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U 96

U-BOAT

Pack 4

Kits 13-16



BUILD THE ICONIC WORLD WAR II U-BOAT

U 96

U-BOAT

Pack 4

Assembly Instructions

Kit 13: The motor for the anchor windlass

Kit 14: Anchor windlass gearbox

Kit 15: Deckhead for the forward compartment

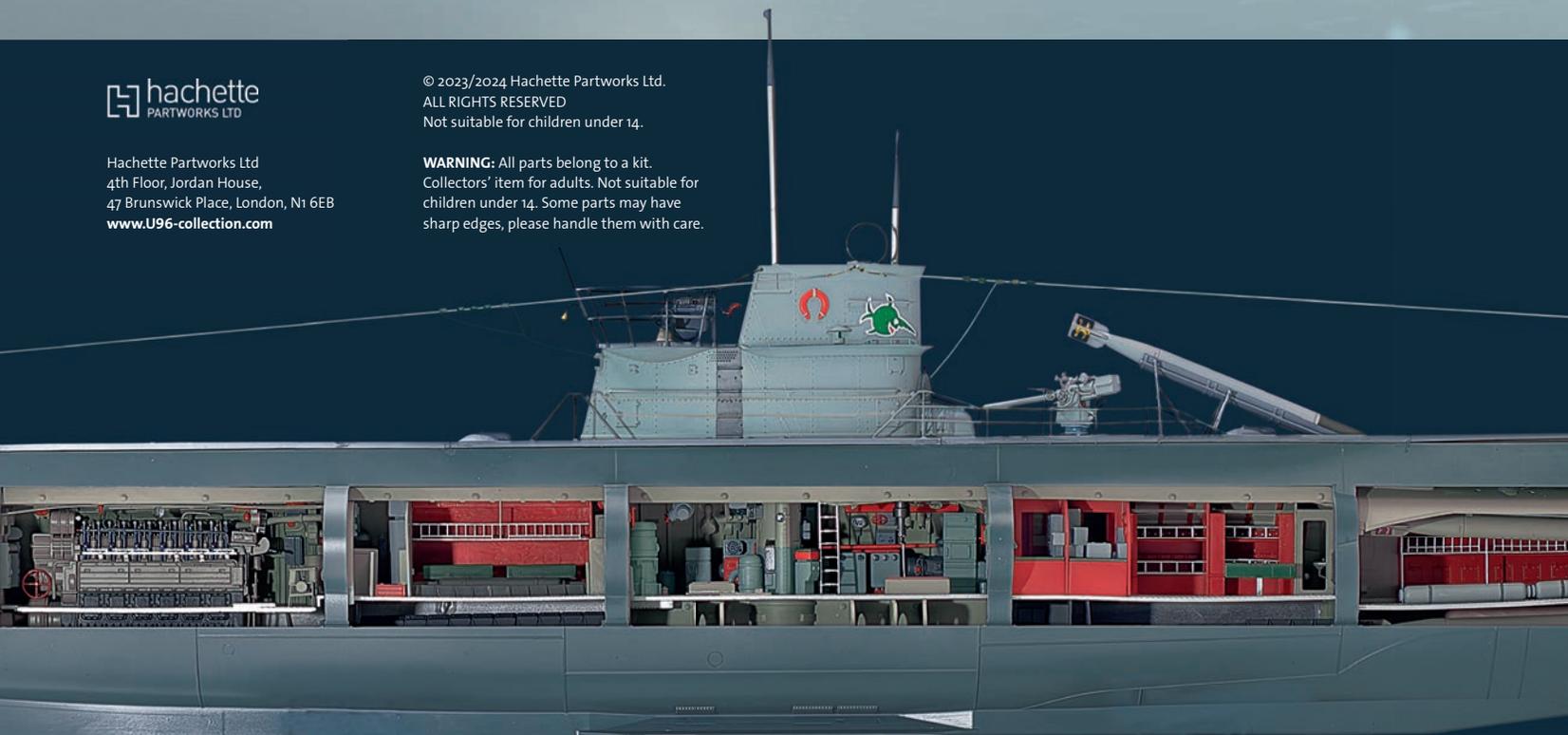
Kit 16: Bunks and deck



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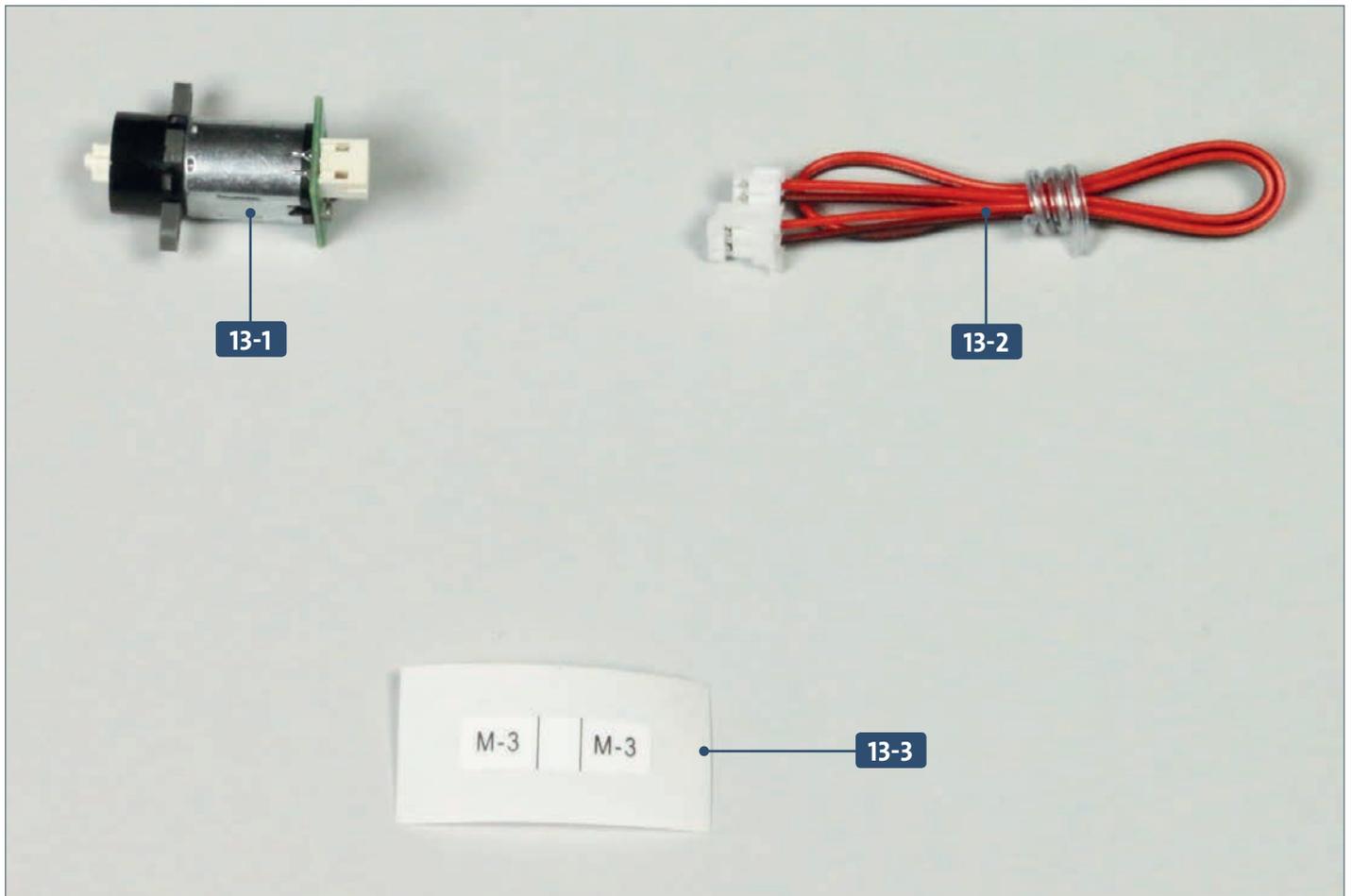
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Not suitable for children under 14.

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 13: The motor for the anchor windlass

In this kit, the electrical cable is given a label and connected to the motor for the windlass (winch). You will also assemble the two torpedoes received with kit 12 and fit them into the empty tubes.

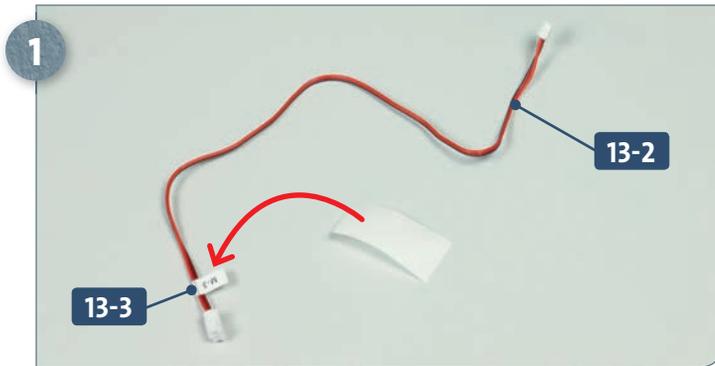


Parts reference list	
Part no.	Name
13-1	Motor for anchor windlass
13-2	Cable
13-3	Cable label

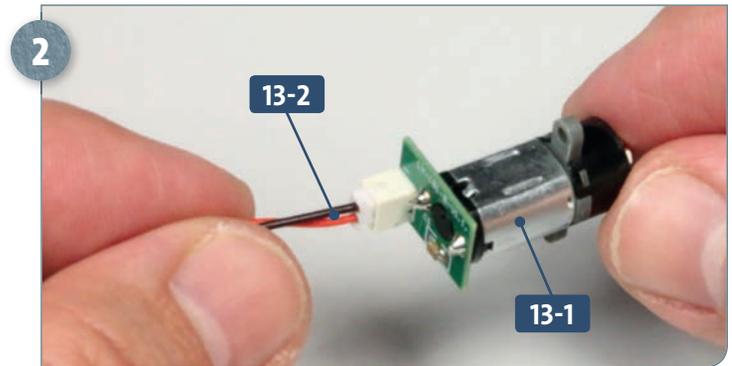
Screws		
Ref	No.	Dimensions
BP	2+1	1.7 x 6 mm

Kit 13: The motor for the anchor windlass

STAGE 1 → Connect cable to motor

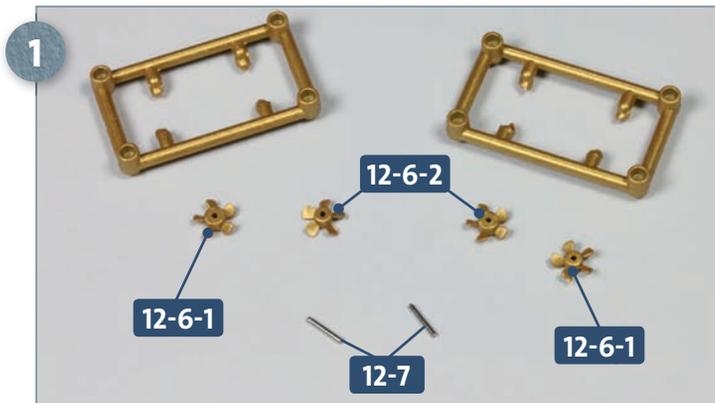


Remove the cable label **13-3** from its backing film and wrap the sticker around the end of the cable **13-2** with the widest connector.

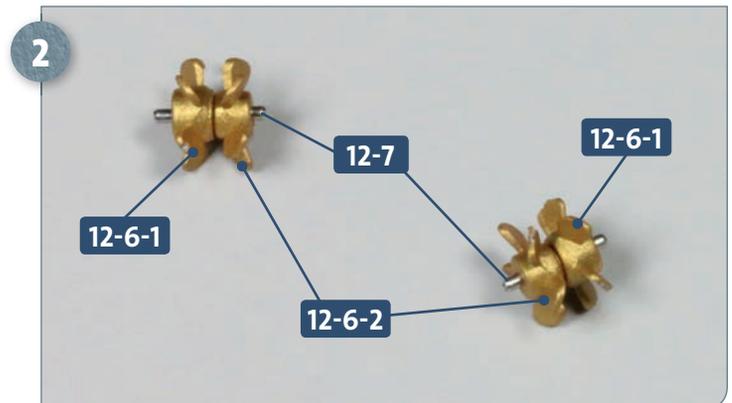


Insert the other, narrower end of the cable **13-2** into the socket on the motor's circuit board **13-1**.

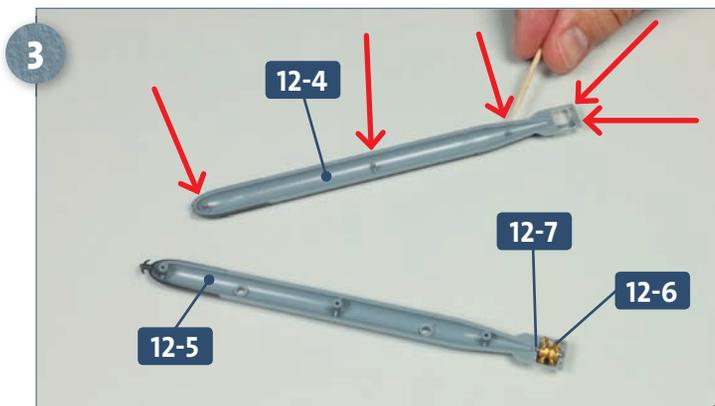
STAGE 2 → Assemble the torpedoes



Detach the two opposing screws **12-6-1** and **12-6-2** from the frames **12-6**. Locate the two shafts **12-7**.



Connect the two screws **12-6-1** and **12-6-2** with a shaft **12-7** to form a propeller. Make a second, identical propeller in the same way.

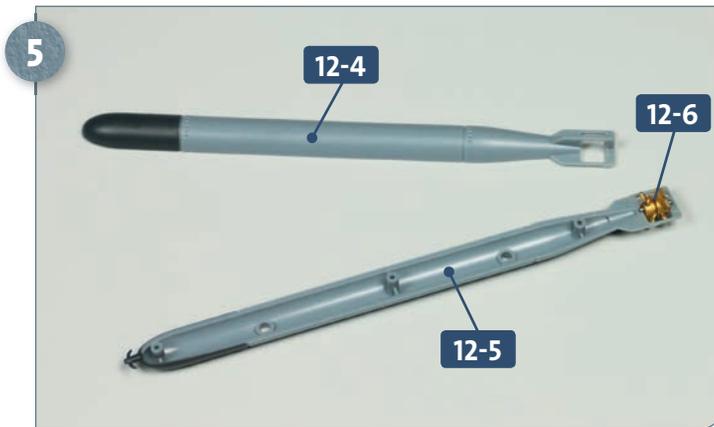


Take one torpedo upper half **12-4** and one lower section **12-5**. Fit one of the propellers **12-6** into the lower section **12-5**, so that the shaft **12-7** sits in the recess of the torpedo. Add glue to the three small pegs along the length of the upper section **12-4** as well as to the two pegs near to where the propeller sits (see arrows).

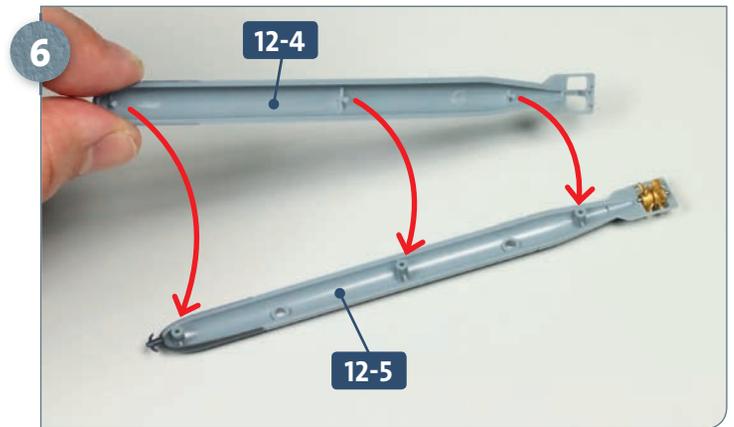


Place the upper half **12-4** onto the lower half **12-5** and gently press both parts together.

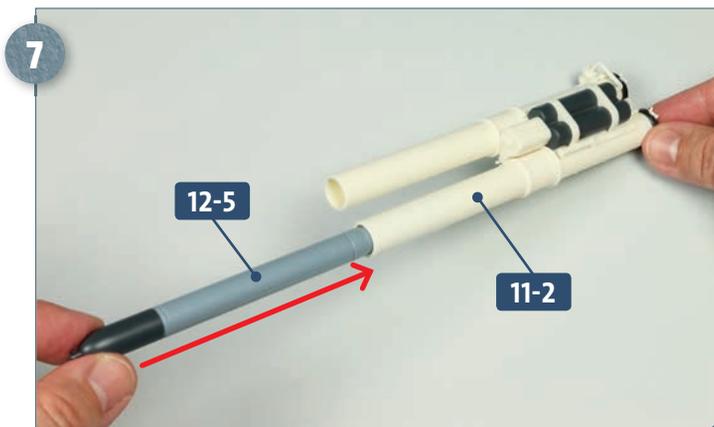
Kit 13: The motor for the anchor windlass



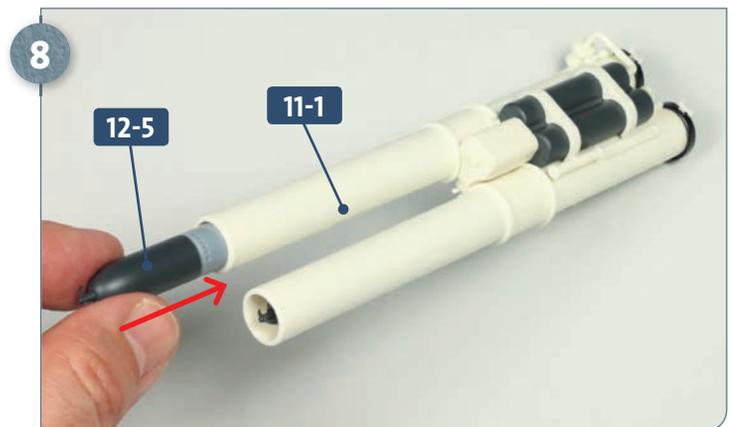
Repeat the previous steps for the second torpedo: first taking the two separate halves **12-4** and **12-5** and placing the propeller inside **12-5** the lower section.



Apply a little glue to the three pegs along the upper section **12-4** and to the two pegs by the propeller. Insert these pegs into the corresponding holes in the lower half **12-5**, indicated by the arrows.

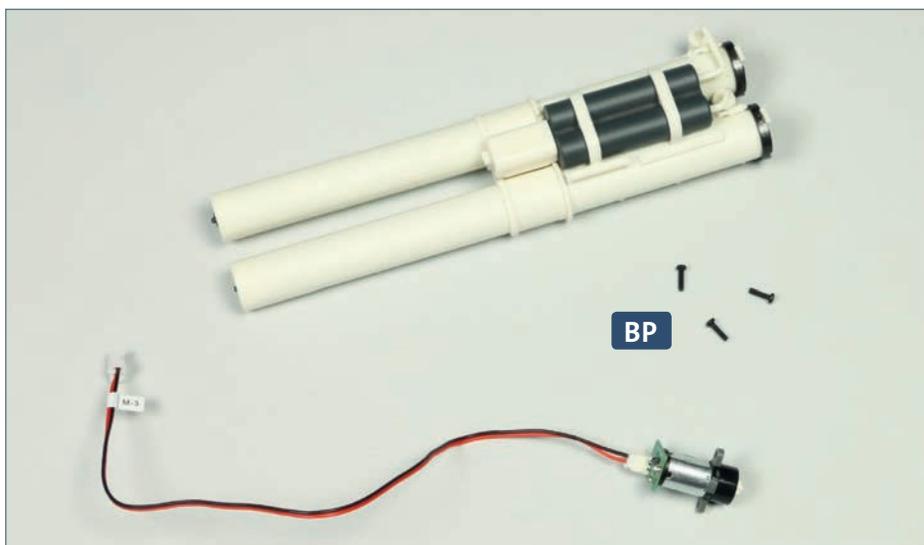


Take the torpedo tube assembly you built in kit 11. Fit one of the torpedoes **12-5** inside the torpedo tube, as shown above. The torpedoes need to move freely within the tubes and so, if necessary, use fine sandpaper (or similar) to slightly reduce the size of the fins on the torpedo.



Insert the remaining torpedo into the second tube, as shown. Again, if necessary, use fine sandpaper to reduce the size of the fins on the torpedo to ensure the correct fit.

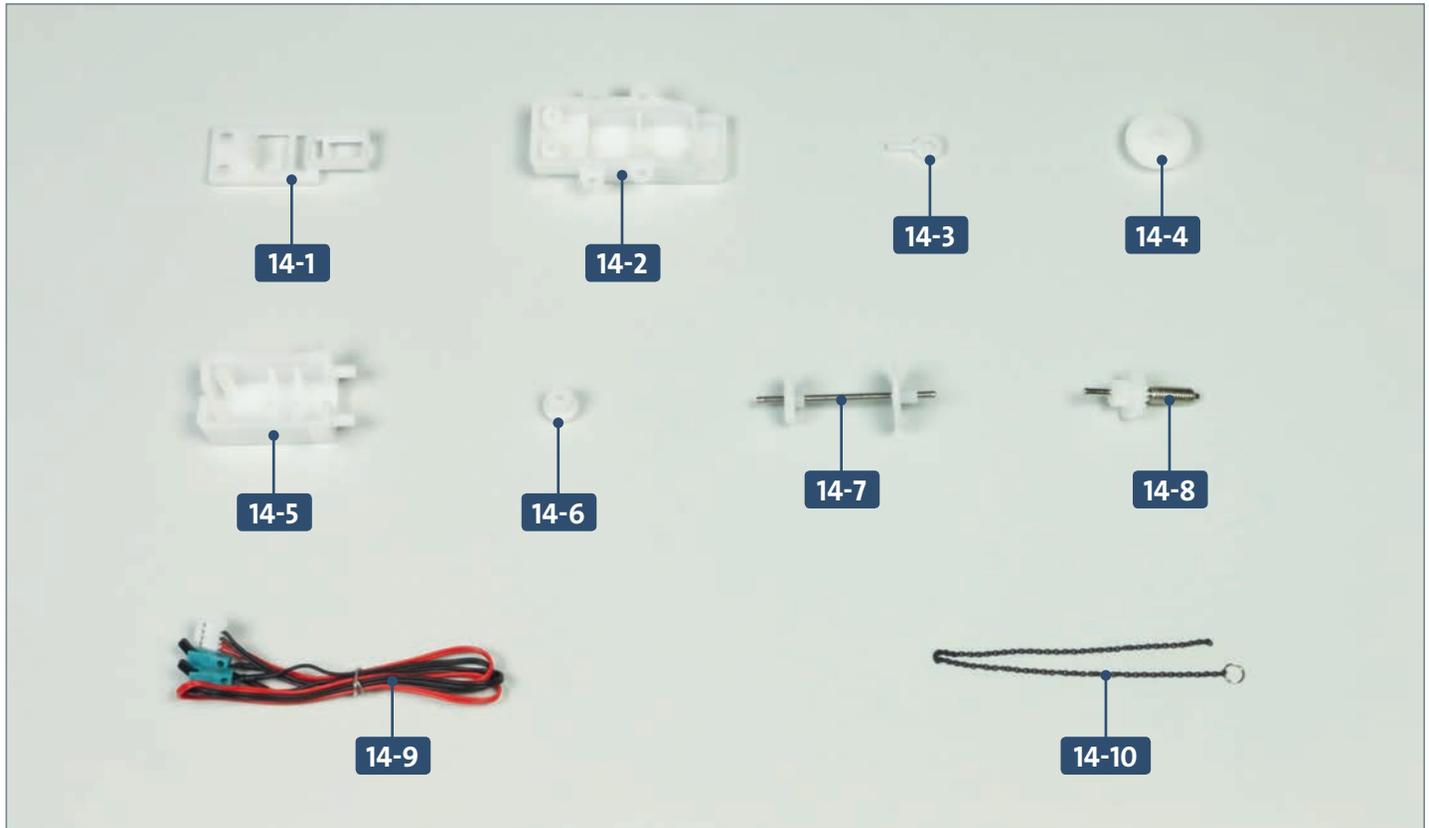
COMPLETED WORK



The two torpedoes have been assembled and fitted inside tubes **2** and **4**. A cable has been attached to the anchor windlass motor. Keep the three BP screws somewhere safe, as they will be needed in a future stage of the build.

Kit 14: Anchor windlass gearbox

The windlass is assembled and attached to the front of the hull, before being tested to check the motor and gearbox are working correctly.



Parts reference list

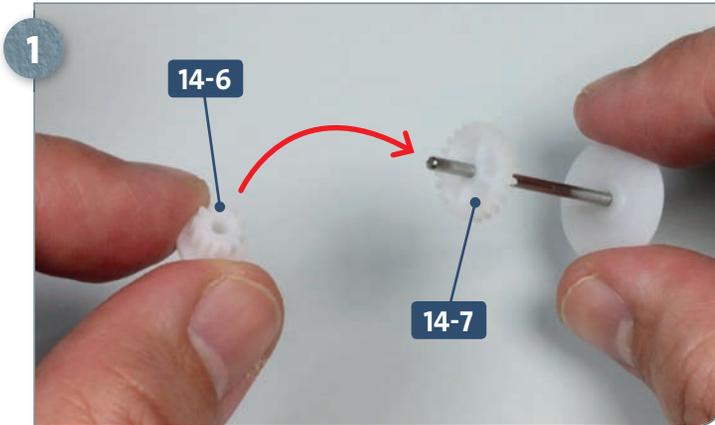
Part no.	Name
14-1	Gearbox inner frame
14-2	Gearbox upper cover
14-3	Stop lever
14-4	Drum side
14-5	Gearbox lower cover
14-6	Cog
14-7	Shaft with cog and drum
14-8	Screw shaft
14-9	Limit switches
14-10	Anchor chain



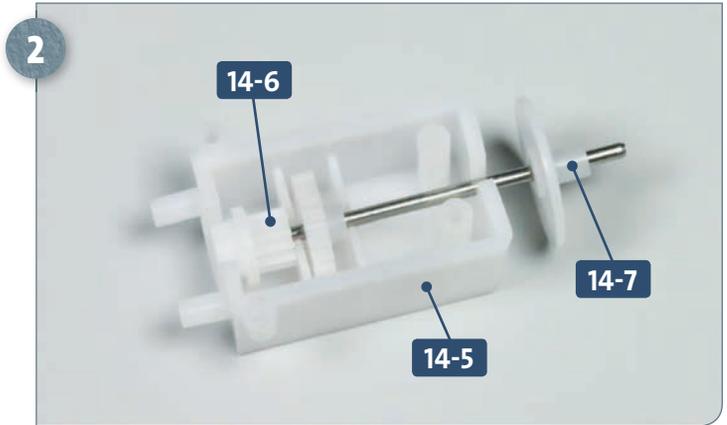
Screws

Ref	No.	Dimensions
BP	2+1	1.7 x 6 mm
DP	6+1	2 x 6 mm

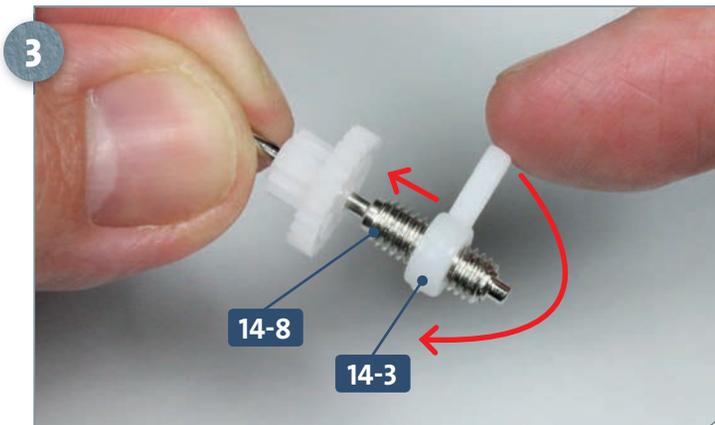
STAGE 1 → Assembly and installation of windlass gearbox



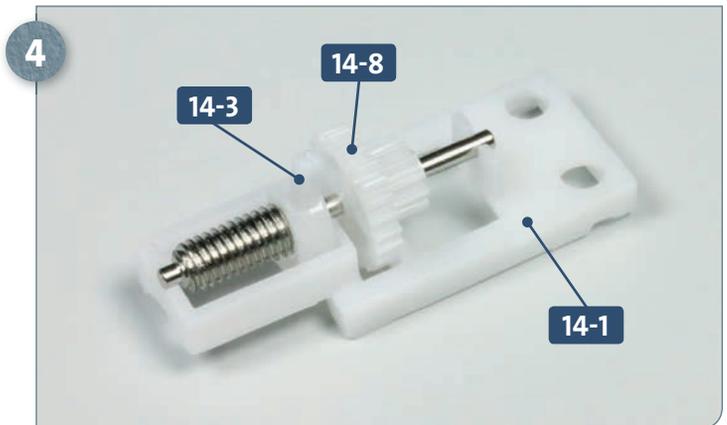
Take the cog **14-6**, oriented as shown above, and fit it onto the shaft **14-7**, as indicated by the arrow.



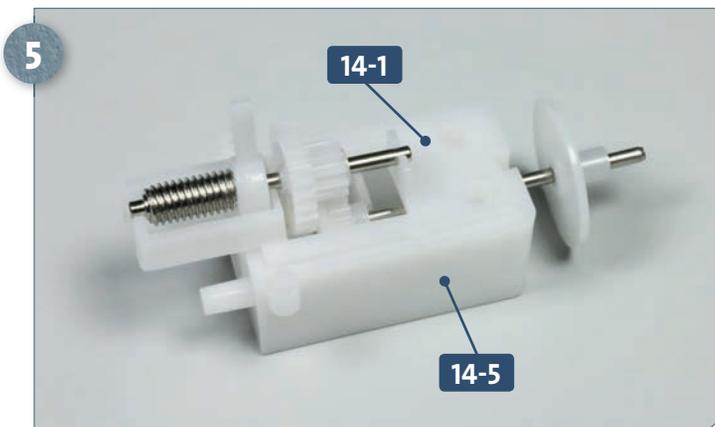
Insert the resulting assembly of **14-6/14-7** into the lower gearbox cover **14-5**.



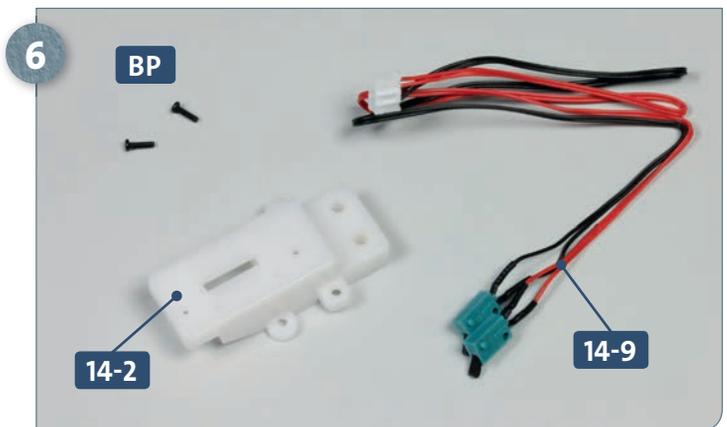
Thread the stop lever **14-3** onto the end of the screw rod **14-8**. Keep rotating it until it reaches the end of the thread, as indicated.



Place the resulting assembly of **14-3/14-8** on the inner frame **14-1**, as shown.

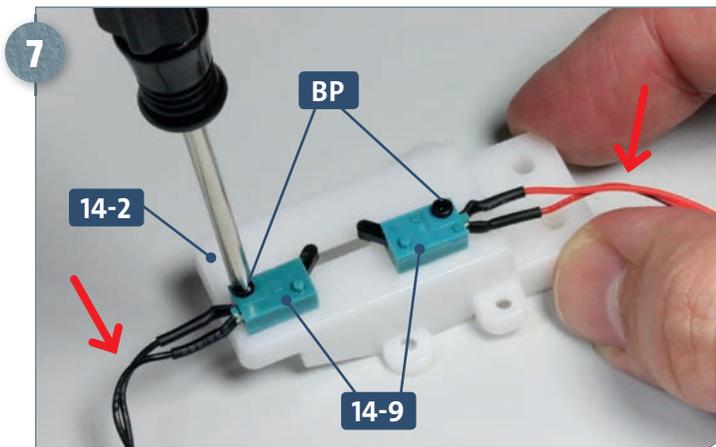


Fit the inner frame **14-1** into the recess in the gearbox lower cover **14-5**.

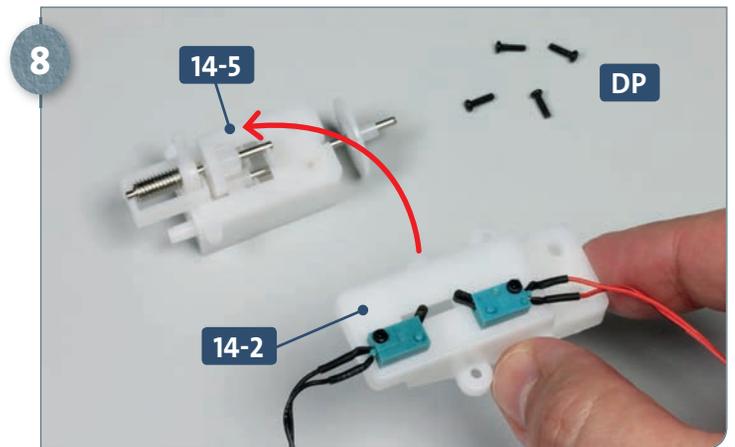


Take the upper gearbox cover **14-2**, the limit switch assembly **14-9** and two **BP** screws.

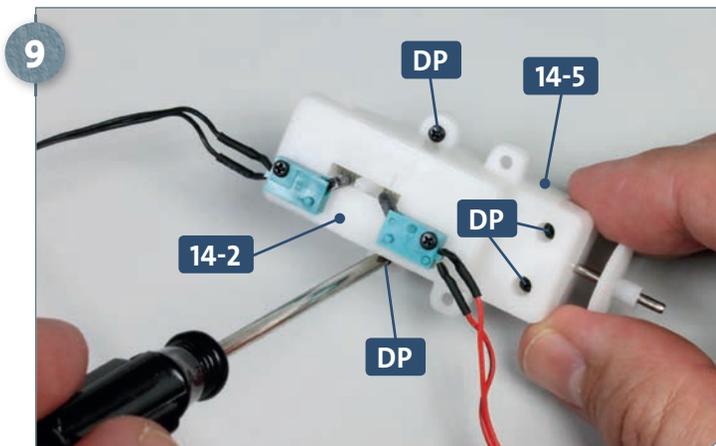
Kit 14: Anchor windlass gearbox



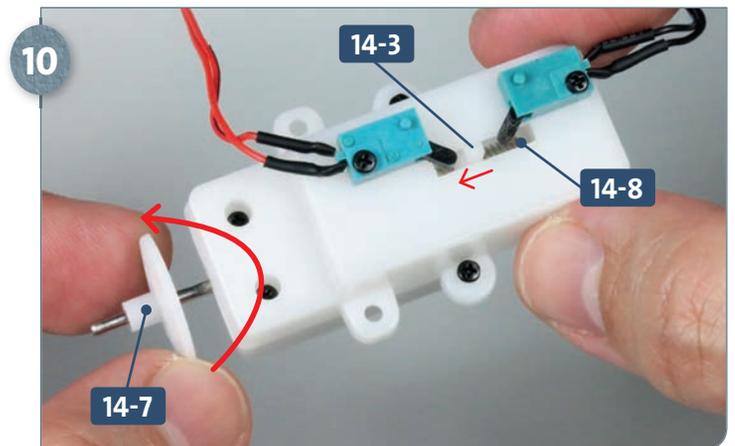
Attach the two limit switches of **14-9** onto the upper gearbox cover **14-2** using two **BP** screws. Make sure that the switch with the black cable is on the left, and the one with the red cable is on the right, as shown above.



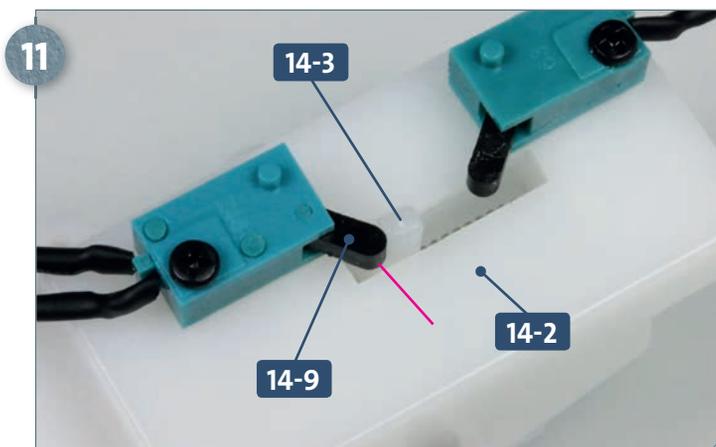
Take four **DP** screws. After making sure that the stop lever **14-3** fits into the slot, place the upper gearbox cover **14-2** onto the lower part **14-5**, as shown.



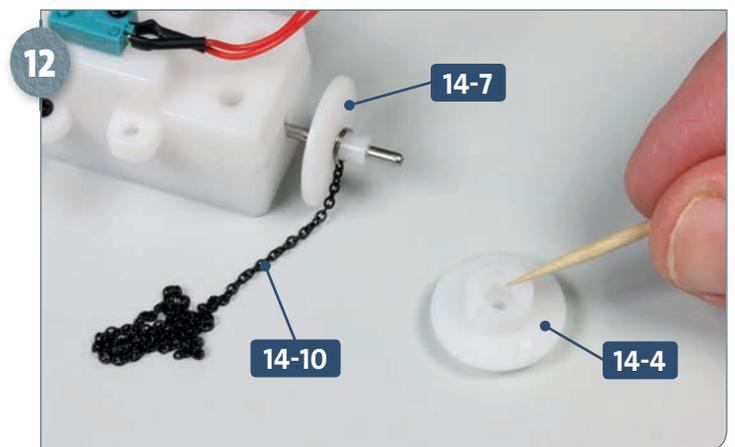
Fix the upper cover **14-2** to the lower cover **14-5** using the four **DP** screws as shown above.



If it isn't already correctly positioned, turn the chain drum **14-7** so that the stop lever **14-3** on the screw rod **14-8** is to the left, as indicated by the arrow.

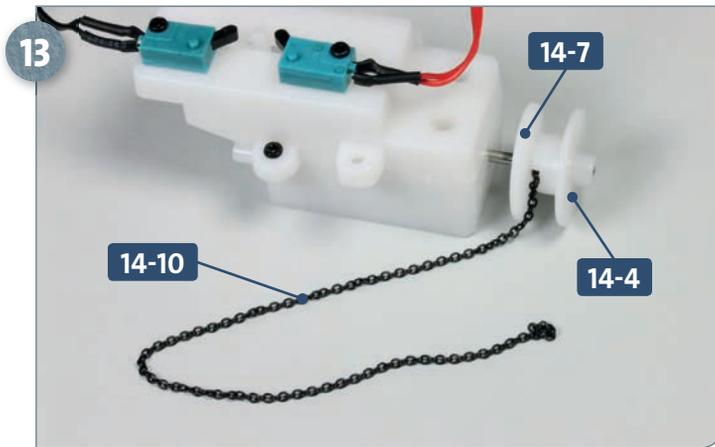


The stop lever **14-3** is in the correct position when its leading edge touches the limit switch with the red label **14-9**. The front edge of the lever should now be level with the marking on the upper gearbox cover **14-2**, highlighted by the red line above.

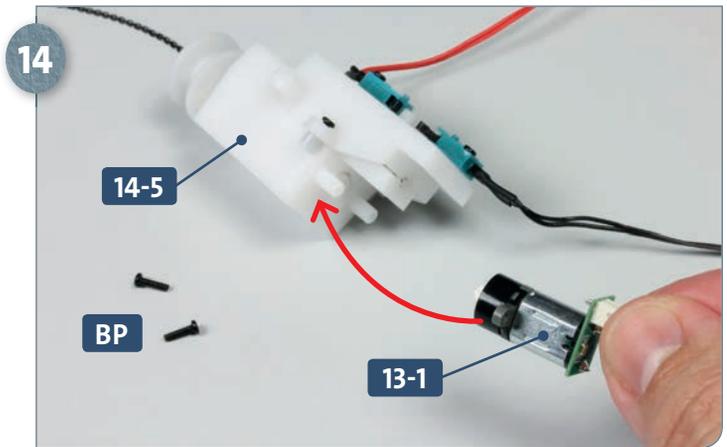


Fit the ring at the end of the anchor chain **14-10** onto the chain drum **14-7**, as shown. Have ready the drum side **14-4**. This will be glued in the next step.

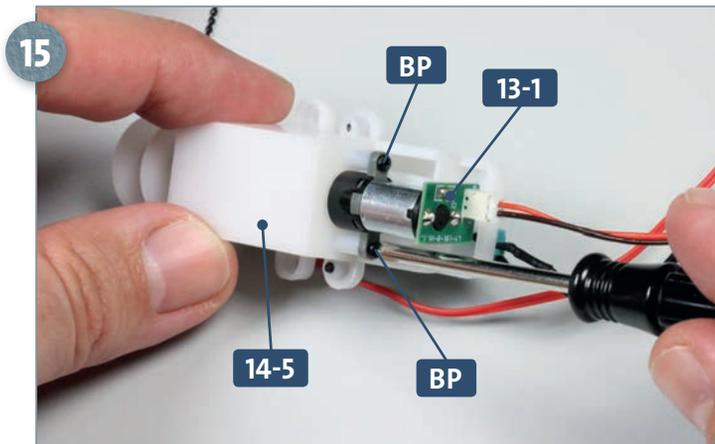
Kit 14: Anchor windlass gearbox



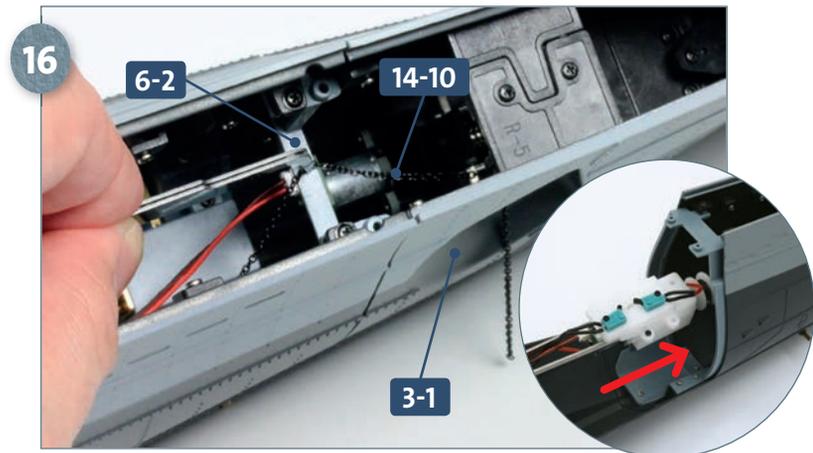
Test-fit the drum side **14-4** onto the drum **14-7** to form a spool for the anchor chain, as shown. Note that there is a notch in drum side **14-4** through which the chain passes. When sure of a good fit, apply a little glue to the drum side **14-4** and secure in place. Take care not to get any glue on the anchor chain.



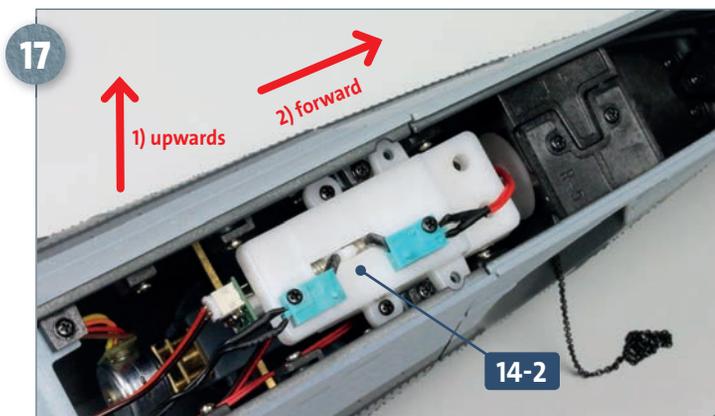
Take the two **BP** screws received with kit 13 along with the motor **13-1** you assembled in the same kit. Turn the gear assembly over and fit the motor onto the two mounts on the back of the lower gearbox cover **14-5**, as shown. Check that the splines on the motor align with the slots in the gearbox.



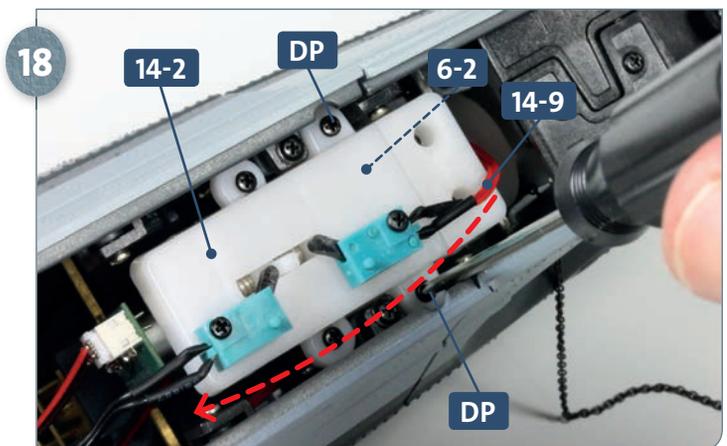
Secure the motor **13-1** to the back of the gearbox **14-5** using the two **BP** screws. Note the orientation of the motor circuit board.



To fit the gearbox assembly inside the hull, place it through the end of the hull, as shown in the inset photo. The anchor chain **14-10** passes over the hull connector **6-2** and through an opening in the starboard (R) bow **3-1**, marked by the red arrow. You might find that tweezers help with this.



Guide the gearbox assembly upwards and then forwards in the fuselage until it has reached the correct position: the two tabs on the upper gearbox cover **14-2** should sit over the raised sockets of the connecting piece, as shown.

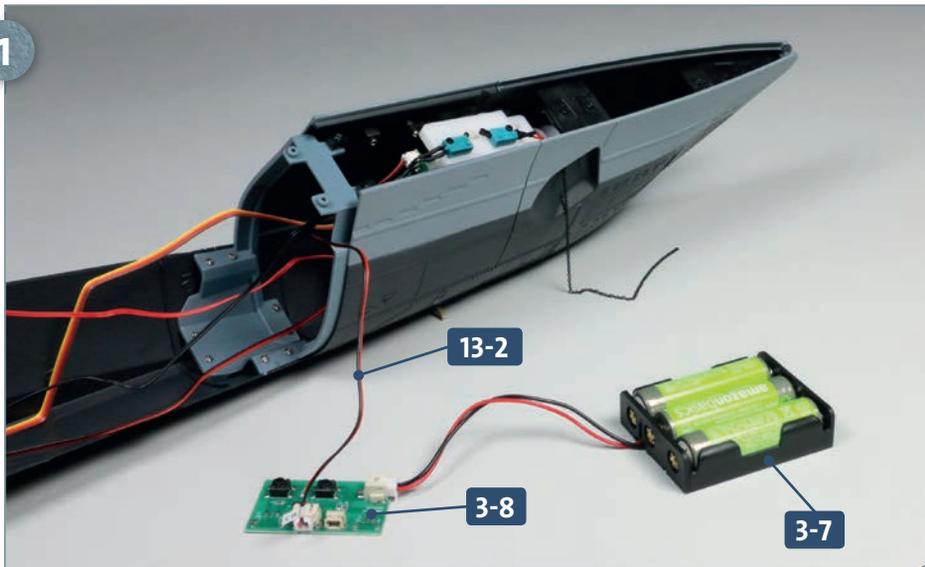


The red cable of the limit switch **14-9** should be routed below the gearbox towards the aft. See also the red dotted line above. Secure the gearbox cover **14-2** to the connector **6-2** using two **DP** screws.

Kit 14: Anchor windlass gearbox

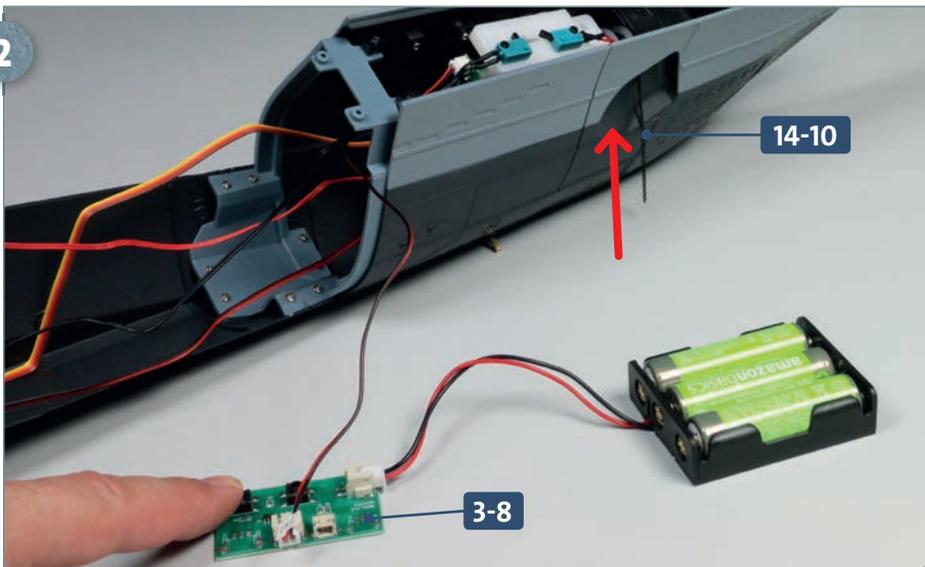
STAGE 2 → Testing the windlass

1



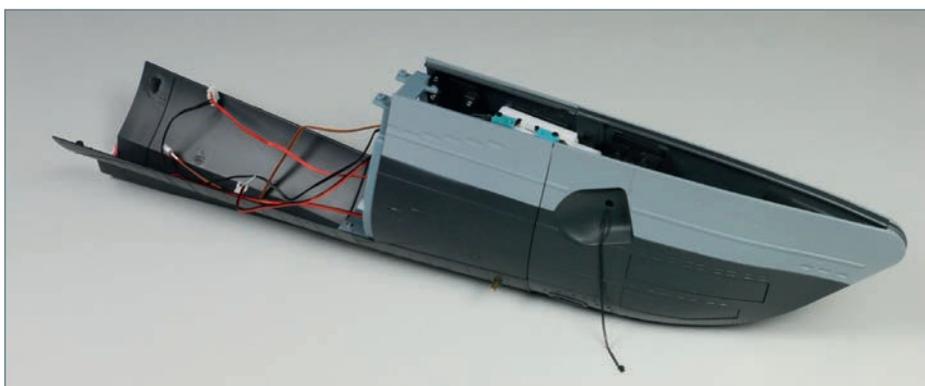
If you have not already done so, connect the cable from the battery compartment **3-7** to the socket on the test PCB **3-8**. Insert the cable **M-3 (13-2)** into the wide socket on the test PCB, as shown in the photo.

2



Press the left button on the test board PCB **3-8**. When it is kept depressed, the anchor chain **14-10** should be reeled in. Do not completely pull the chain in or it will be drawn back through the opening in the starboard (R) bow. The right-hand button on the circuit board can be pressed and held to drop the anchor chain. After testing, masking tape could be used to hold the anchor chain to the hull to save it from accidentally falling back through the hole in the hull.

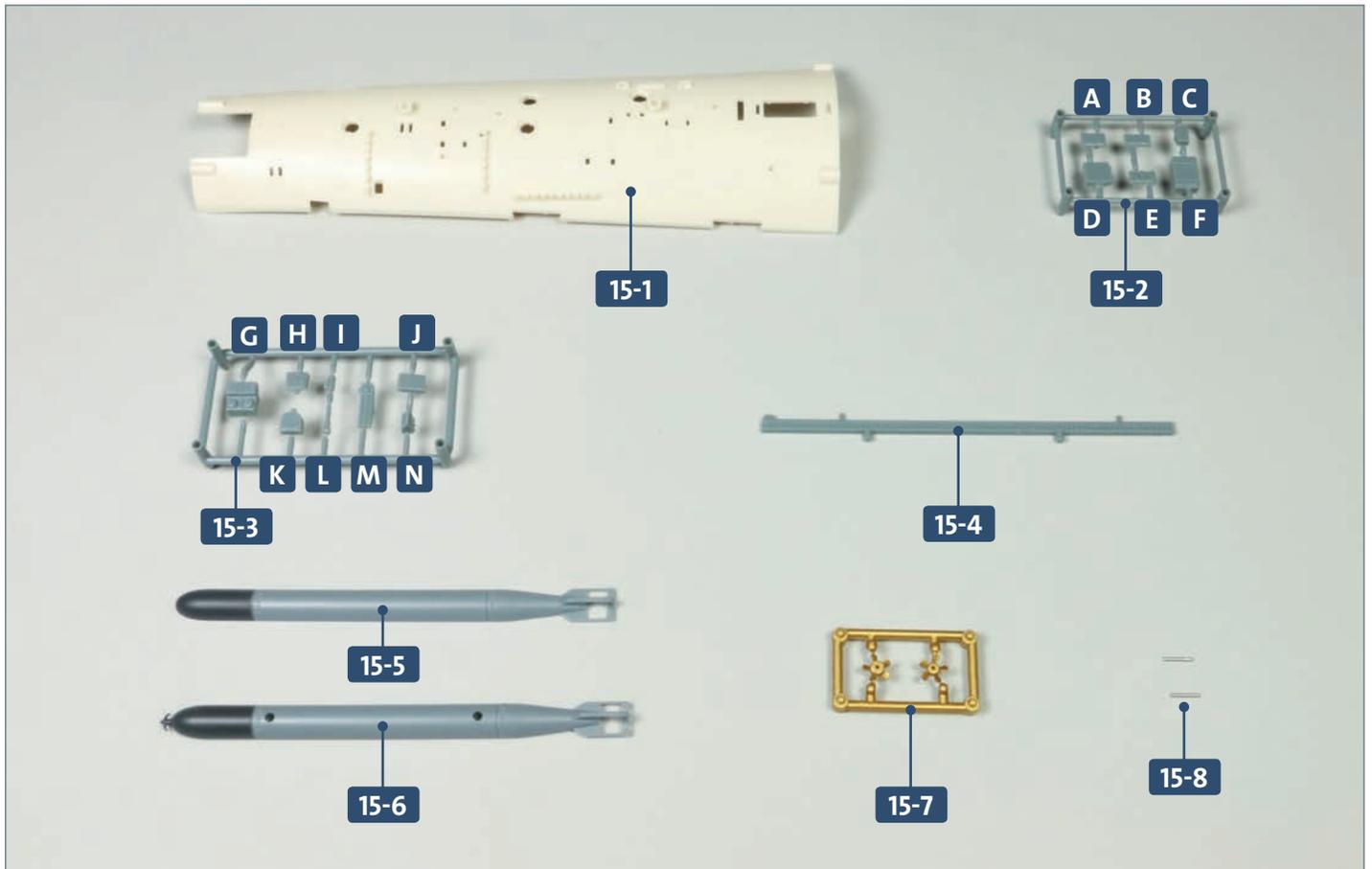
COMPLETED WORK



The windlass gear to lift and drop the anchor chain has been assembled and installed, and then tested to check its functionality.

Kit 15: Deckhead for the forward compartment

In this kit, various details including a torpedo loading rail are attached to the deckhead (ceiling) of the forward compartment. A torpedo is assembled and attached to the loading rail.

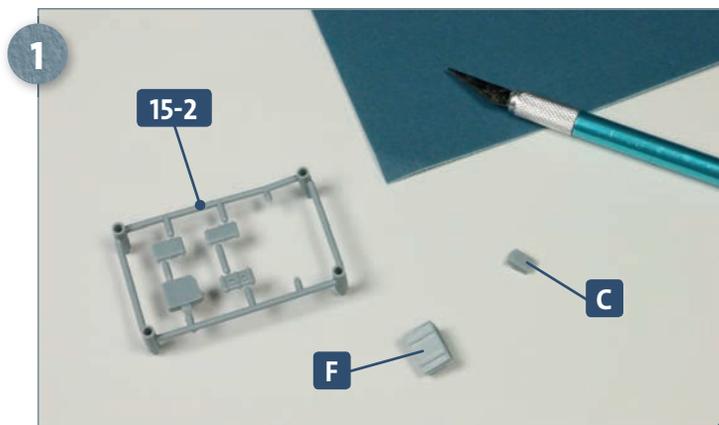


Parts reference list

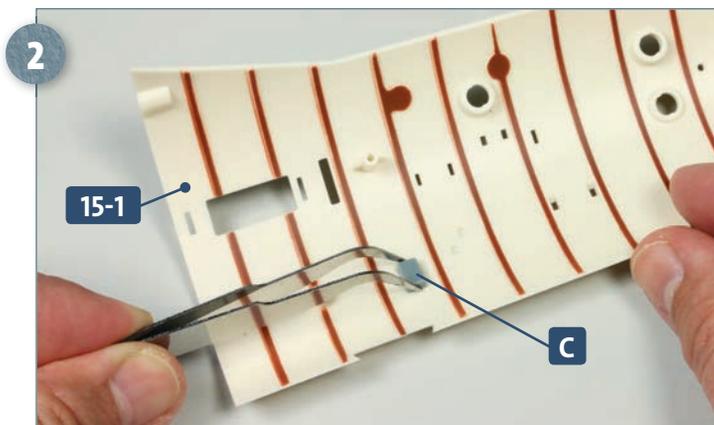
Part no.	Name
15-1	Forward deckhead
15-2	Frame (A, B, C, D, E, F)
15-3	Frame (G, H, I, J, K, L, M, N)
15-4	Loading rail
15-5	Torpedo upper half
15-6	Torpedo lower half
15-7	Propeller screws
15-8	Shafts (one spare)

Kit 15: Deckhead for the forward compartment

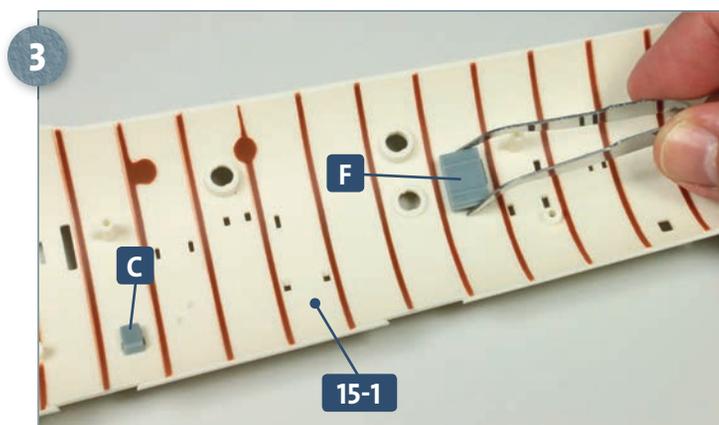
STAGE 1 → Attaching details from the frames



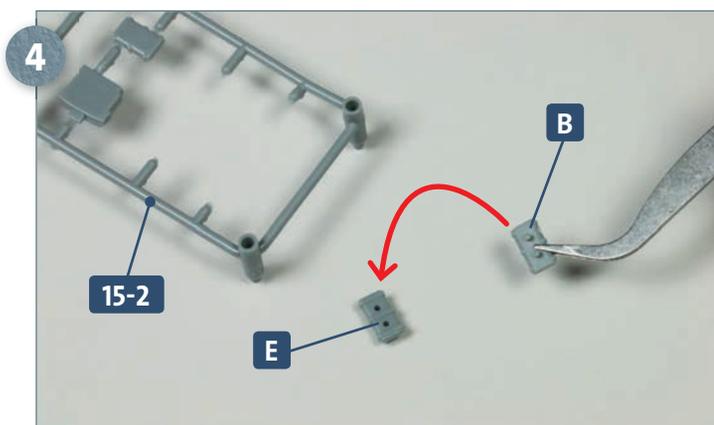
Use side cutters or a craft knife to carefully detach parts **C** and **F** from frame **15-2**. Use fine sandpaper to remove any remains of the attachment points (this step applies to each piece removed from the frames in this kit).



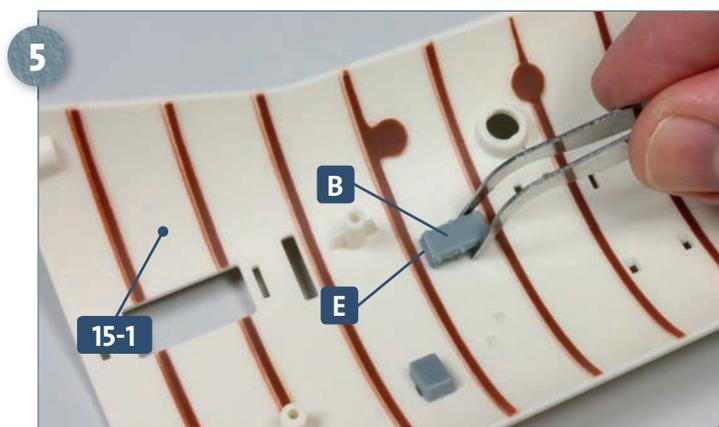
Apply a little glue to the two pegs on the back of part **C** and attach it to the indentations in the deckhead **15-1**, as shown. If possible, always test-fit parts in place before applying glue.



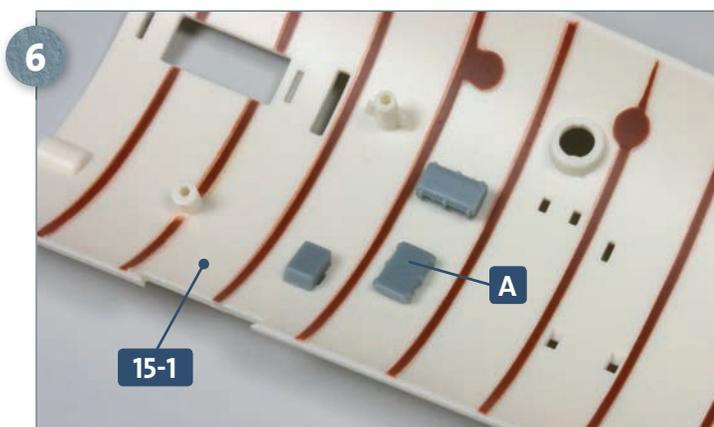
Apply some glue to the two pegs on the back of **F** and attach it to the two holes further forward on the deckhead **15-1**, as shown in the photo.



Next, separate parts **B** and **E** from frame **15-2**. Apply some glue to the two pegs on part **B** and fit the two parts together as shown.

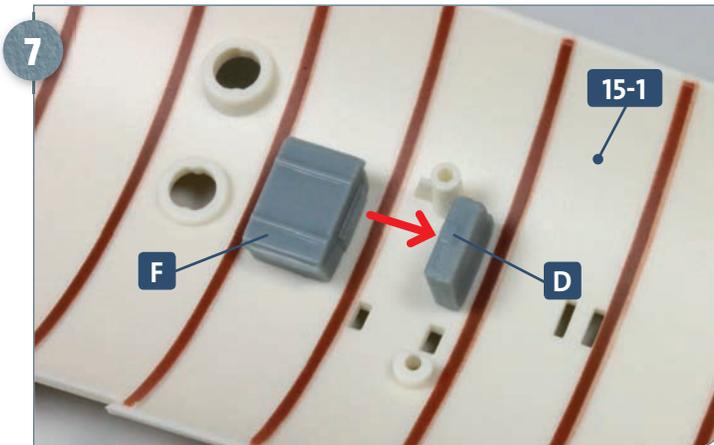


Apply some glue to the pegs on the back of **E** and fix the **B/E** assembly to the deckhead **15-1**.

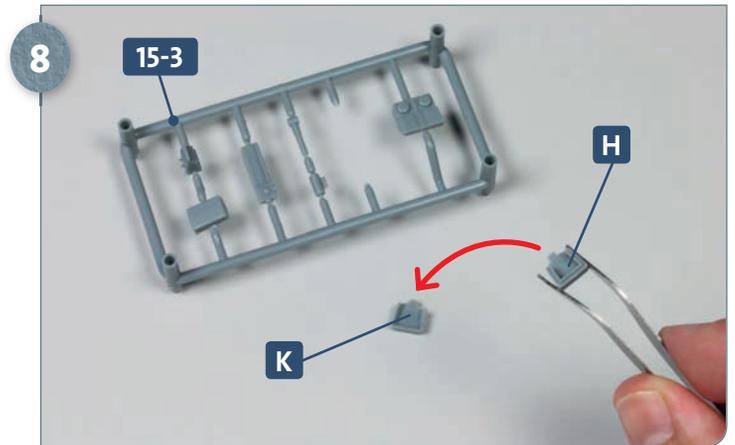


Remove part **A** from frame **15-2**, apply some glue to its two rear pegs, and insert them into the recesses in the deckhead **15-1**, as shown above.

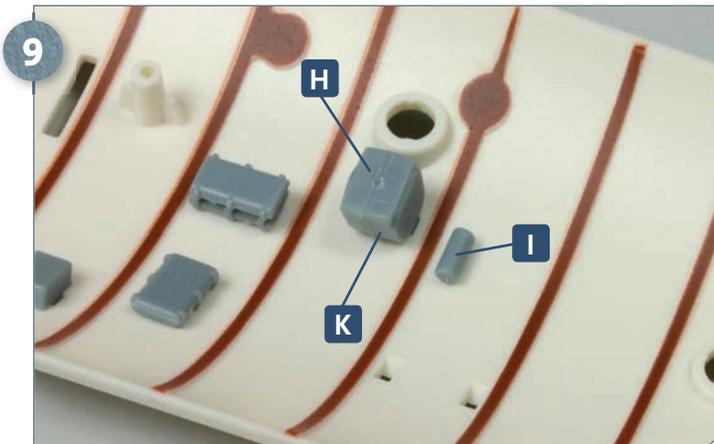
Kit 15: Deckhead for the forward compartment



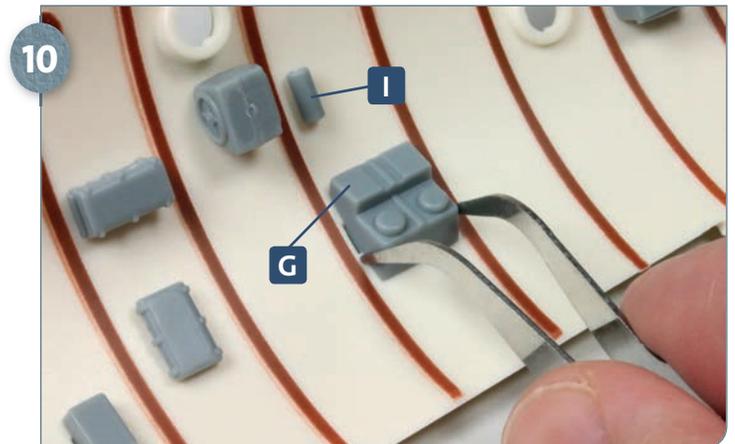
The remaining part from frame 15-2, part **D**, should be fixed in place near to the previously fitted part **F**. Note the indentation to the left of the part shown with an arrow.



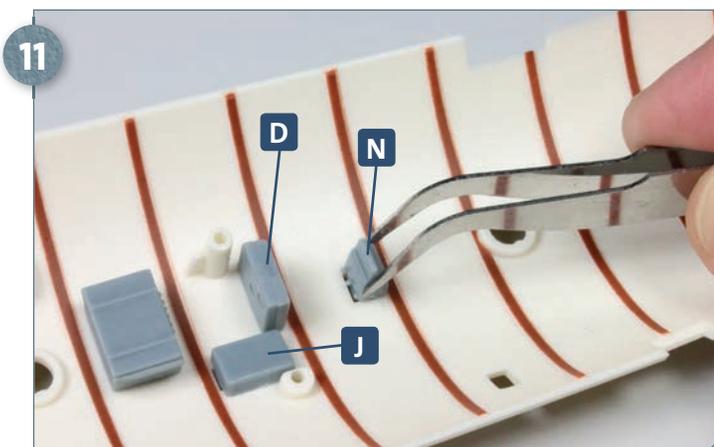
Now take frame 15-3 and remove parts **H** and **K**. Glue these together, as indicated by the arrow.



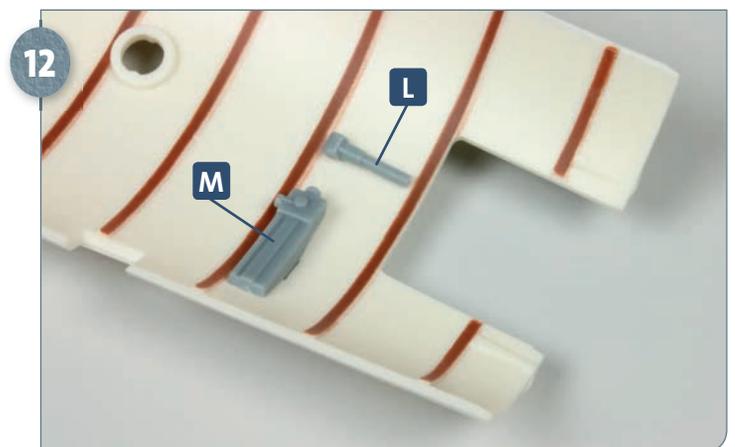
Apply some glue to the two pegs of the **H/K** assembly and attach to the deckhead as shown. Attach part **I** next to them.



Apply some glue to the two pegs of part **G** and attach it to the deckhead just below **I**.



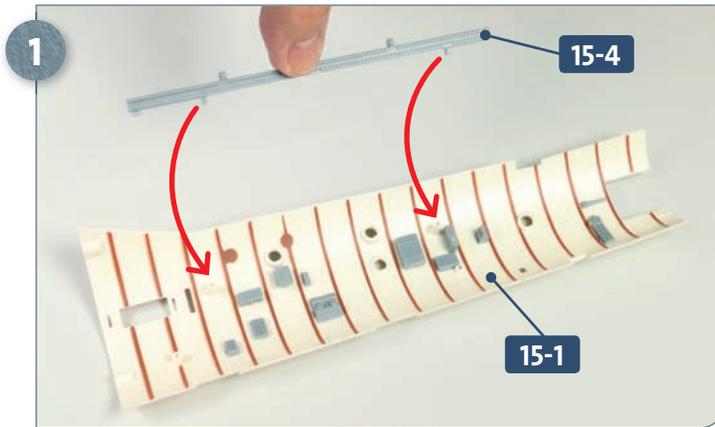
Glue parts **J** and **N** further forward, close to the previously attached part **D**.



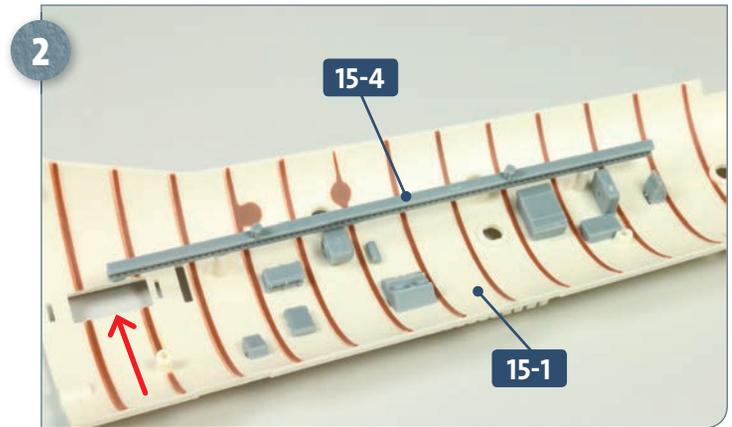
Finally, add glue to the pegs on parts **L** and **M** and glue them to the forward end of the deckhead 15-1.

Kit 15: Deckhead for the forward compartment

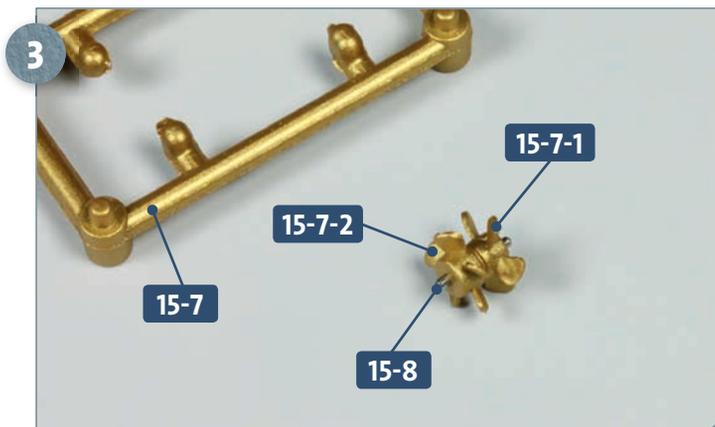
STAGE 2 → Adding the torpedo loading rail and torpedo



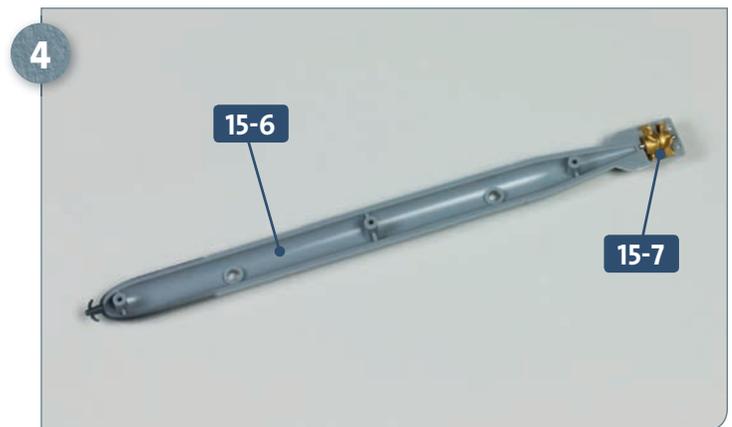
Take the torpedo loading rail **15-4** and apply some glue to the two thinner pegs. Guide these to the two raised sockets on the deckhead **15-1**, indicated by the arrows above.



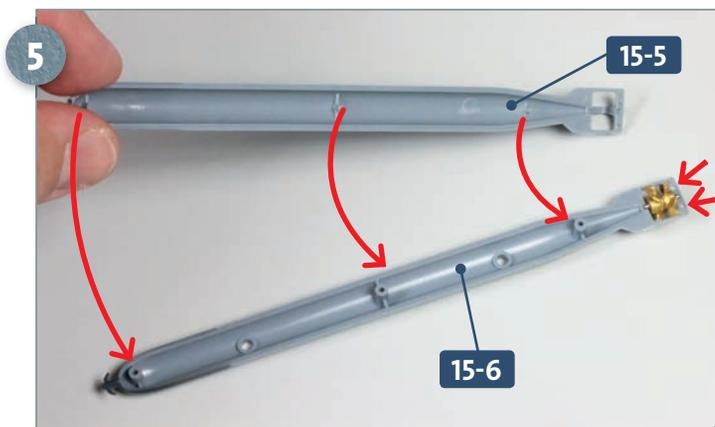
After noting the position of a tab at one end of the torpedo loading rail **15-4** (see arrow), fix in place onto the two raised sockets on the deckhead **15-1**, as shown.



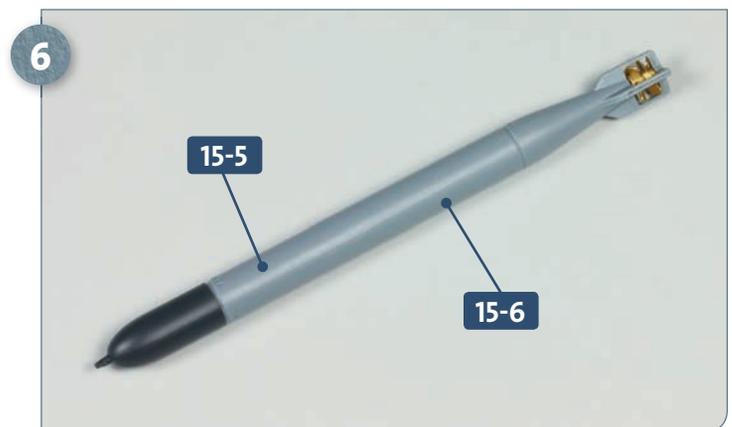
Remove the two propeller screws **15-7-1** and **15-7-2** from frame **15-7**. Connect the two together using a shaft **15-8** to form a propeller.



Take the torpedo lower half **15-6** and place the propeller **15-7** into the back so that the shaft sits in the recesses.

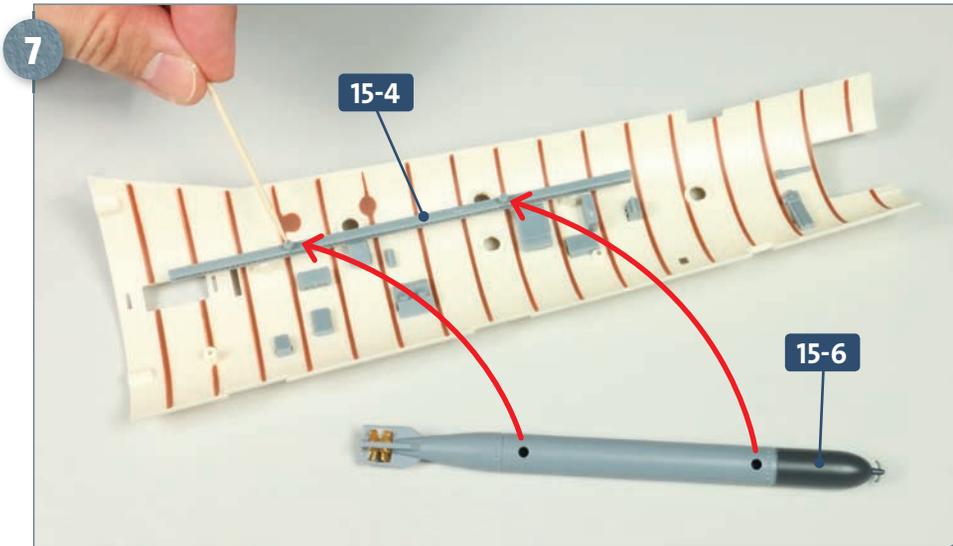


Take the upper half of the torpedo **15-5** and add a little glue to the three pegs along the length of the upper section as well as to the two pegs near where the propeller sits (see arrows). Insert the pegs into the corresponding holes in the lower half **15-6**, as shown above.

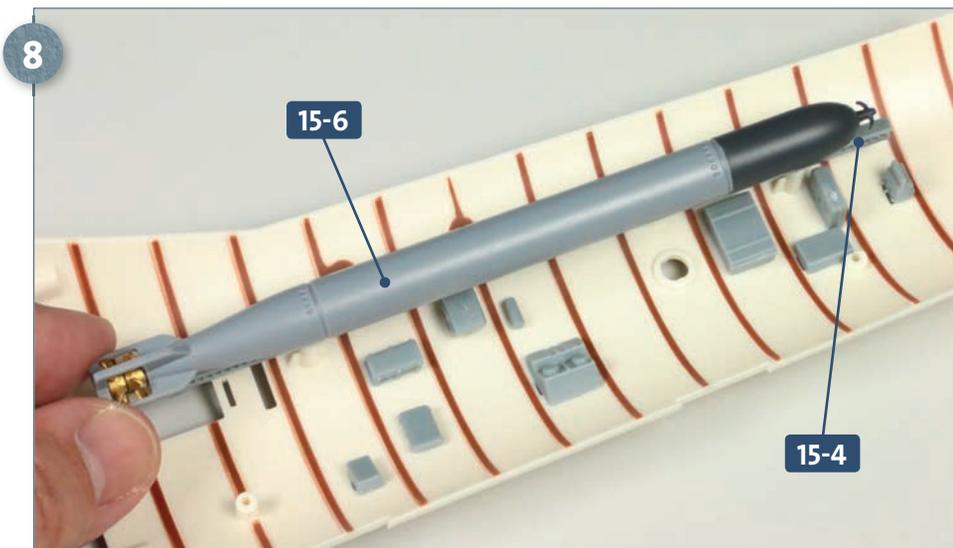


Apply some gentle pressure to secure the two halves of the torpedo **15-5** and **15-6** together.

Kit 15: Deckhead for the forward compartment

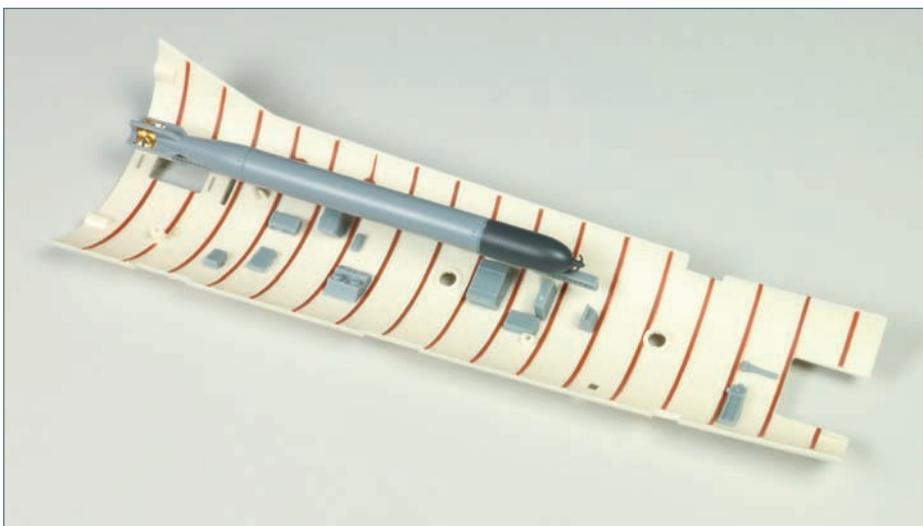


Apply some glue to the two pegs on the torpedo loading rail **15-4**. These fit inside the holes in the bottom of the torpedo **15-6**, as indicated by the two arrows.



Glue the torpedo onto the two pegs of the loading rail **15-4**, as shown.

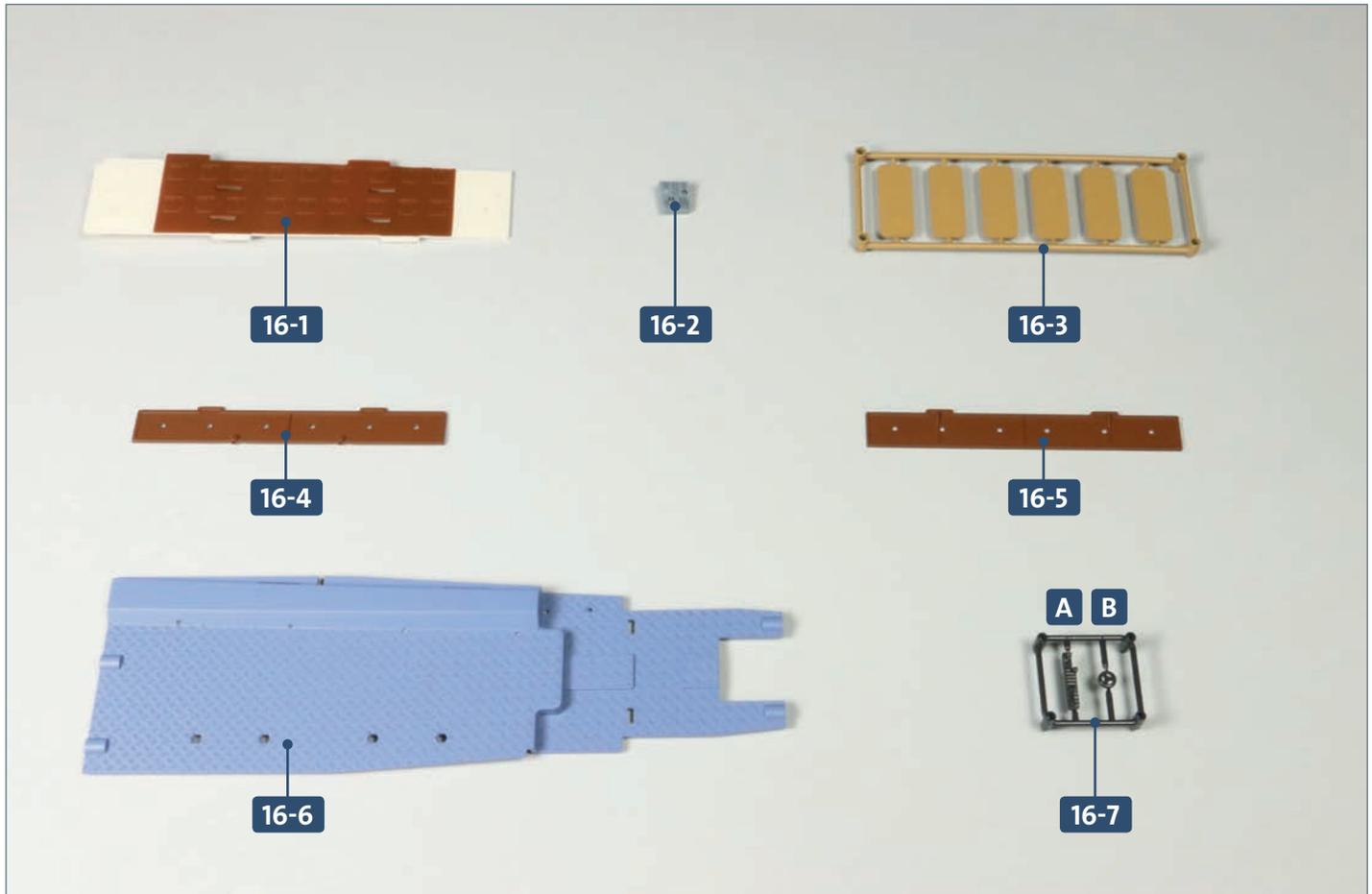
COMPLETED WORK



Various details including a torpedo loading rail and torpedo have been attached to the deckhead of the forward compartment.

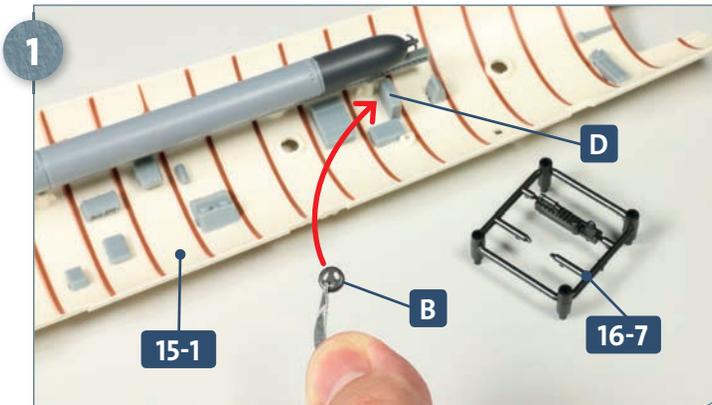
Kit 16: Bunks and deck

In this kit, a hand wheel is attached to the deckhead of the forward compartment, and you will build the assembly of the bunks, before joining the rear bulkhead (wall) and deck (floor) of the forward compartment.

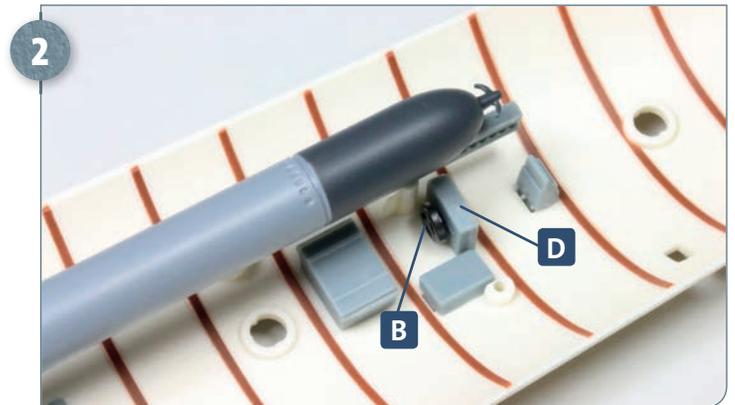


Parts reference list	
Part no.	Name
16-1	Rear bulkhead
16-2	Switchboard
16-3	Six bunks
16-4	Upper bunk frame
16-5	Lower bunk frame
16-6	Deck section
16-7	Frame (A, B)

STAGE 1 → Hand wheel assembly and deckhead

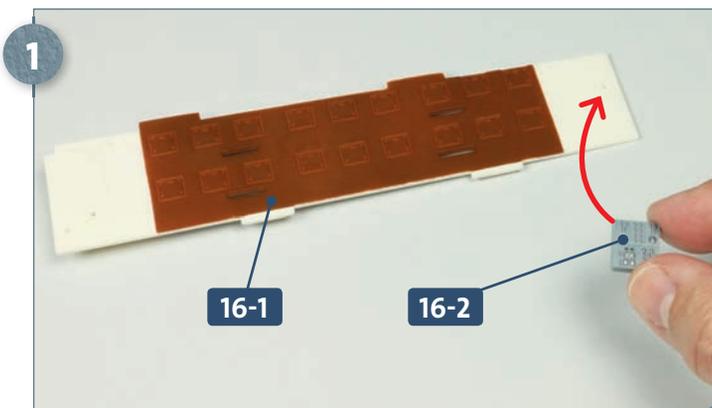


Place the forward compartment deckhead **15-1** on your work surface. Remove the hand wheel **B** from frame **16-7**, apply some glue to the peg, and fit it into the indentation on part **D**, which was attached to the deckhead in the previous kit.

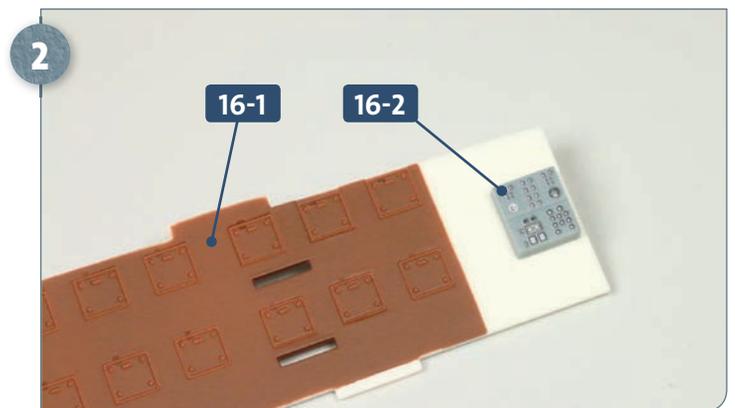


Glue the hand wheel **B** in place on part **D**, as shown above.

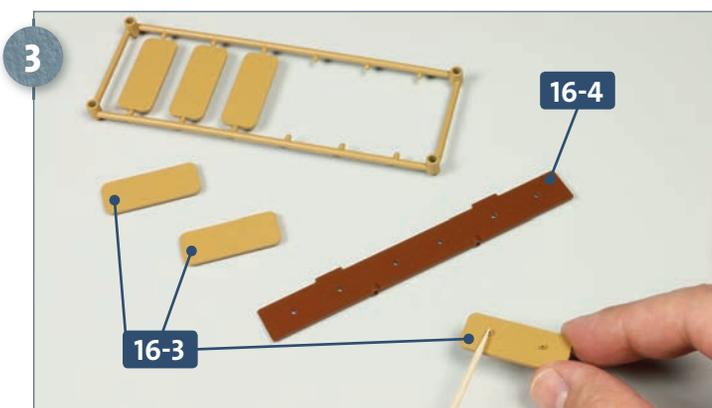
STAGE 2 → Assembly of bunks, rear bulkhead and deck



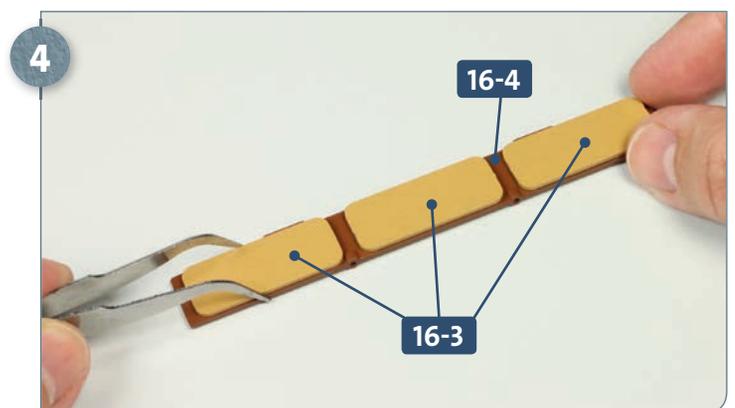
Take the rear bulkhead of the forward compartment **16-1**. Apply some glue to the pegs on the switchboard panel **16-2** and insert them into the front side of the rear bulkhead, in the position shown.



The photo above shows the switchboard panel **16-2** mounted in position on the rear bulkhead **16-1**.

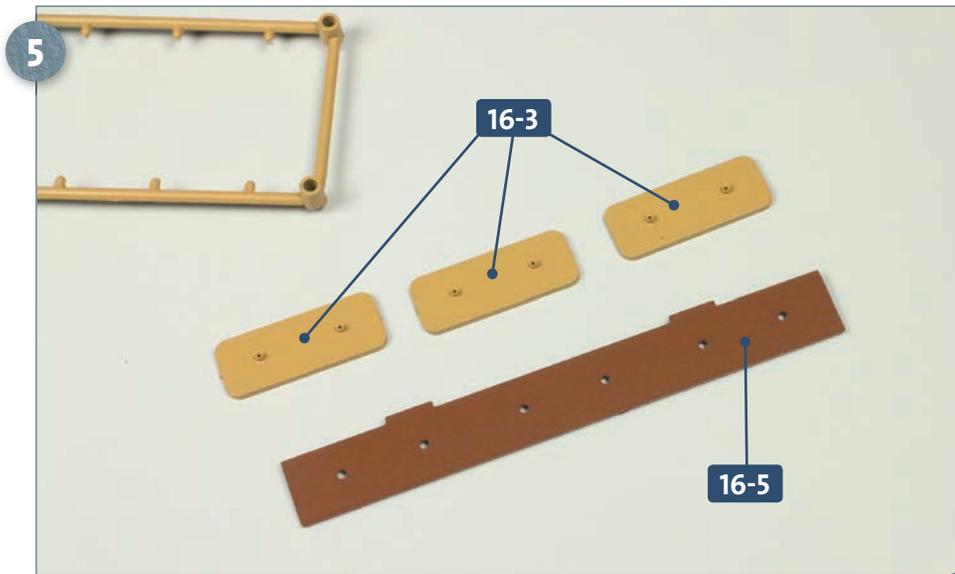


Have the upper bunk frame **16-4** ready. Remove three bunks from frame **16-3**; apply some glue to the underside of one of the bunks. Note, bunks should be fitted to the smooth side of bunk frame **16-4**.

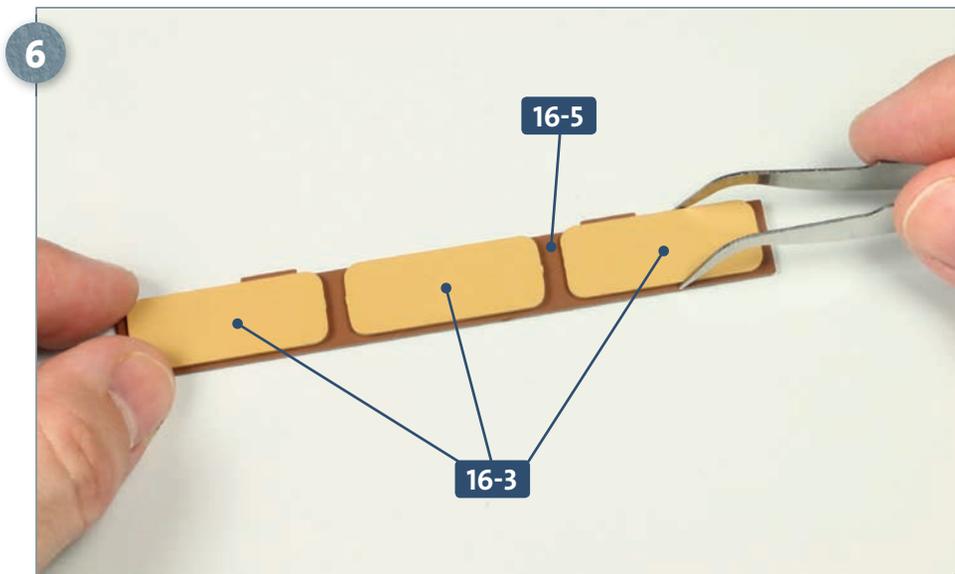


Glue the first bunk **16-3** to the upper frame **16-4**. Repeat the process with the other two bunks, as shown. Again, the bunks are fitted to the smooth side of the frame **16-4**.

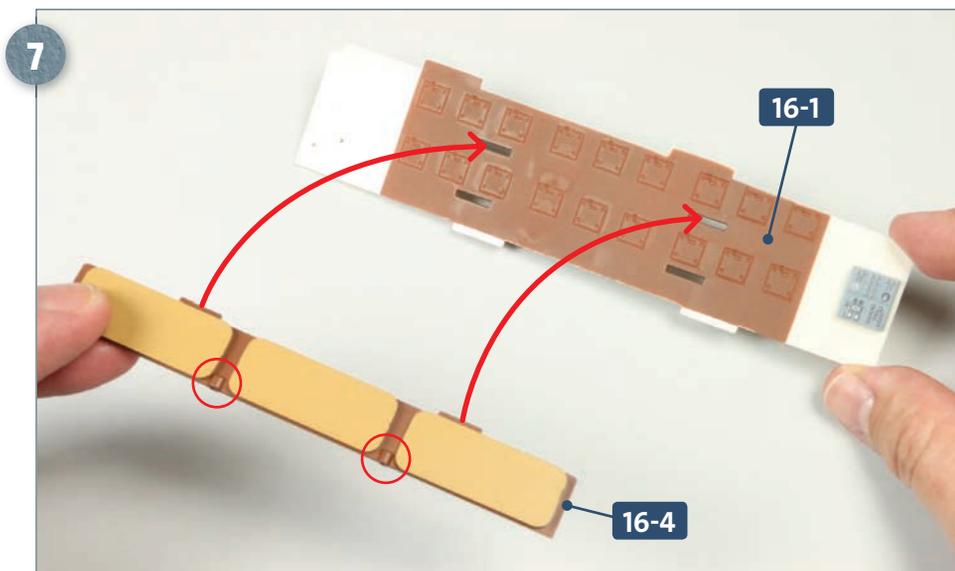
Kit 16: Bunks and deck



Take the lower bunk frame **16-5**. Separate the remaining three bunks from the frame **16-3**.



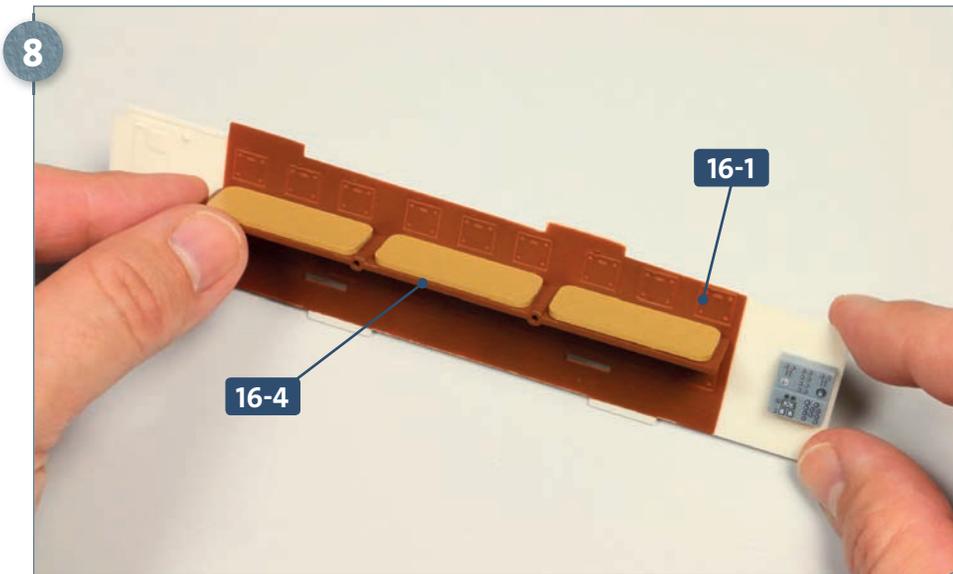
Apply some glue to the underside of each bunk **16-3** and attach to the lower frame **16-5**, as shown.



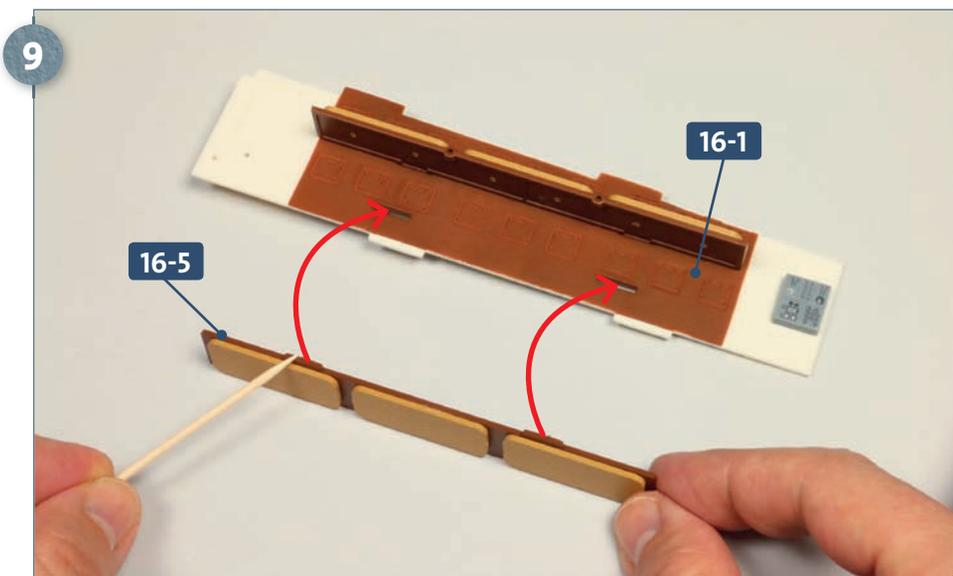
Take the upper bunk frame **16-4** and apply some glue to its rear edge and the two wide tabs. Fit these into the two upper slots on the rear bulkhead panel **16-1**, as indicated by the arrows. Note that part **16-4** has raised holes in the side (circled).

Kit 16: Bunks and deck

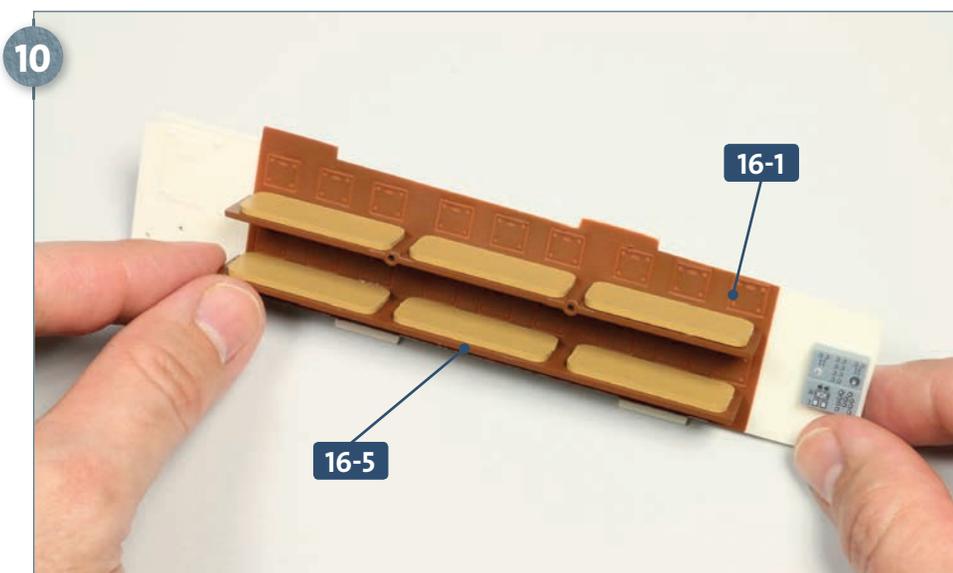
The photo shows the upper bunk frame **16-4** correctly fitted to the bulkhead **16-1**.



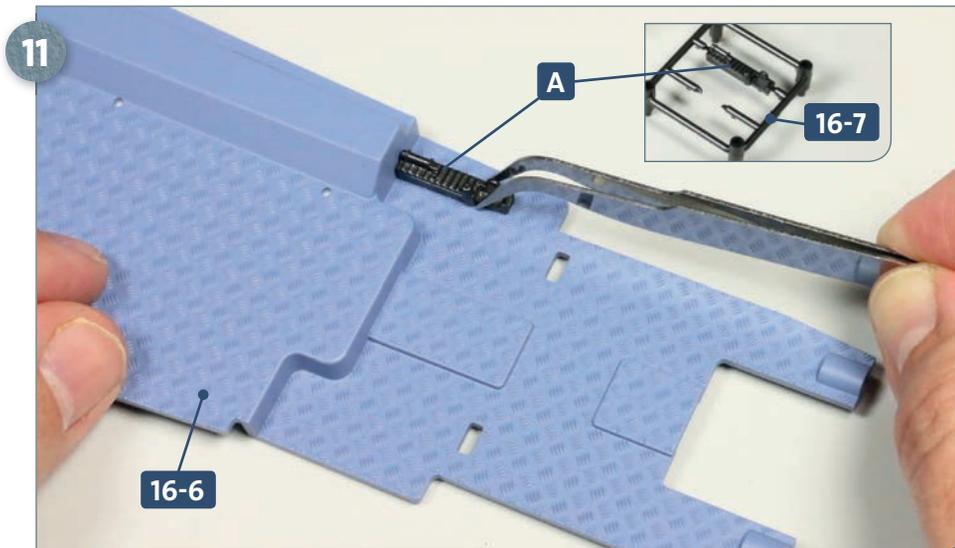
Now repeat the process: take the lower bunk frame **16-5** and apply glue to its contact points, before fitting it to the rear bulkhead panel **16-1**, as shown.



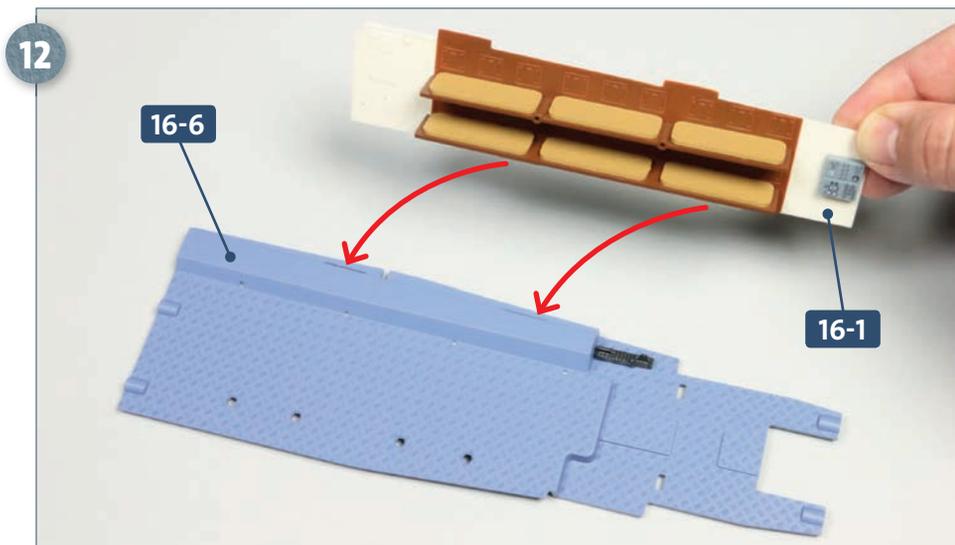
The two wide tabs of the lower bunk frame **16-5** fit into the two lower slots in the bulkhead panel **16-1**.



Kit 16: Bunks and deck

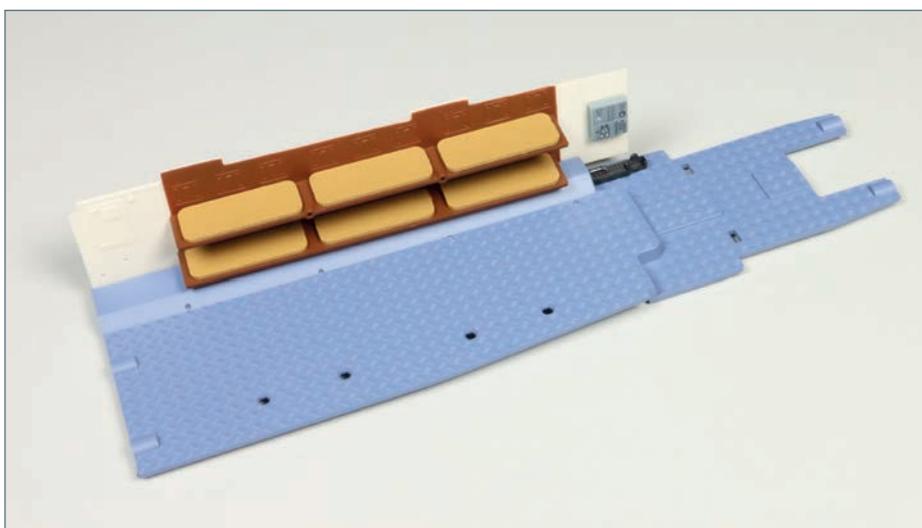


Take the deck section for the forward compartment **16-6**. Remove part **A** from frame **16-7** and apply some glue to its two pegs. Glue part **A** into the two holes in the forward end of the deck section **16-6**, as shown in the photo.



Apply glue along the lower edge and two wide tabs of the rear bulkhead panel **16-1** and fit these into the corresponding slots in the deck **16-6**, as indicated by the two arrows.

COMPLETED WORK



Assembly of the forward compartment has continued with the bunks attached to the rear bulkhead panel, which has then been fitted to the deck.