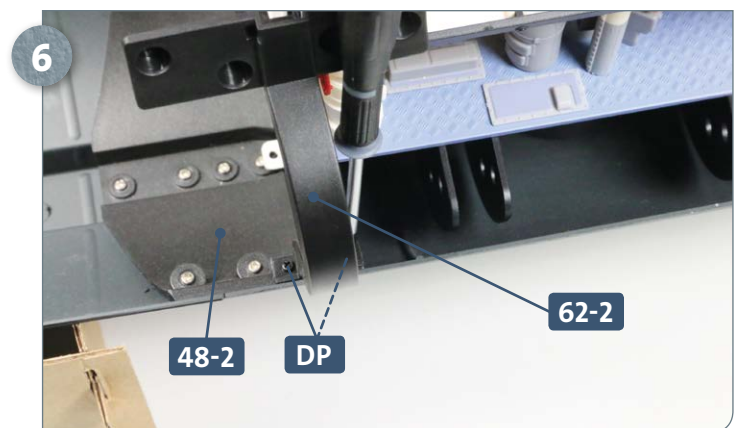
Place the hull assembly on your work surface so that you have access to the port (L) side. Fit the connector **62-1** onto the aft bulkhead of the command compartment **37-1**, as indicated by the arrow.



Next, attach connector **62-1** to connector **48-2** using two **DP** screws, as shown above.

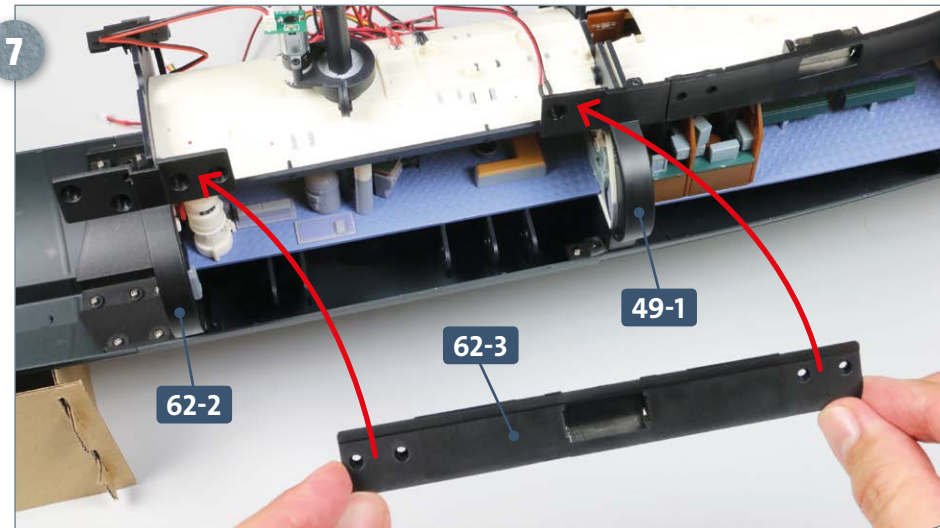


Turn the hull assembly so that you have access to the starboard (R) side. Fit the connector **62-2** onto the aft bulkhead of the command compartment **37-1**, as indicated.

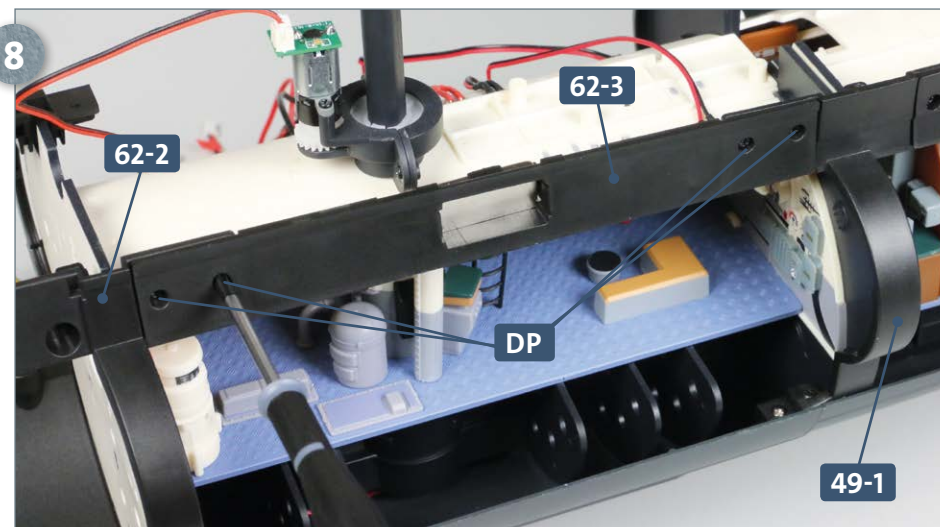


Attach connector **62-2** to connector **48-2** using two **DP** screws.

Kit 62: The third magnet

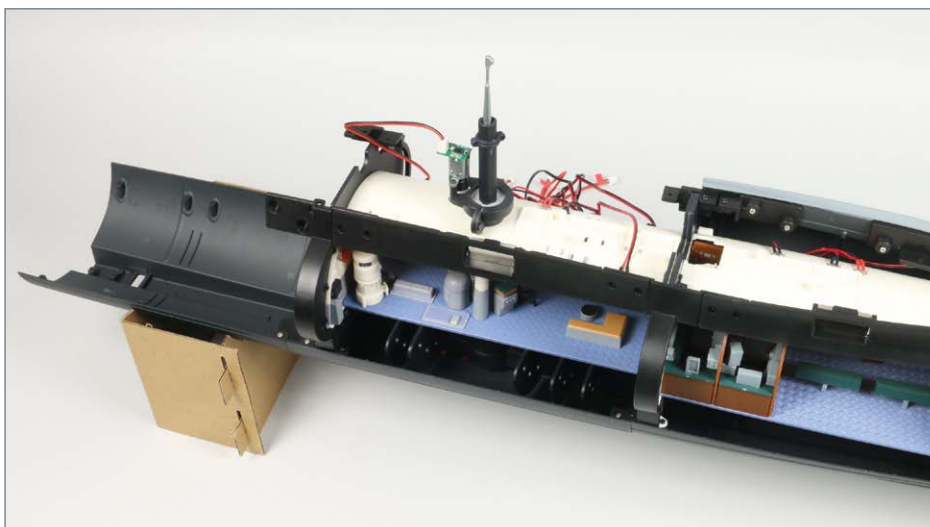


Taking the mounting plate **62-3**, fit it between connectors **49-1** and **62-2**, as indicated by the two arrows.



Fix the mounting plate **62-3** to connectors **49-1** and **62-2** using two **DP** screws on each part.

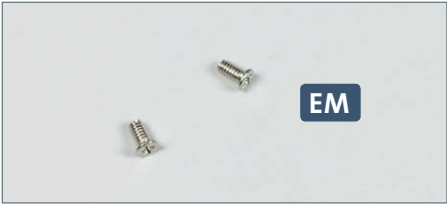
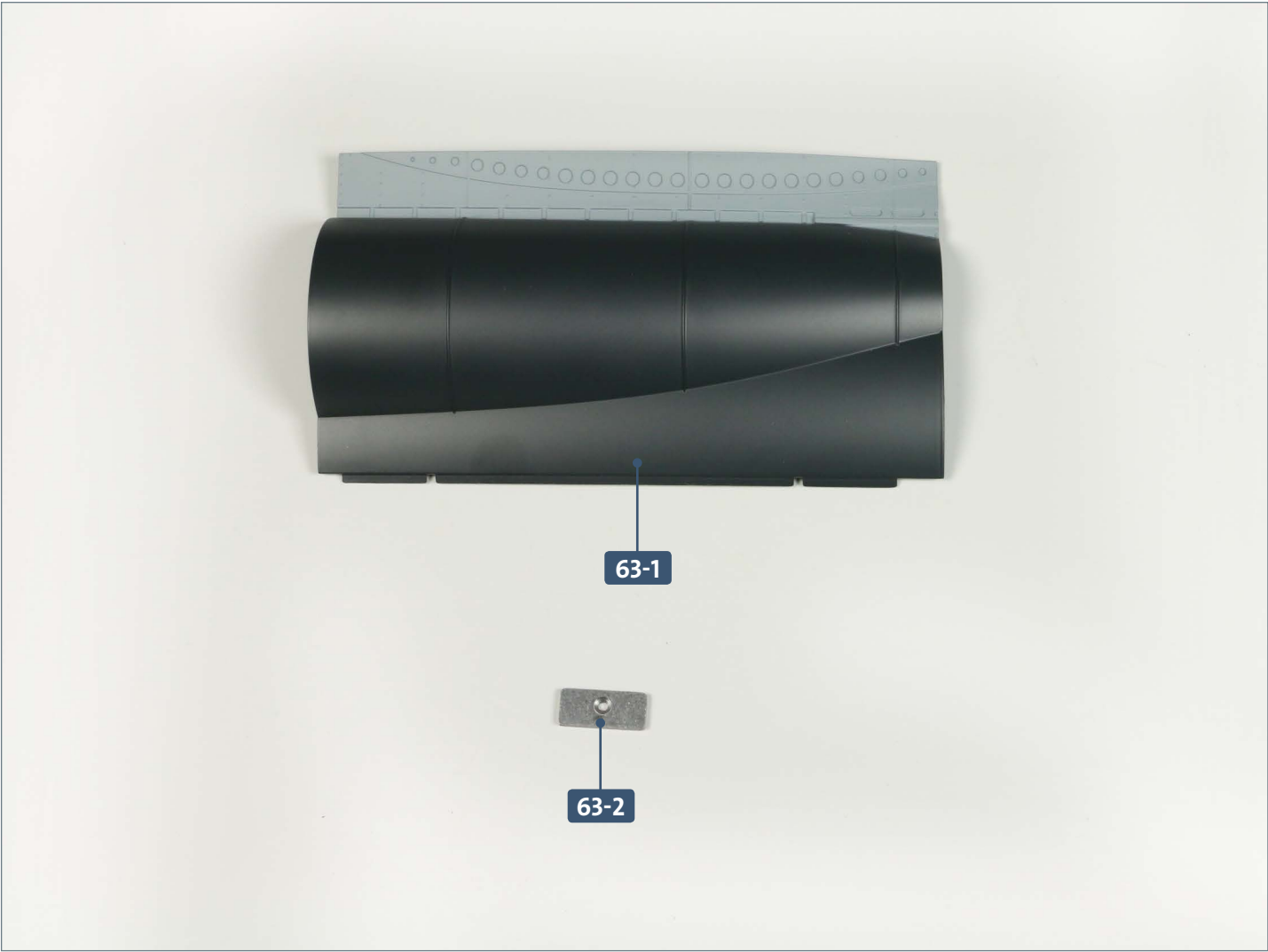
COMPLETED WORK



Two connectors and a magnet (fixed onto a mounting plate) have now been added to the hull assembly.
Note: keep any spare screws safely aside.

Kit 63: Starboard hull section

The hull assembly is supplemented by the addition of a new starboard (R) section, which is first fitted with a metal plate before being placed against the second compartment.



Parts reference list	
Part no.	Name
63-1	Starboard (R) hull section
63-2	Metal plate

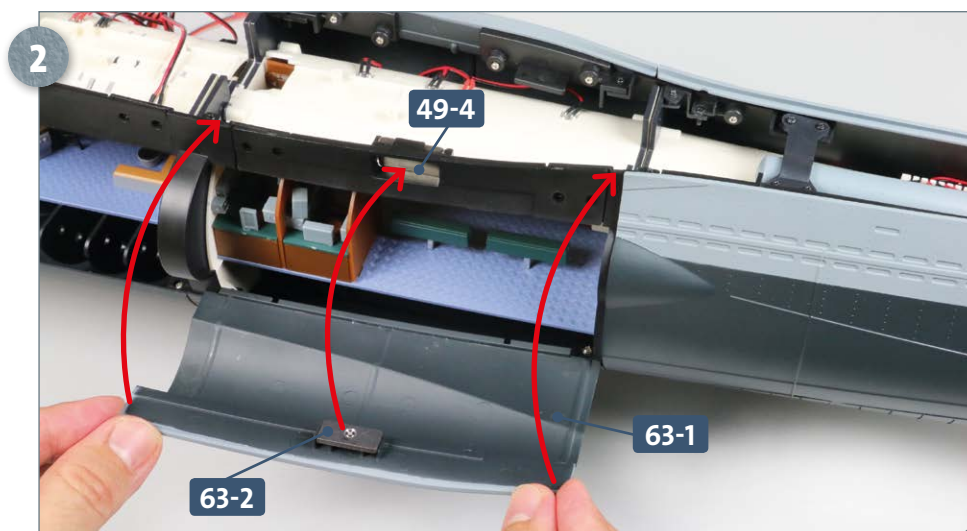
Screws		
Ref	No.	Dimensions
EM	1+1	2 x 4 mm

Kit 63: Starboard hull section

STAGE 1 → Attaching the hull plate



Place the hull plate **63-1** on your work surface, inside facing up. Take the metal plate **63-2**, with the countersunk side upwards, and fit it flush to the raised socket on the hull plate and fix in position using an **EM** screw, as pictured.



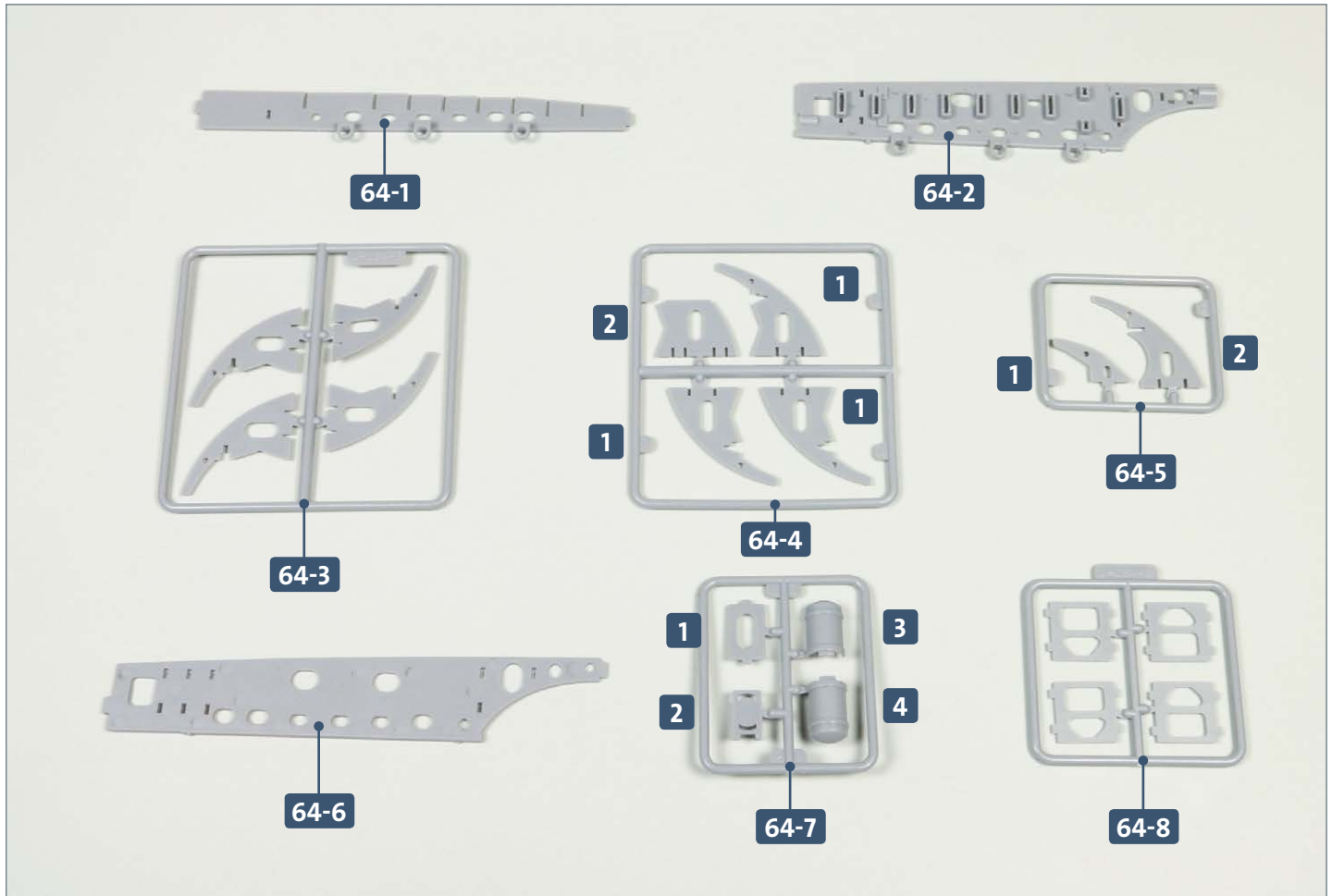
Place the main hull assembly on your work surface so that you have access to the starboard (R) side. Fit the lip at the base of the hull plate **63-1** onto the edge of the keel at the bottom of the second compartment. Tilt the hull section **63-1** upwards until the metal plate **63-2** is in contact with the magnet **49-4**, as shown by the middle red arrow.

COMPLETED WORK



Kit 64: The engine room

In this kit, work on the engine room begins with the assembly of the foundations, consisting of various frames and struts. Lastly, the lights and motors of compartments 3 and 4 are tested.



Parts reference list

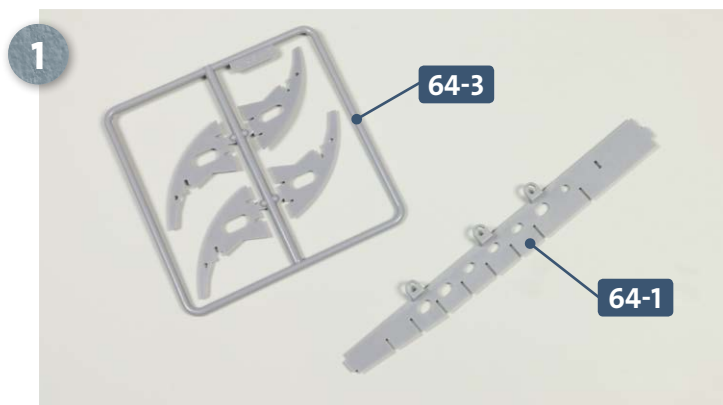
Part no.	Name
64-1	Engine foundation strut
64-2	Engine foundation strut
64-3	Frame
64-4	Frame
64-5	Frame
64-6	Engine foundation strut
64-7	Starboard (R) engine radiator & bracket
64-8	Four attachments

Note 1: Where parts on a given frame differ from one another, this is reflected in their designation (e.g., part 4 from frame 64-7 is numbered 64-7-4).

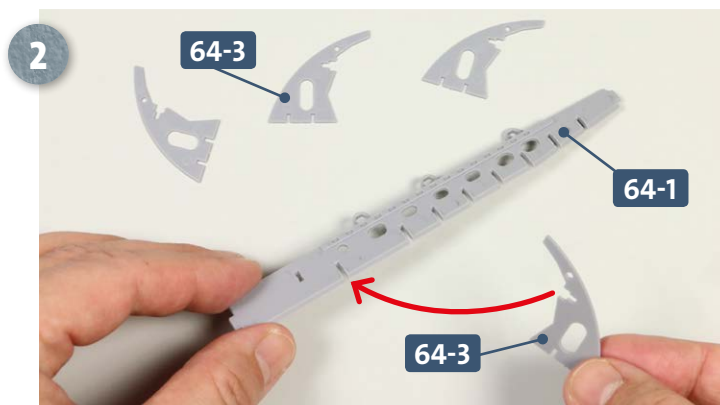
Note 2: Only place glue where specified in the instructions, so that the engine assembly remains flexible.

Kit 64: The engine room

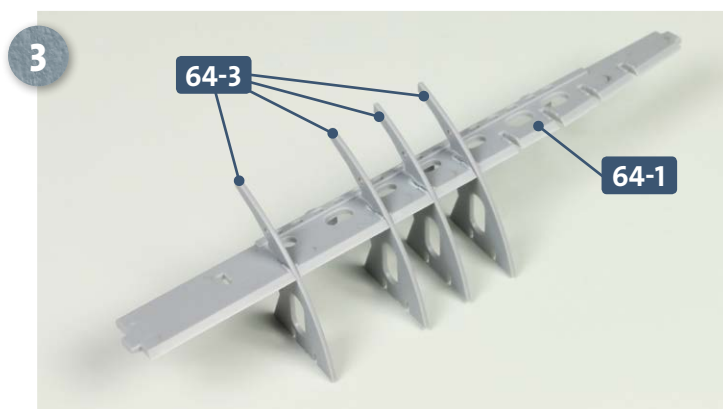
STAGE 1 → Assembling the engine foundations



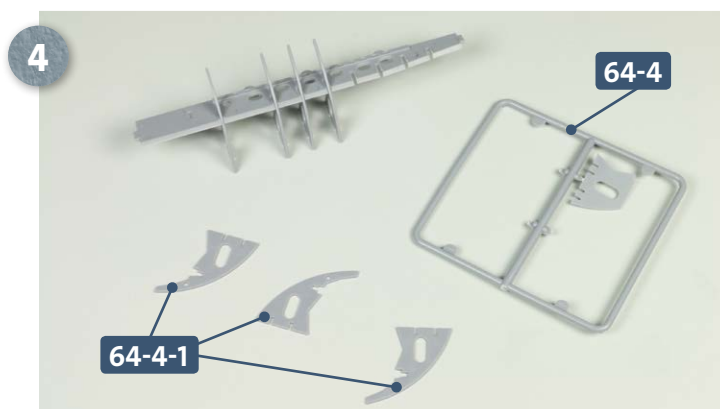
Place strut **64-1** and frame **64-3** with its four identical parts on your work surface. Separate the parts from the frame and remove any residual attachment points.



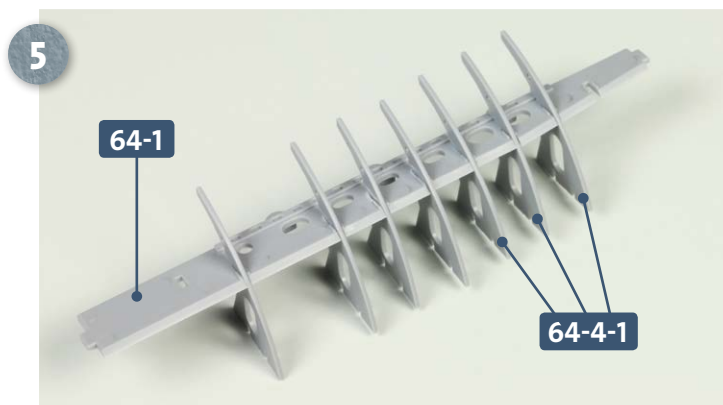
Fit the first part **64-3** into the recess of the strut **64-1**, in the position indicated by the arrow.



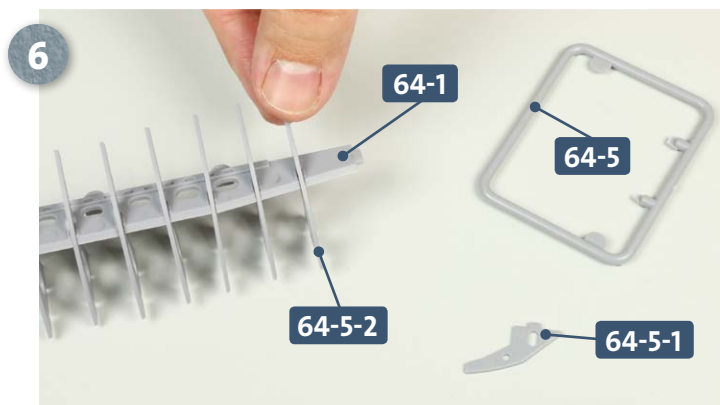
The three remaining parts from frame **64-3** are inserted into the adjacent recesses on the strut **64-1**, as pictured.



Next, take frame **64-4** and remove the three identical parts **64-4-1** from it.

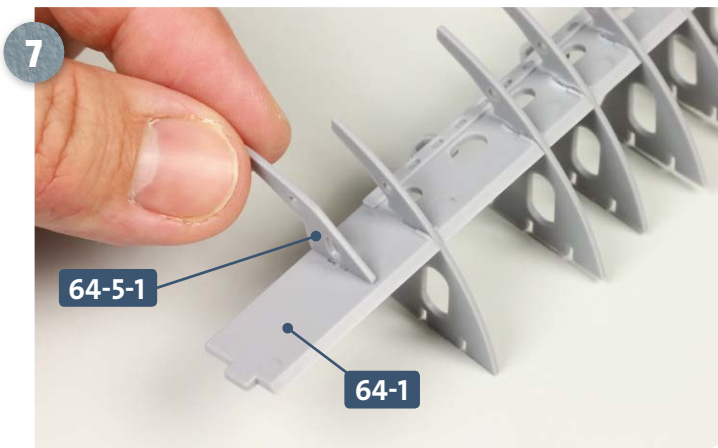


Fit the three parts **64-4-1** into the next three recesses in the strut **64-1**, as pictured.

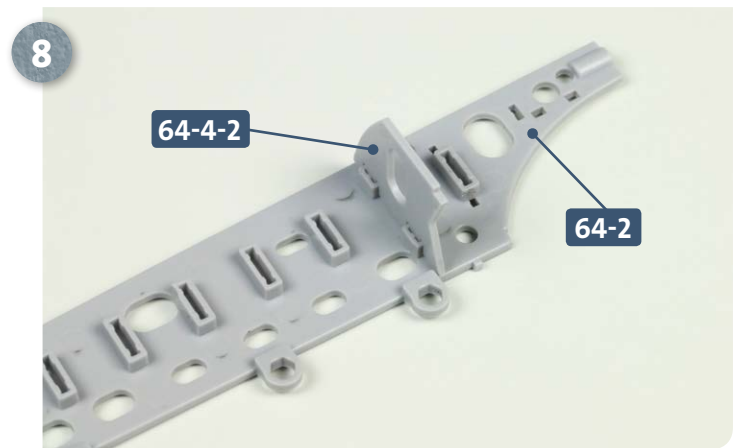


Remove the two differently sized parts from frame **64-5**. Fit the larger part **64-5-2** into the final recess in the strut **64-1**, as shown above.

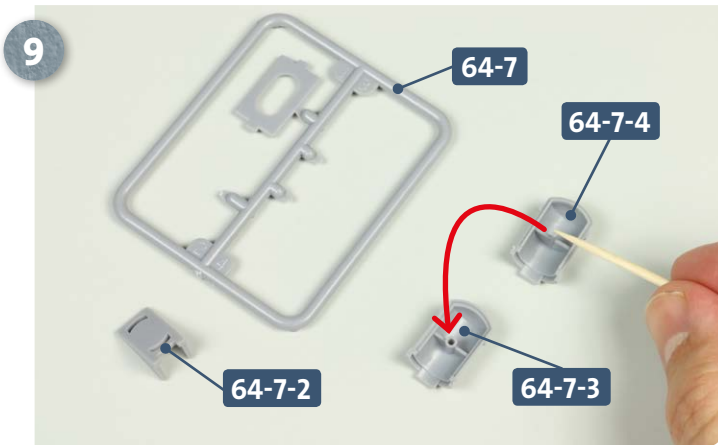
Kit 64: The engine room



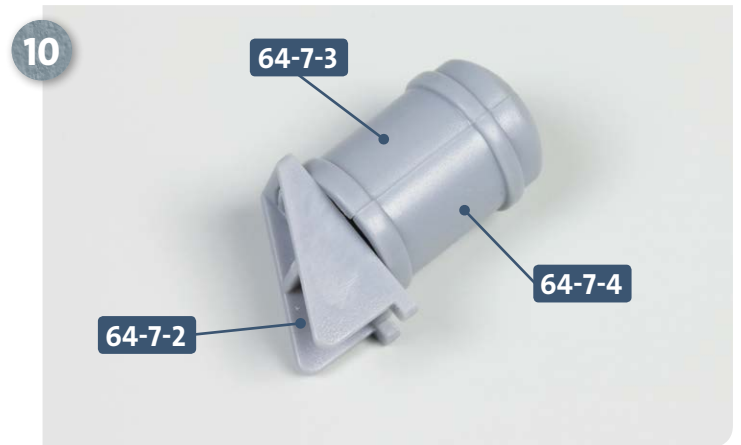
Apply a small amount of glue to the tab on the smaller part **64-5-1** and secure it in the slot at the other end of the strut **64-1**, as shown above.



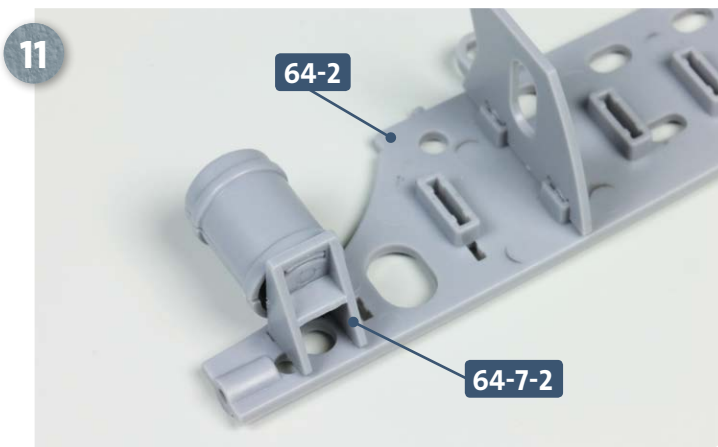
Place strut **64-2** on your work surface. Separate the smaller part **64-4-2** from frame **64-4**. After checking the orientation, apply a little glue into the two recesses on the strut, and insert the part.



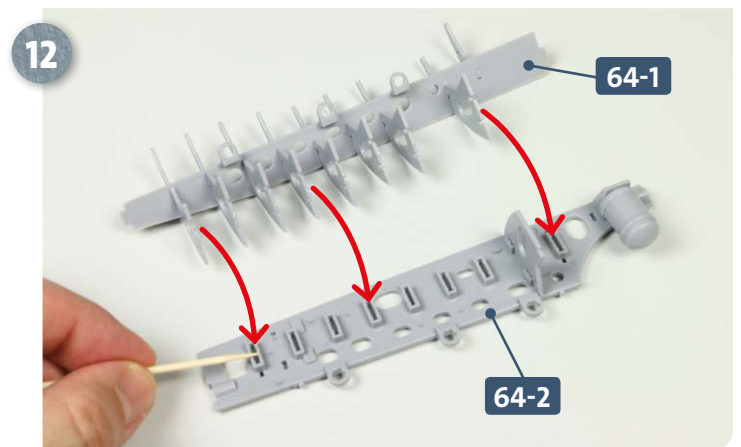
Detach parts 2, 3 and 4 from frame **64-7**. Apply some glue to the peg on the inside of **64-7-4** and glue the two halves of the starboard (R) engine radiator together, as indicated by the arrow.



After gluing the two halves of the radiator **64-7-3** and **64-7-4** together, apply a little glue to the pegs on the bottom of both parts and insert into the slots in the bracket **64-7-2**, as shown.

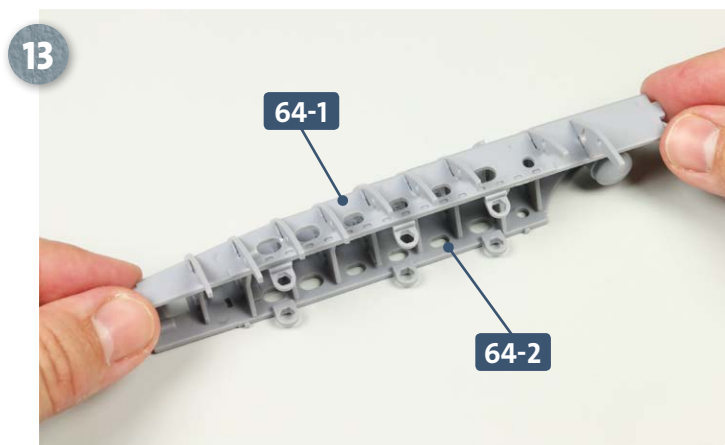


Next, apply some glue to the two pegs of the bracket **64-7-2** before inserting them into the two slots at the narrower end of the strut **64-2**.

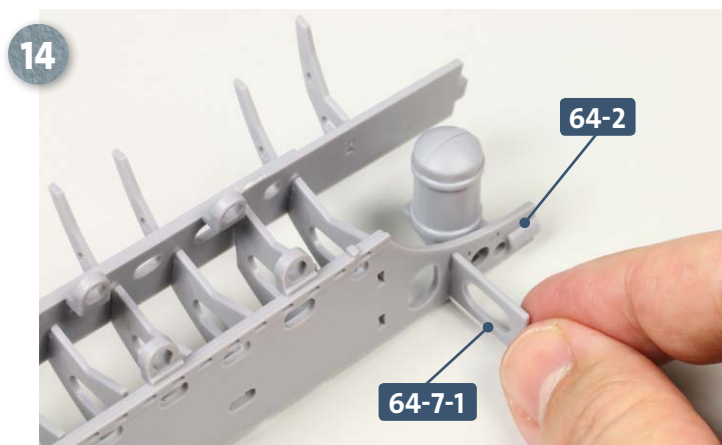


Apply some glue to the eight recesses on strut **64-2**. Insert the eight parts attached to strut **64-1** into these slots, as indicated by the arrows above. Make sure that all the struts are fully inserted into the slots.

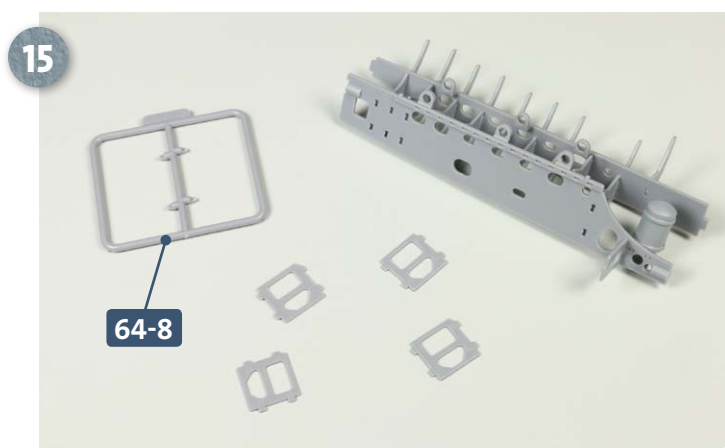
Kit 64: The engine room



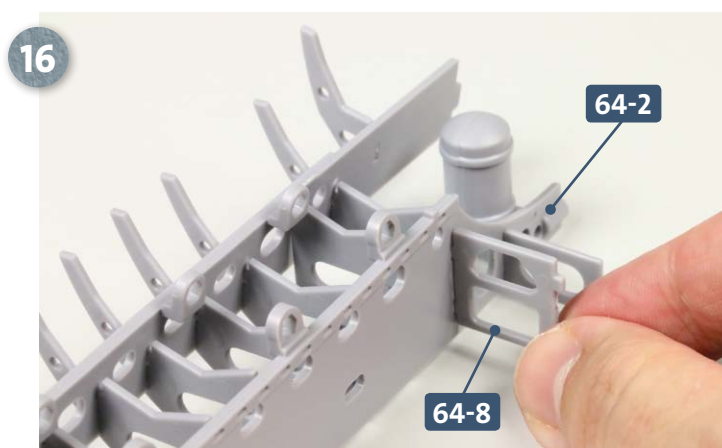
This photo shows the two struts **64-1** and **64-2** joined correctly.



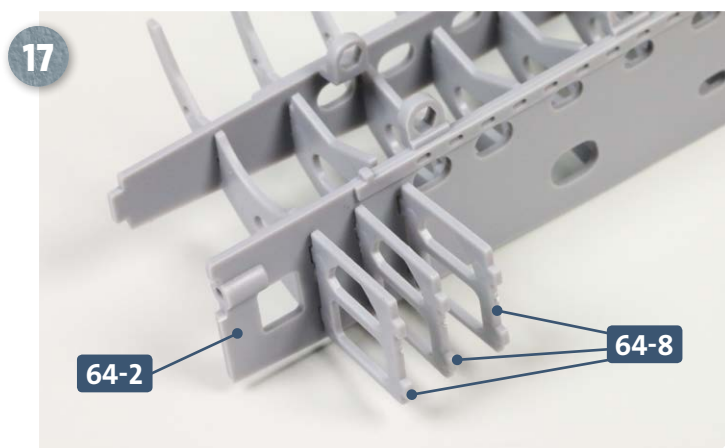
Separate part **64-7-1** from frame **64-7** and glue it to the mount on strut **64-2**, as shown.



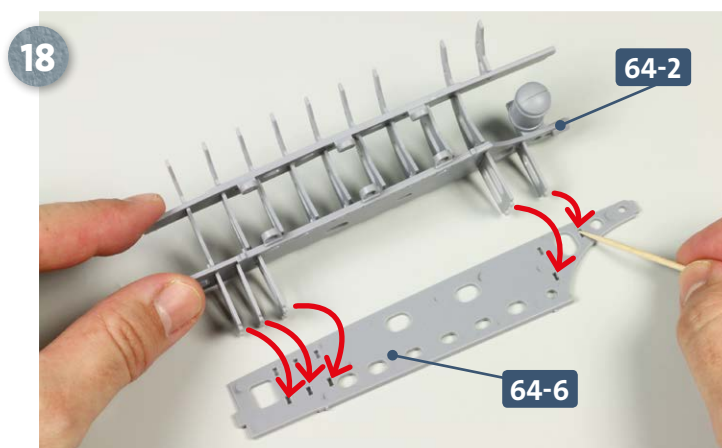
Take frame **64-8** and detach the four identical attachments from it. Make sure to remove any traces of the connection points.



After noting its orientation, fit the first attachment **64-8** onto the narrow end of the strut **64-2**. Apply a little glue to the two tabs, then insert them into the corresponding slots in the strut.



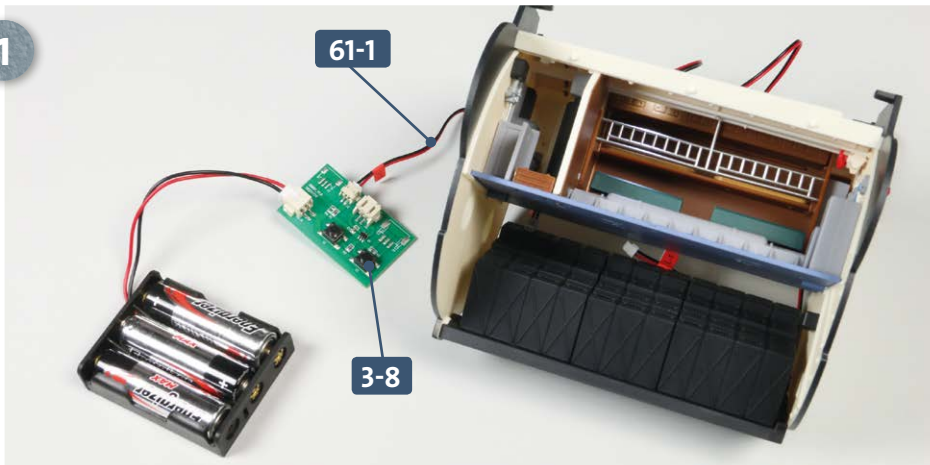
The three remaining attachments **64-8** are glued to the other end of the strut **64-2**, as pictured.



Finally, the five attachments previously added to strut **64-2** are glued to strut **64-6**, as indicated by the arrows.

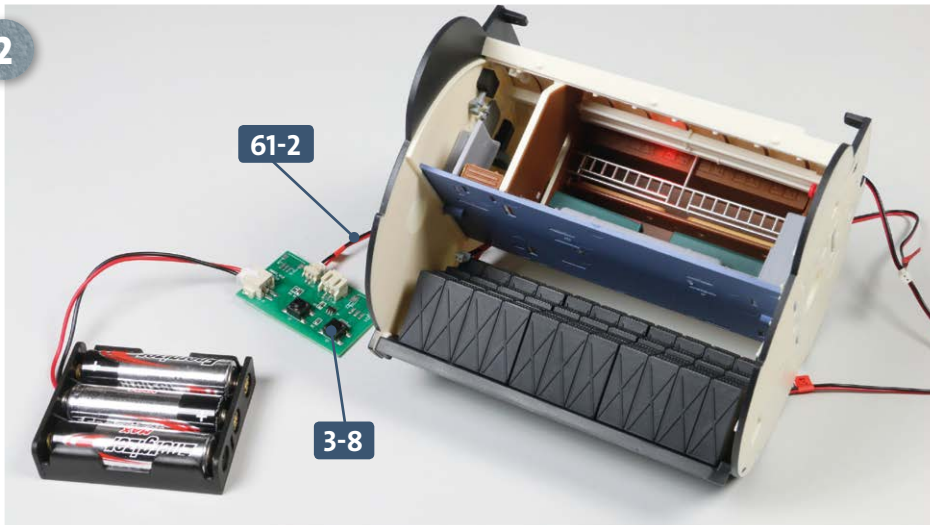
STAGE 2 → Testing the LEDs and motors

1



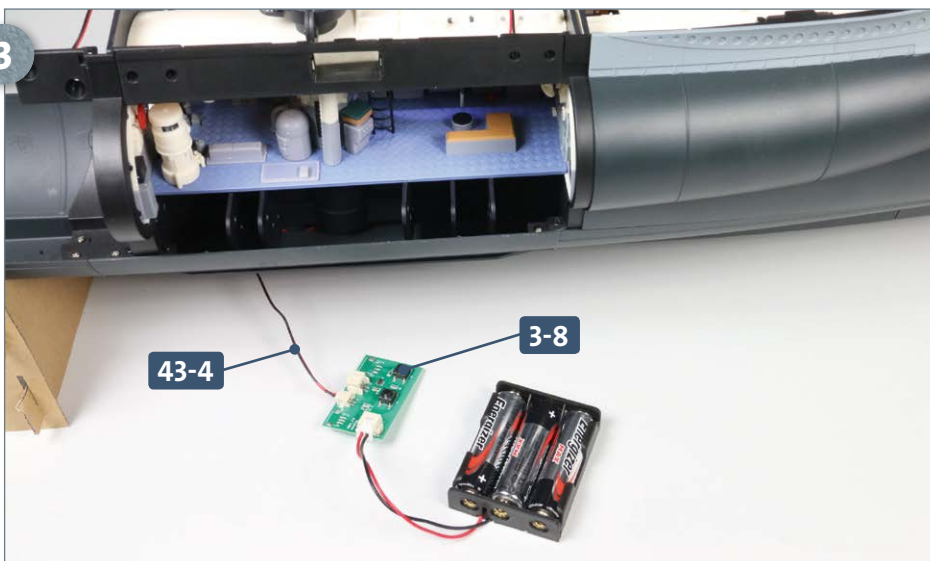
First test the LEDs in the fourth compartment. Insert the four cables **61-1** (marked **L1**) one after the other into the smaller socket of the test PCB **3-8**: the white LEDs should light.

2



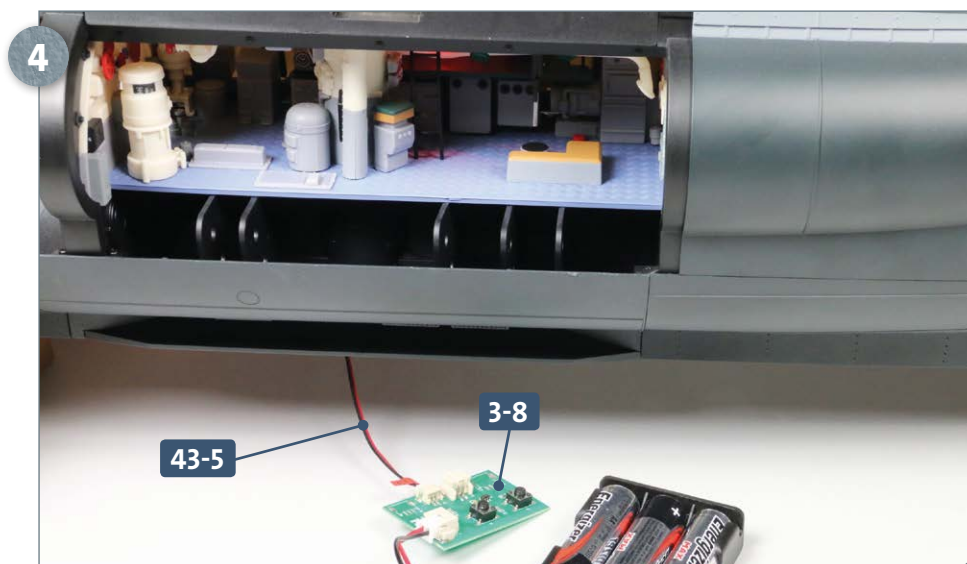
When cable **61-2** (labelled **L2**) is inserted into the test PCB **3-8** the LED should light red.

3

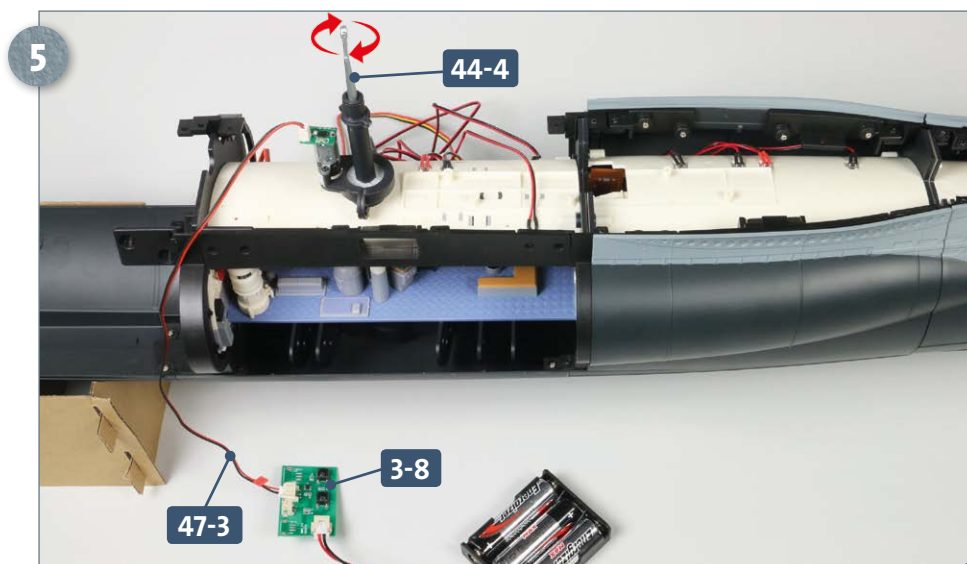


The LEDs of the third compartment can also be tested at this point (even if this was done prior to their installation in the deckhead panel). Insert the cables **43-4** (marked **L1**) into the smaller socket on the test PCB **3-8**: the LEDs should light up white.

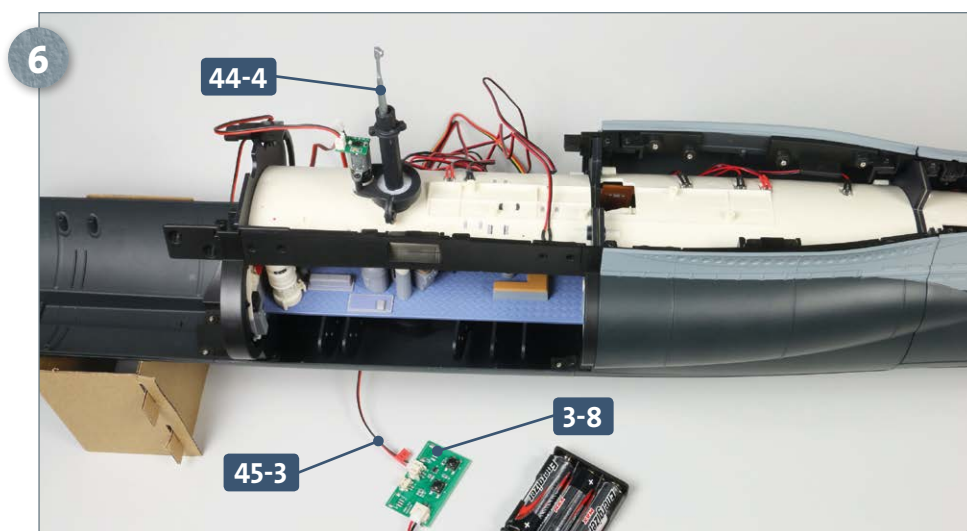
Kit 64: The engine room



Cable **43-5** (labelled **L2**), when inserted into the smaller socket on the test PCB **3-8**, should light up red.

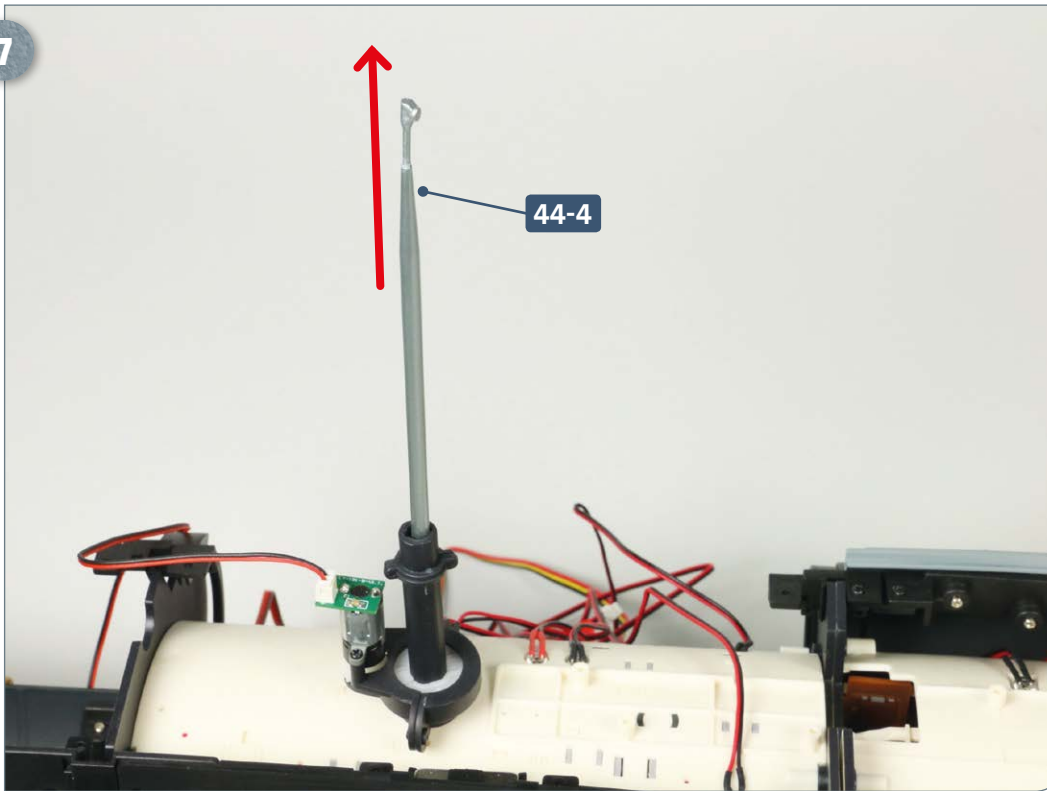


Next, test the two motors in the third compartment. First, connect the cable **47-3** (labelled **M5**) to the corresponding socket on the test board **3-8**. When you depress the button marked **S1**, the attack periscope **44-4** should rotate anticlockwise. Pressing the **S2** button rotates it in a clockwise direction.



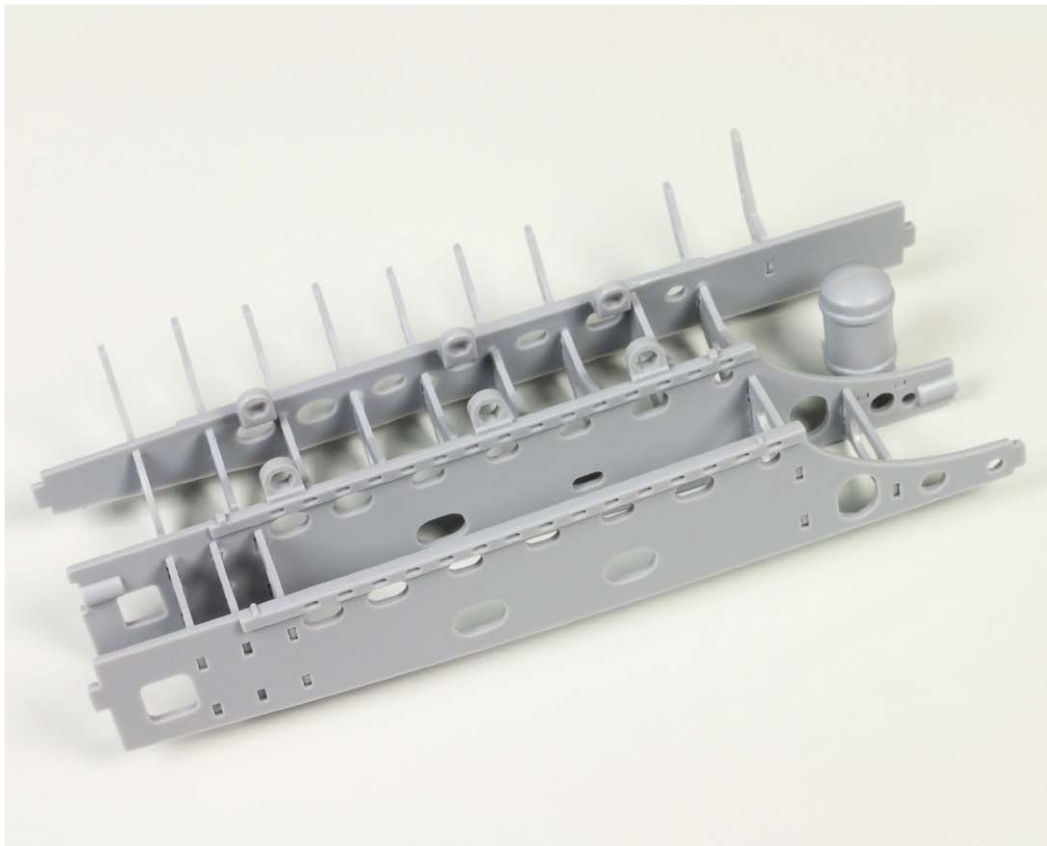
Finally, insert the terminal of cable **45-3** (marked **M4**) into the corresponding socket on the test board **3-8**. The attack periscope **44-4** is controlled with this motor.

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Pressing the button **S1** retracts the attack periscope **44-4**, while **S2** makes it rise, as indicated by the arrow.

COMPLETED WORK



The foundation of the diesel engine has now been assembled, and the electronics of the third and fourth compartments tested.