U 96 U-BOAT

Pack 27
Assembly
Instructions

Kit 105: The port propeller shaft

Kit 106: The second propeller motor

Kit 107: The starboard propeller shaft

Kit 108: Elevator motor



Kit 105: The port propeller shaft

In this kit, the propeller blades are firstly glued to the hub of the port (L) side propeller, before the propeller shaft assembly is inserted into the main hull, and the propeller motor is mounted.



Parts reference list		
Part no. Name		
105-1	Port (L) side propeller shaft assembly	
105-2	Three propeller blades	
105-3	Retaining plate	

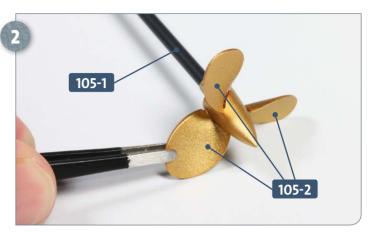


Screws		
Ref	No.	Dimensions
FM	1+1	2 x 4 mm (PWM)
GM	2 + 1	1.4 x 6 mm (PWM)
СР	2 + 1	2 x 4 mm (PWB)

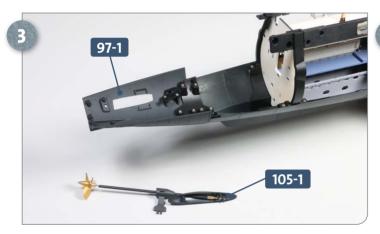
STAGE 1 \rightarrow Installation of port (L) side propeller and motor



Place the port (L) side propeller assembly 105-1 on your work surface. Detach the three propeller blades 105-2 from their frame and gently smooth any rough edges.



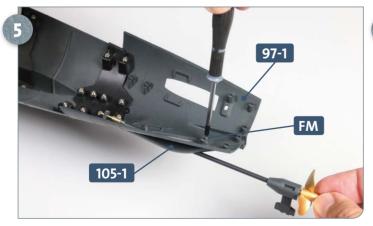
Glue the three propeller blades 105-2 into the slots of the propeller hub 105-1 using a little glue, as shown. Take time whilst doing this and check the alignment of the blades by looking at the propeller from the end.



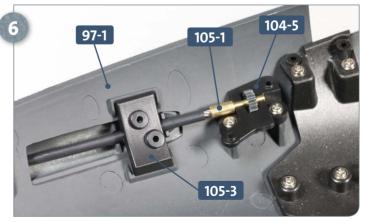
Place the main hull assembly on your work surface so that you have access to the aft end and hull section **97-1**. Have ready the propeller shaft assembly **105-1**.



Guide the shaft of the propeller assembly **105-1** through the rectangular opening in the port (L) side of the aft hull section **97-1**. The cog at the forward end of the shaft fits into the recess in the motor housing **104-5**, as shown.

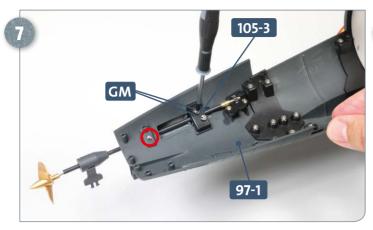


Attach the domed die-cast structure located on the propeller shaft assembly 105-1 to the hull section 97-1 using an FM screw. The screw is circled in red in the photo in step 7.

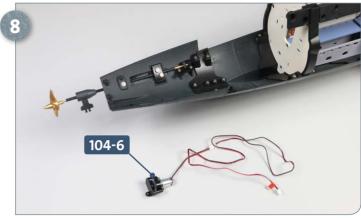


After checking the cog on the shaft 105-1 is seated in the housing 104-5, fit the retaining plate 105-3 into the recess of the hull section 97-1: the plate covers the shaft tube of 105-1, as shown.

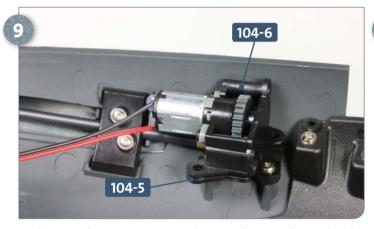
Kit 105: The port propeller shaft



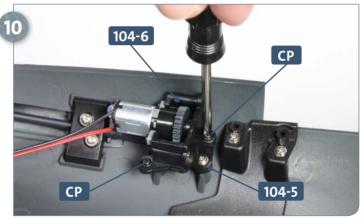
Fasten the retaining plate 105-3 to the hull section 97-1 using two GM screws. (The screw you attached in step 5 is circled in red above.)



Place the motor assembly and housing **104-6**, which you assembled in the previous kit, next to the model.

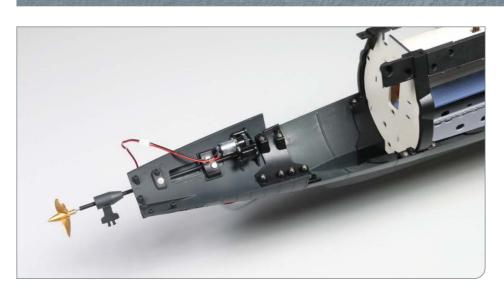


Fit the motor housing **104-6** onto the motor housing that is already attached to the hull, **104-5**, as pictured.



Fasten the two parts of the motor housing **104-6** and **104-5** together using two **CP** screws.

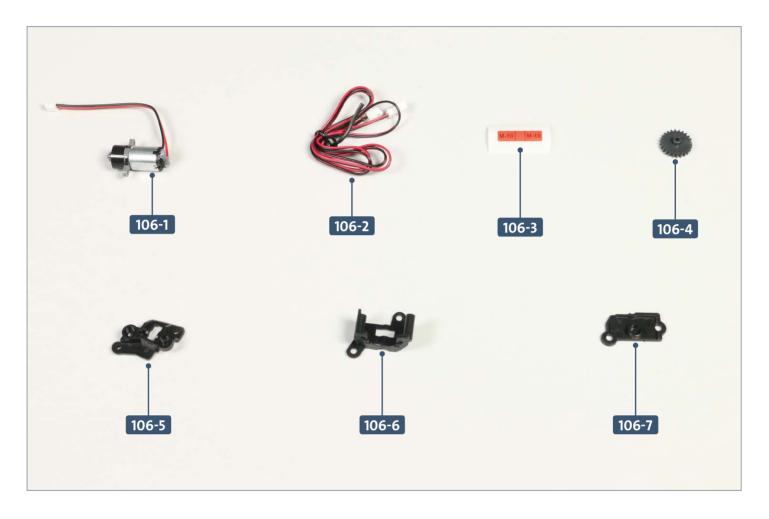
COMPLETED WORK



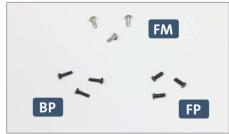
The port (L) side propeller shaft assembly has now been prepared and inserted into the main assembly. The motor for the port (L) side propeller has also been mounted in the model.

Kit 106: The second propeller motor

In this kit, the starboard (R) propeller motor is fitted with a cable attachment complete with cable label. A cog is also fitted to the hub of the motor, which is then screwed to its housing.

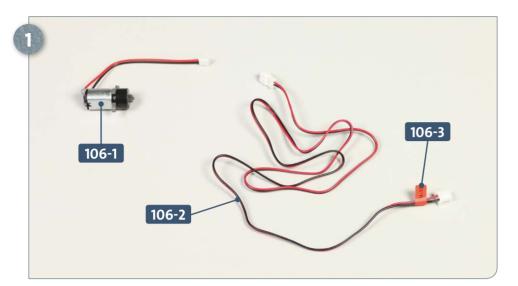


Parts reference list		
Part no.	Name	
106-1	Motor	
106-2	Cable	
106-3	Cable label	
106-4	Cog	
106-5	Motor housing	
106-6	Motor housing	
106-7	Motor housing	

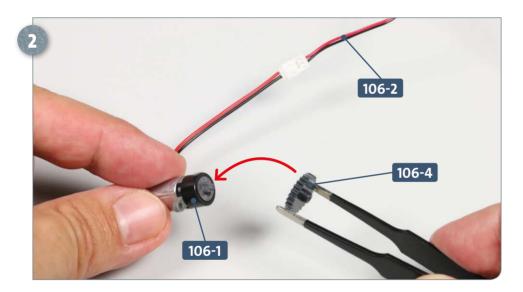


Screws			
Ref	No.	dimensions	
FM	2 + 1	2 x 4 mm (PWM)	
ВР	2 + 1	1.7 x 6 mm (PB)	
FP	2 + 1	2 x 6 mm (KB)	

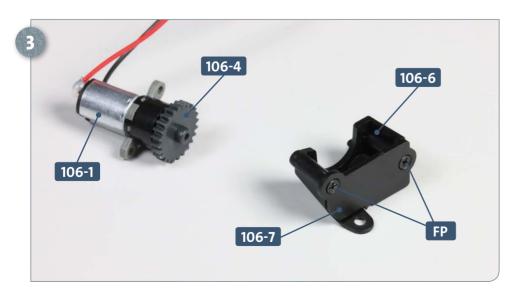
STAGE 1 \rightarrow Port (L) side propeller motor



Remove the tie from cable 106-2. Attach cable label 106-3 (marked M-10) to the plug at the end of the cable, as pictured. Have ready motor 106-1.

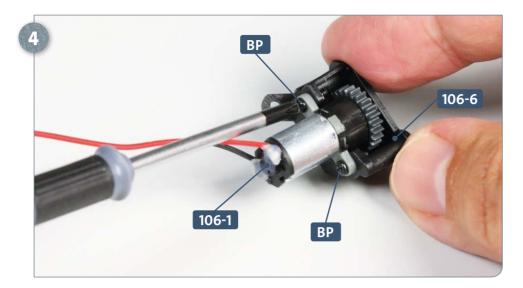


Connect the plug of cable 106-1 to the socket of 106-2, as pictured. Take the cog 106-4 and fit it onto the hub of the motor, as indicated by the arrow.

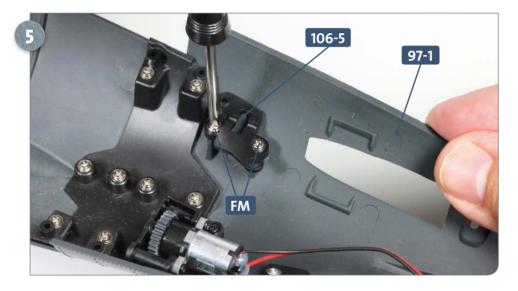


Fit the two parts of the motor housing 106-6 and 106-7 together and fix in place using two FP screws, as shown. Have ready the motor 106-1 and cog 106-4 from the previous step.

Kit 106: The second propeller motor

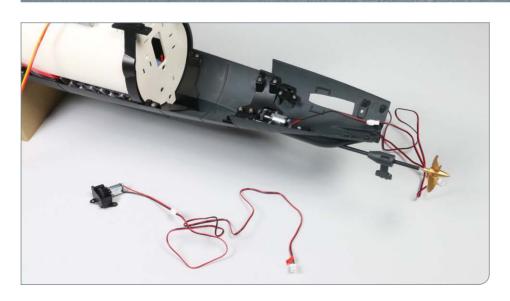


Take the motor 106-1 and fit the attached cog in the recess of the motor housing 106-6. Fix the motor to the housing using two BP screws.



Place the main hull assembly on your work surface so that you have access to the aft end. Position the motor housing **106-5** on the two supports on the starboard (R) side of the lower hull section **97-1**. Attach in position using two **FM** screws.

COMPLETED WORK



The motor for the starboard (R) propeller is now fitted with a cable and has been inserted into its housing. The motor will be installed in the next stage of the build.

Kit 107: The starboard propeller shaft

In this kit, blades are glued to the hub of the starboard (R) propeller, the propeller shaft assembly is fitted into the main hull, and the propeller motor is mounted.

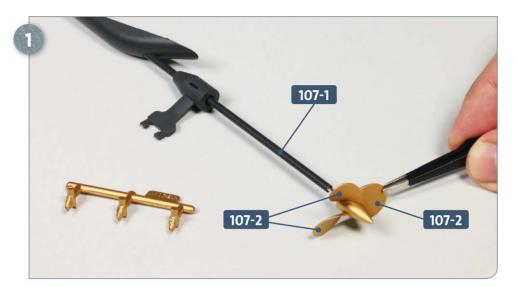


Parts reference list		
Part no. Name		
107-1	Starboard (R) side propeller shaft assembly	
107-2	Three propeller blades	
107-3	Retaining plate	

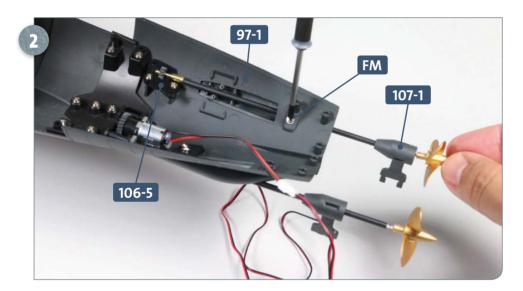


Screws		
Ref	No.	Dimensions
FM	1+1	2 x 4 mm (PWM)
GM	2 + 1	1.4 x 6 mm (PWM)
СР	2 + 1	2 x 4 mm (PWB)

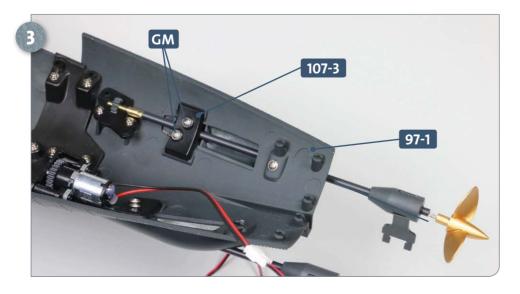
STAGE 1 → Installation of the starboard (R) side propeller and motor



Place the starboard (R) propeller assembly **107-1** on your work surface. Detach the three propeller blades **107-2** from their frame and gently smooth any rough edges. Fix the three blades in place into the slots of the propeller hub **107-1** using a little glue. Take time whilst doing this and check the alignment of the blades by looking at the propeller from the end.

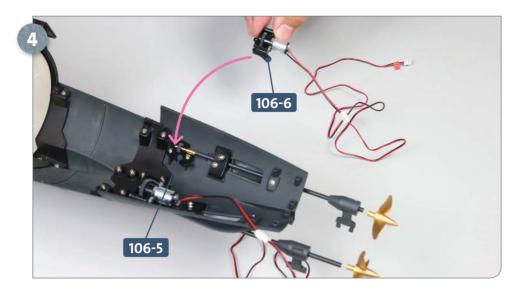


Place the main hull assembly on your work surface so you have access to the aft end. Guide the shaft of the propeller assembly 107-1 through the rectangular opening in the aft hull section 97-1. The cog at the forward end of the shaft fits into the recess in the motor housing 106-5, as shown. Attach the domed die-cast structure located on the propeller shaft assembly 107-1 to the hull using an FM screw, as shown.

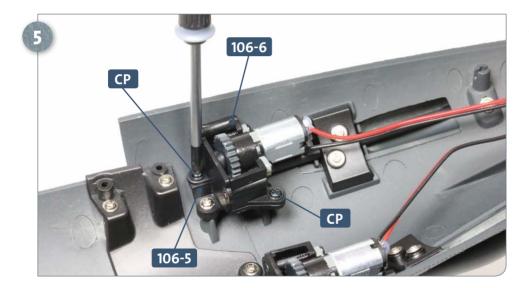


Fit the retaining plate 107-3 into the recess of the hull plate 97-1 so that it covers the shaft. Fasten in place using two GM screws.

Kit 107: The starboard propeller shaft

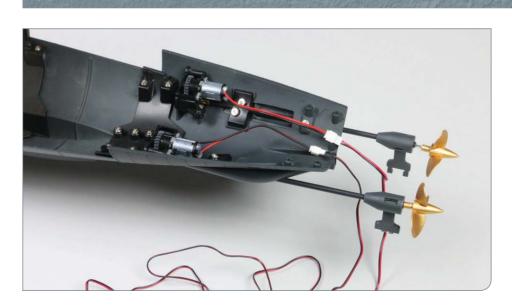


Take the motor assembly in its housing **106-6**, which you assembled in the previous kit, and fit it to the motor housing already attached to the hull structure **106-5**, as shown by the arrow.



Fasten the two parts of the motor housing 106-6 and 106-5 together using two CP screws as shown, left.

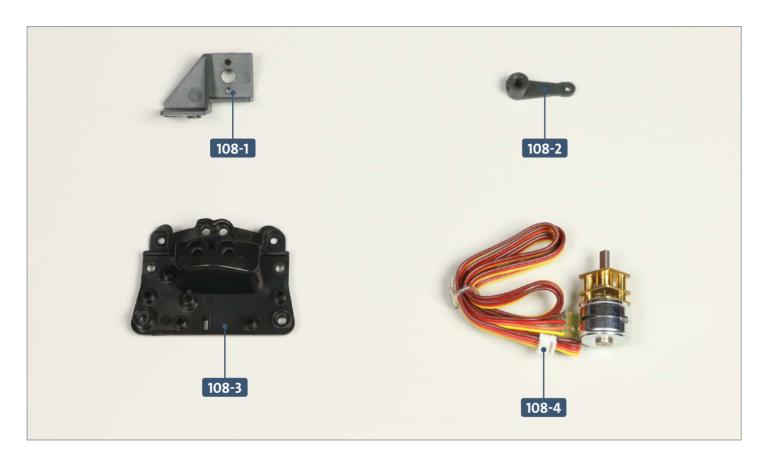
COMPLETED WORK



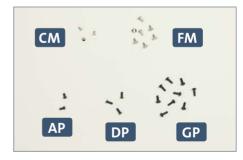
The starboard (R) propeller shaft assembly has now been prepared and inserted into the main hull assembly, and the motor for the starboard (R) propeller has been installed.

Kit 108: Elevator motor

In this kit, a connector is first fitted to the main hull structure, then the sixth compartment is inserted and fixed in place. The elevator motor is fitted with a mounting plate and a lever.

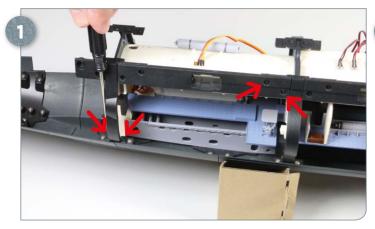


Parts reference list		
Part no. Name		
108-1	Mounting plate	
108-2	Lever	
108-3	Connector	
108-4	Aft elevator motor	

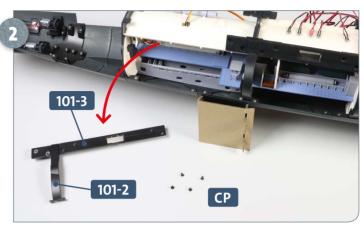


Screws			
Ref	No.	Dimensions	
CM	2 + 1	1.6 x 4 mm	
FM	6+1	2 x 4 mm	
AP	1+1	2 x 4 mm	
DP	2 + 1	2 x 6 mm (PB)	
GP	8 + 1	2 x 6 mm (PWB)	

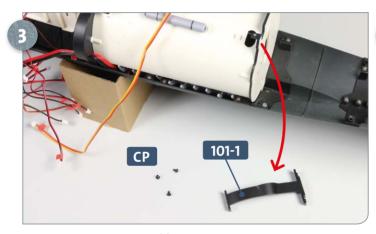
STAGE 1 \rightarrow Installing the sixth compartment



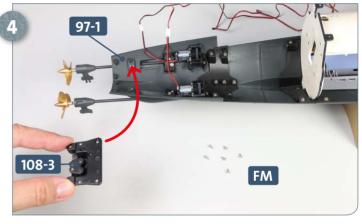
Before starting assembly, first read all the steps in stage 1 carefully. When ready, locate the fifth compartment of the model and remove the four CP screws, indicated by the four arrows.



Remove the 101-2/101-3 assembly from the main hull structure. This assembly and the four **CP** screws will be reattached to the model in step 13. Keep the screws safely aside until needed.



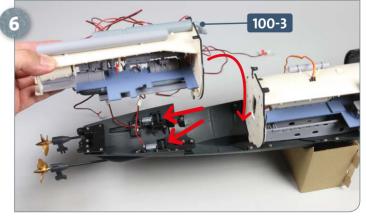
Now, working on the port (L) side of the model, loosen three more **CP** screws and remove connector **101-1** from the hull structure. These will be reattached in step 11.



Have ready six **FM** screws. Take connector **108-3** and place it aft of the lower hull section **97-1**, as shown by the arrow.

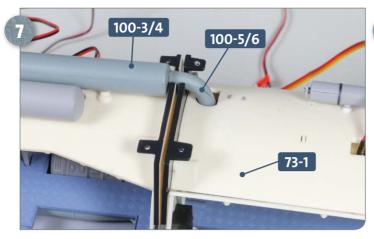


Attach the connector **108-3** to the aft hull section **97-1** with six **FM** screws, as pictured. In the next step, the electric motor room is inserted into the main structure.

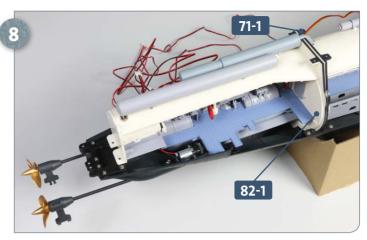


Although the photo shows the muffler 100-3 in place, it is best to temporarily remove it while inserting the electric motor room. Carefully guide the substructure of the compartment past the housings of the two propeller motors, shown by the two arrows. It may help to temporarily loosen the starboard (R) motor.

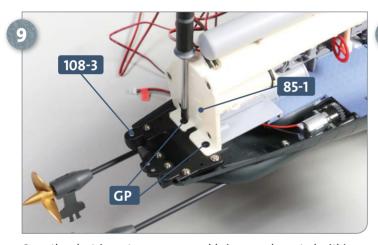
Kit 108: Elevator motor



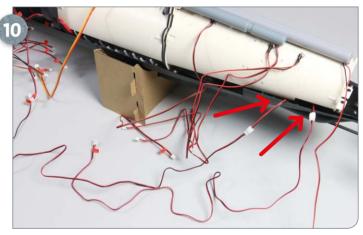
Once the electric motor room is correctly in place, feed the exhaust pipe 100-5/6 through the opening in the deckhead of the diesel engine room 73-1. When fitted, replace the muffler 100-3/4 on the deckhead of the electric motor room. Only glue the muffler in place once you are certain the motor room is correctly seated.



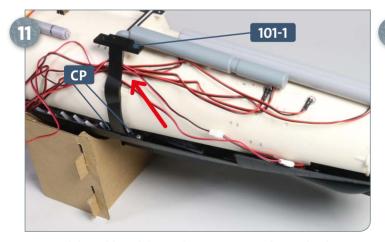
This photograph shows the electric motor room assembly correctly positioned in the main structure: the forward bulkhead 82-1 sits flush against the aft bulkhead of the diesel engine room 71-1.



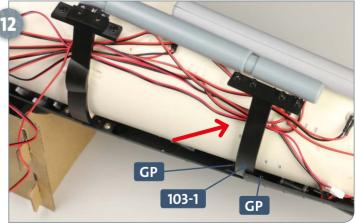
Once the electric motor room assembly is properly seated within the main structure, it needs to be secured. Start with the aft deck panel 85-1, which is fixed to connector 108-3 with two GP screws.



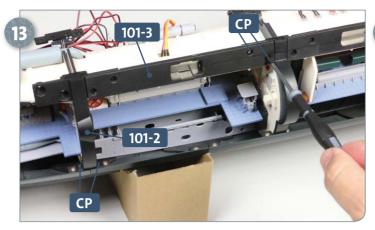
Switching to the port (L) side: make sure that the cables of the two propeller motors (see arrows) are routed sideways beneath the inserted sixth compartment.



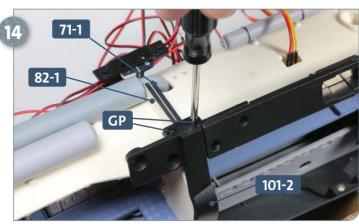
Route all the cables of the sixth compartment forwards. They run beneath the connector 101-1, which is fixed in place with two of the existing CP screws. As there are cables still to be fitted, the top of the connector 101-1 will be secured in a later kit.



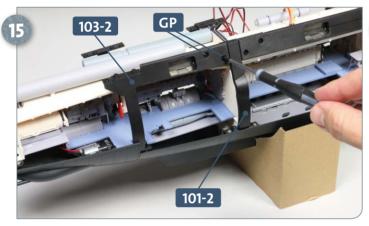
Take the connector 103-1 from kit 103 and insert it into the main hull structure in the centre of the sixth comparment, aft. Fix it to its corresponding bracket using two GP screws.



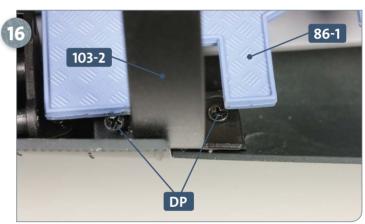
Working on the starboard (R) side: reposition assembly 101-2/101-3 on the main hull structure and secure in place using the four existing CP screws, as pictured.



Attach the connector 101-2 at the top of the two bulkheads 71-1 and 82-1 using two GP screws.

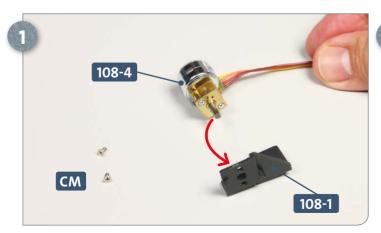


Insert connector 103-2, which was fitted with a magnet in kit 103, into the hull structure in the centre of the sixth compartment. Fasten it to connector 101-2 using two GP screws.

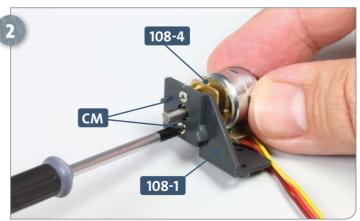


Fix connector 103-2 to its corresponding bracket at the bottom of the hull structure using two DP screws. Carefully push the base 86-1 slightly to the side to gain access to the screws.

STAGE 2 → Aft elevator motor

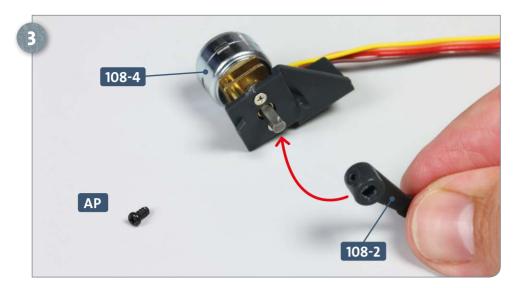


Place the mounting plate 108-1 and two CM screws on your work surface. Take the motor 108-4 and guide its hub through the large hole in the mounting plate, as indicated by the arrow.

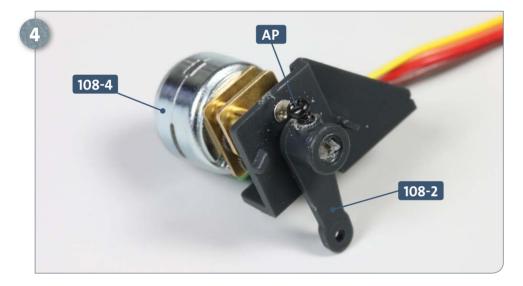


Attach the motor **108-4** to the mounting plate **108-1** using two **CM** screws. Make sure that the plate is correctly aligned.

Kit 108: Elevator motor

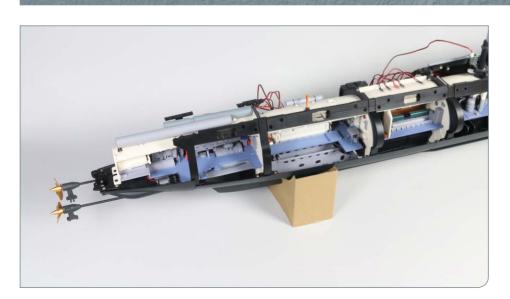


Have ready an AP screw. Take the lever 108-2, orient it as shown in the photo, and fit it onto the hub of the motor. Note that both the hub and the hole in the lever have one flat side.



Taking care not to over-tighten, secure the lever 108-2 to the hub of the motor 108-4 using the AP screw. Keep the assembly somewhere safe, as it will be attached to the main structure in the next stage of the build.

COMPLETED WORK



The sixth compartment (the electric motor room) has now been installed within the main U-Boat structure.