

BISMARCK

THE LEGENDARY BATTLESHIP



Pack 10 | Build Instructions

Your 1:200 scale model of the legendary battleship Bismarck is packed with intricate details which precisely replicate every aspect of this state-of-the-art warship. Each piece has been created using premium quality materials to bring maximum enjoyment during your complete build.

In your tenth model pack, you will assemble:

**STAGE 105: A HULL SECTION AND DECK
DETAILS**

STAGE 106: 2CM AND 3.7CM FLAK GUNS

STAGE 107: THE AFT SIGNAL BRIDGE

STAGE 108: THE SIXTH 15CM GUN TURRET

**STAGE 109: THE MOTOR FOR THE SIXTH
15CM GUN TURRET**

STAGE 110: THE THIRD 38CM GUN TURRET

**STAGE 111: HULL SECTION AND TURRET
HOUSING**

STAGE 112: HULL SECTION AND GUN PARTS

**STAGE 113: GEARBOX FOR THE NEXT
38CM TWIN TURRET**

STAGE 114: THE BILGE KEELS

STAGE 115: TWO HULL SECTIONS

STAGE 116: TWO HULL SECTIONS

Advice from the experts

Spare screws are included with each part. Occasionally, you may be instructed to keep spare or unused screws for a later stage.

Keep these spares in a safe place and label them correctly.

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.

Your screwdriver can be magnetised 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.

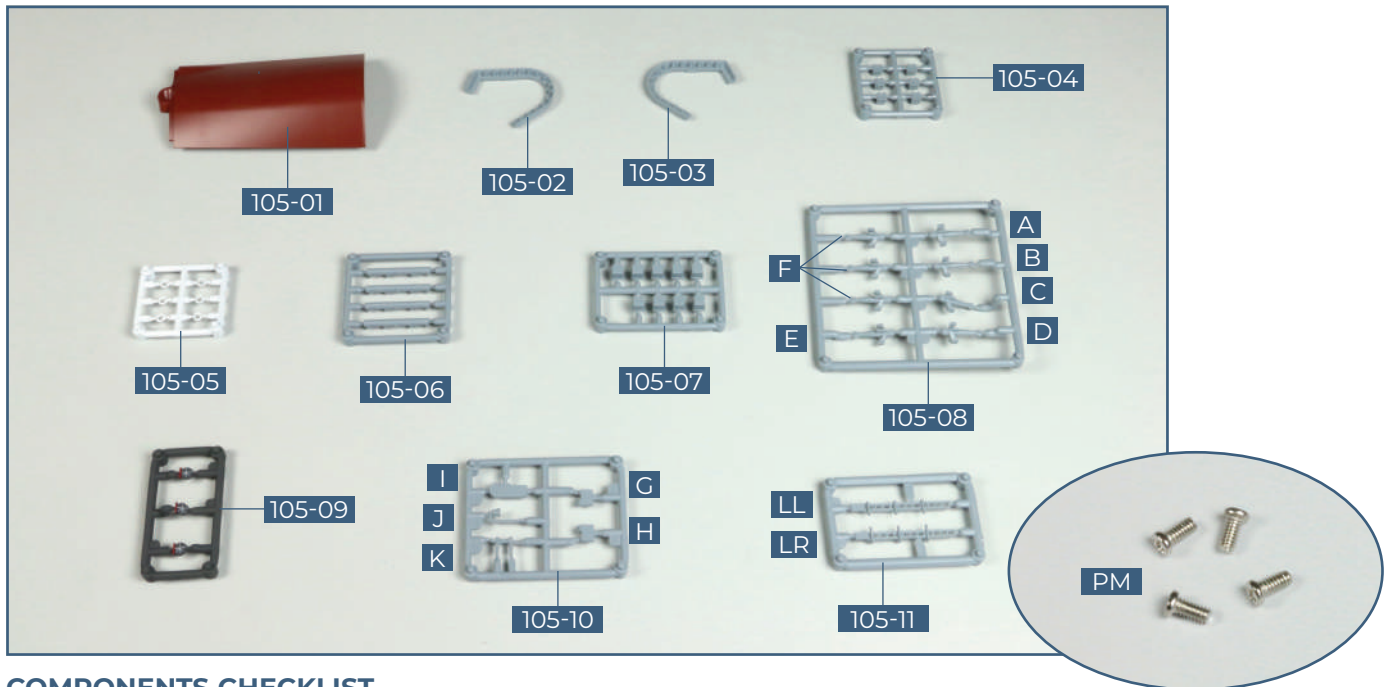
During the course of this build, you will receive many pieces that you will assemble immediately – following the instructions in the corresponding stage – and other pieces that you should store safely to one side, for use in future assembly stages.



Not suitable for children under the age of 14. This product is not a toy and is not designed for use in play. Keep the parts out of the reach of small children. Some parts may have sharp edges. Please handle them with care.

STAGE 105

A HULL SECTION AND DECK DETAILS



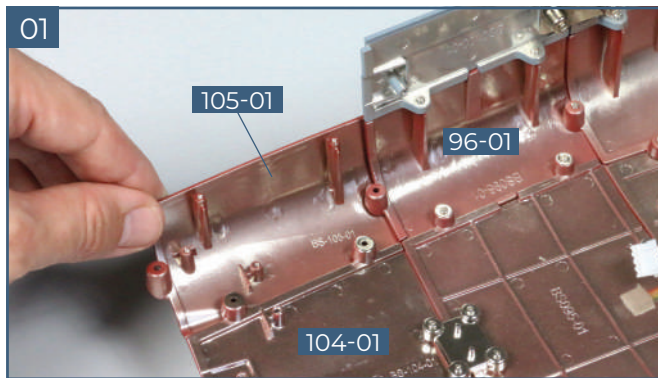
COMPONENTS CHECKLIST

- 105-01:** Lower port hull section
- 105-02:** Port splinter protection
- 105-03:** Starboard splinter protection
- 105-04:** Lockers x 2
- 105-05:** Lifebuoys x 6

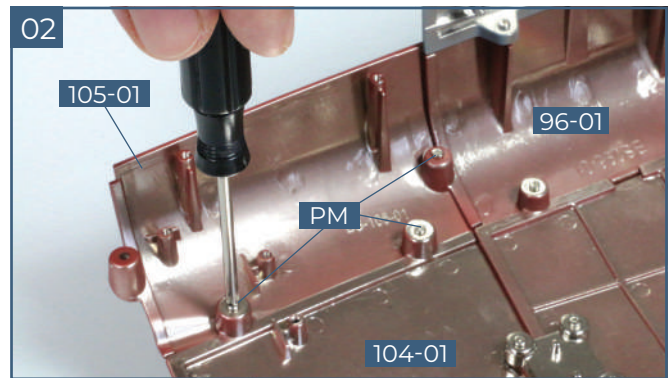
- 105-06:** Storage cylinders for sub calibre rounds x 4
- 105-07:** Skylights x 9
- 105-08:** Paravanes x 8 (A to F)
- 105-09:** Fire hoses x 3
- 105-10:** Deck details (G to K)

- 105-11:** Two ladders (LL: left and LR: right)
- PM:** Four 2 x 4mm PM screws

01. FITTING THE HULL SECTION

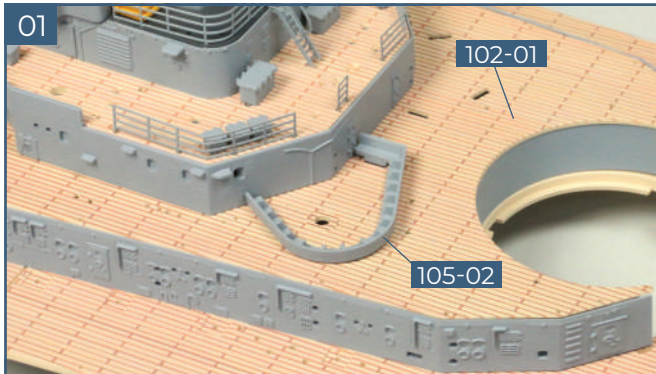


Take the hull assembly from the previous stage. Fit hull section **105-01** next to hull section **96-01** and keel section **104-01**, so that the screw sockets fit over each other.

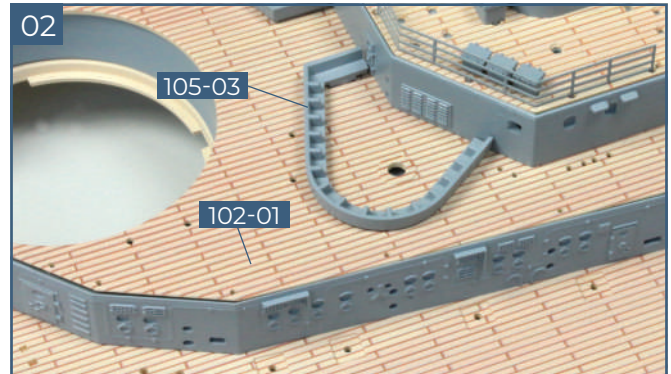


Fix the hull sections together with three 2 x 4mm **PM** screws.

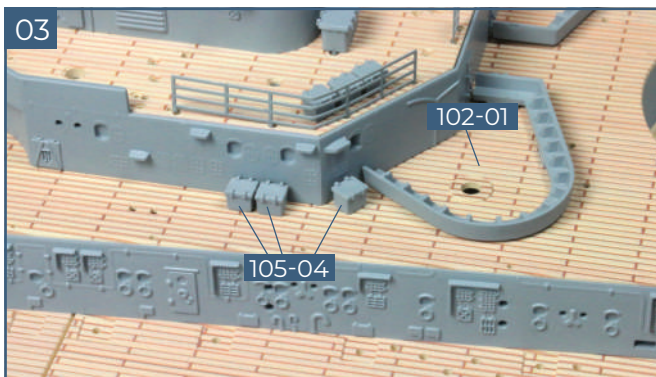
02. SPLINTER PROTECTION, LIFEBOUYS, CYLINDERS AND LOCKERS



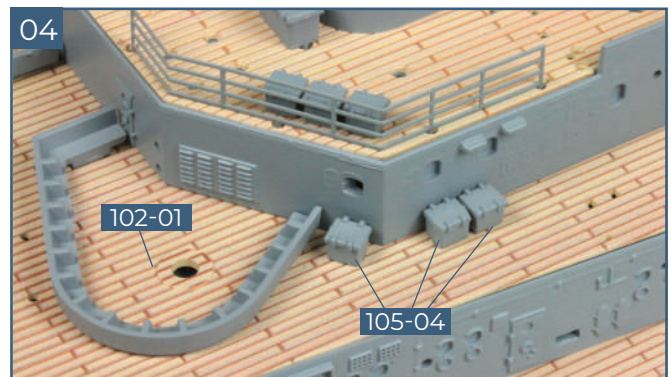
Fit the port splinter protection **105-02** on the aft superstructure. Tabs on the lower edge of part **105-02** fit into recesses in the decking **102-01**. Glue in place.



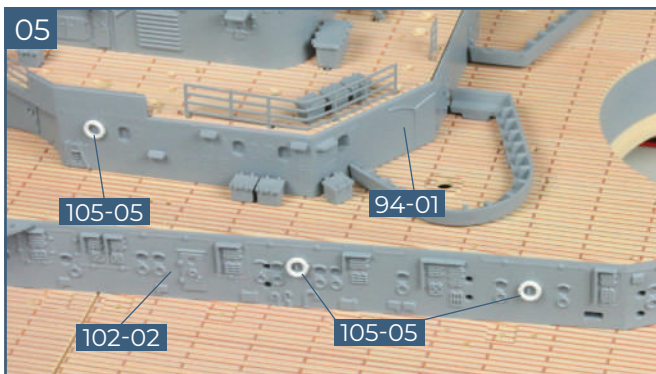
Fit the starboard splinter protection **105-03** on the other side of the aft superstructure. Again, tabs on part **105-03** fit into recesses in the decking **102-01**. Glue in place.



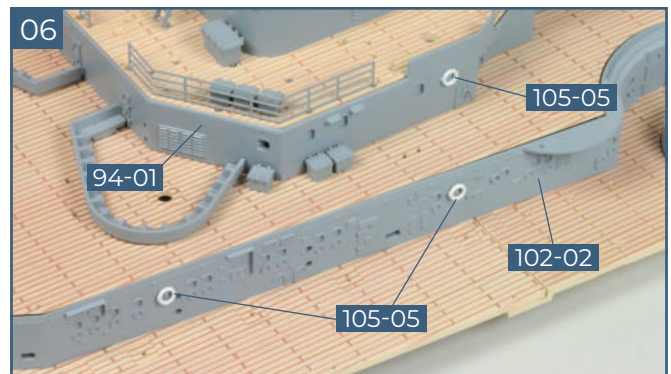
On the port side of the aft superstructure, check the fit of three lockers from frame **105-04** around the side of the deck, near the splinter protection on the decking **102-01**. Small pegs on the base of the lockers fit into recesses in the decking. Glue in place.



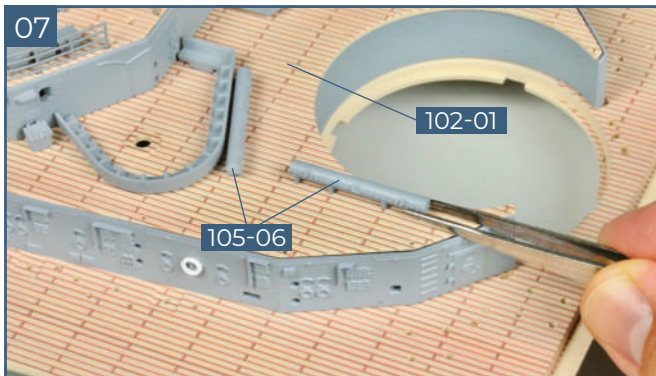
Similarly, glue three lockers from frame **105-04** to the starboard side of the aft superstructure.



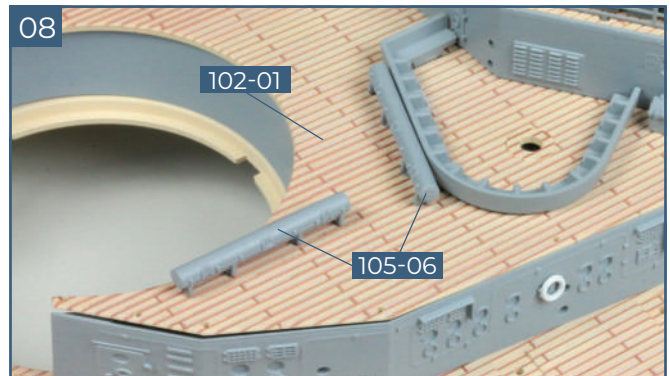
Take three lifebuoys from frame **105-05** and identify their positions on the port side: two are fitted on the wall of the superstructure deck **102-02** and one is fitted on the wall of part **94-01**. Glue in place.



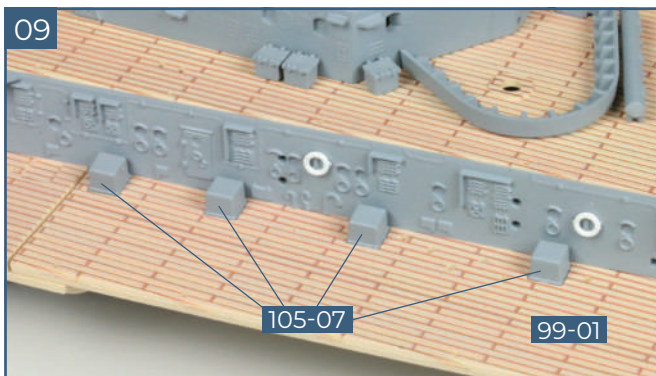
Similarly, three more lifebuoys from frame **105-05** are fitted on the deck walls on the starboard side.



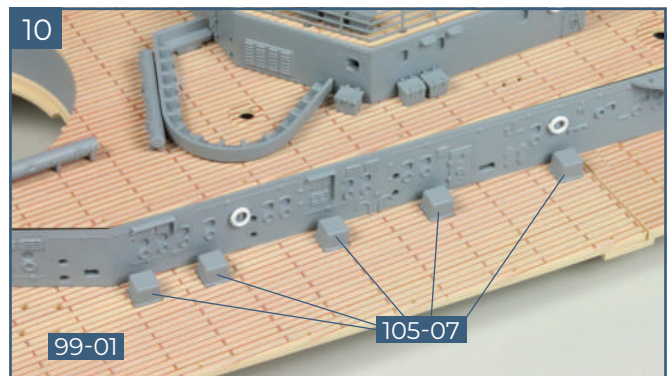
Take two of the storage cylinders from frame **105-06** and fit them to the port side of the aft superstructure, on the decking **102-01**, near the opening for the gun turret. The detail faces outwards. Glue in place.



Fit the other two storage cylinders from frame **105-06** on the starboard side of the aft superstructure, on the decking **102-01**. Again, the detail on the sides of the cylinders faces outwards. Glue in place.

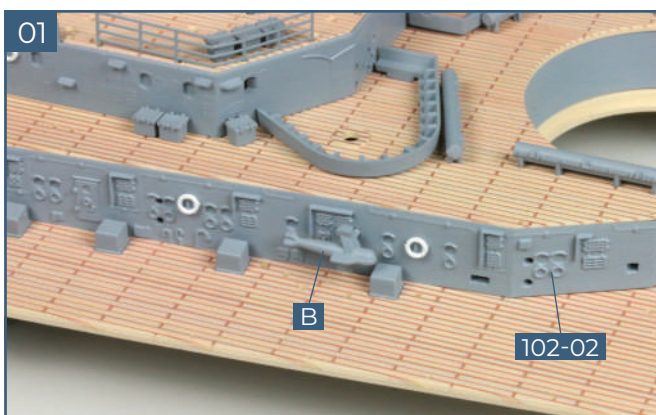


Take four lockers from frame **105-07**. Smooth any rough edges. They are positioned down the side of the aft superstructure, on decking **99-01**. Glue the pegs on the lockers into the recesses in the decking.

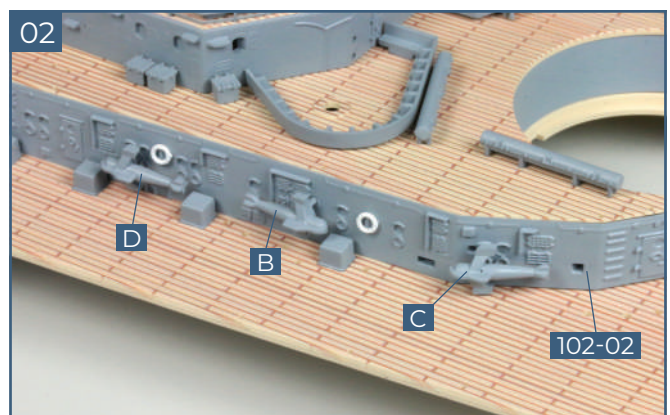


Fit the remaining five lockers from frame **105-07** on the starboard side of the superstructure, on decking **99-01**. Glue the pegs on the bases of the lockers in place, as shown.

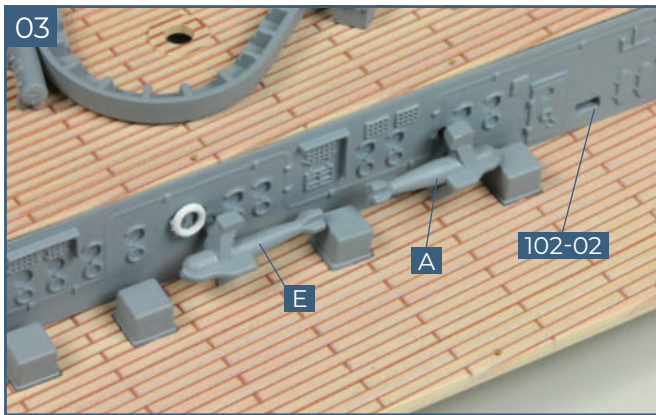
03. PARAVANES, FIRE HOSES AND LADDERS



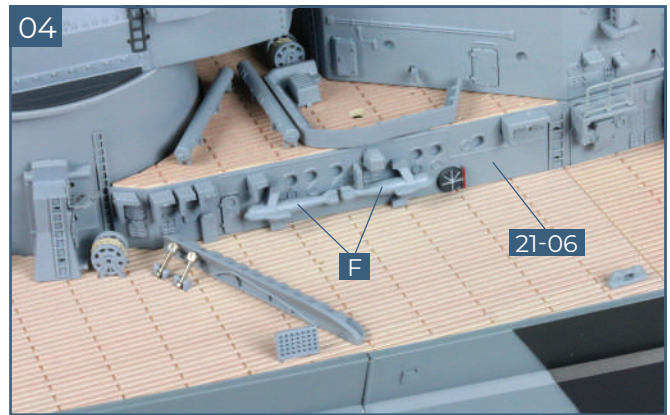
Cut a paravane **B** from frame **105-08**. Identify the position on the wall of the deck **102-02** and glue in place, as shown.



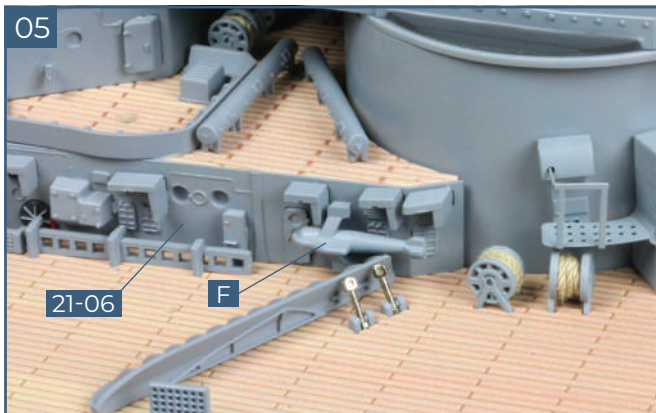
Paravanes **D** and **C** from frame **105-08** are fitted on the same wall, on either side of the first paravane. Identify the fixing points and glue in place, as shown.



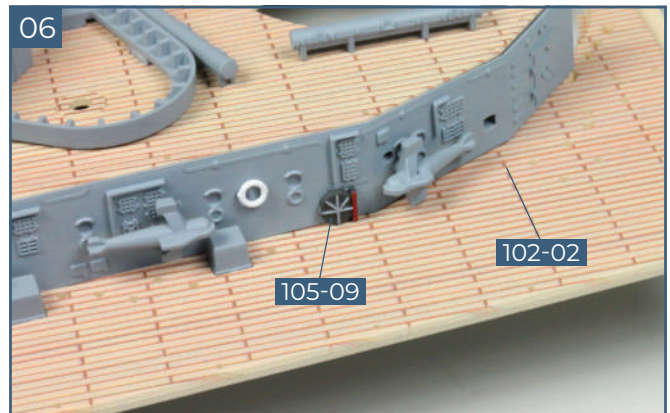
Paravanes **A** and **E** from frame **105-08** are fitted on the starboard side of the superstructure, on the wall **102-02**. Glue in place, pointing away from each other, as shown.



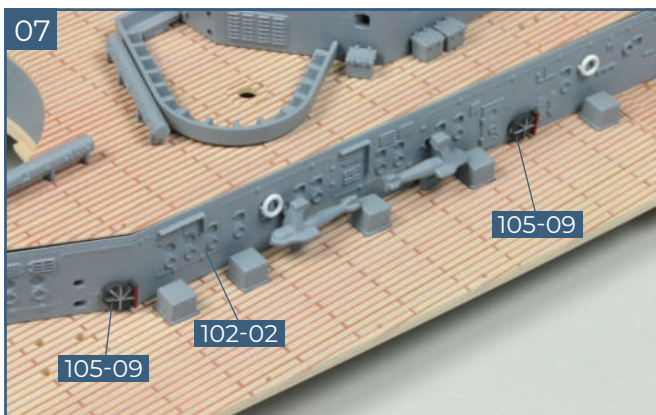
Two paravanes **F** are fitted on the port side of the **forward** superstructure, on the deck wall **21-06**, pointing away from each other, as shown. Glue in place.



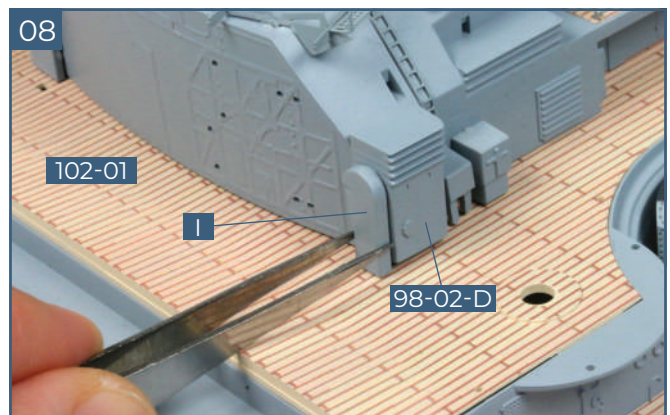
The last paravane **F** is fitted on the starboard side of the **forward** superstructure, on the deck wall **21-06**, as shown. Glue in place.



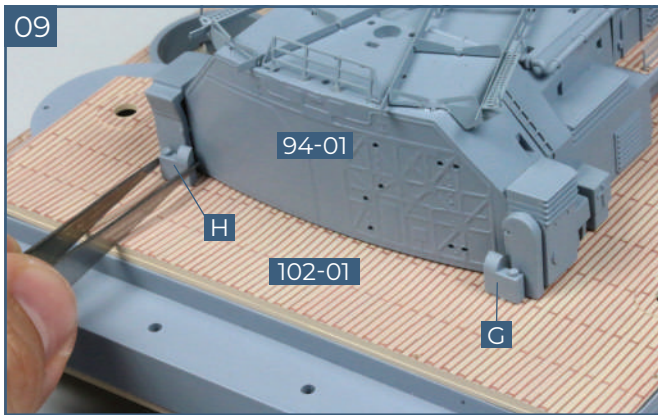
Returning to the **aft** superstructure, identify the fixing point for the first hose reel from frame **105-09**, on the deck wall between the two aft paravanes on the port side, fitted in steps 1 and 2.



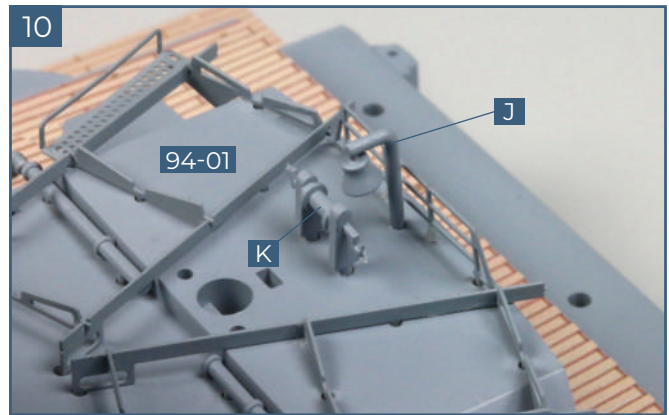
Two more fire hose reels from frame **105-09** are fitted to the wall of the superstructure deck **102-02** on the starboard side of the aft superstructure. Glue in place.



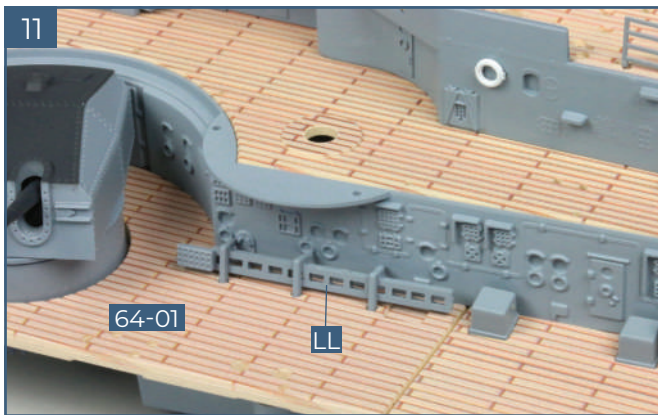
Remove the fan **I** from frame **105-10**. Identify its position against part **D** from frame **98-02** (fitted in stage 98), with the base on the decking **102-01**. Glue in place.



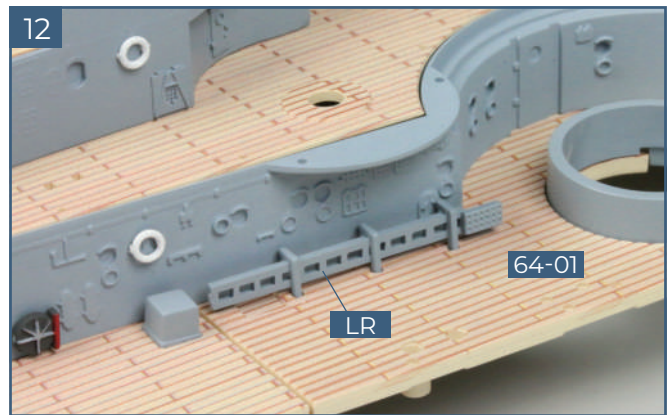
Take parts **G** and **H** from frame **105-10** and identify their positions on either side of the central hangar **94-01**. Glue in place, with the bases of parts **G** and **H** on the decking **102-01**.



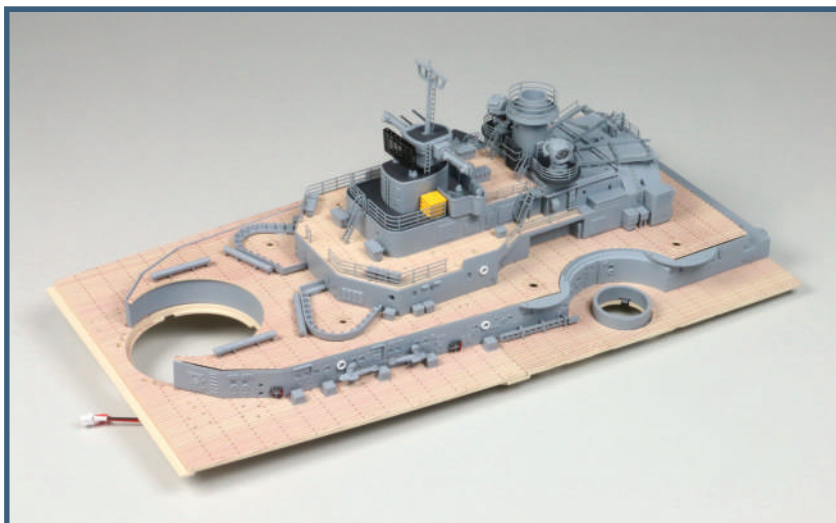
Identify the position for the mainmast winch, part **K** from frame **105-10**, and the ship's bell, part **J** from frame **105-10**. Pegs on part **K** and the base of part **J** fit into recesses in the roof of the hangar **94-01**, between the supports for the boats. Glue in place.



Take the left ladder **LL** from frame **105-11** and identify the fixing point on the decking **64-01**, near the 15cm gun fitted on the port side in stage 98. Glue in place.



The right ladder **LR** from frame **105-11** is fitted on the starboard side of the superstructure near the barbette fitted in stage 64. Glue in place.

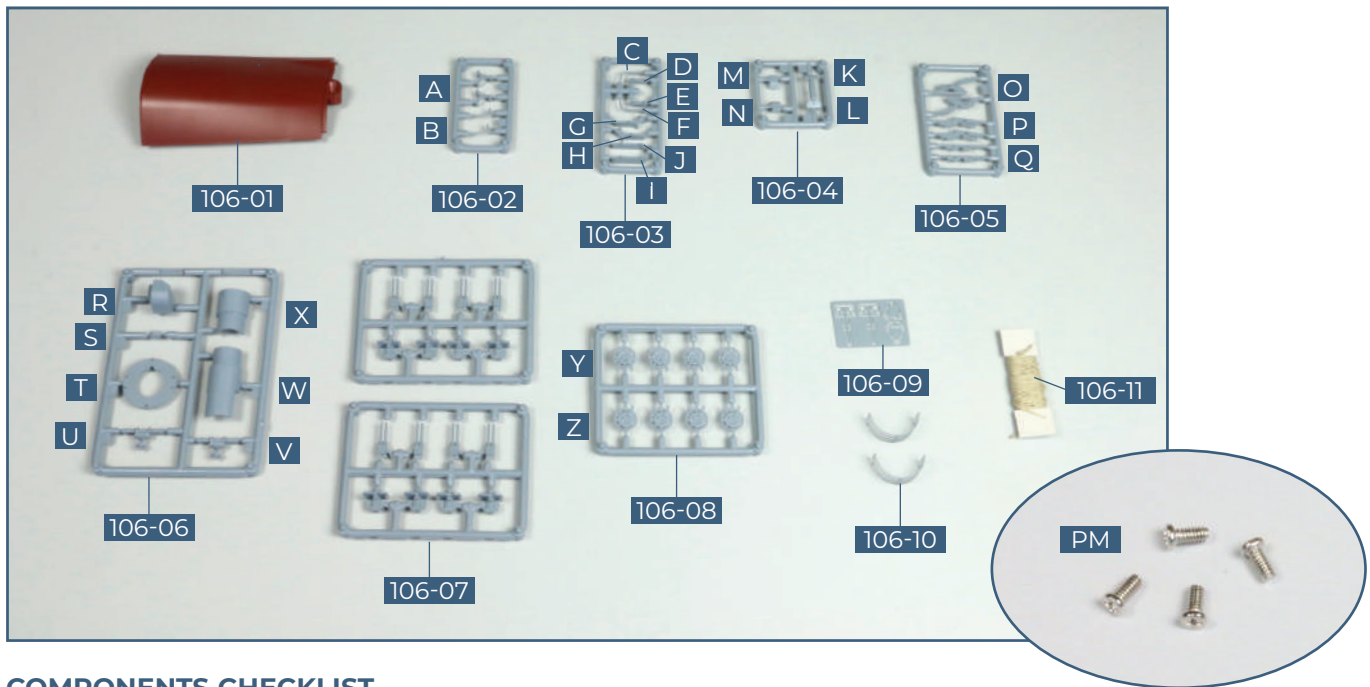


Completed work

Various details have been fitted to the aft superstructure, shown here. Paravanes have been fitted to the forward superstructure and another section has been added to the hull assembly (not shown).

STAGE 106

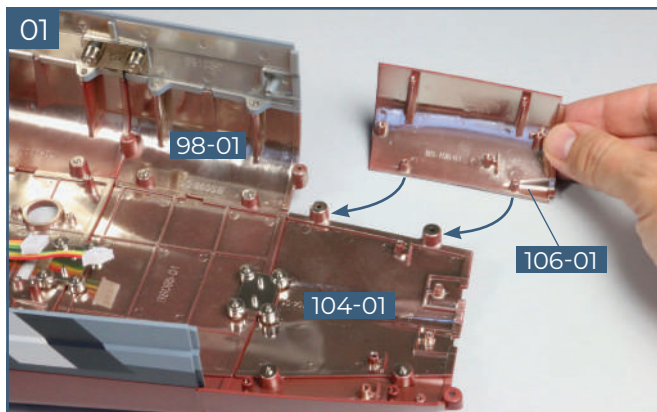
2cm AND 3.7cm FLAK GUNS



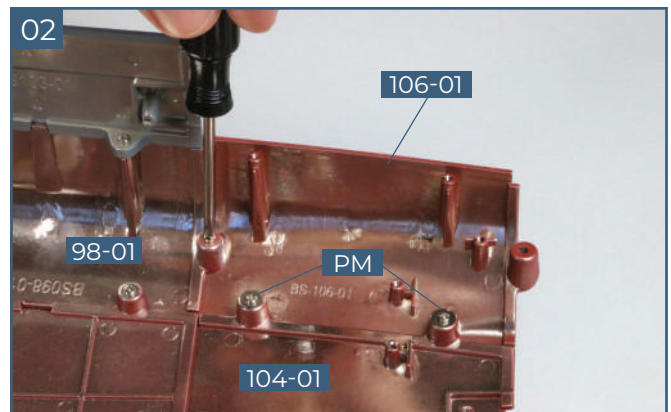
COMPONENTS CHECKLIST

- | | | |
|---|---|---|
| 106-01: Lower starboard hull section | 106-04: Splinter protection (M, N) and cabinets (K, L) | 106-08: Four large rope reels (Y, Z) |
| 106-02: Mounts for 2cm flak guns (A) and lookout binoculars (B) | 106-05: Boat mounts (O to Q) | 106-09: Two 2cm army-style flak guns and bases |
| 106-03: Pipework (C, F), lockers (D, E) and splinter protection (G to J) | 106-06: Flak control station D (R to X) | 106-10: Two railings |
| | 106-07: Eight 3.7cm anti-aircraft guns | 106-11: Rope |
| | | PM: Four 2 x 4mm PM screws |

01. FITTING THE NEXT HULL SECTION

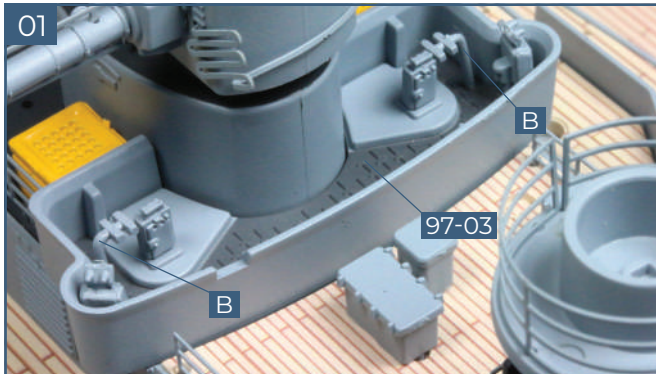


Position the hull section **106-01** next to the keel section **104-01** and hull section **98-01**, ensuring that the screw sockets fit over each other.

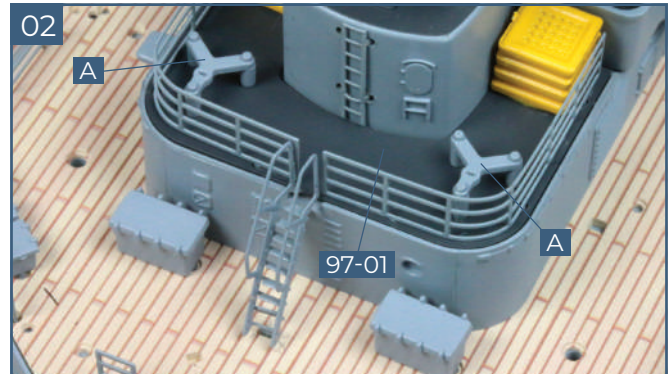


Fix the hull section **106-01** in place using three 2 x 4mm **PM** screws.

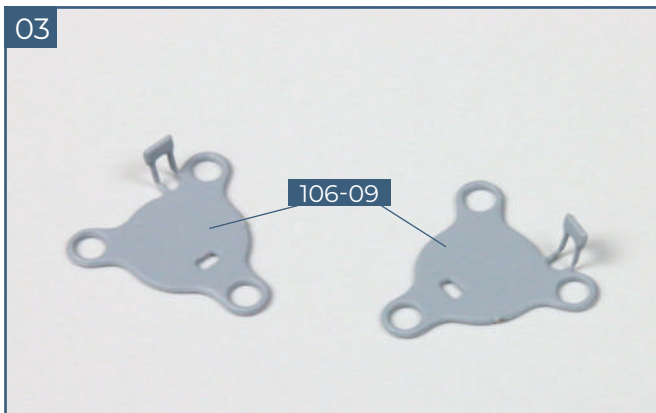
02. 2cm FLAK GUNS AND OTHER DETAILS



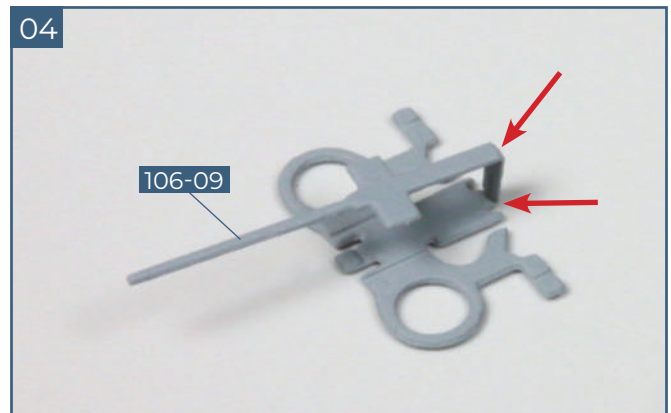
Take the binoculars, **B**, from frame **106-02**. Identify the fixing points on the deck covering **97-03** on the bridge in front of the aft control room. Glue in place.



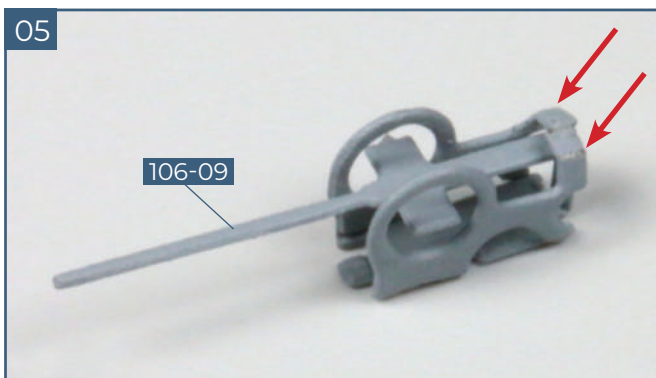
Cut the two gun mounts **A** from frame **106-02**. Identify the fixing point on the decking **97-01** behind the aft control room. Glue in place, as shown.



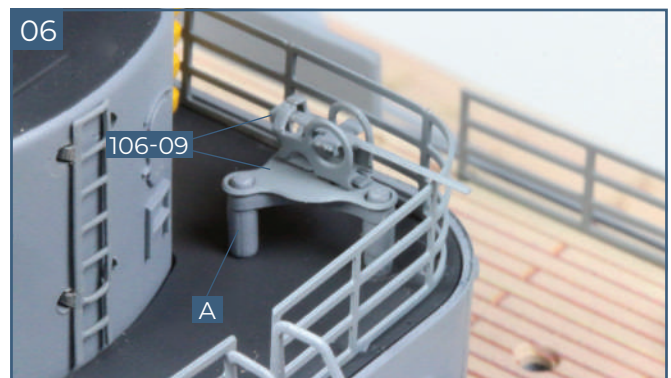
Take the two circular gun bases from the metal frame **106-09**. Bend the seats up at right angles along the marked lines, as shown.



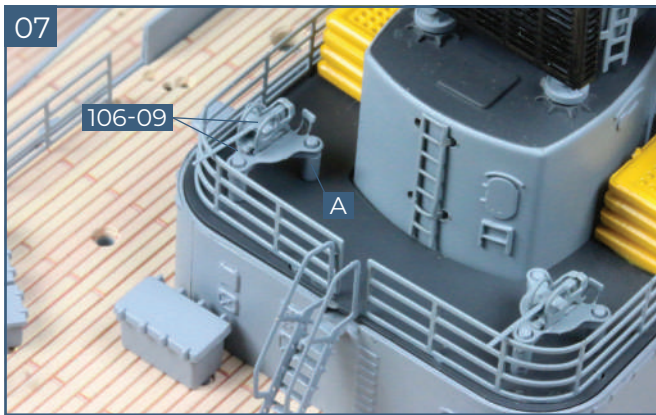
Take the first 2cm flak gun from the metal frame **106-09**. Bend the barrel section of the part at right angles twice, at the points indicated by the arrows.



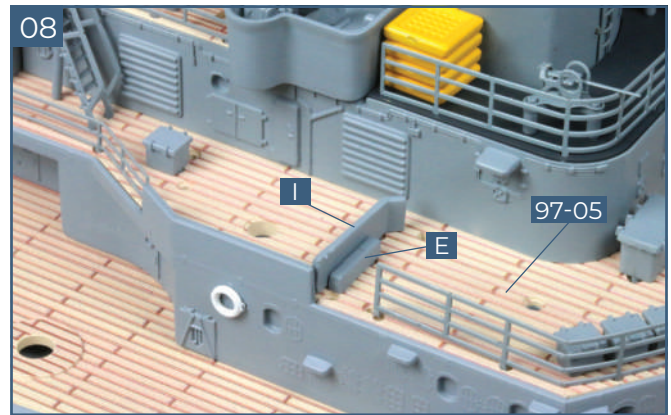
Bend the sides of the gun upwards at right angles. Bend the two flanges at the rear of the gun at right angles over the top of the gun (arrows). Repeat to make a second 2cm flak gun.



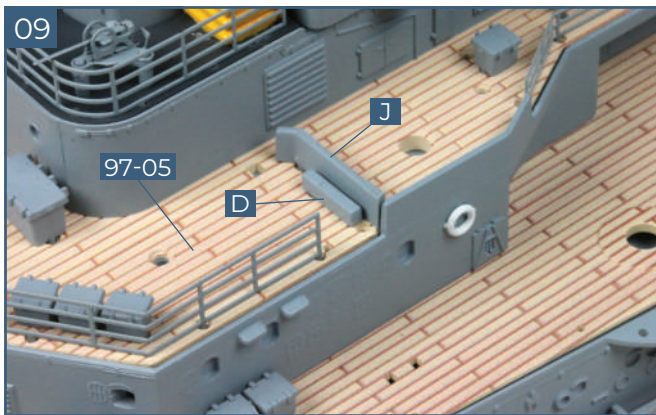
With the seat on the outside, see step 7, fit the first gun base from step 3 on the gun mount **A** fitted in step 2. Glue in place. Position one of the 2cm flak guns from step 5 on top of it and glue in place.



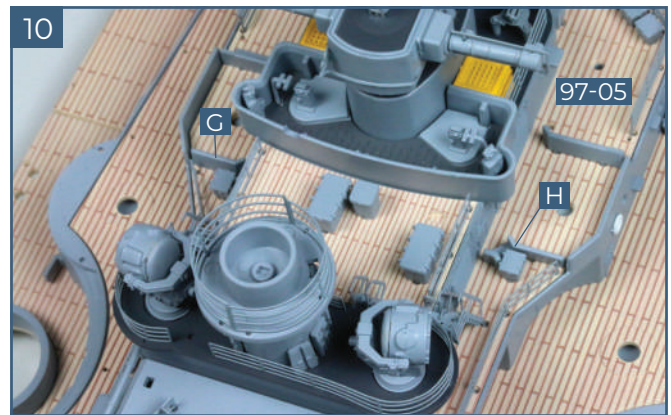
Repeat step 6 on the other side of the model to fit the second gun base and 2cm flak gun on the gun mount **A** fitted in step 2.



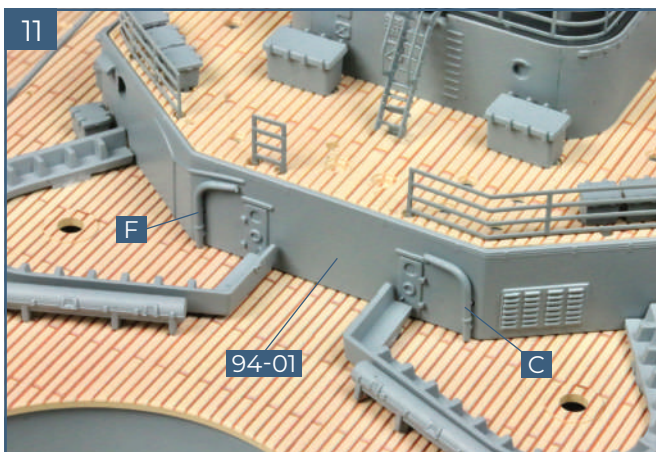
Take splinter protection part **I** from frame **106-03** and fix it in place across the decking **97-05** as shown. Pegs on the base of part **I** fit into recesses in the decking. Glue in place. Take locker **E** from frame **106-03** and glue in place next to part **I**.



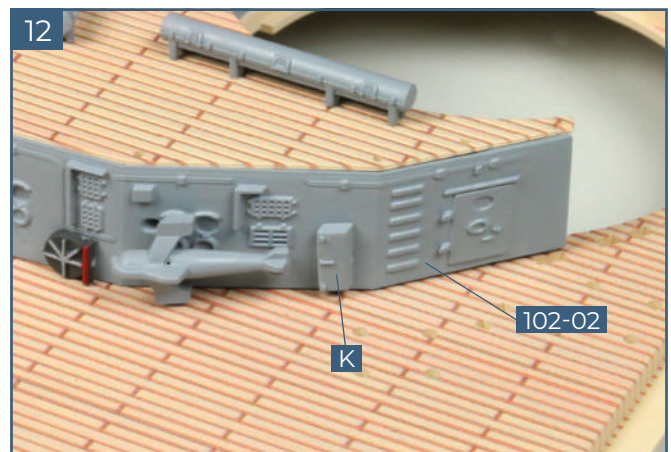
Similarly, glue splinter protection part **J** and locker **D** in place on decking **97-05** on the other side of the aft superstructure.



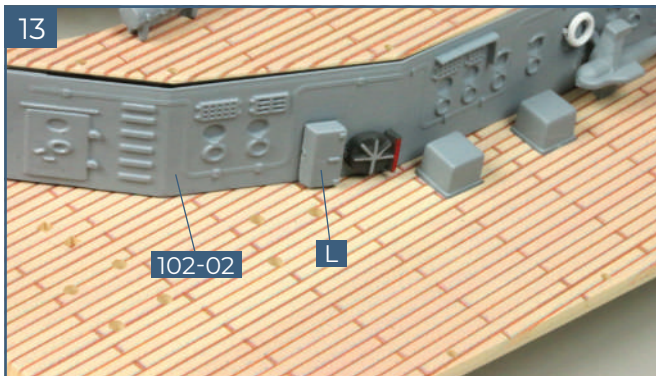
The shorter lengths of splinter protection **G** and **H** are positioned forward of splinter protection **I** and **J**. Glue in place on the decking **97-05**, as shown.



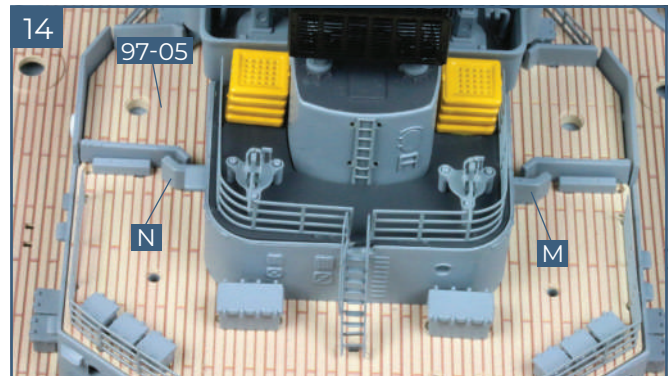
Cut the pipework **C** and **F** from frame **106-03** and identify the fixing points on the decking wall **94-01**. Glue in place, as shown.



Remove locker **K** from frame **106-04**. Identify the fixing point on the deck wall **102-02** and glue in place, as shown.

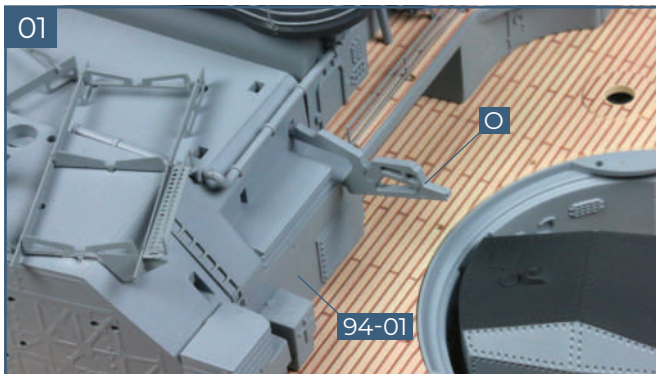


Similarly, take locker **L** from frame **106-04** and glue in place on the deck wall **102-02** on the other side of the aft superstructure.

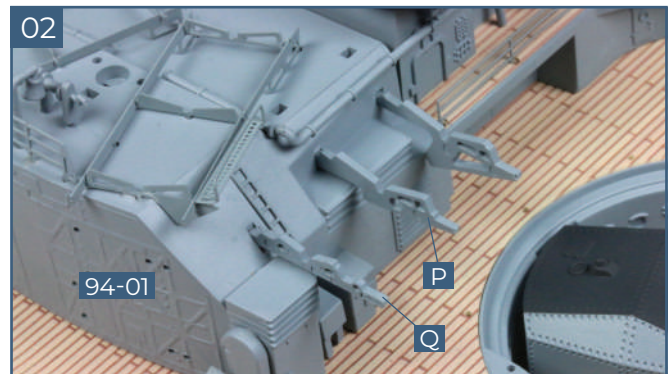


Two short lengths of splinter protection, parts **M** and **N** from frame **106-04** fit on either side of the model, close to the longer lengths of splinter protection. Glue in place, as shown.

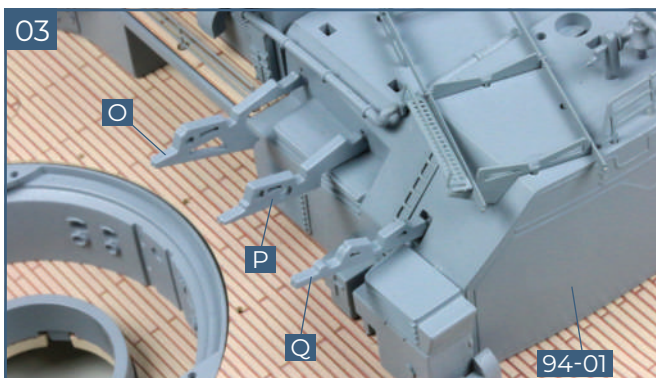
03. BOAT SUPPORTS AND ANTI-AIRCRAFT CONTROL STATION



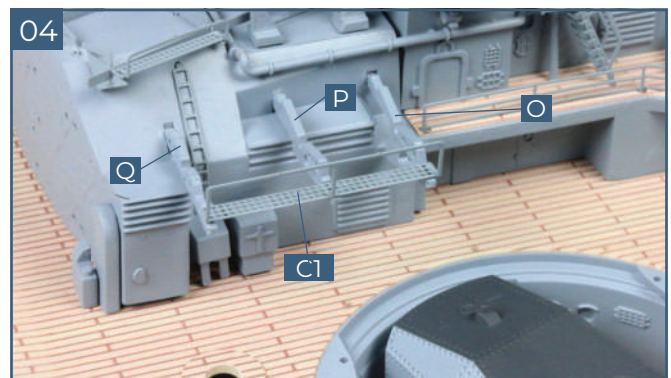
Take the first boat support, part **O** from frame **106-05**. Identify the fixing point on the port side of the central hangar **94-01** and glue in place as shown.



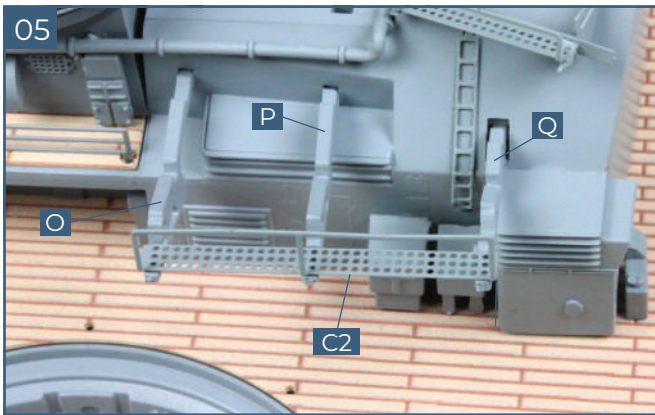
Boat supports **P** and **Q** from frame **106-05** are also fitted on the port side of the central hangar. Check that you have them in the correct order and glue in place.



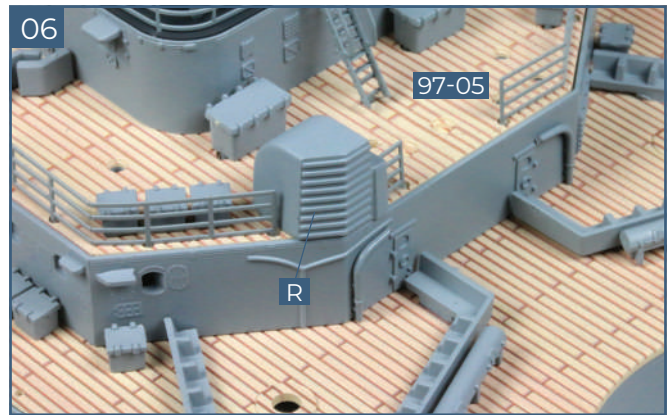
The second set of boat supports **O**, **P** and **Q** from frame **106-05** are fitted on the starboard side of the central hangar **94-01**. Check the positions carefully and glue in place.



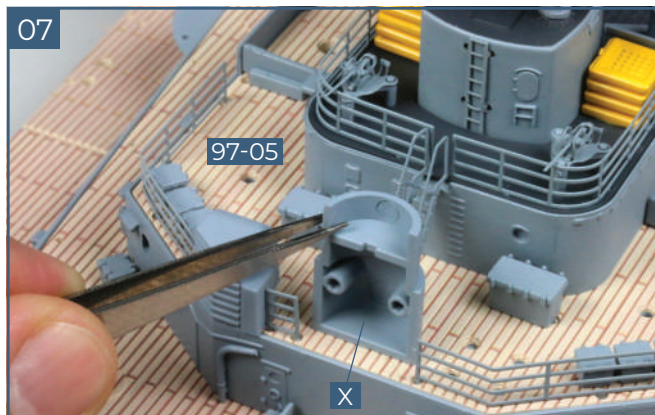
Take the catwalk **C1** from frame **104-05**, supplied with stage **104**. Check the fit along the outer brackets of the boat supports **O**, **P** and **Q** on the port side of the aft superstructure. Glue in place.



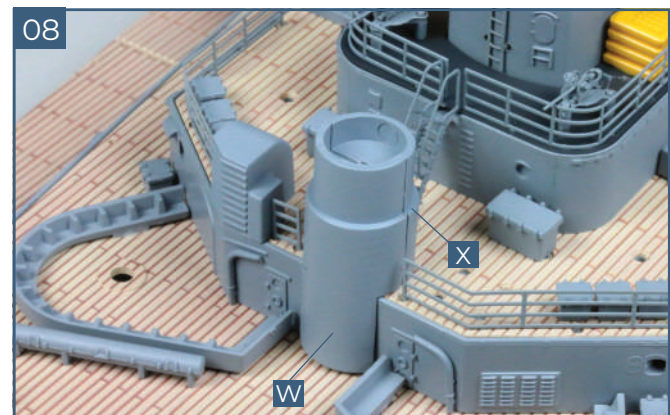
Catwalk **C2** from frame **104-05** fits on the starboard side of the aft superstructure on the ends of the boat supports **O**, **P** and **Q**. Glue in place, as shown.



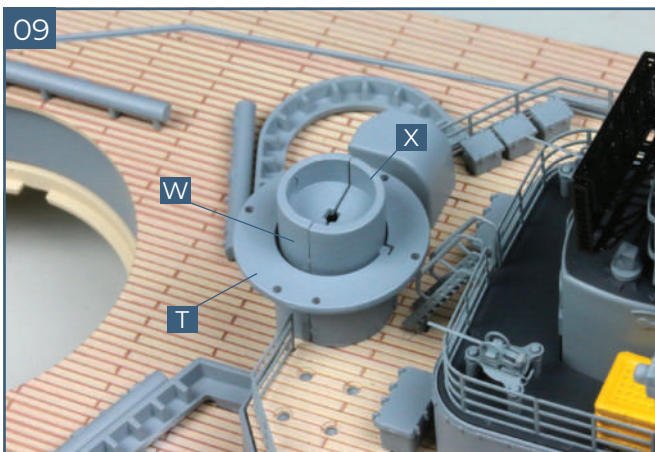
Take the vent unit, part **R** from frame **106-06**. Identify the fixing point at the rear of the aft superstructure on the decking **97-05**. Glue in place.



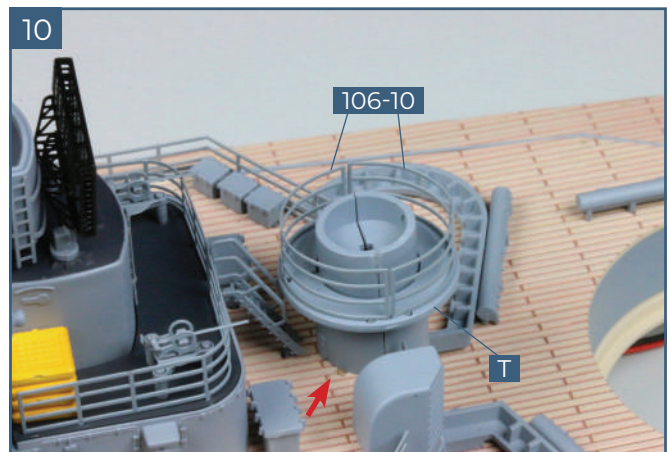
Take part **X**, the front half of flak control station D, from frame **106-06**, and identify the fixing point on the decking **97-05**. Glue in place.



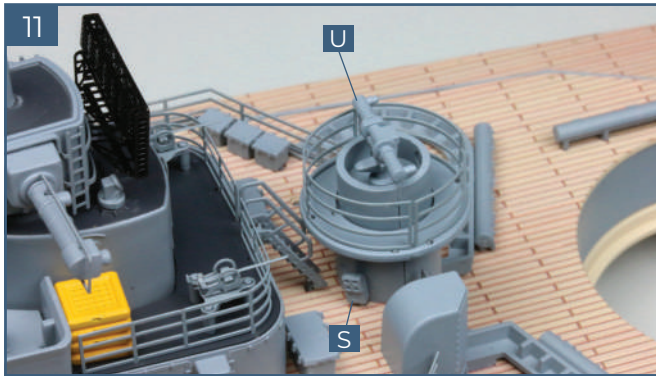
Part **W** from frame **106-06**, the rear half of flak control station D, fits over the edge of the superstructure deck. Glue to part **X**, as shown.



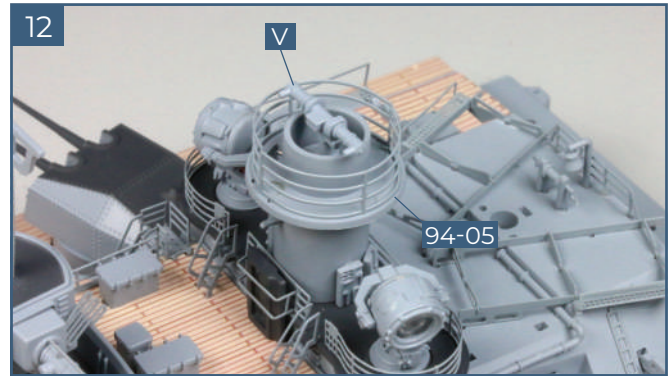
Take the walkway, part **T** from frame **106-06**, and check how it fits over parts **W** and **X** and sits on the ledge. Glue in place, as shown.



Take the two semicircular railings, **106-10** and check the fit around the edge of walkway **T**. Pegs on the railing fit into holes in part **T**. Glue in place, as shown. Note the recess where part **S** from frame **106-06** will be fitted in the next step (arrow).



Take the rangefinder **U** and vent **S** from the frame **106-06**. Check the fit of part **U** on top of flak control station D. The vent **S** fits on the side of the flak control station. Glue in place, as shown.

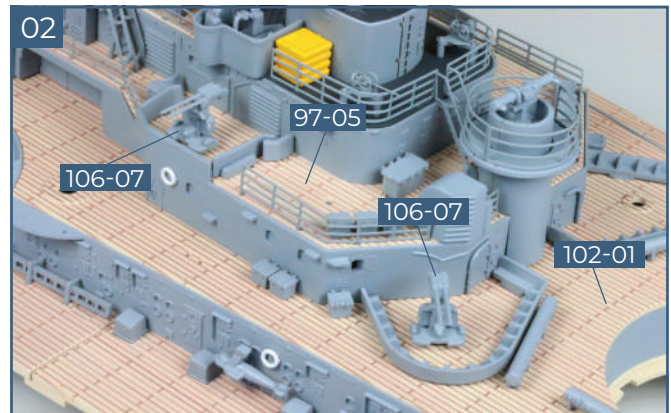


Rangefinder **V** from the frame **106-06** fits on top of the anti-aircraft control station **94-05** on the searchlight platform of the aft superstructure. Glue in place, as shown.

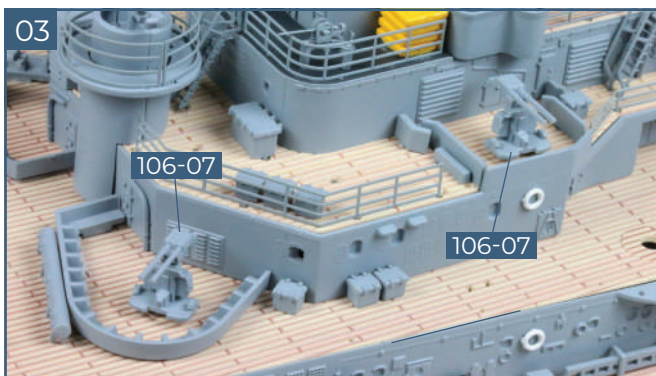
04. 3.7cm FLAK GUNS AND ROPE REELS



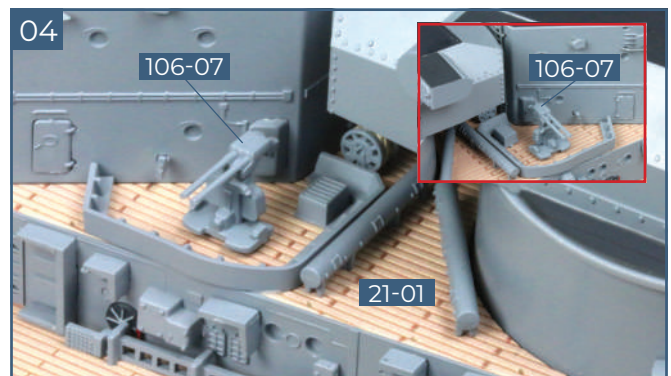
Separate the eight 3.7cm flak guns and their mounts from the two identical frames **106-07**. Make eight identical guns by gluing a flak gun to each mount, as shown.



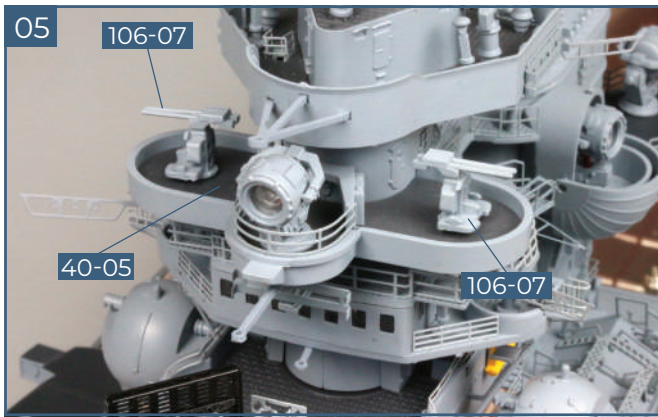
The first and second 3.7cm flak guns **106-07** are glued on decking **102-01** and **97-05** on the port side of the aft superstructure.



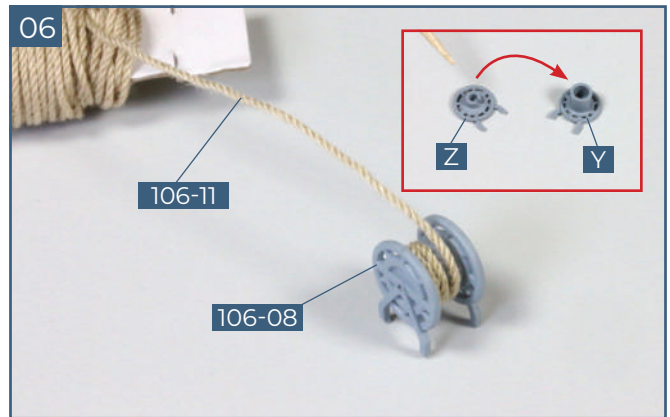
Similarly, the next two flak guns **106-07** are glued on decking **102-01** and **97-05** on the starboard side of the aft superstructure.



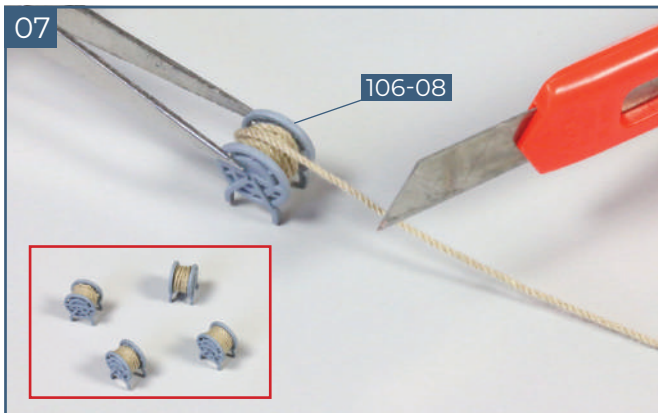
The fifth and sixth 3.7cm flak guns **106-07** fit on either side of the **forward** superstructure on the first section of the superstructure deck **21-01**.



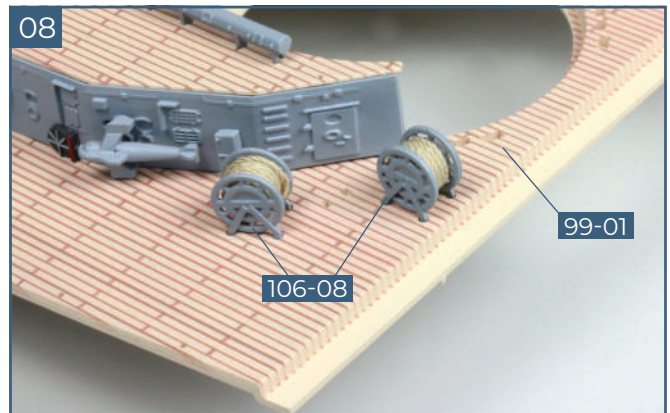
The last two 3.7 cm guns **106-07** are glued to the deck covering **40-05** of the searchlight platform on each side of the battle mast on the **forward** superstructure, as shown.



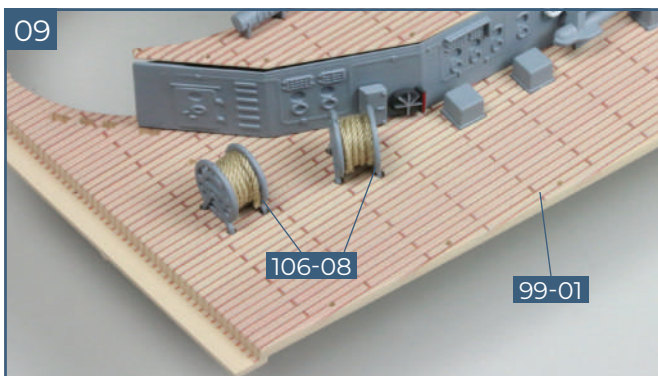
Separate a part **Z** and a part **Y** from the frame **106-08**. Check how they fit together to create a rope reel (inset), and glue them together. Wrap some of the rope **106-11** around the reel.



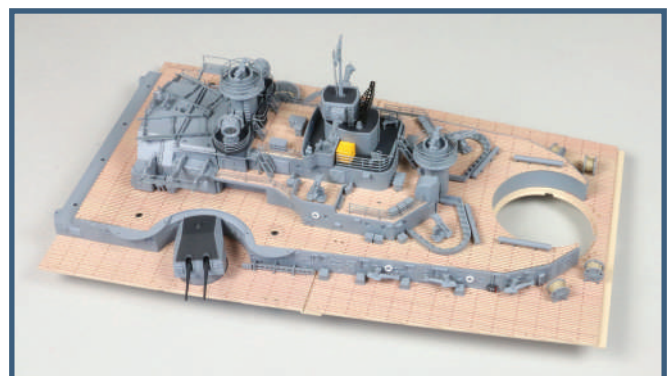
When the reel is full, cut the rope and glue the end in place to prevent it from unwinding. Repeat to make a total of four rope reels.



Identify the positions for the first two rope reels near the rear edge of the upper deck **99-01**, on the port side, as shown. Glue in place.



Similarly, glue the two remaining rope reels in place on the starboard side near the rear edge of the upper deck **99-01**.

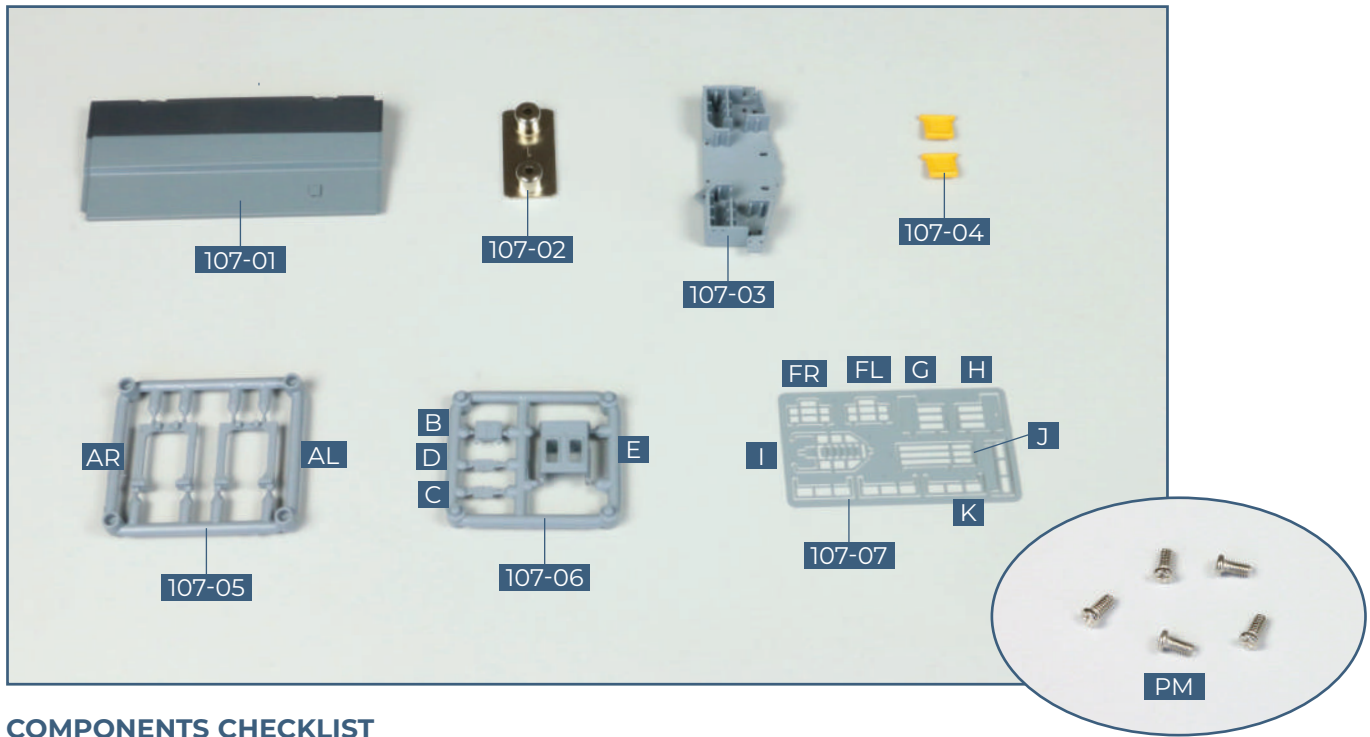


Completed work

Further details, including flak guns and a flak control station, have been added to the aft superstructure. Flak guns have been fitted to the forward superstructure and another section has been added to the hull (not shown).

STAGE 107

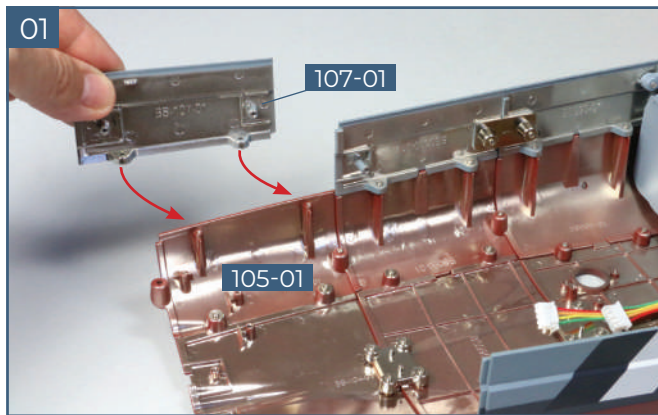
THE AFT SIGNAL BRIDGE



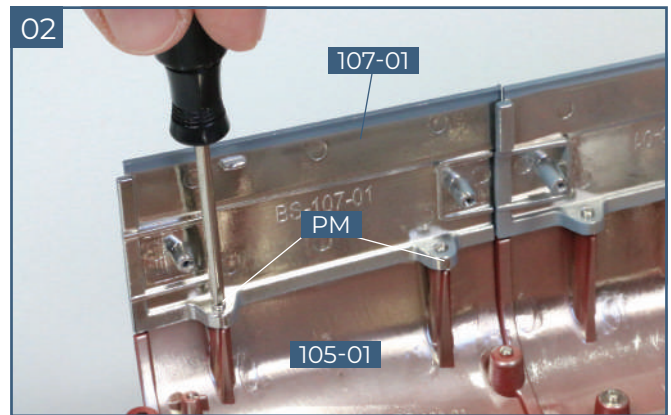
COMPONENTS CHECKLIST

- 107-01:** Upper port hull section
- 107-02:** Connector
- 107-03:** Aft signal bridge
- 107-04:** Two life rafts
- 107-05:** Supports for the signal bridge (**A:** left and right)
- 107-06:** Details for the signal bridge (**B** to **E**)
- 107-07:** Railings and a ladder (**F** to **K**)
- PM:** Five 2 x 4m PM screws

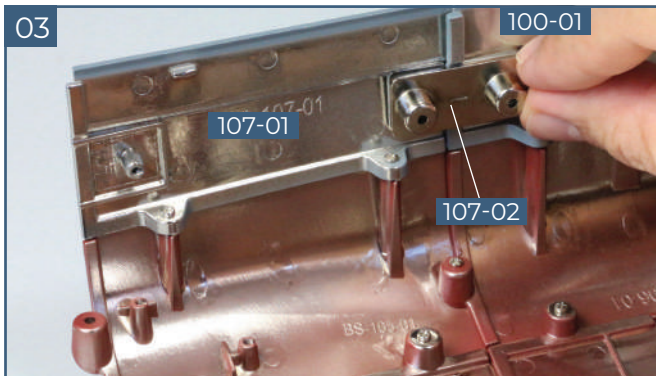
01. FITTING THE NEXT HULL SECTION



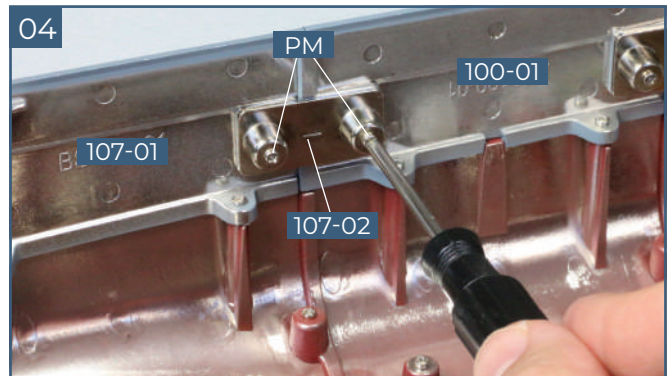
Take the hull section **107-01** and position it above hull section **105-01**, so that the screw holes on part **107-01** align with the screw sockets on part **105-01**, as indicated.



Fix the parts together using two 2 x 4mm **PM** screws.

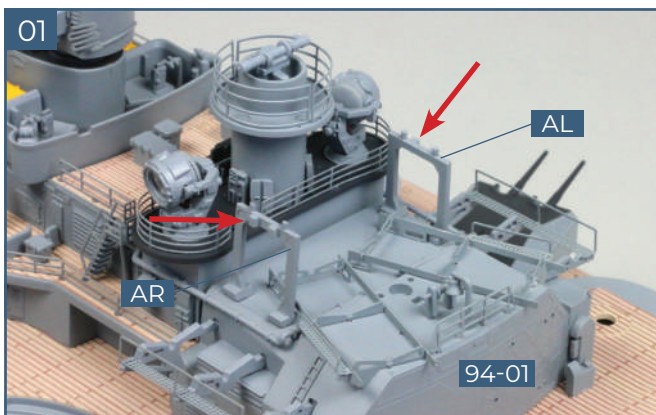


Take connector **107-02** and fit it over the raised screw sockets of hull sections **107-01** and **100-01**, as shown.

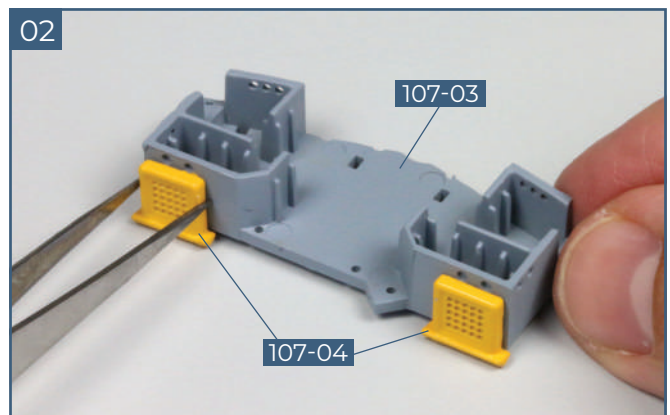


Fix the connector **107-02** in place using two 2 x 4mm **PM** screws.

02. ASSEMBLING THE AFT SIGNAL BRIDGE



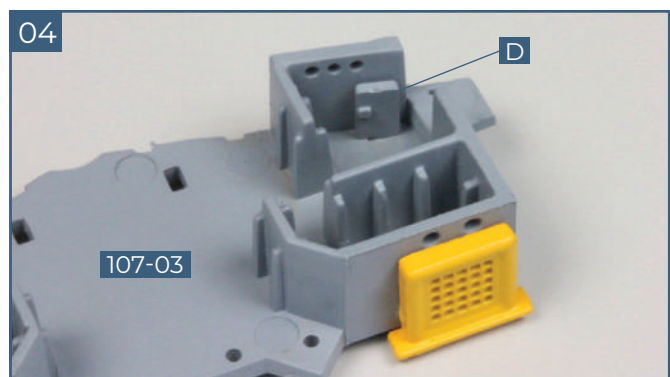
Take the two signal bridge supports **AL** and **AR** from frame **107-05**. Identify the fixing points on the central hangar **94-01**. Note that the small pegs on the top bars should point outwards (arrows). Glue in place, as shown.



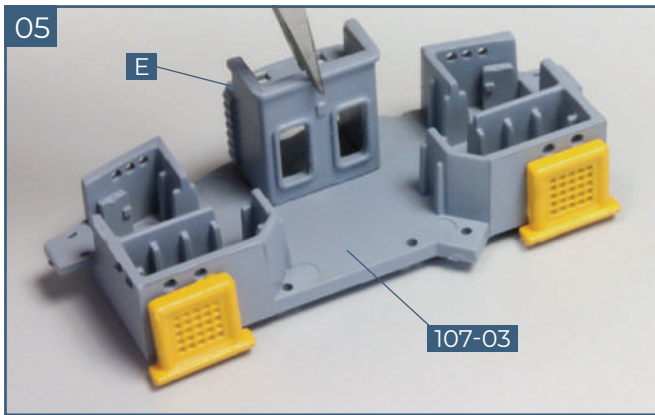
Take the two life rafts **107-04** and glue them to the rear of the aft signal bridge **107-03**, as shown.



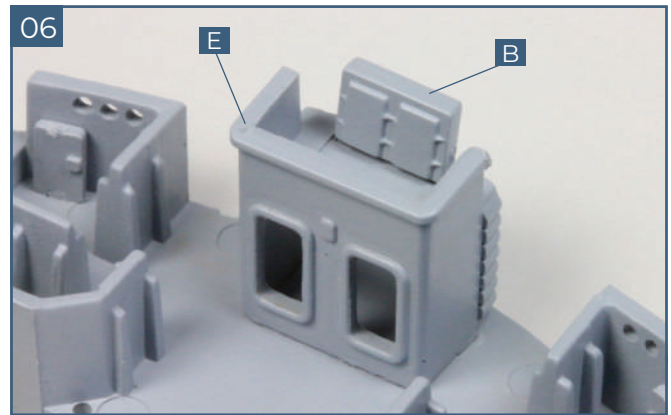
Take the small locker **C** from frame **107-06**. Identify the fixing point inside the port side of the signal bridge and glue in place, as shown.



Take the small locker **D** from frame **107-06** and glue in place inside the starboard side of the signal bridge.

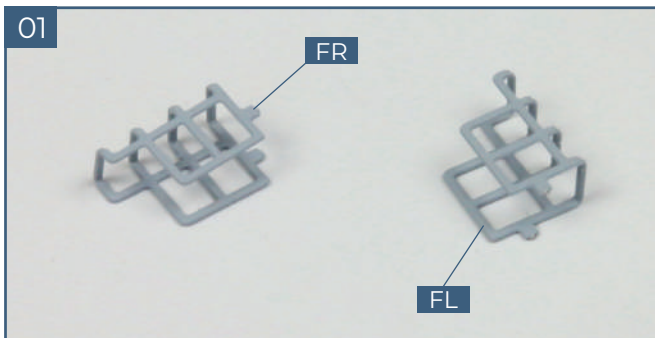


The shelter, part **E** from frame **107-06**, fits near the forward edge of the signal bridge. Glue in place, as shown.

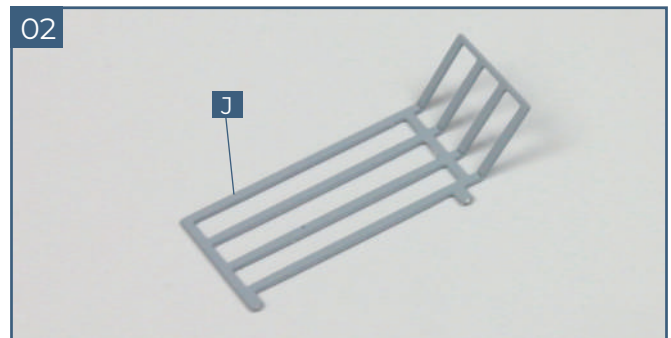


Part **B** from frame **107-06** is glued to the top of shelter **E**, as shown.

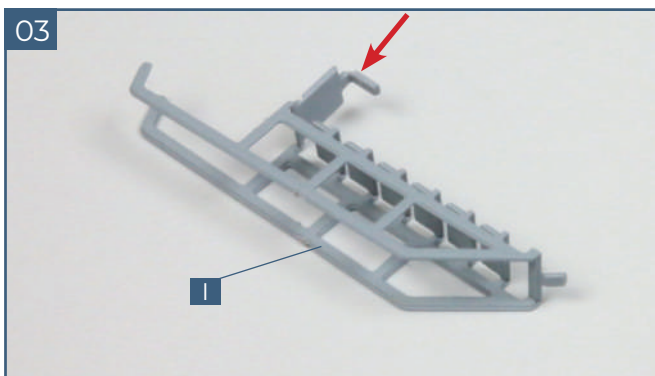
03. RAILINGS AND COMPANIONWAY



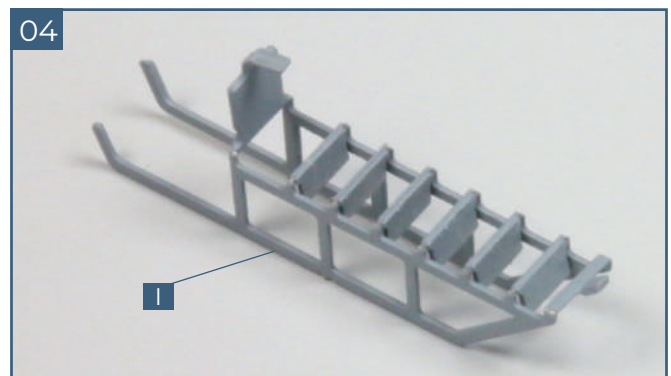
Take the two rails **FR** and **FL** from the frame **107-07** and bend them twice at right angles to make two mirror-image, almost identical rails.



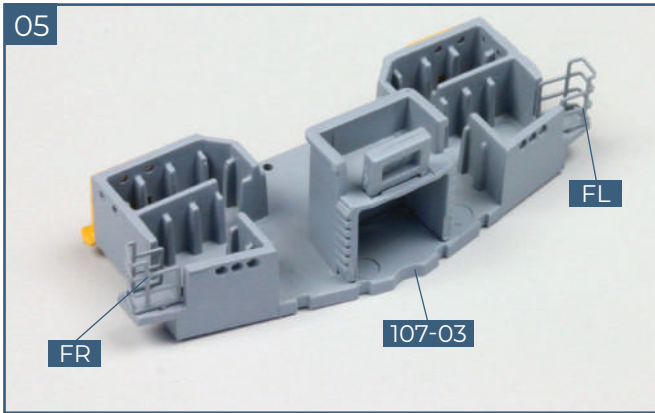
Take railing **J** from frame **107-07** and bend along the fold lines as shown. For the exact angle, see step 8 on the next page.



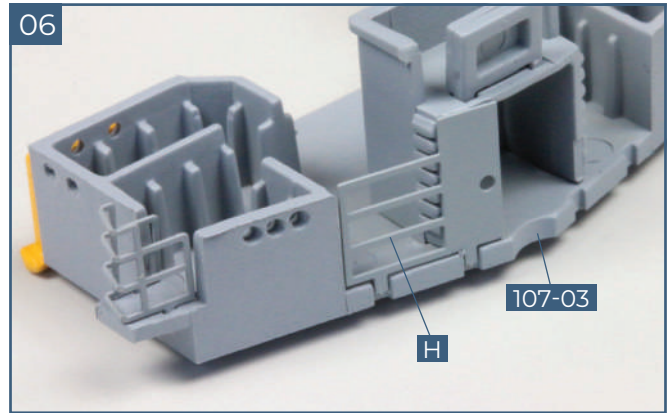
Take the ladder, part **I** from frame **107-07**. Bend the two handrails upwards at right angles. Bend the platform down at right angles, then bend the peg down at right angles (arrow). At the foot of the ladder, bend the peg slightly, as shown.



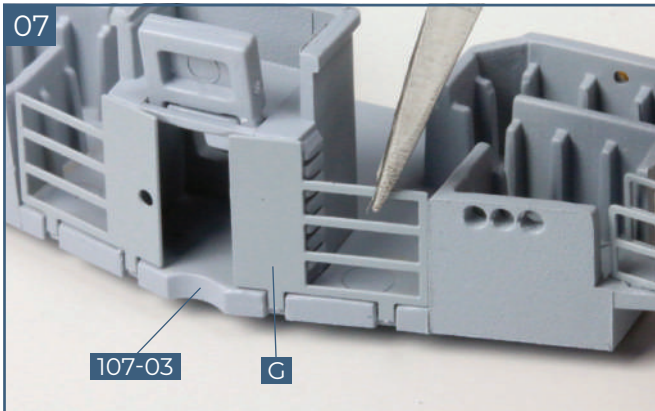
Use a pair of fine pointed tweezers to bend the six steps on the ladder so that they are horizontal.



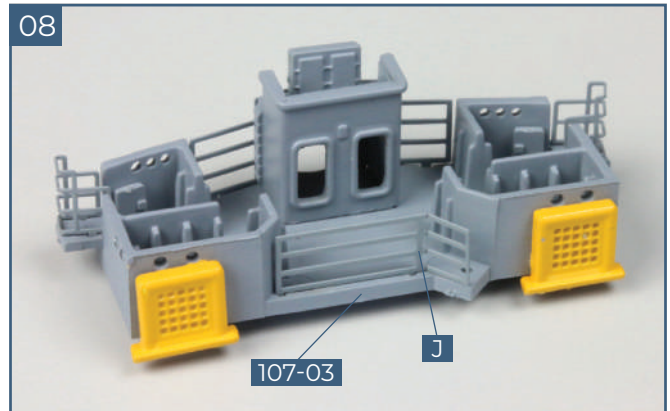
Check the fit of the rails **FR** and **FL** on the appropriate side of the signal bridge **107-03**. Glue in place, as shown.



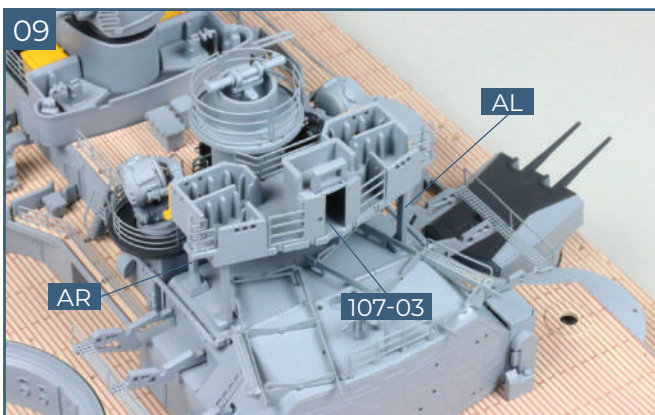
The railing **H** from the frame **107-07** fits at the front of the signal bridge **107-03**, slightly offset to starboard. Glue in place, as shown.



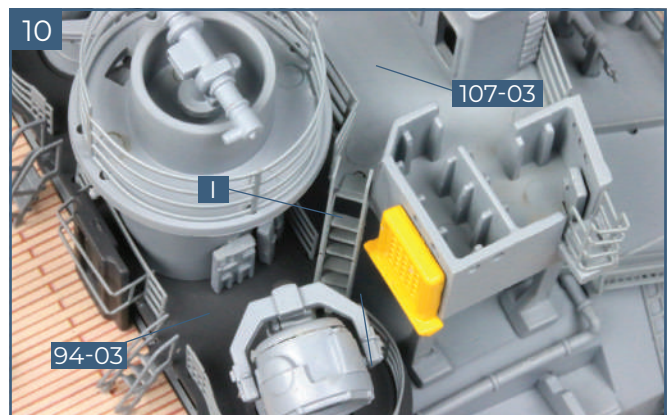
The railing **G** from frame **107-07** fits at the front of the signal bridge **107-03**, slightly offset to port, as shown. Glue in place.



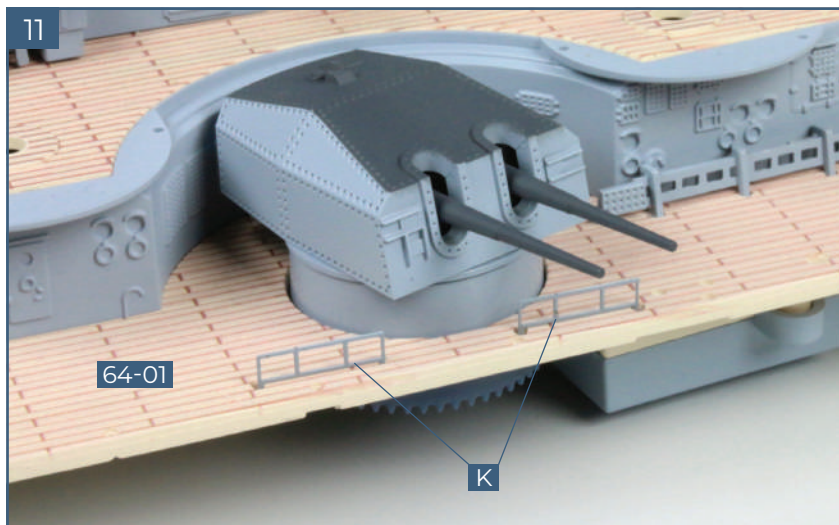
Fit railing **J** from frame **107-07** to the aft side of the signal bridge **107-03**. Check that the angle is correct and glue in place.



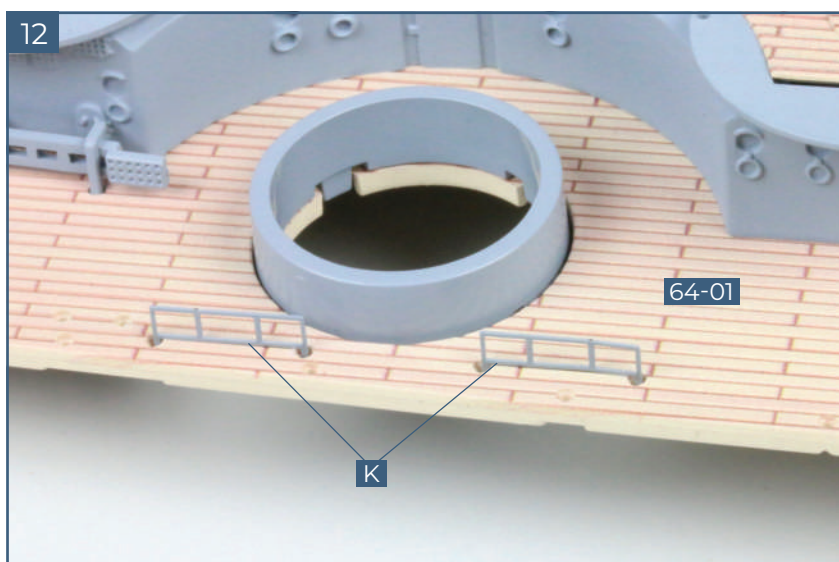
Fit the signal bridge **107-03** on to the two supports **AR** and **AL**. When you are happy with the fit, glue in place, as shown.



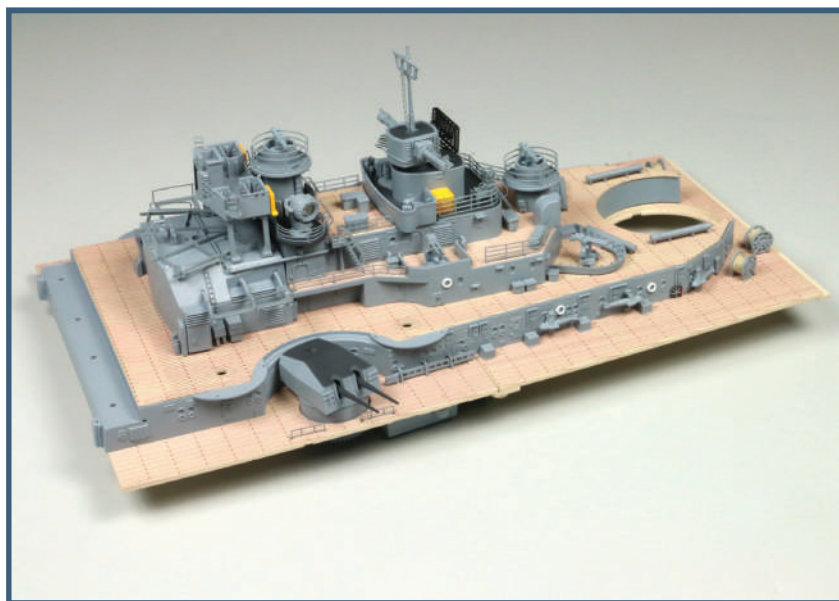
The ladder **I** runs from the searchlight platform **94-03** up to the aft signal bridge **107-03**. The bent pegs fit into the platform and the signal bridge. When you are happy with the fit, apply glue to the pegs and fix in place.



Glue two of the railings **K** from frame **107-07** in front of the 15cm twin gun barbette on the port side of the sixth upper deck section **64-01**, as shown.



Glue the other two railings **K** from frame **107-07** in front of the barbette on the port side of the sixth upper deck section **64-01**, as shown.

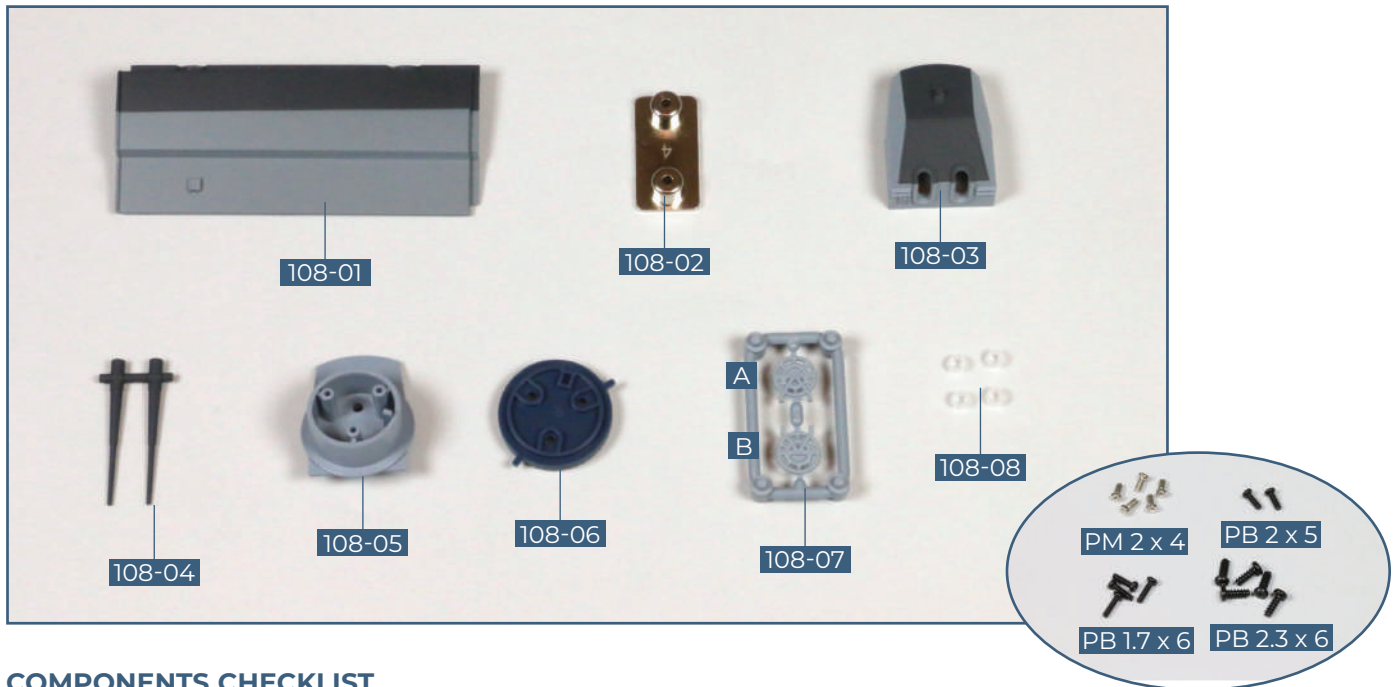


Completed work

The aft signal bridge has been assembled and fitted to the aft superstructure. Another section has been added to the hull (not shown).

STAGE 108

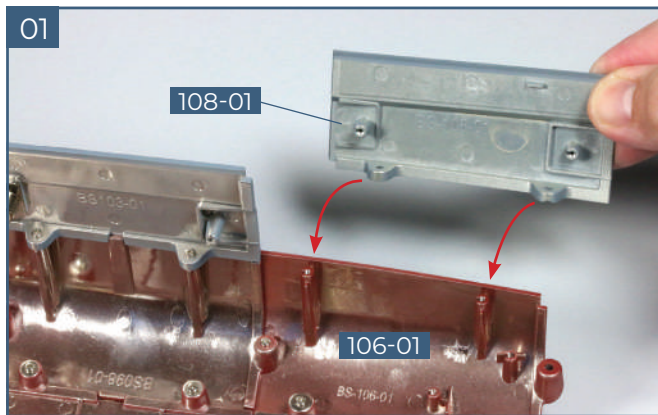
THE SIXTH 15cm GUN TURRET



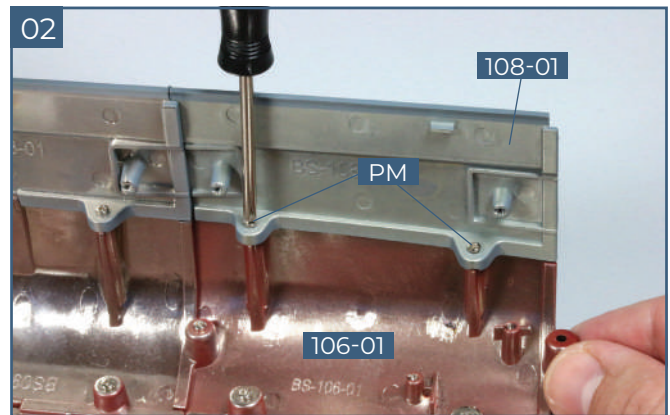
COMPONENTS CHECKLIST

- | | | |
|---|---|---|
| 108-01: Upper starboard hull section | 108-05: Base plate of gun turret | Five PM 2 x 4mm screws (1 spare) |
| 108-02: Connector | 108-06: Cog | Two PB 2 x 5mm screws (1 spare) |
| 108-03: 15cm gun housing (STB III) | 108-07: Large rope reel | Four PB 1.7 x 6mm screws (1 spare) |
| 108-04: Twin gun barrels | 108-08: Four plastic sleeves | Five PB 2.3 x 6mm screws (1 spare) |

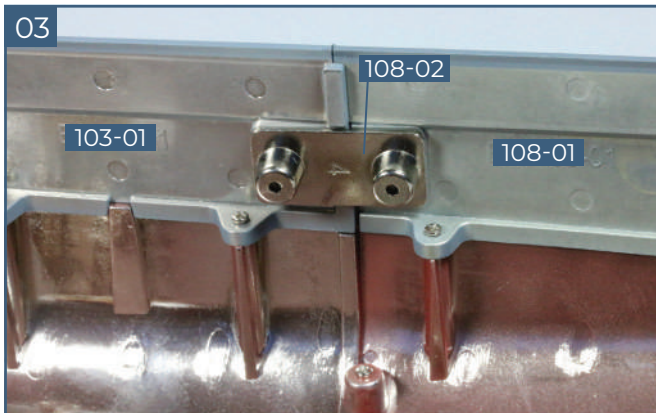
01. FITTING THE NEXT HULL SECTION



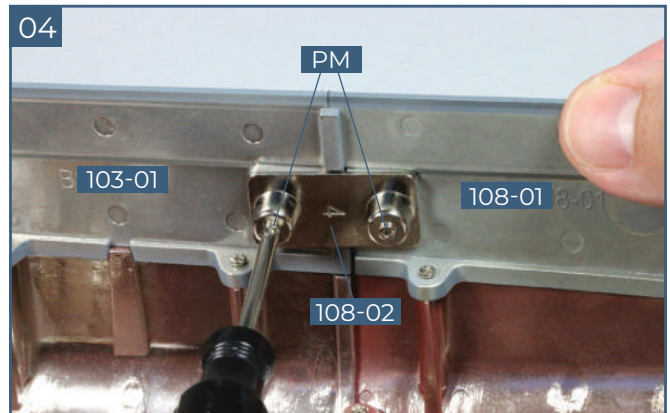
Take the upper starboard hull section **108-01** and fit it against the lower hull section **106-01** as indicated.



Fix the hull section **108-01** to hull section **106-01** using two **PM** 2 x 4mm screws, as shown.

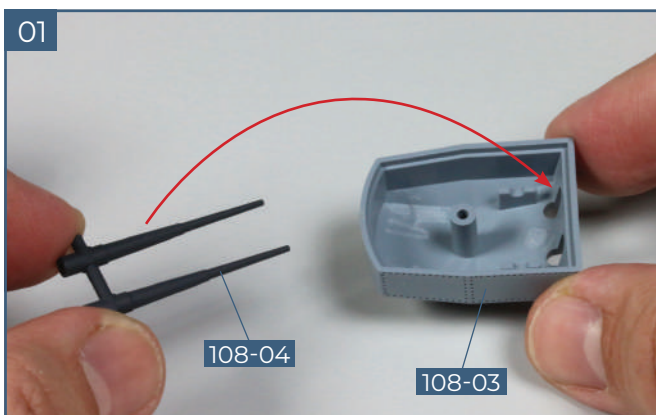


Take the connector **108-02** and fit it over the raised screw sockets on hull sections **103-01** and **108-01**, as shown.

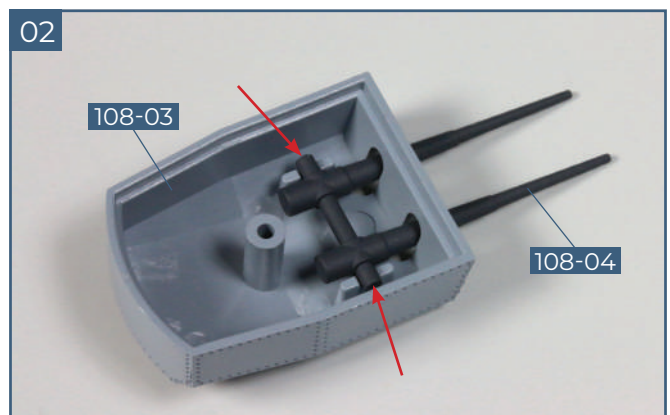


Fix the connector **108-02** in place using two **PM** 2 x 4mm screws.

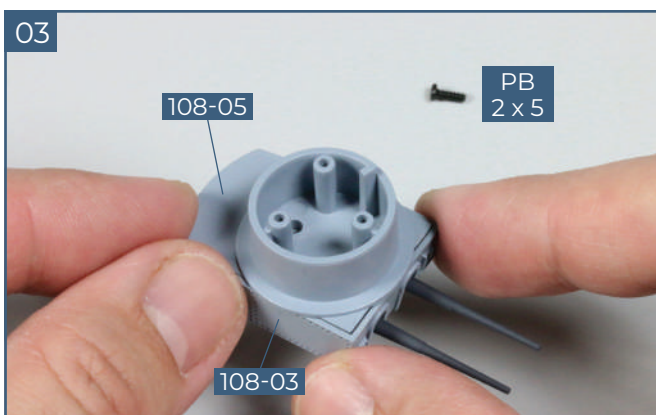
02. ASSEMBLING AND FITTING THE 15cm GUN TURRET



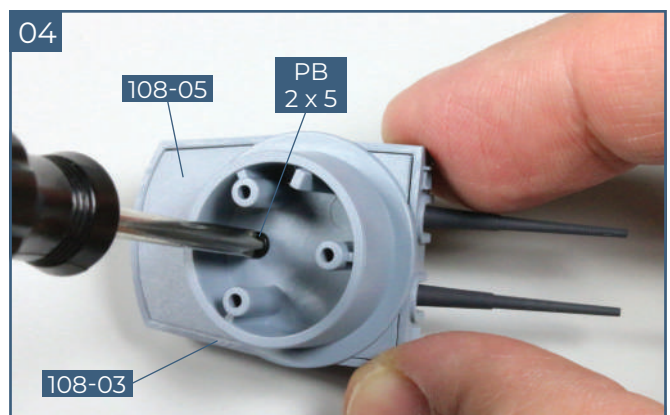
Take the gun housing of the sixth 15cm gun turret **108-03** and place it upside down on your work surface. Fit the gun barrels **108-04** through the holes in the front of the gun housing, as indicated.



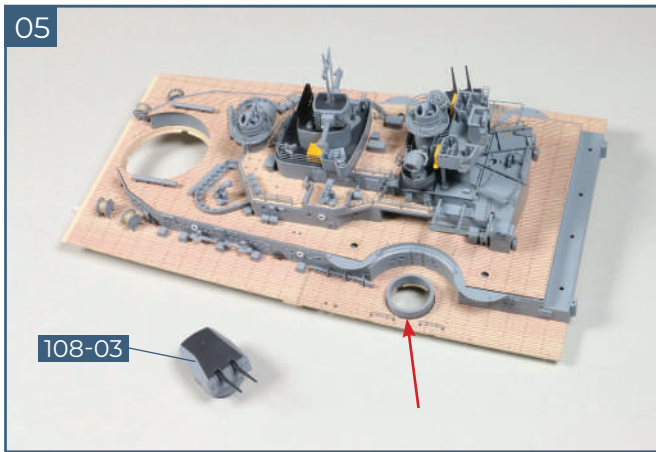
When correctly fitted, the pegs on the side of the twin barrels **108-04** fit into recesses in the top of the gun housing **108-03** (arrows).



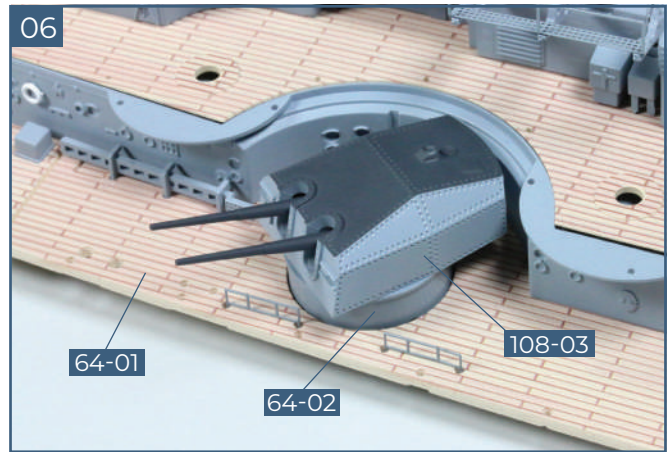
Fit the base plate **108-05** on the underside of the turret **108-03**. You will need a **PB** 2 x 5mm screw.



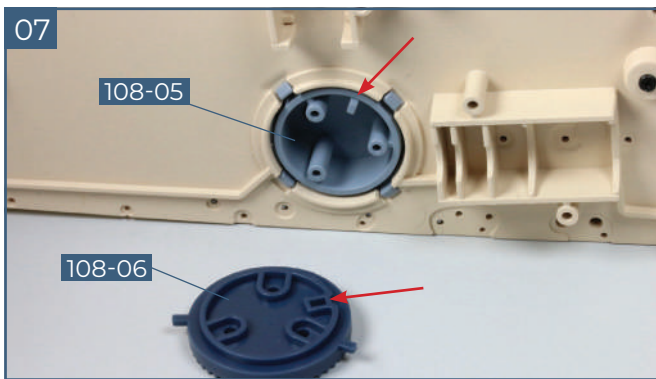
Fix the base plate **108-05** in place using the **PB** 2 x 5mm screw, as shown.



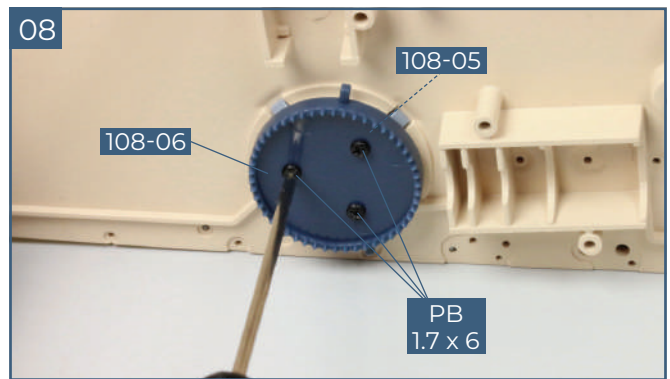
Put the aft superstructure on your worktop. Identify the barbette for the STB III gun turret (**108-03**) on the starboard side of the superstructure (arrow).



Fit the 15cm gun turret **108-03** on the barbette **64-02**, which is fitted into a hole in the sixth upper deck section **64-01**.

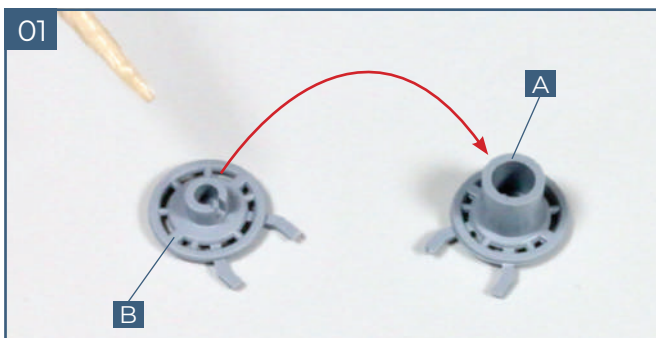


Tip up the superstructure so that you can access the base plate **108-05**. Fit the cog section **108-06** on the base plate: the screw holes should be aligned and the rectangular tab on the base plate fits into the recess in the cog (arrows).

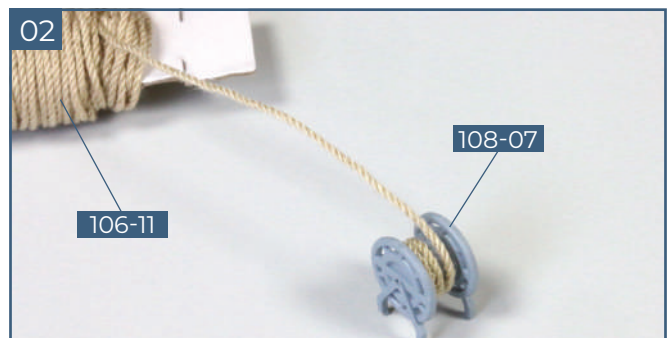


Fix the cog **108-06** in place using three **PB 1.7 x 6mm** screws, as shown.

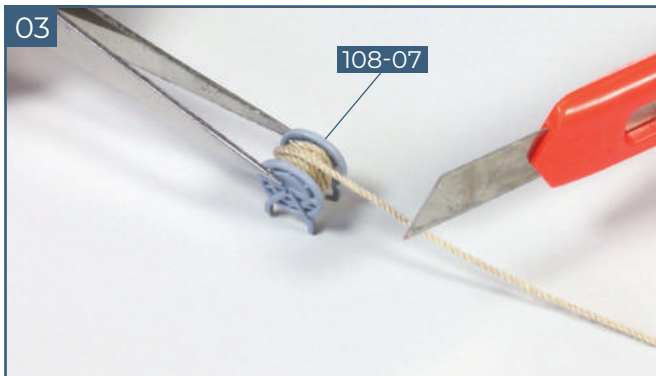
03. ASSEMBLING THE ROPE REEL



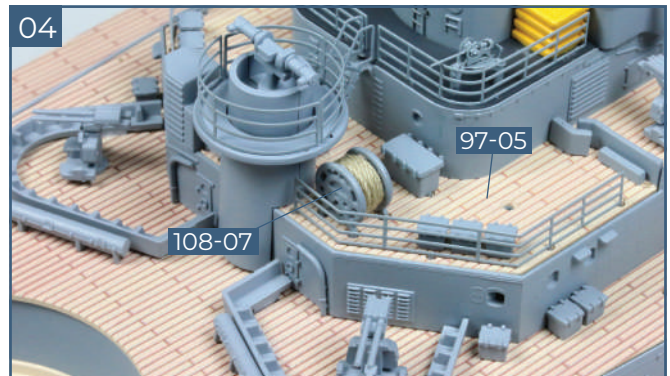
Cut the two parts, **A** and **B**, from frame **108-07**. Check how the parts fit together, as indicated. Use a little superglue to fix the parts together.



Take the 'rope' **106-11**, supplied with stage **106**, and wrap two or three layers around the reel.

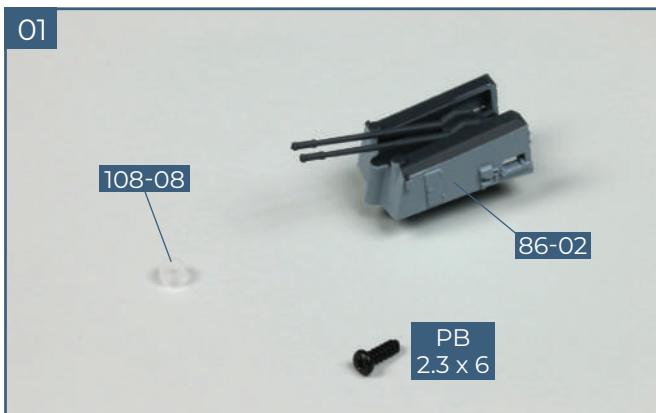


Cut the yarn and glue the end in place on the reel with a little superglue.

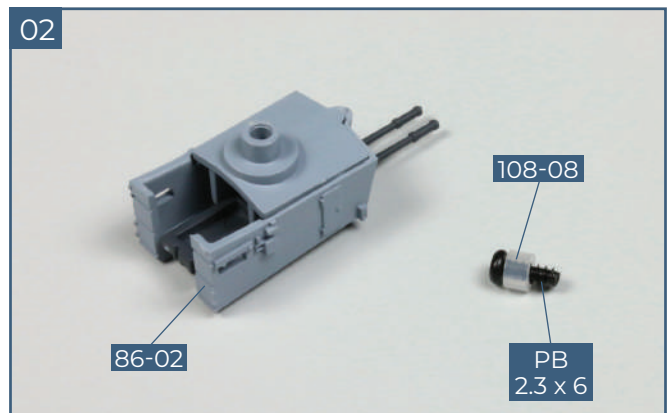


Identify the fixing point for the rope reel, at the rear of the aft superstructure on deck section **97-05**. Glue in place.

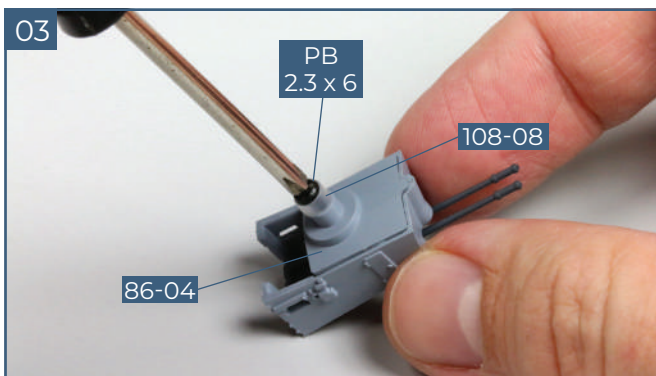
04. FITTING THE SLEEVE GRIPS TO THE 10.5cm AA GUNS



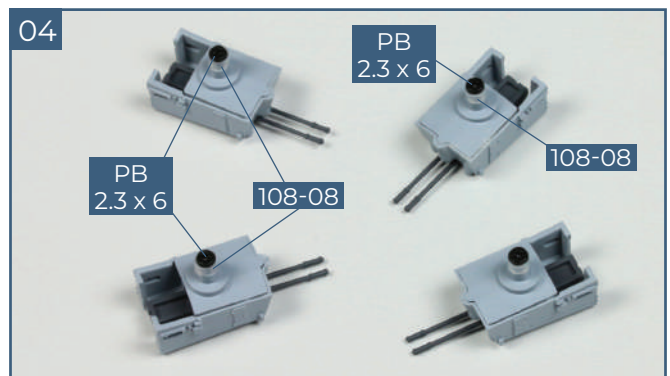
Take one of the 10.5cm AA guns from stage 86. You will need a sleeve **108-08** and a **PB 2.3 x 6mm** screw.



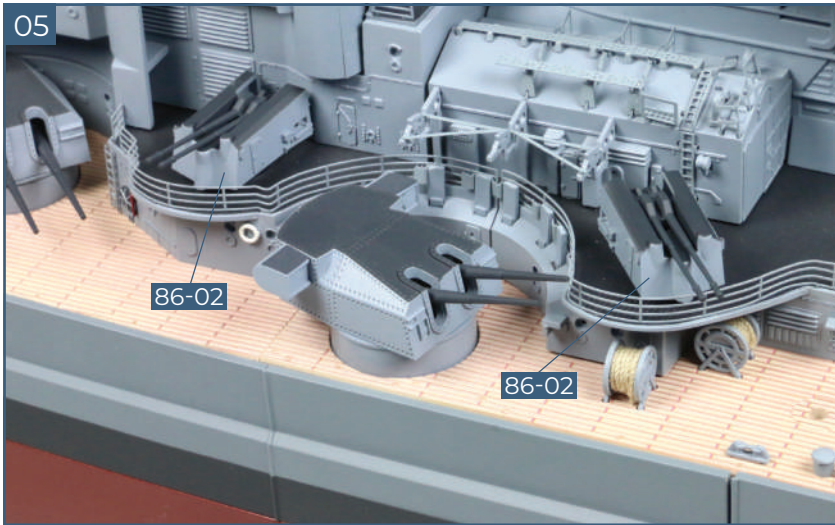
Turn the AA gun **86-02** over, and fit the plastic sleeve on to the **PB 2.3 x 6mm** screw, as shown.



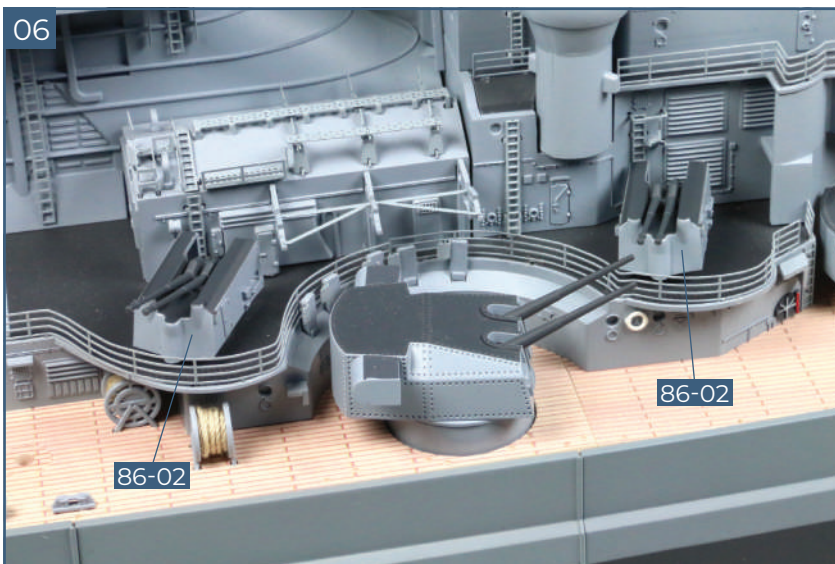
Fit the **PB 2.3 x 6mm** screw into the hole in the centre of the base plate **86-04**. The sleeve **108-08** ensures that the screw head is the right distance from the base of the gun and will provide grip when the gun is fitted to the deck.



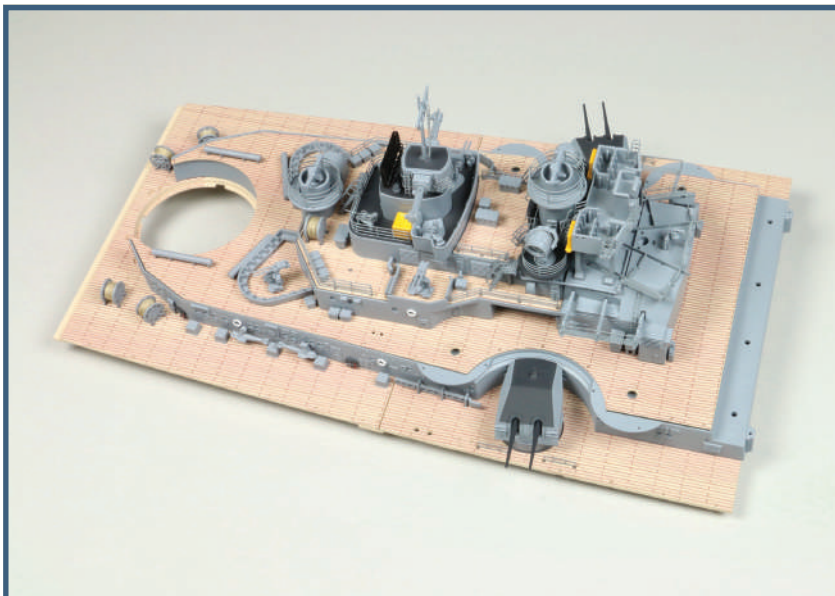
Repeat steps 2 and 3 to fit sleeves on three more **PB 2.3 x 6mm** screws and fix them to the base of the three remaining **AA** guns, as shown.



Take the forward superstructure and fit two of the AA guns **86-02** in the appropriate holes on the port side: push the guns down firmly so that the **PB** screws go through the holes and the sleeves provide grip on the sides of the holes.



Fit the last two guns in place on the starboard side of the forward superstructure in the same way. The guns can rotate, but remain held in place.

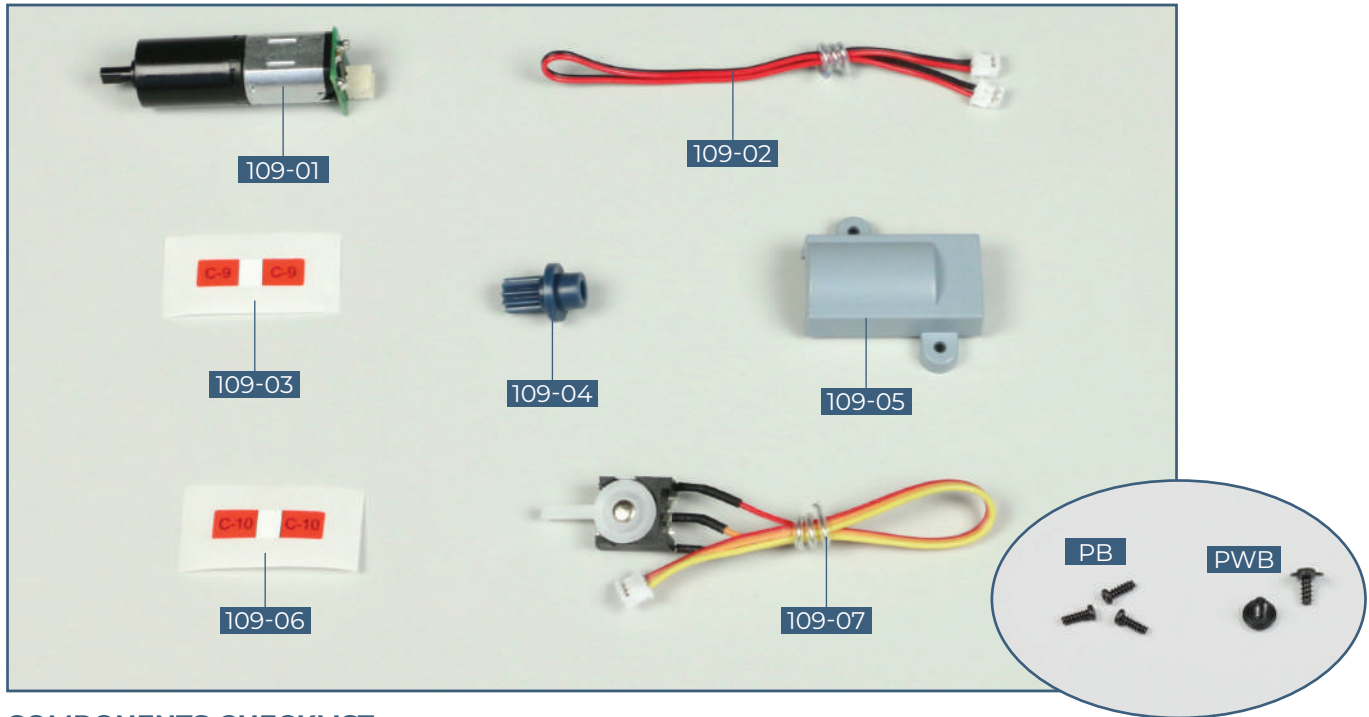


Completed work

Another section of the hull has been fitted to the model. The sixth 15cm gun turret and another cable drum have been attached to the aft superstructure. The front four 10.5cm anti-aircraft guns have been secured in place with plastic sleeves.

STAGE 109

THE MOTOR FOR THE SIXTH 15cm GUN TURRET



COMPONENTS CHECKLIST

109-01: Swivel motor

109-02: Cable for the swivel motor

109-03: Cable label (C-9)

109-04: Cog

109-05: Motor housing

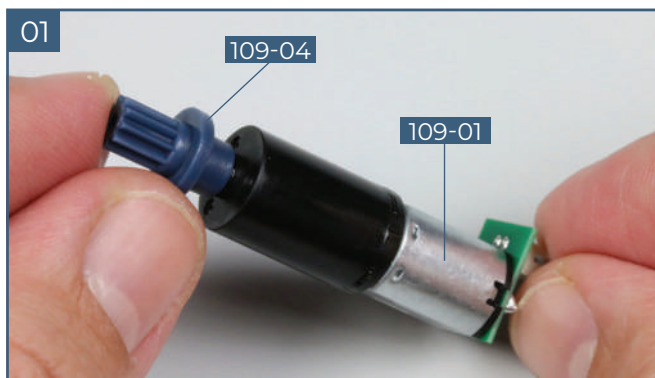
109-06: Cable label (C-10)

109-07: Switch

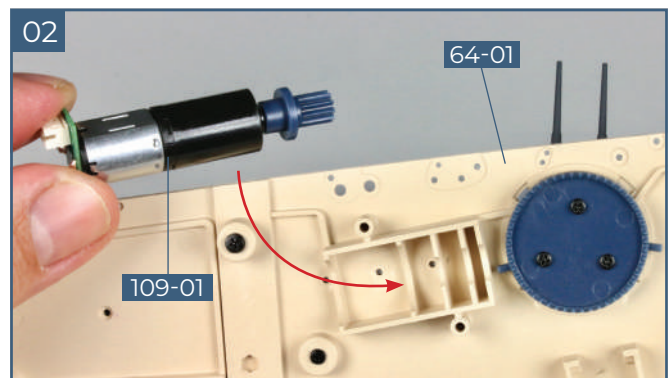
Three **PB** 2 x 5mm screws
(1 spare)

Two **PWB** 2.3 x 5mm screws
(1 spare)

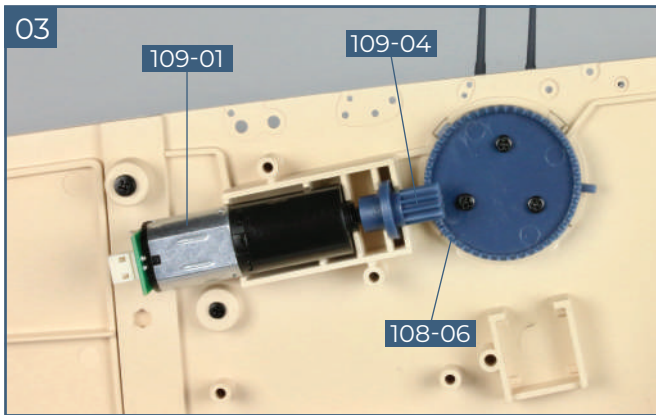
01. FITTING THE SWIVEL MOTOR



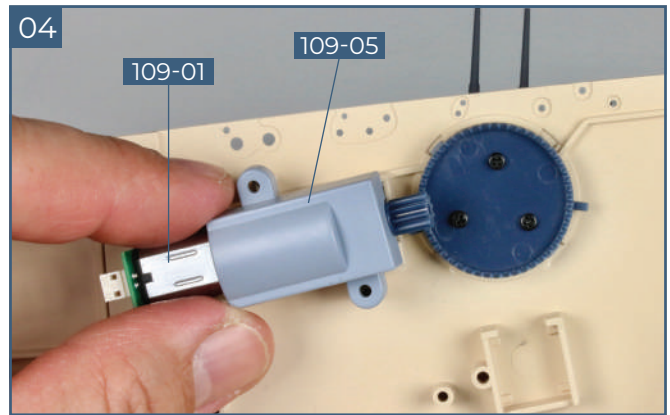
Take the cog **109-04** and fit it on to the shaft of the motor **109-01**, as shown.



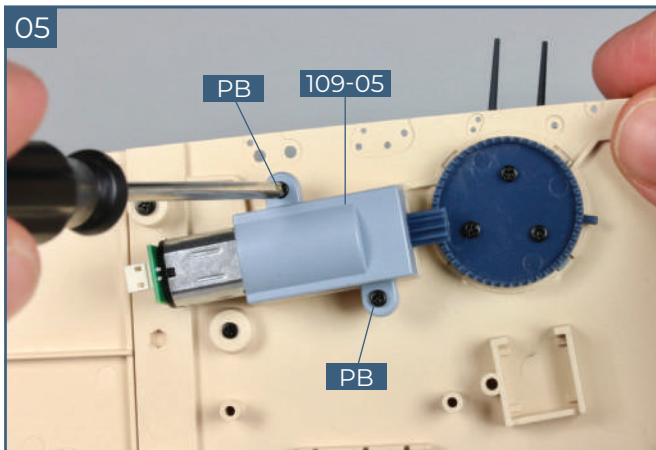
Carefully prop up the aft superstructure (a foam block is useful for this, as shown in Completed Work on page 27). Fit the motor **109-01** into the shaped recess on the underside of deck section **64-01**, as indicated.



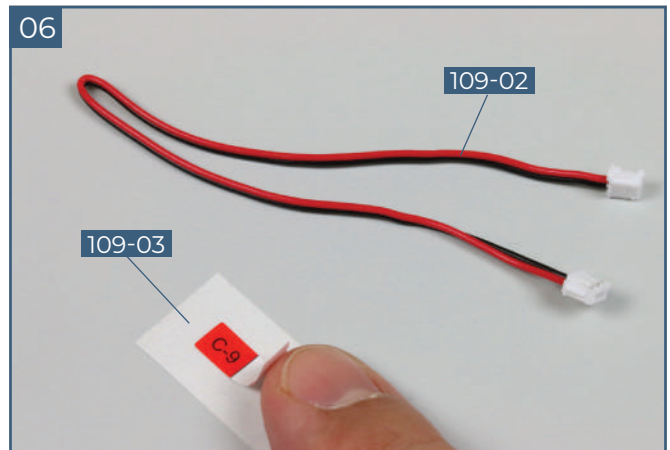
When correctly fitted, the teeth on the cog **109-04** interlock with the teeth around the edge of the cog **108-06**.



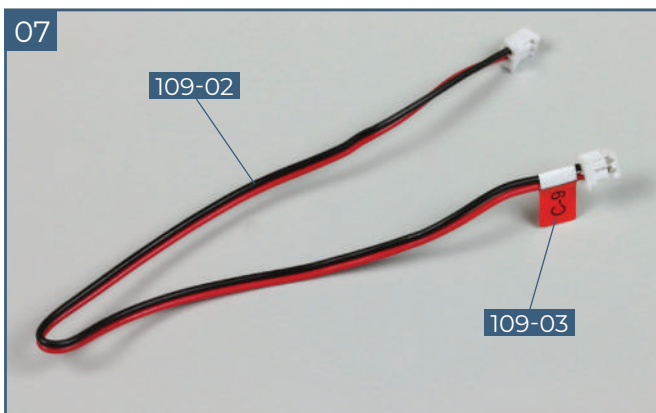
Take the motor housing **109-05** and fit it over the motor **109-01**, as shown. The holes in the tabs on the sides of the cover should align with raised screw sockets in the deck.



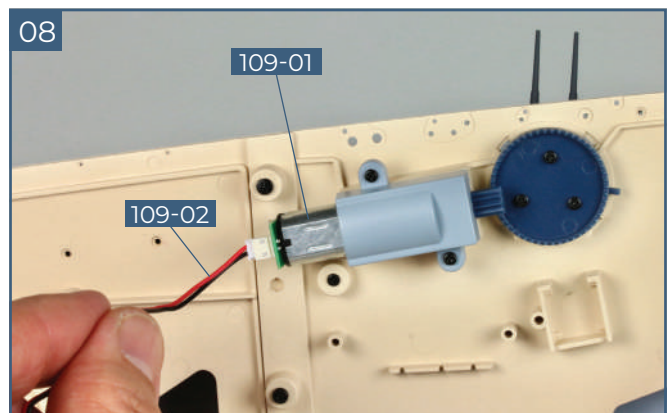
Fasten the housing **109-05** to the underside of the upper deck using two **PB** 2 x 5mm screws.



Take the cable for the motor **109-02**. Remove the backing from the cable label **109-03** (C-9).

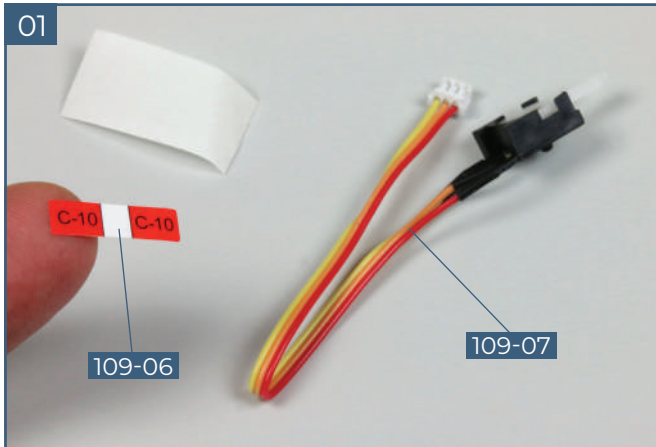


Wrap the cable label **109-03** around the end of the cable **109-02**, close to a connector, as shown.

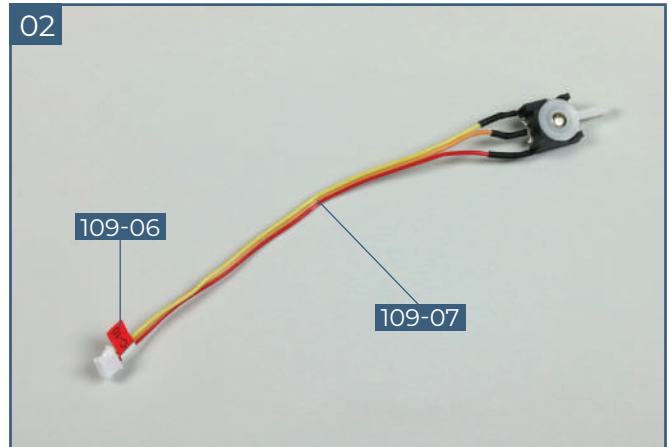


Fit the connector on the other end of the cable (without a label) into the socket on the circuit board of the motor **109-01**.

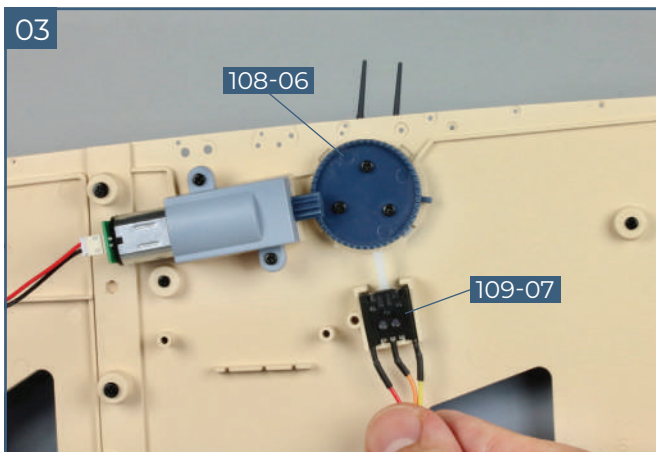
02. FITTING THE SWITCH FOR THE MOTOR



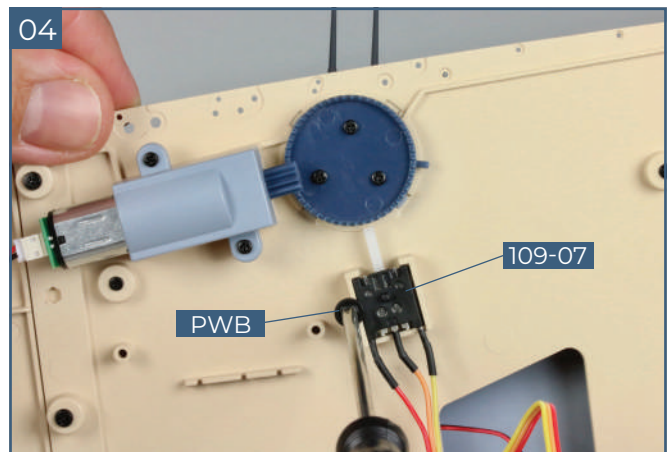
Take the switch and cable **109-07**. Remove the label **109-06** (C-10) from the backing.



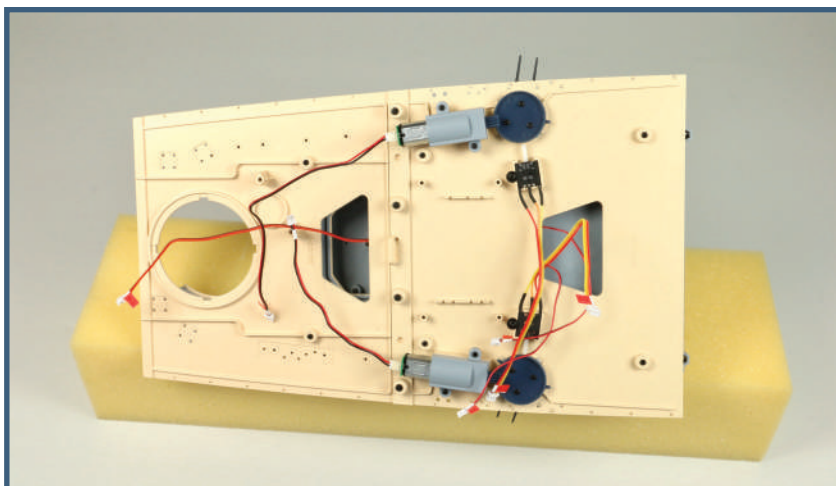
Wrap the label **109-06** around the cable **109-07** near the connector, as shown.



Fit the switch **109-07** into the recess on the underside of the upper deck, near the cog **108-06**, so that the end of the switch meets the edge of cog **108-06**.



Fix the switch mechanism in place using a **PWB** screw. The rim of the washer on the screw holds the mechanism in place.



Completed work

The swivel motor and switch for the sixth 15cm gun turret have been fitted to the underside of the upper deck, beneath the aft superstructure.

STAGE 110

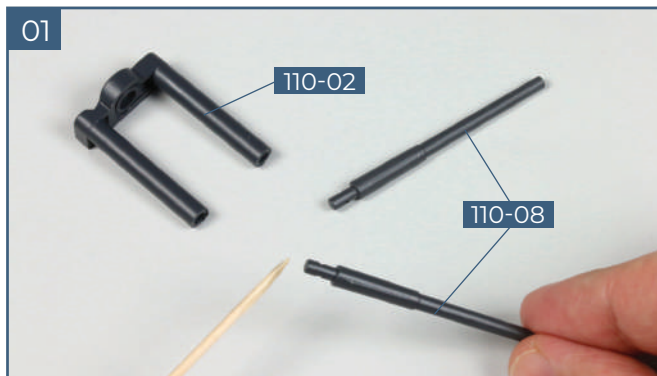
THE THIRD 38cm GUN TURRET



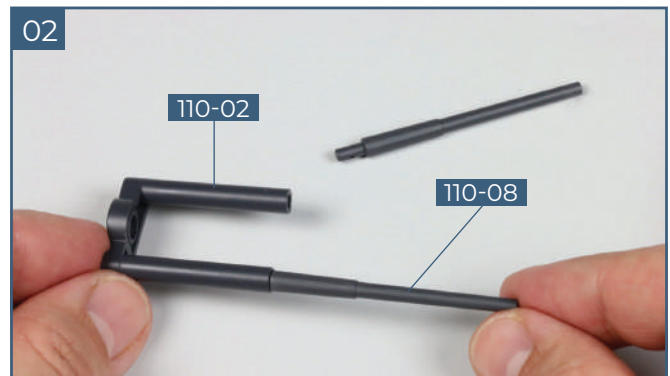
COMPONENTS CHECKLIST

- | | | |
|---|--|-------------------------------|
| 110-01: Motor | 110-05: Clutch shaft | |
| 110-02: Connector for barrels | 110-06: Motor mounting (lower part) | 110-10: Cable label |
| 110-03: Motor mounting (upper part) | 110-07: Ring | Five PB 2 x 5mm screws |
| 110-04: Twin barrel cradle with base plate | 110-08: Two gun barrels | |
| | 110-09: Tension spring | |

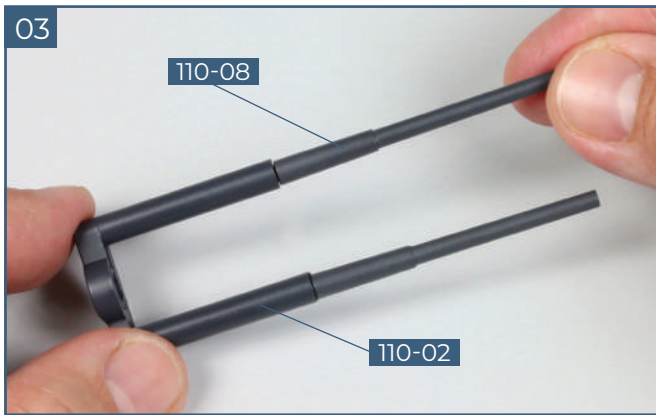
01. ASSEMBLING THE TWIN BARRELS



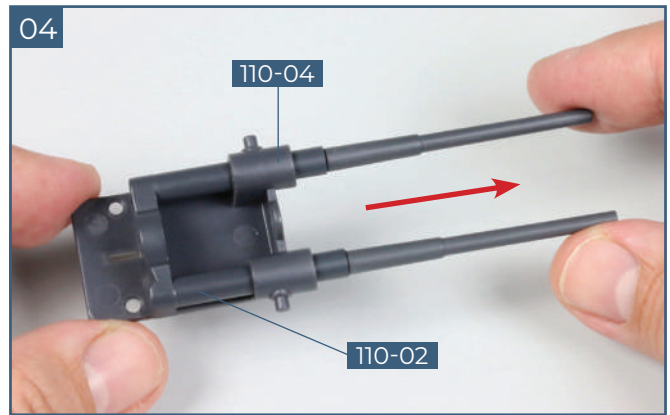
Take the connector **110-02** and the two gun barrels **110-08**. Apply a little superglue to the peg on the end of one of the barrels **110-08**, as shown.



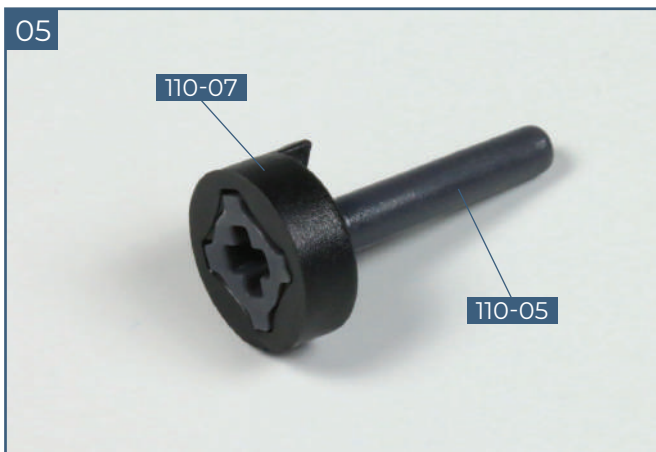
Fit the gun barrel **110-08** into one of the sockets in the connector **110-02**, as shown.



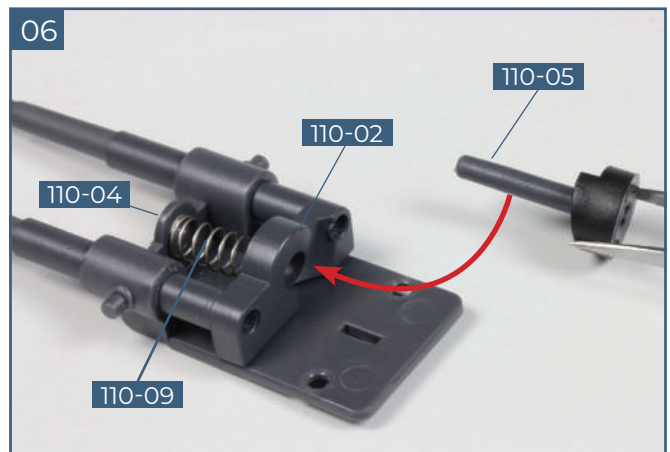
Glue the second gun barrel **110-08** into the second socket in the connector **110-02**, as shown.



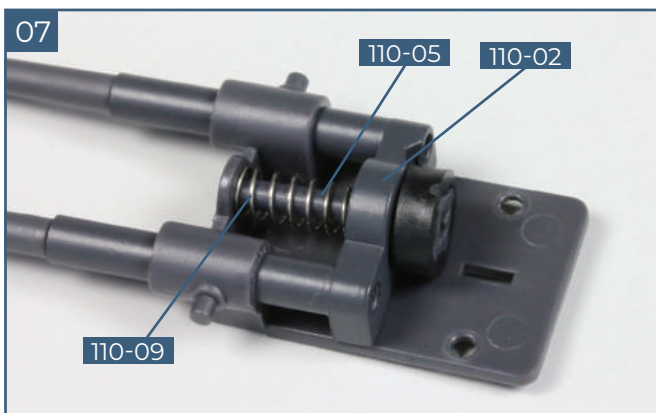
Fit the barrels through the sockets in the barrel cradle **110-04**: slide them in from the rear, as indicated by the arrow.



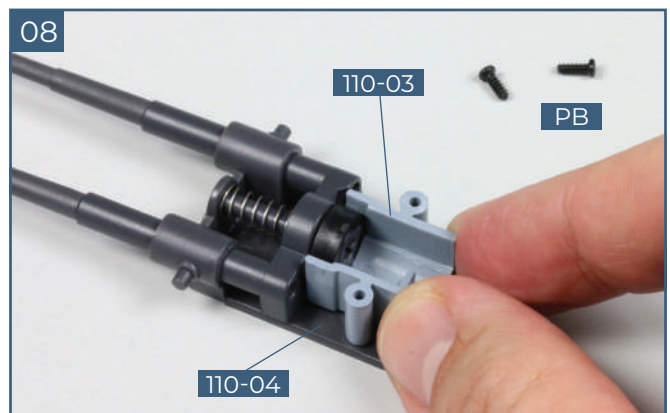
Fit the ring **110-07** onto the clutch shaft **110-05**, as shown.



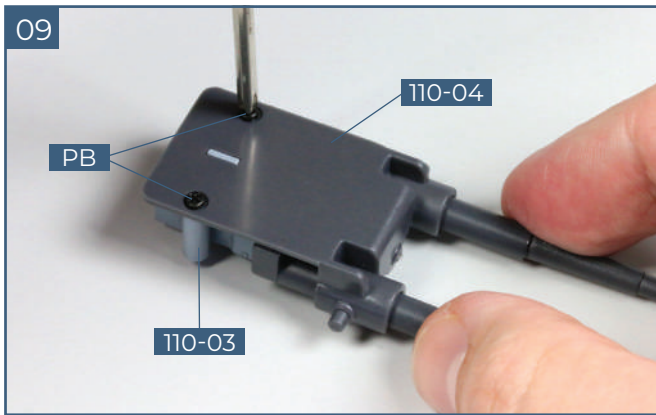
Fit the tension spring **110-09** into the barrel assembly between the connector piece **110-02** and the cradle **110-04**. Fit the shaft of part **110-05** into the assembly (see next step).



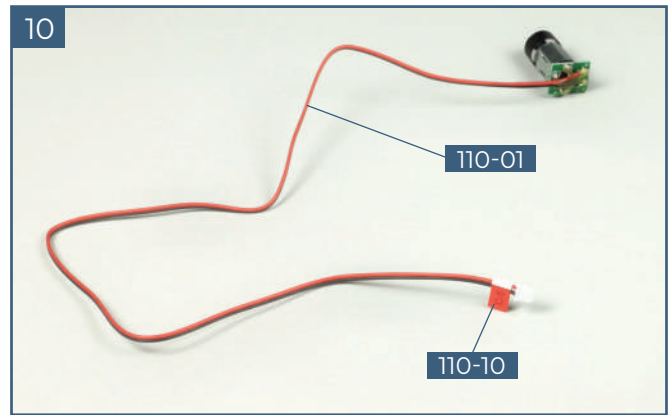
The shaft of part **110-05** goes through the hole in the connector **110-02** and fits down the centre of the spring **110-09**, as shown.



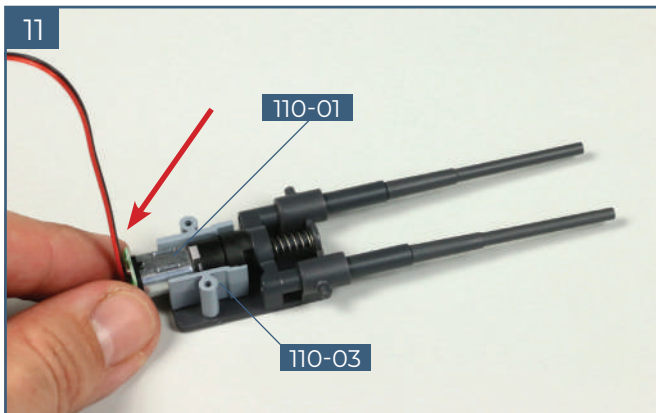
Position the top of the motor mounting **110-03** on the plate of the cradle **110-04** as shown. You will need two **PB** screws.



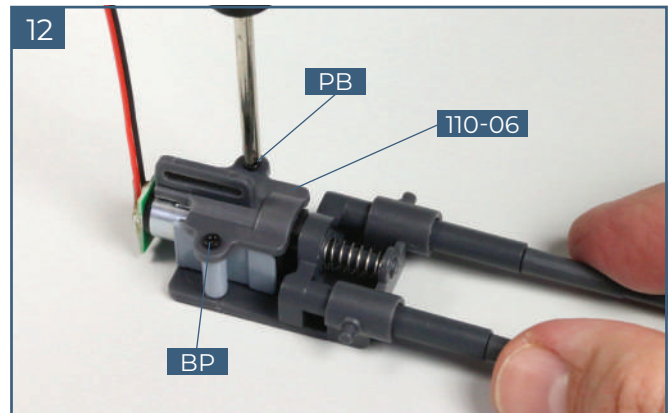
Turn the assembly over and fix the upper part of the motor mounting **110-03** to the base plate **110-04** using two **PB** screws.



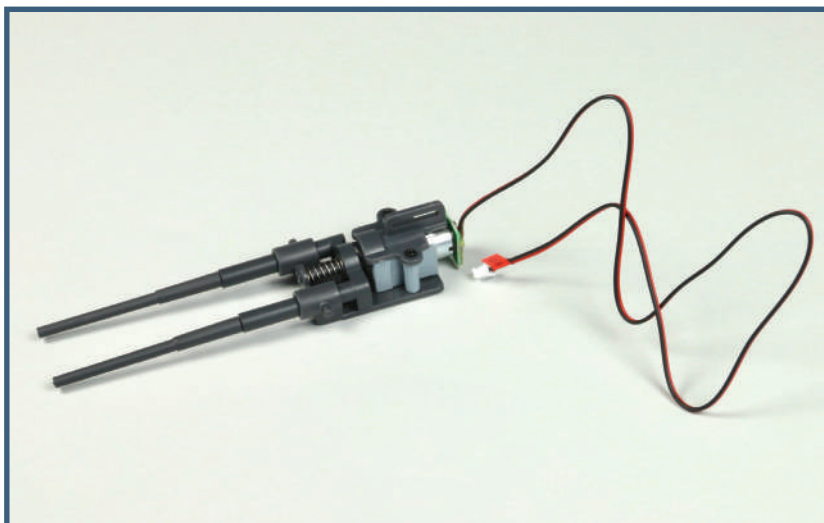
Take the cable label **110-10** and wrap it around the cable from the motor **110-01**, close to the connector.



Fit the motor **110-01** into the motor mounting **110-03**. Note the position of the circuit board and cables (arrow).



Fit the second motor mounting part **110-06** on top of the assembly and fix in it place with two **PB** screws, as shown.



Completed work

The first stage of assembly of the third 38cm twin turret has been completed.

STAGE 111

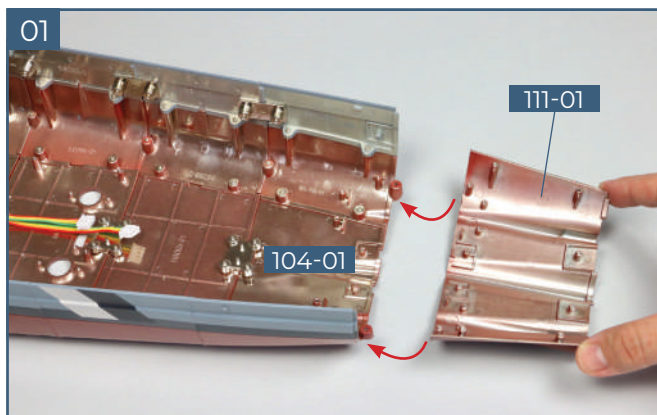
HULL SECTION AND TURRET HOUSING



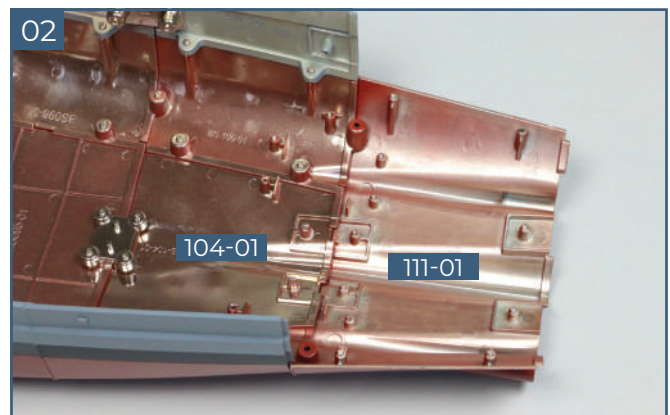
COMPONENTS CHECKLIST

- | | |
|-------------------------------------|---|
| 111-01: Twelfth keel section | Seven 2 x 4mm PM screws
(1 spare) |
| 111-02: Connector | |
| 111-03: Turret housing | Seven 2 x 5mm PB screws
(1 spare) |
| 111-04: Turret base plate | |

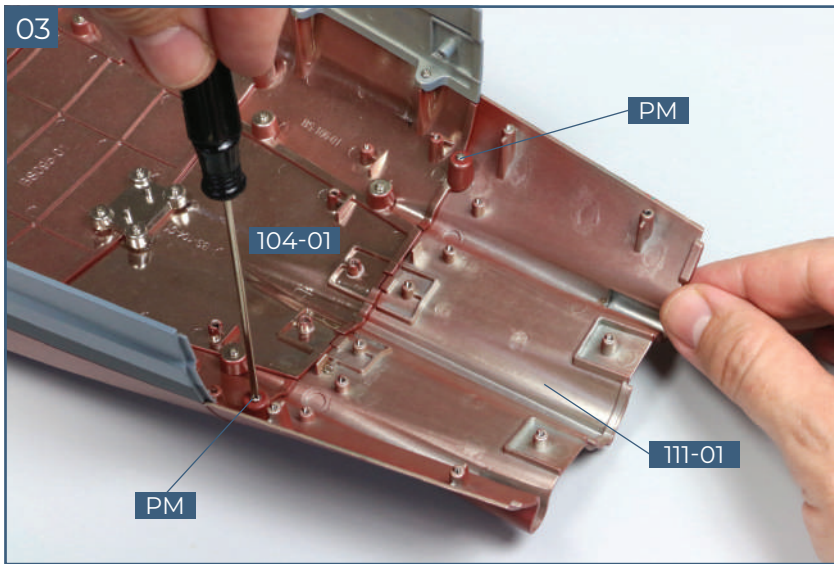
01. FITTING THE KEEL SECTION



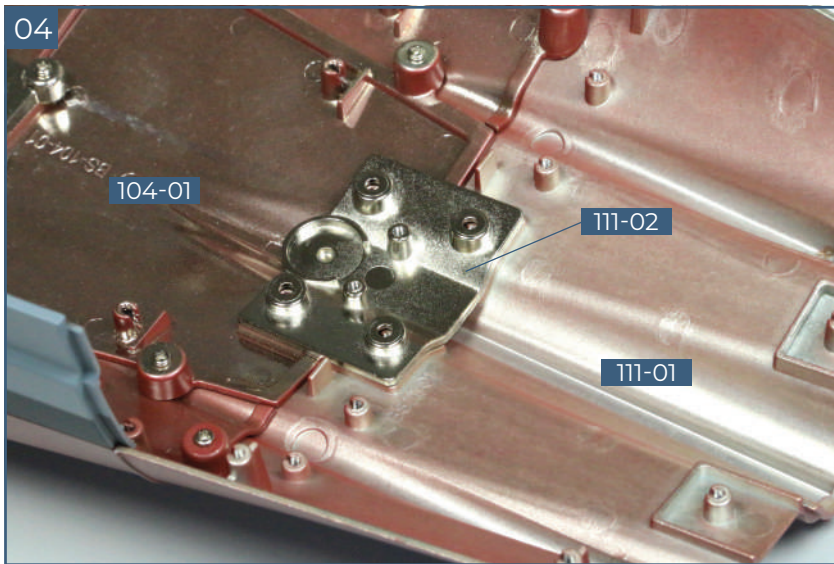
Take the hull assembly from stage 109. Fit the raised screw sockets on the edge of the keel section **111-01** into the sockets on the edge of part **104-01**, as indicated.



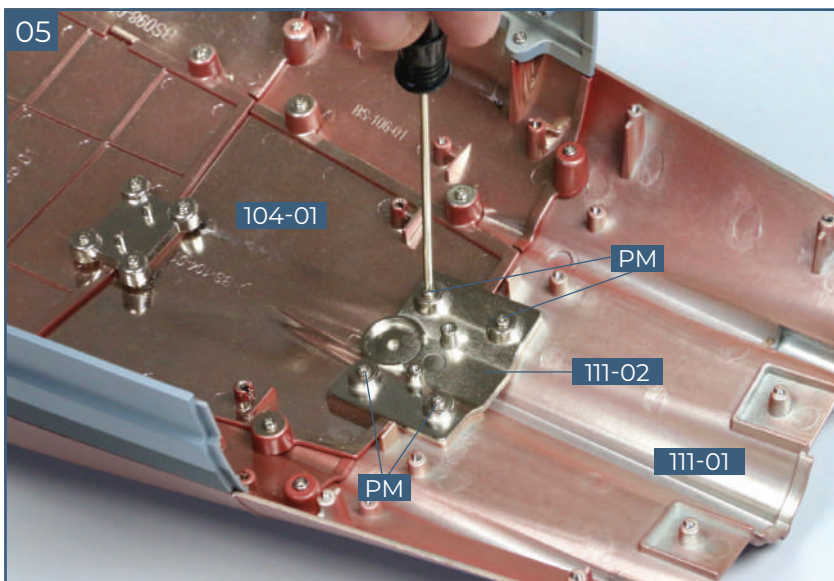
This shows part **111-01** in place, flush with part **104-01**.



Fix the keel section **111-01** in place using two **PM** screws, as shown.

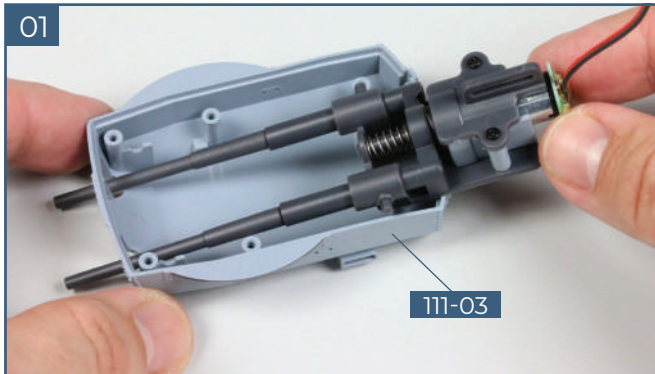


Fit the connector **111-02** over the screw sockets on parts **104-01** and **111-01**. Note the position of the circular detail on the connector.

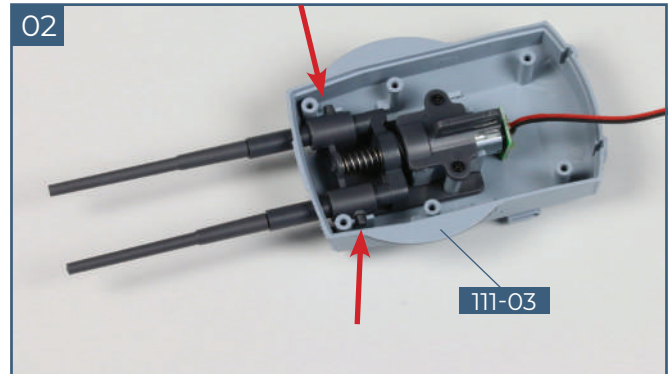


When you are happy with the fit, fix the connector **111-02** to the keel sections **104-01** and **111-01** using four **PM** screws.

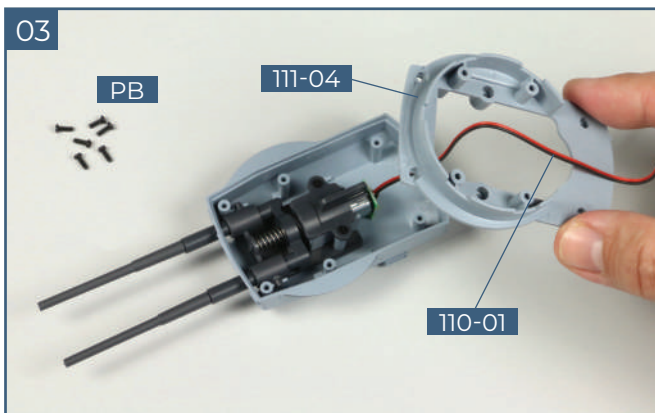
02. HOUSING FOR THE THIRD 38cm TWIN GUN



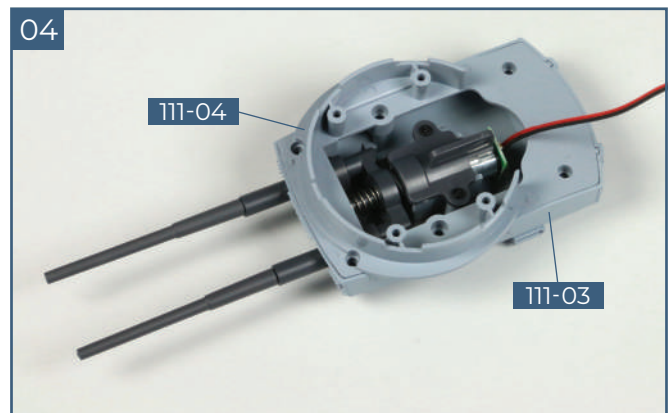
Take the barrel assembly from the previous stage. Fit the twin barrels through the holes in the gun housing **111-03**.



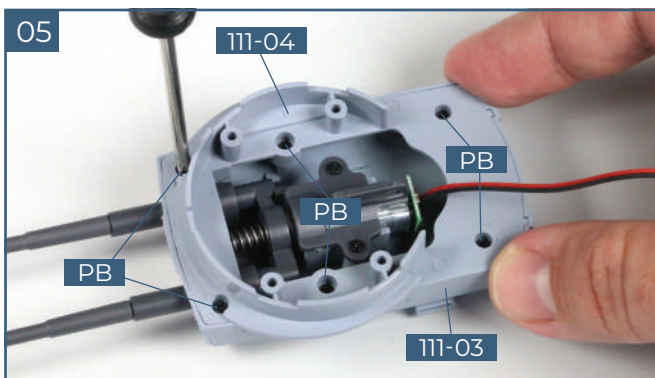
When the barrel assembly is correctly fitted, pegs on the sides of the cradle pins fit into recesses in the housing **111-03** (arrows).



Take the turret base plate **111-04** and feed the motor cable **110-01** through the large opening as shown. You will need six **PB** screws.



Fit the turret base plate **111-04** on the underside of the housing **111-03** so that screw holes are aligned.



Fix the base plate **111-04** to the housing **111-03** using six **PB** screws, as shown.

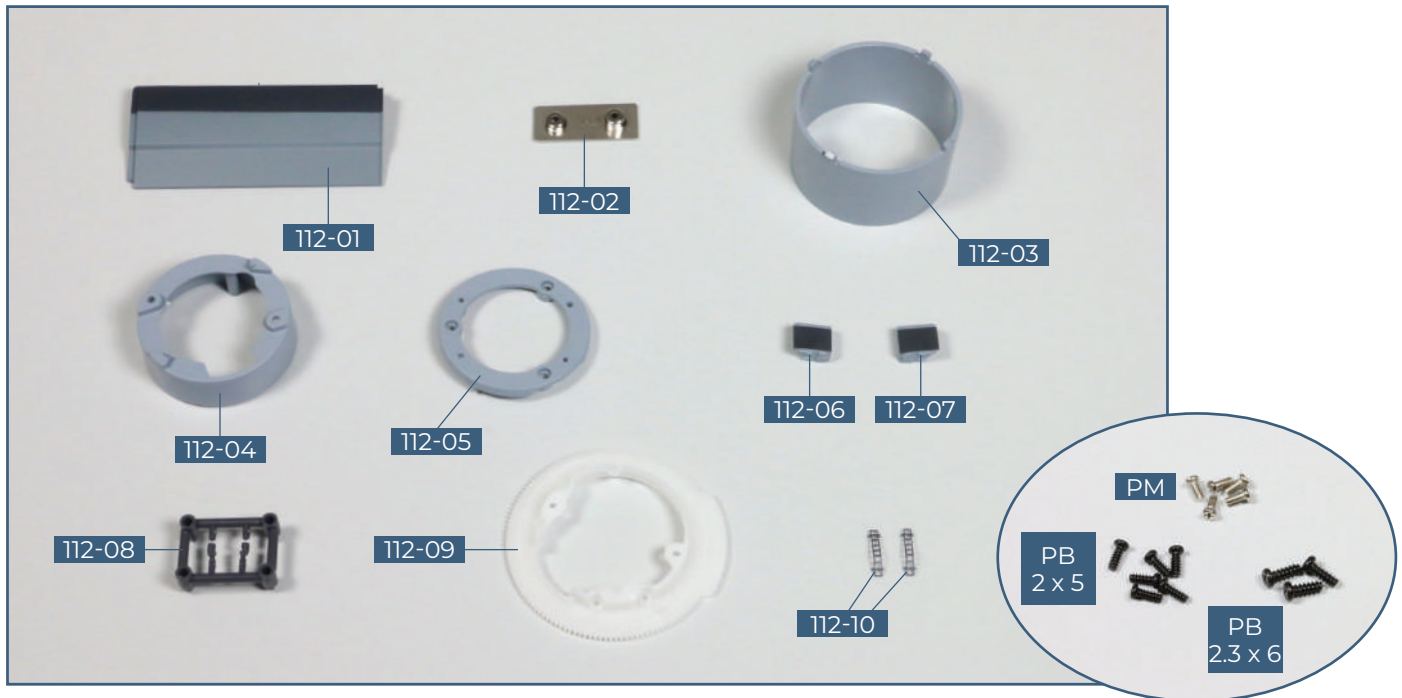


Completed work

The third 38cm twin turret has been built. A keel section has been added to the hull assembly (not shown).

STAGE 112

HULL SECTION AND GUN PARTS



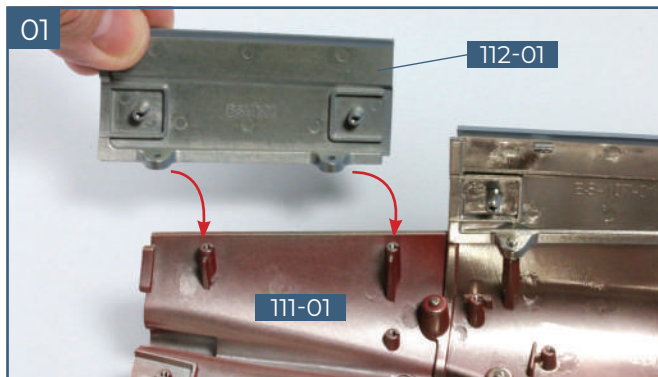
COMPONENTS CHECKLIST

- 112-01:** Upper port hull section
- 112-02:** Connector
- 112-03:** Barbette
- 112-04:** Gun turret base
- 112-05:** End plate for base of gun turret

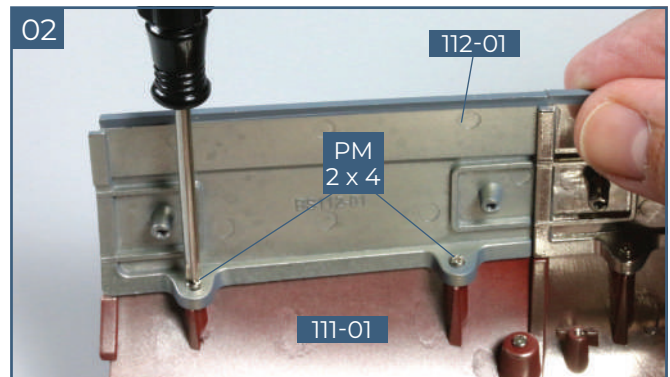
- 112-06:** Left side rangefinder arm hood
- 112-07:** Right side rangefinder arm hood
- 112-08:** Two periscopes
- 112-09:** Cog

- 112-10:** Two ladders
- PM:** Five 2 x 4mm PM screws
- PB:** Six 2 x 5mm PB screws
- PB:** Three 2.3 x 6mm PB screws

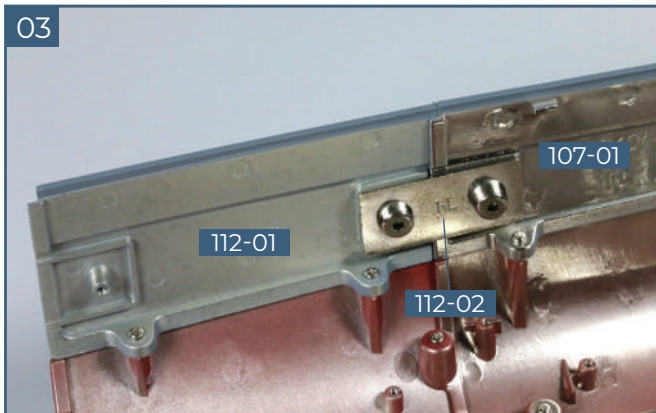
01. FITTING THE HULL SECTION



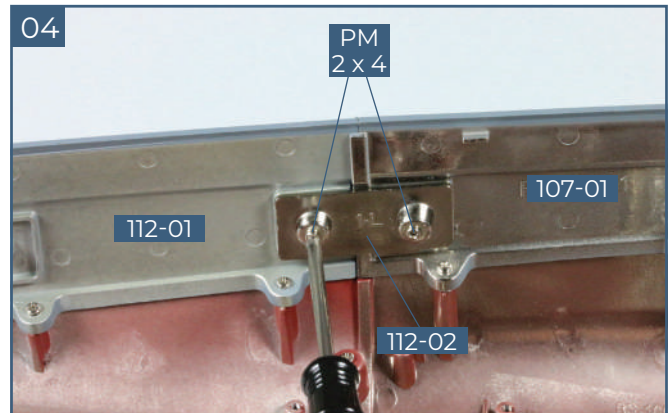
Take the upper port hull section **112-01** and fit it against the keel section **111-01** so that the screw holes are aligned, as indicated.



Fix the hull section **112-01** to the keel section **111-01** using two **PM** 2 x 4mm screws, as shown above.

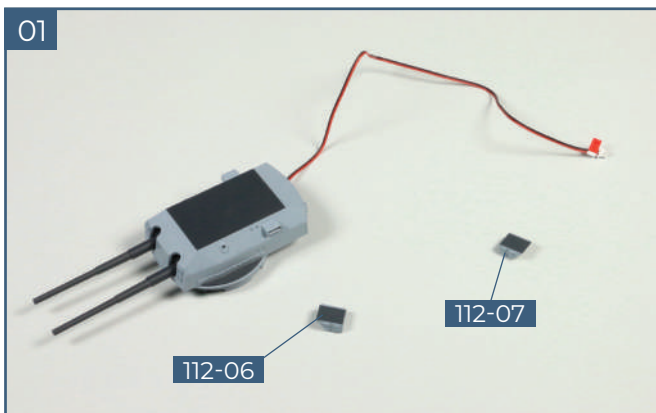


Fit the connector **112-02** over the raised screw sockets of the hull sections **107-01** and **112-01**, as shown.

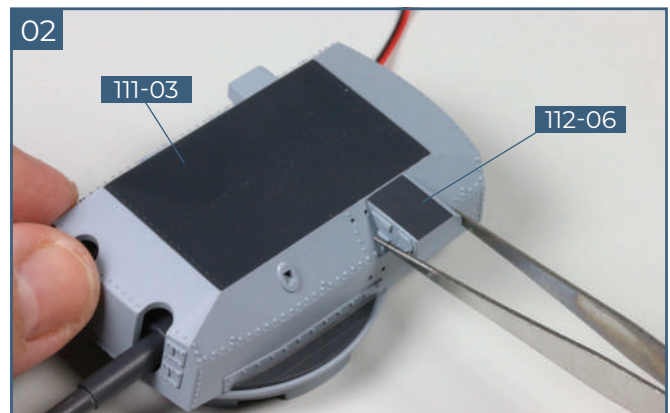


Fix the connector **112-02** to the two fuselage sections **107-01** and **112-01** using two **PM 2 x 4mm** screws.

02. DETAILS FOR THE THIRD 38cm TWIN GUN TURRET



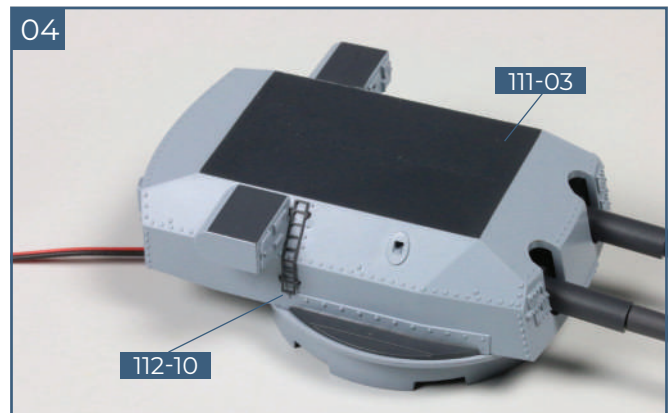
Take the third gun turret, from stage **111**. Place the left and right side range finder arm hoods **112-06** and **112-07** on your worktop.



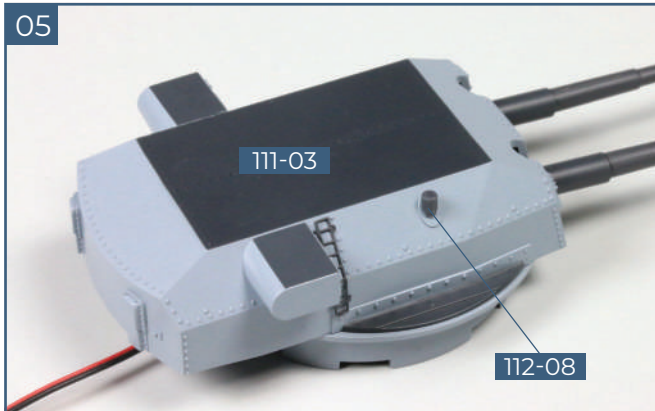
Check the fit of the range finder arm hood **112-06** on the left side of the turret **111-03**. Glue in place.



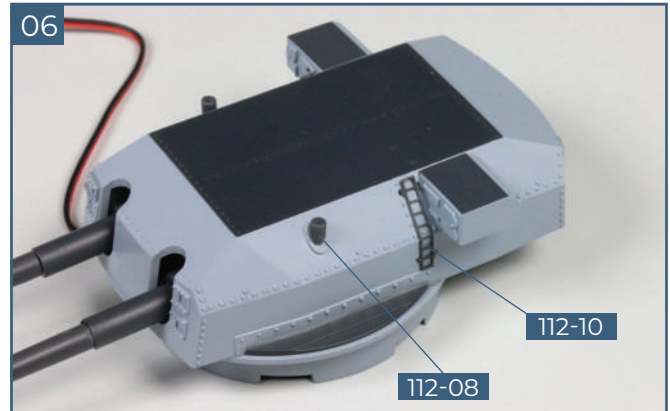
Check the fit of the range finder arm hood **112-07** on the right side of the turret **111-03**. Glue in place.



On the right side of the turret **111-03**, check the fit of one of the ladders **112-10** in front of the protective hood. Glue in place on the wall of the turret.

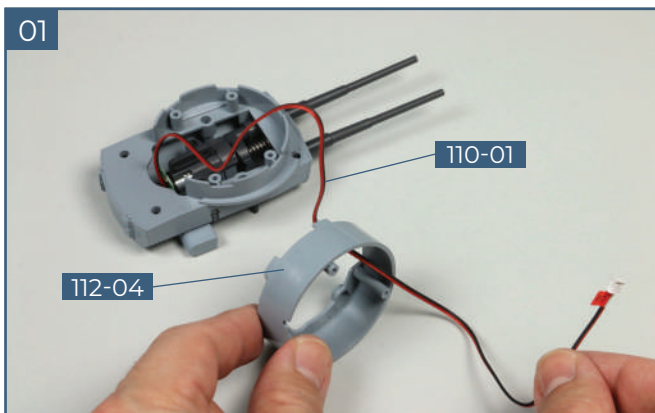


Check the fit of the first periscope **112-08** on the side of the turret **111-03**, as shown. Glue in place.

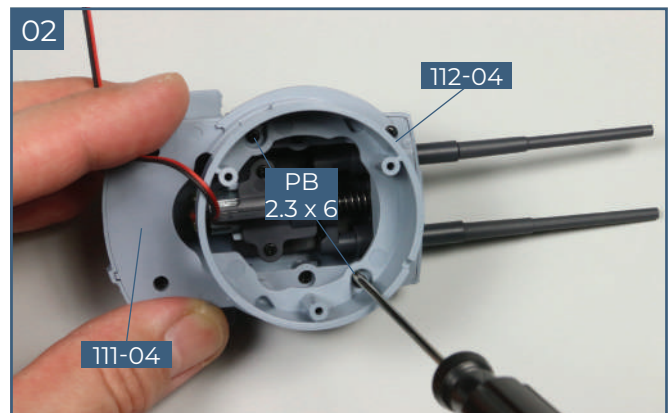


On the left side of the turret, check the fit of the second ladder **112-10** and the second periscope **112-08** and glue in place, as shown.

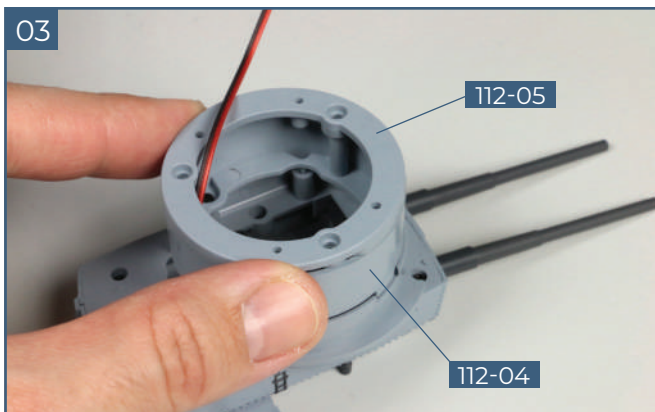
03. FITTING THE GUN TURRET TO THE BARBETTE



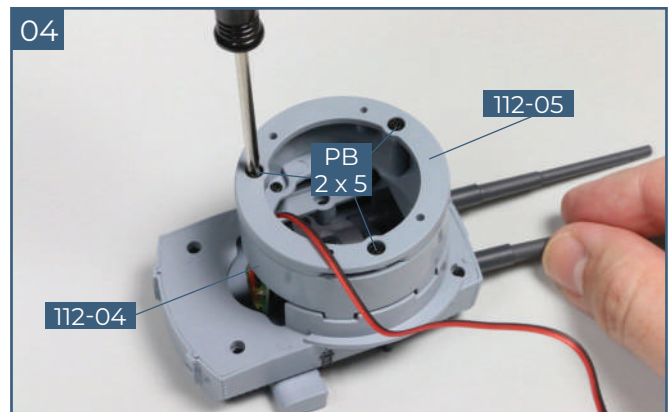
Turn the turret upside down and pass the cable of the motor **110-01** through the opening of the turret base **112-04**.



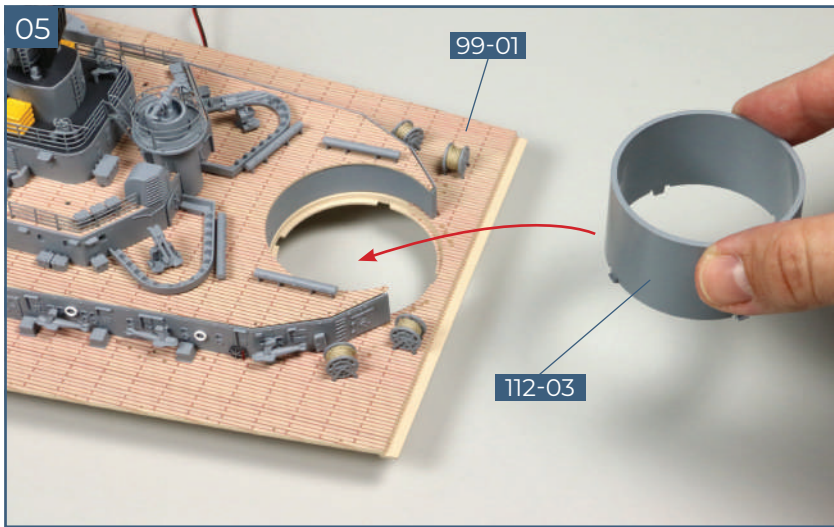
Position the turret base **112-04** on the turret base plate **111-04** and fix it in place using two **PB** 2.3 x 6mm screws. Check that the parts are correctly aligned, as shown.



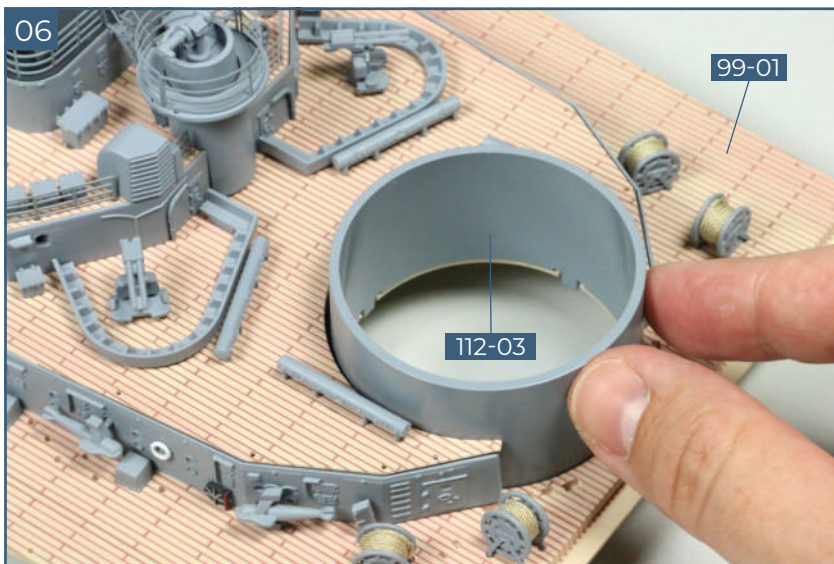
Take the gun turret end plate **112-05** and position it on the turret base **112-04**, checking that it is correctly aligned.



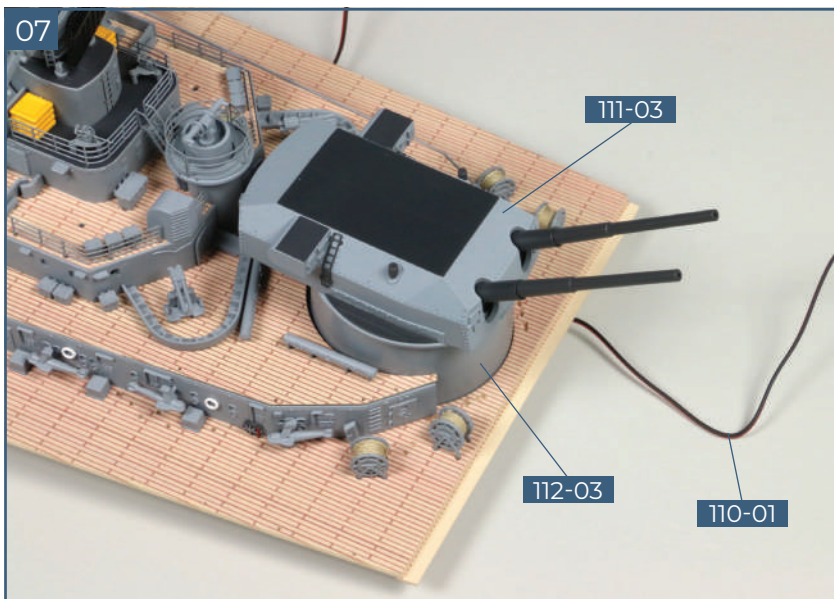
Fasten the gun turret end plate **112-05** in place using three **PB** 2 x 5mm screws.



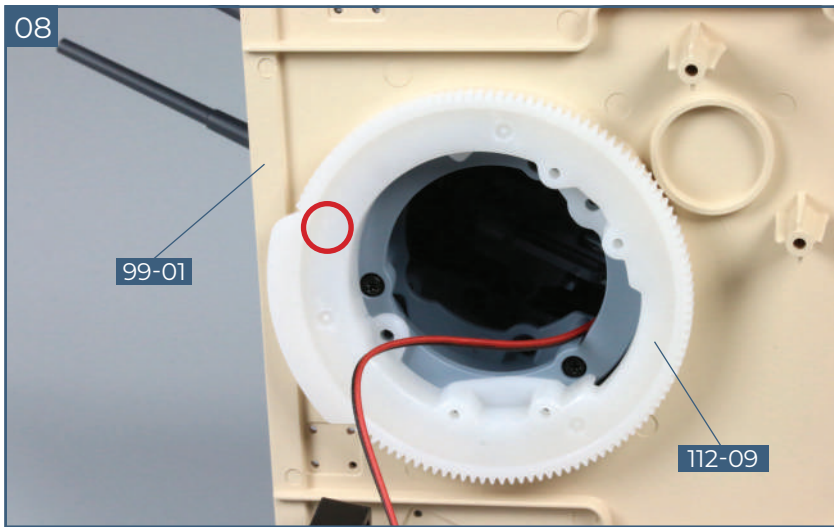
Place the aft superstructure on your worktop. Take the barrette **112-03** and fit it in the opening in upper deck section **99-01** as indicated.



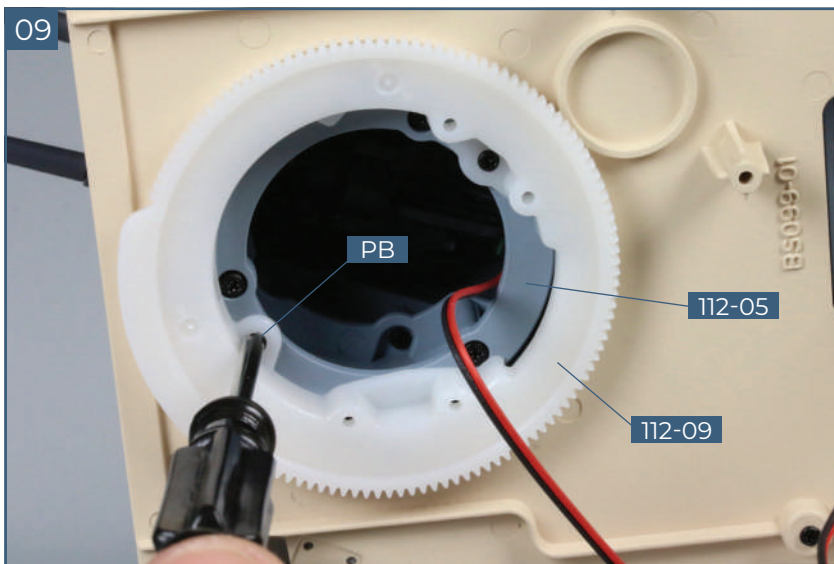
Carefully push the barrette **112-03** into the opening in the upper deck section **99-01** so that the four tabs on the lower edge of the barrette snap into corresponding recesses in the deck.



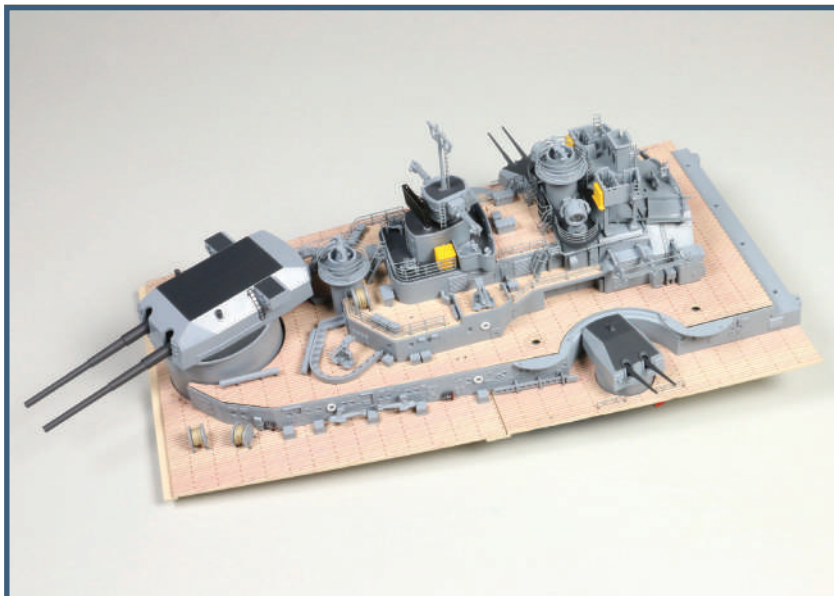
Pass the cable of the motor **110-01** down through the opening of the barrette **112-03** and fit the third 38cm gun turret **111-03** on the barrette.



Hold the turret in place and carefully turn the aft superstructure so that you can access the underside. You can hold it in place with an arrangement of brackets, as described in stage 84. Fit the cog **112-09** on the underside of the upper deck **99-01** as shown. The cog is aligned so that the small triangle (circled in red) and barrels point aft – in this photo, the triangle and barrels are pointing to the left.



Fix the cog **112-09** in place using two **PB** 2 x 5mm screws. They fit through the cog and into screw holes in the gun turret end plate **112-05**.

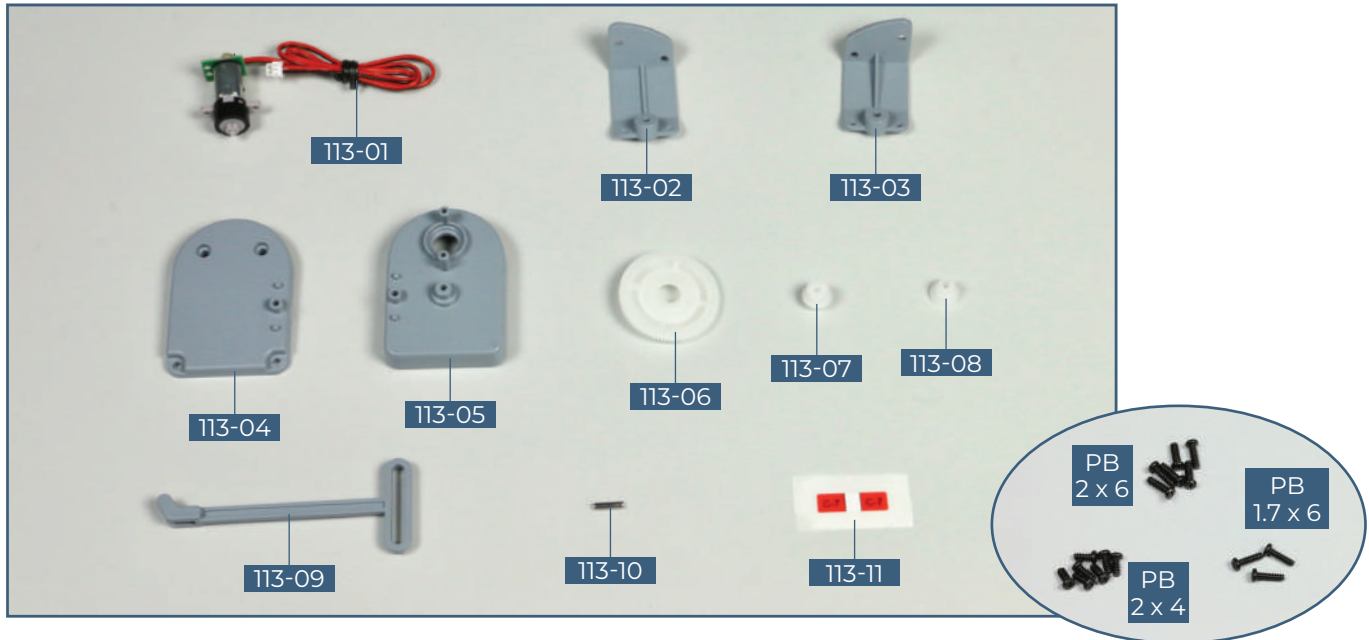


Completed work

Another section has been added to the hull (not shown) and details have been fitted to the third 38cm gun turret, which has been fitted in place on the aft superstructure.

STAGE 113

GEARBOX FOR THE NEXT 38cm TWIN TURRET



COMPONENTS CHECKLIST

113-01: Motor and cable

113-02: Left support bracket (L)

113-03: Right support bracket (R)

113-04: Gear housing

113-05: Gear housing

113-06: Cog

113-07: Cog

113-08: Hub

113-09: Gear arm

113-10: Shaft

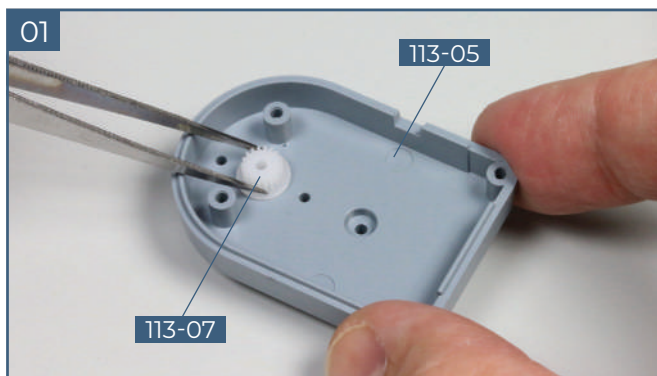
113-11: Cable label

PB Six 2 x 6mm PB screws

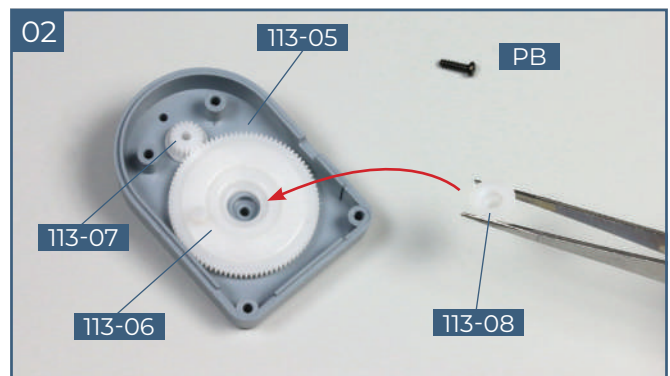
PB Seven 2 x 4mm PB screws

PB Three 1.7 x 6mm PB screws

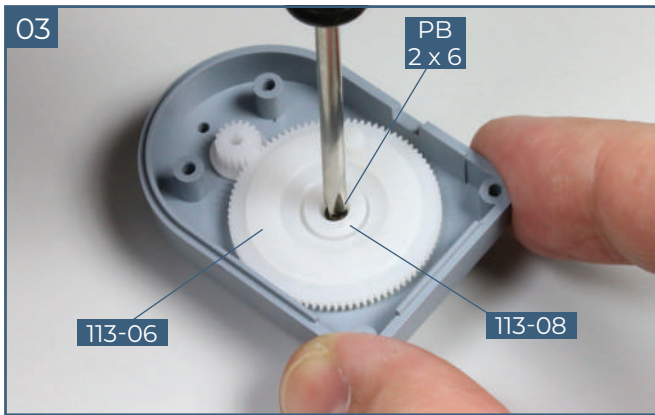
01. MECHANISM FOR THE ELEVATION CONTROL OF THE 38cm GUN



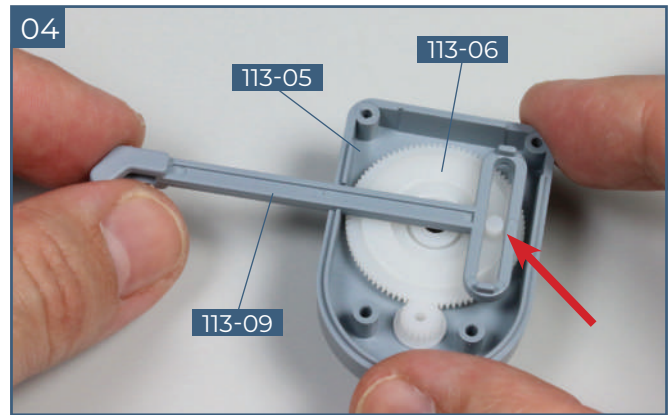
Take the gear housing **113-05**. Fit the cog **113-07** into the large hole in the housing.



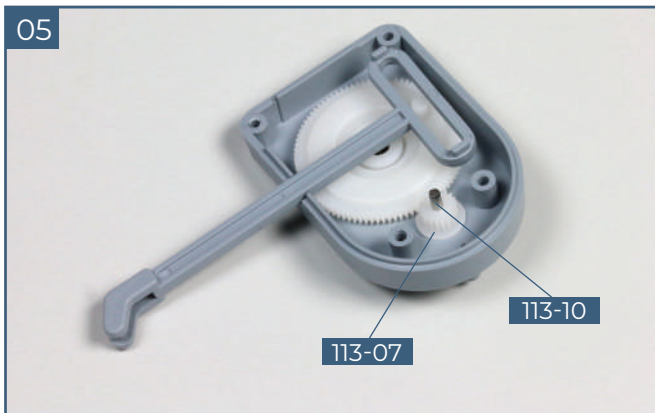
Fit the large cog **113-06** into the centre of the housing **113-05** so that the teeth interlock with those on cog **113-07**. Then fit the hub **113-08** into the centre of cog **113-06** (arrow). You will need a 2 x 6mm **PB** screw for step 3.



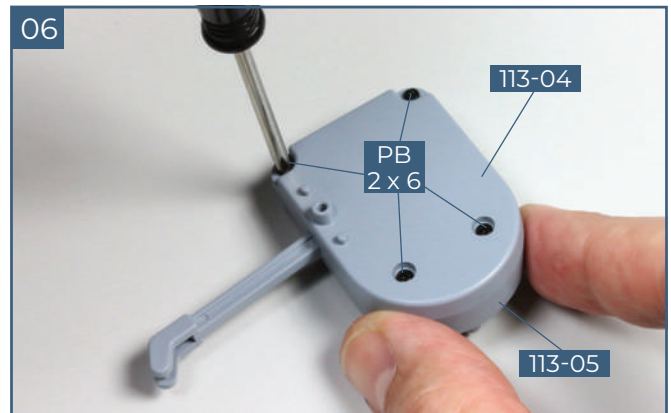
Fix the hub in place so that it holds the cog **113-06** in place in the centre of the housing, using a 2 x 6mm **PB** screw. Do not overtighten: the cogs should be able to rotate.



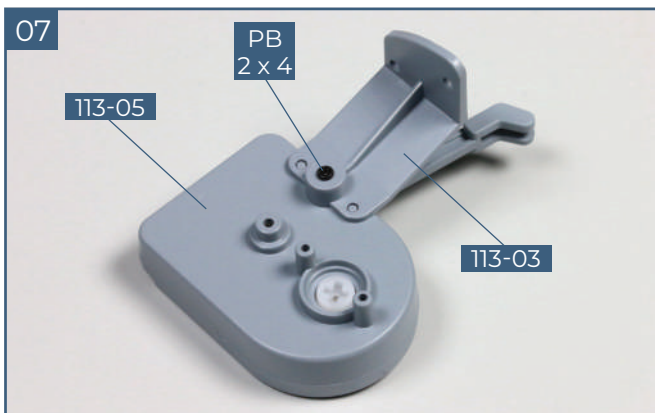
Fit the gear arm **113-09** into the gear housing **113-05**. Note that the peg on cog **113-06** is fitted into the slot in the gear arm (arrow).



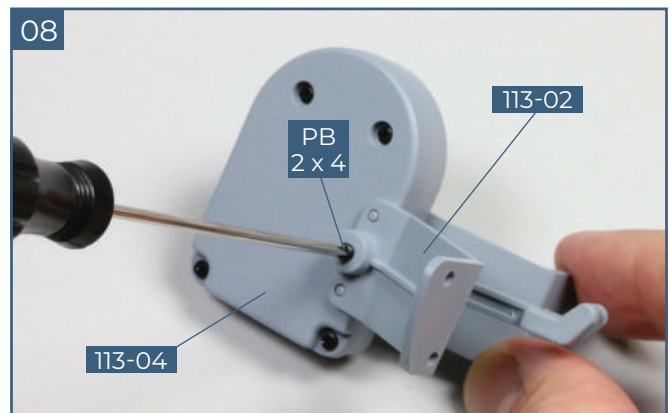
Insert the shaft **113-10** into the hole in the centre of cog **113-07**, as shown.



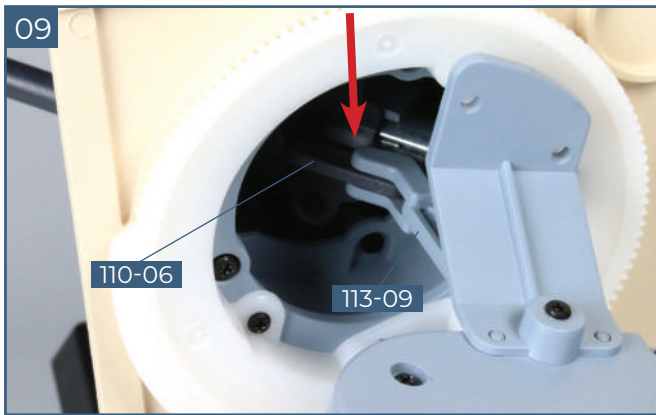
Fit the other half of the gear housing, **113-04**, onto part **113-05**. Fasten the two halves of the housing together using four 2 x 6mm **PB** screws.



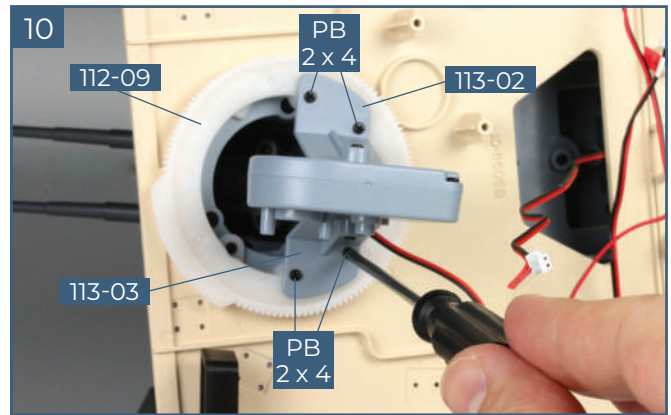
Turn the gearbox over and attach the right gearbox support bracket **113-03** to the housing part **113-05** using a 2 x 4mm **PB** screw, as shown.



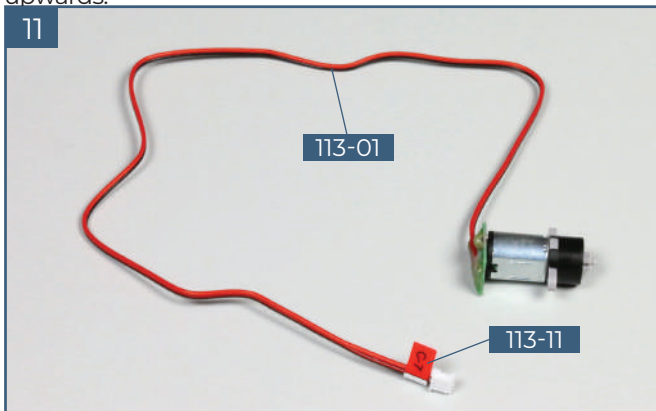
Turn the gearbox housing over again and fix the left gearbox bracket **113-02** in place on part **113-04** using a 2 x 4mm **PB** screw.



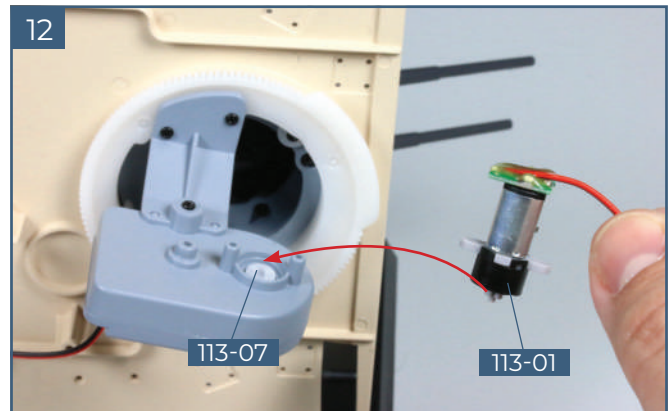
Take the aft superstructure and position it, carefully supported, so that you can access the underside. Fit to the angled end of the round motor mounting **110-06**. Pegs at the end of the arm snap into position (arrow). It may be easier if you tilt the gun barrels upwards.



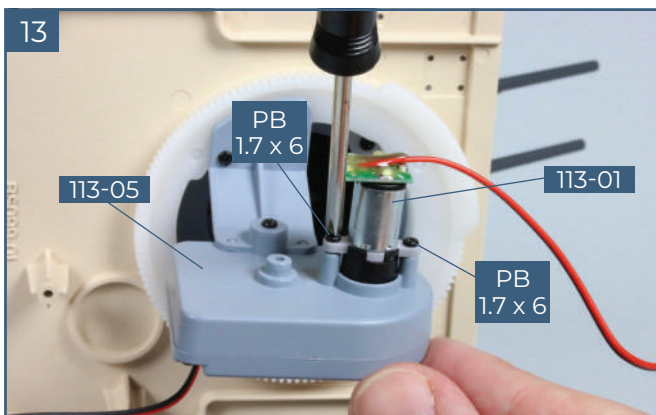
Use two 2 x 4mm **PB** screws to fix each of the support brackets **113-02** and **113-03** in place: the screws fit into screw sockets in the cog **112-09**, as shown.



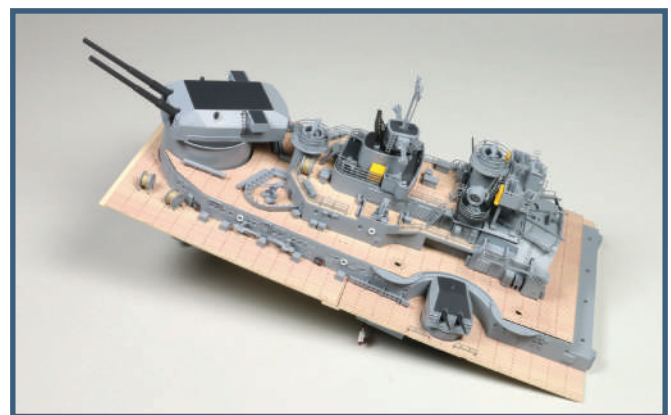
Take the elevation motor **113-01** and the cable label **113-11**. Remove the label from its backing and wrap it around the cable near the connector, as shown.



Fit the motor **113-01** on to the gear housing: the shaft on the motor fits into cog **113-07**, as indicated by the arrow.



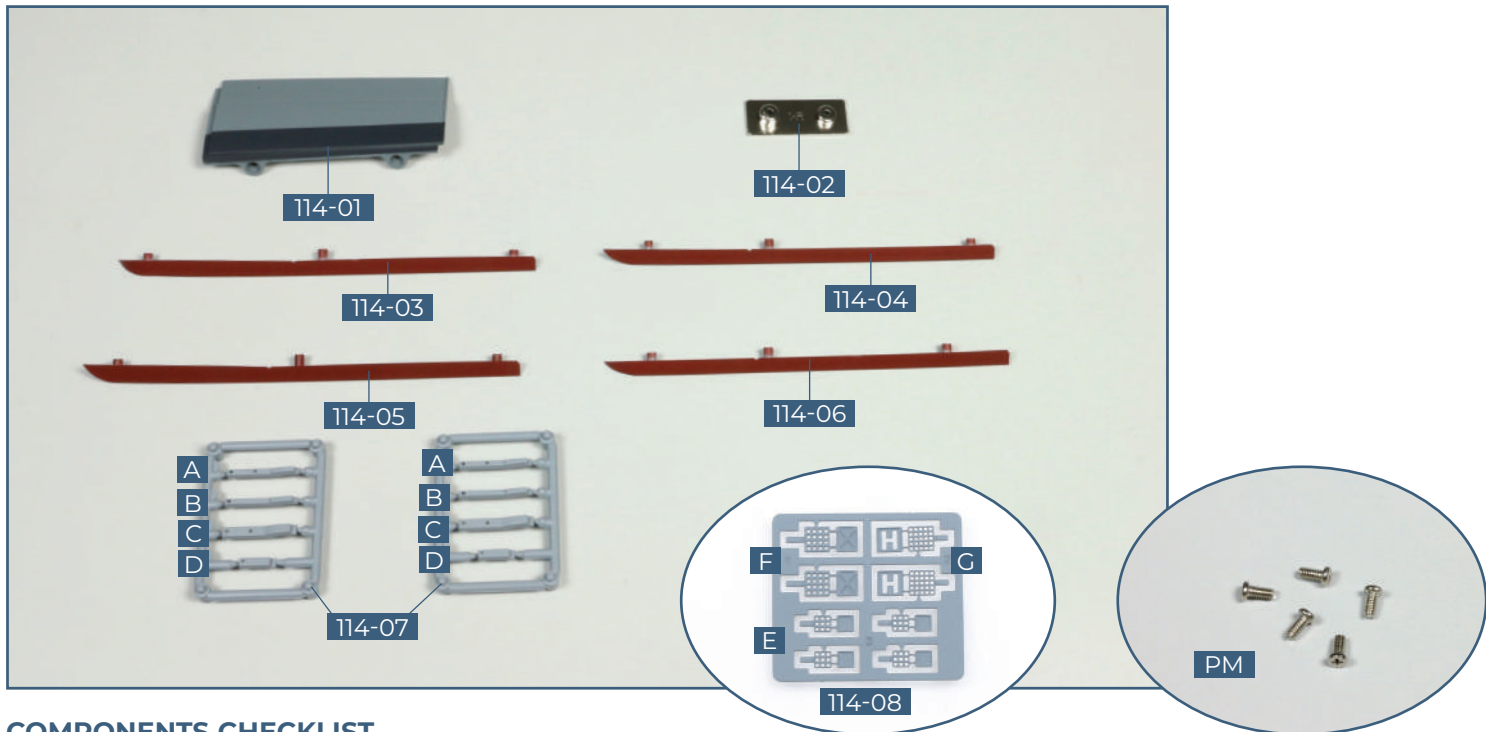
Fix the motor **113-01** on to the gearbox housing **113-05** using two 1.7 x 6mm **PB** screws.



Completed work

The gearbox and elevation motor have been fitted to the third 38cm gun, on the aft superstructure.

STAGE 114 THE BILGE KEELS



COMPONENTS CHECKLIST

114-01: Upper starboard hull section

114-02: Connector

114-03: Forward starboard bilge keel (R1)

114-04: Aft starboard bilge keel (R2)

114-05: Forward port bilge keel (L1)

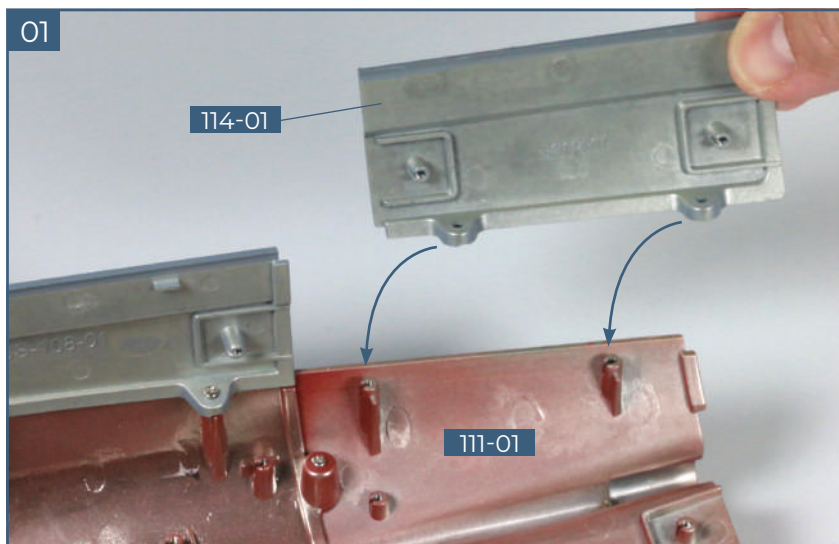
114-06: Aft port bilge keel (L2)

114-07: Eight vents (2 x A to D)

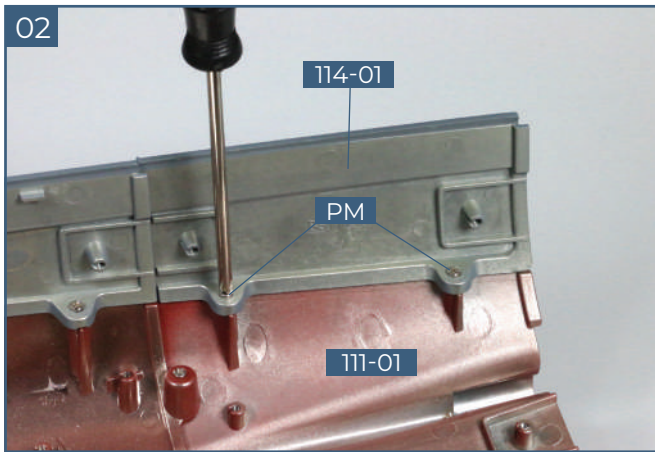
114-08: Eight grilles (4 x E, 2 x F, 2 x G)

PM: Five 2 x 4mm PM screws

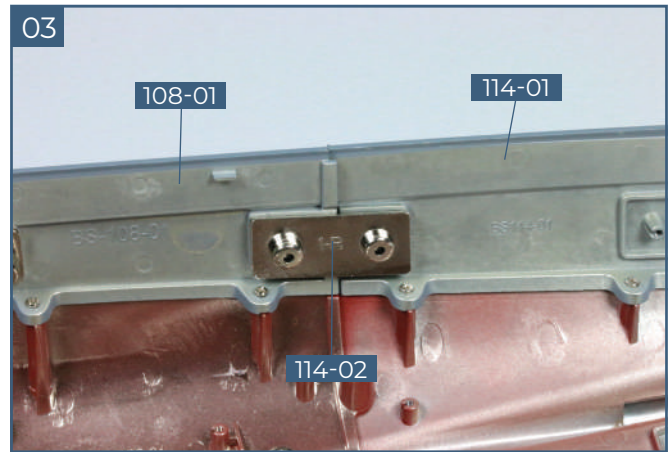
01. FITTING THE NEXT HULL SECTION AND THE BILGE KEELS



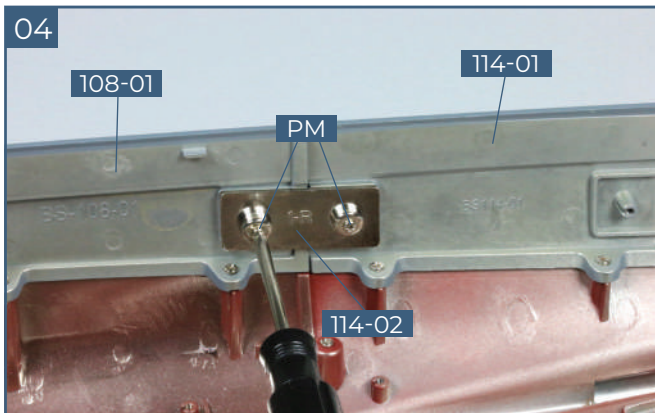
Take the upper starboard hull section **114-01** and fit it next to keel section **111-01** so that screw holes are aligned, as shown.



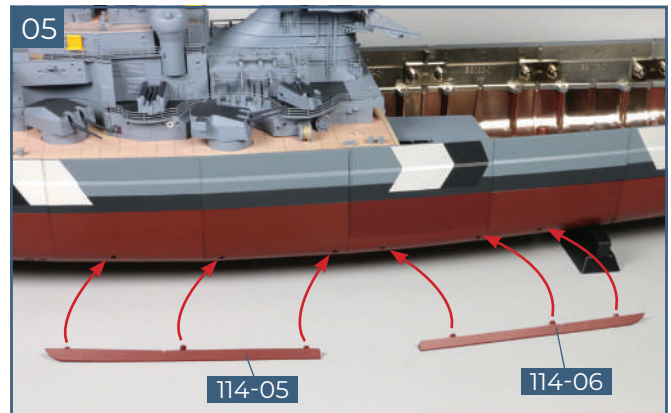
Fix the hull section **114-01** in place using two 2 x 4mm **PM** screws, as shown.



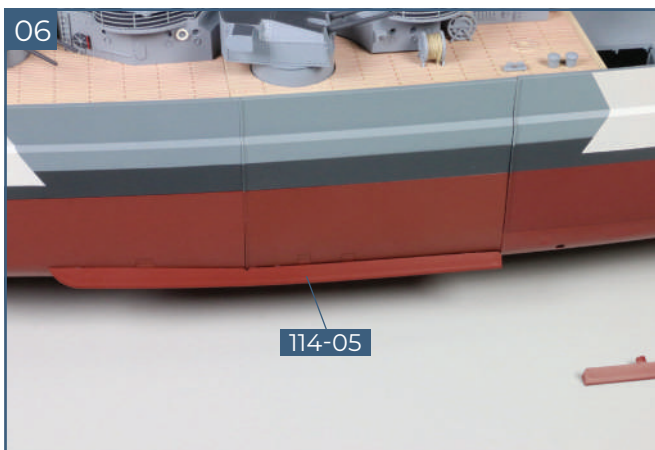
Take the connector **114-02** fit it over the raised screw sockets of hull sections **108-01** and **114-01**, as shown.



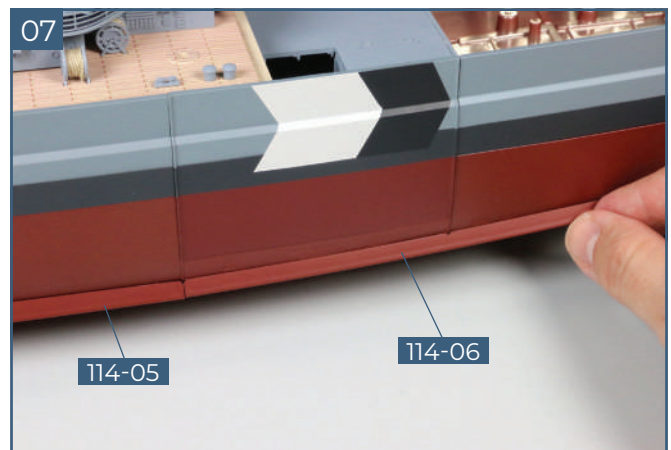
Fit the connector **114-02** to the two hull sections **108-01** and **114-01** using two 2 x 4mm **PM** screws.



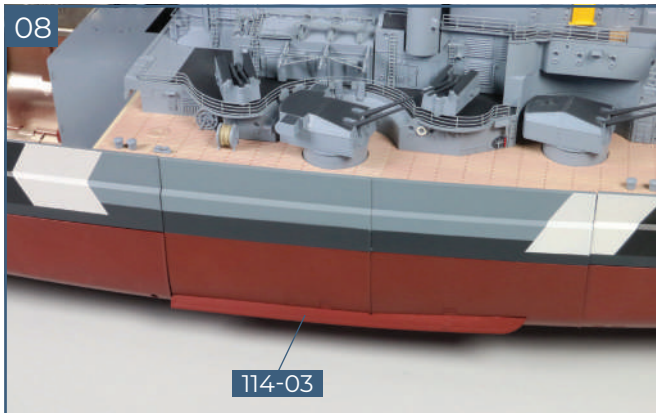
Align the two port bilge keels **114-05** (L1) and **114-06** (L2) along the port side of the hull. Pegs on the keels fit into holes in the hull, as indicated.



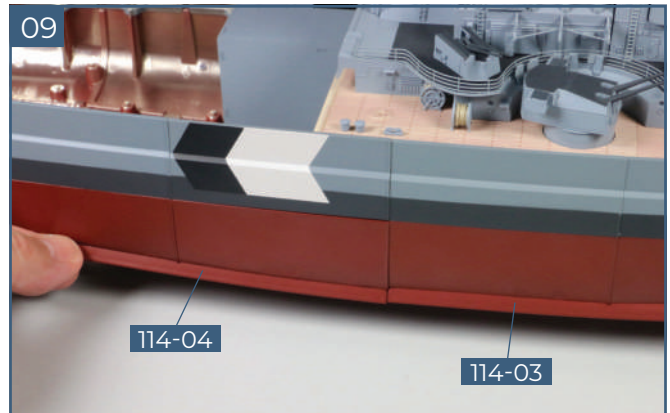
Fit the forward port bilge keel **114-05** (L1) by carefully pushing the three pegs into the three holes in the keel. This is a push-fit connection.



Fit the aft port bilge keel **114-06** (L2) in line with bilge keel **114-05** (L1), as shown.

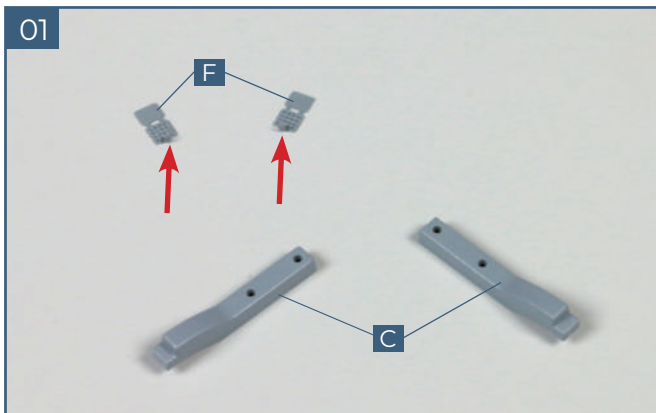


On the starboard side of the hull, fit the forward starboard bilge keel **114-03** (R1) in place as shown.

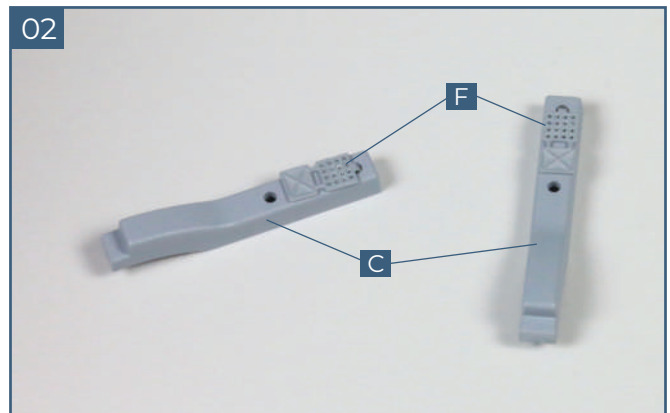


The aft starboard bilge keel **114-04** (R2) is fitted in line with part **114-03** (R1), as shown.

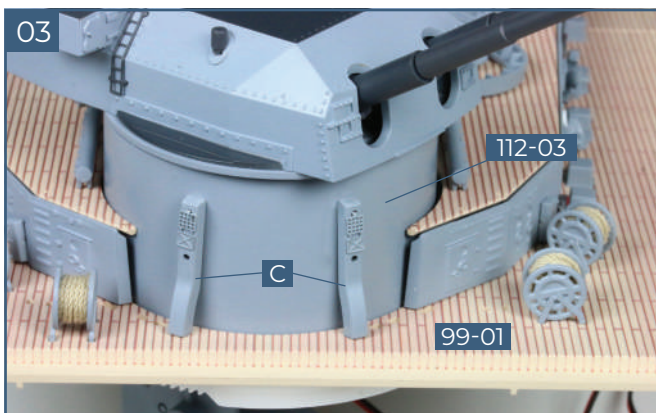
02. FITTING VENTS TO THE BARBETTE



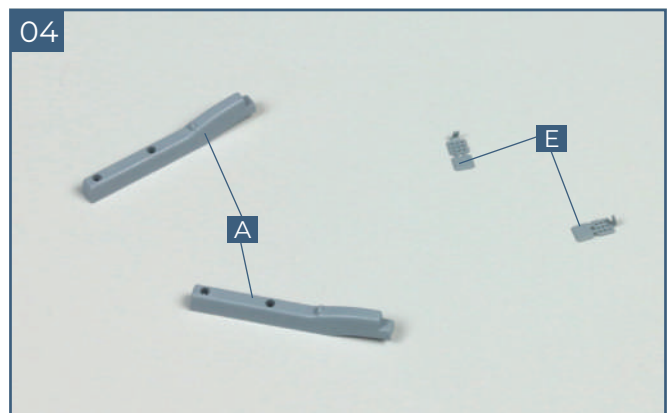
Cut the two vents **C** from frames **114-07** and two grilles **F** from frame **114-08**. Bend the tabs on the grilles back at right angles (arrows). Note that the pattern should face outwards (see step 2).



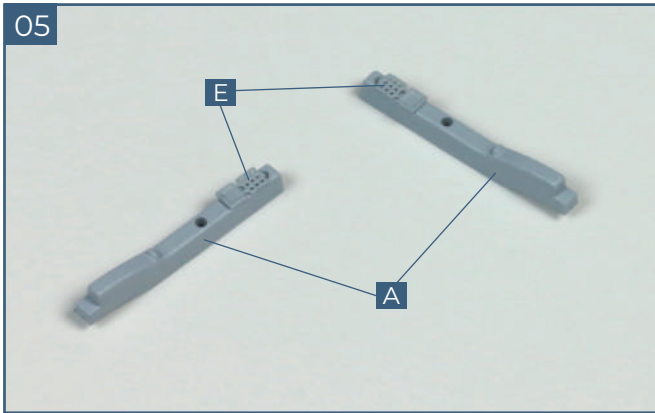
Glue one of the grilles **F** to each of the two vents **C**: the tab on each of the grilles fits in the upper hole of the fan, as shown.



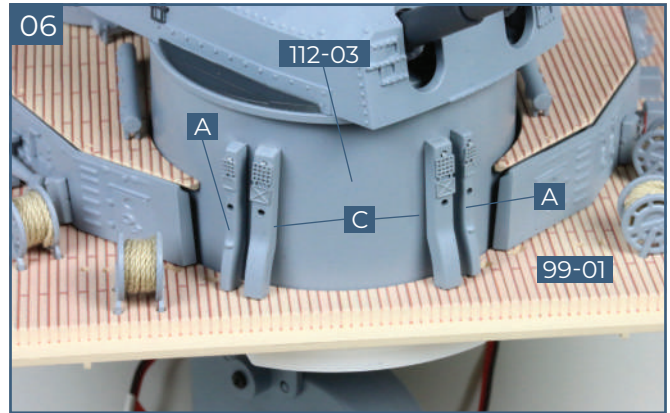
Identify the positions for the vents on the side of the barquette **112-03**, on deck section **99-01**. Glue in place.



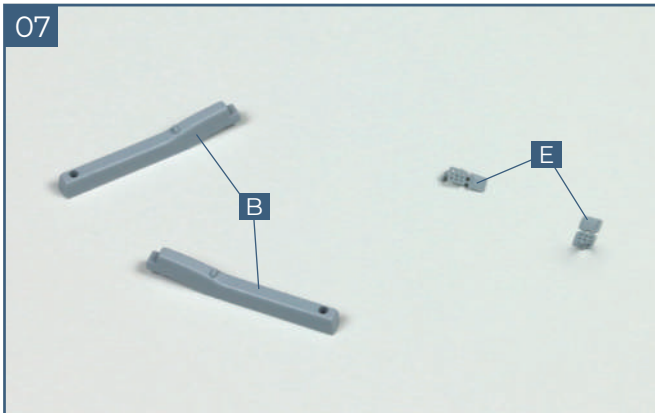
Take the two vents **A** from frames **114-07** and two of the grilles **E** from frames **114-08**. Bend the tabs on the grilles at right angles.



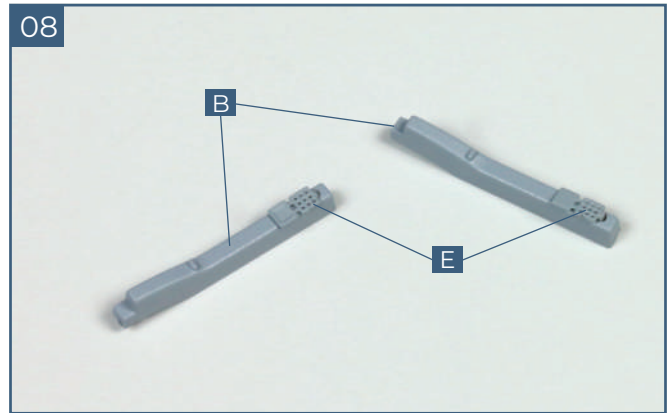
Glue one of the grilles **E** to each of the two vents **A**: the tab on each of the grilles fits in the upper hole of the fan, as shown.



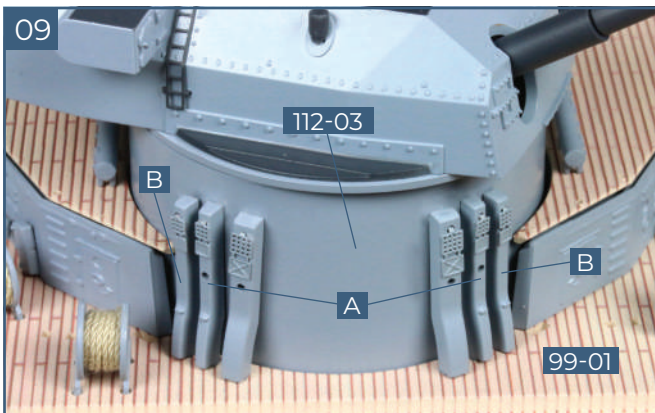
Identify the positions for the vents on the side of the barquette **112-03**, on deck section **99-01**, next to the vents **C**. Glue in place.



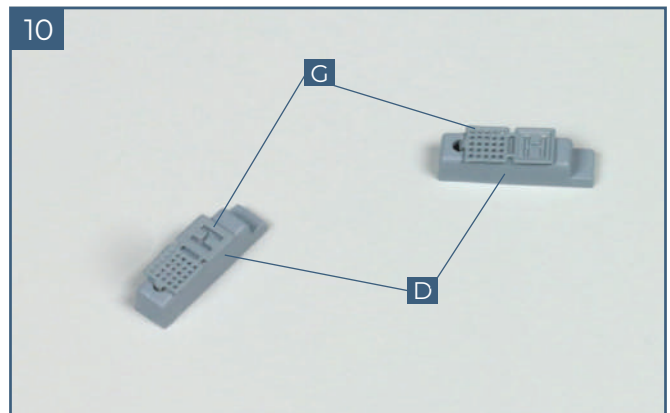
Take the two vents **B** from frames **114-07** and the remaining two grilles **E** from frame **114-08**. Bend the tabs on the grilles at right angles.



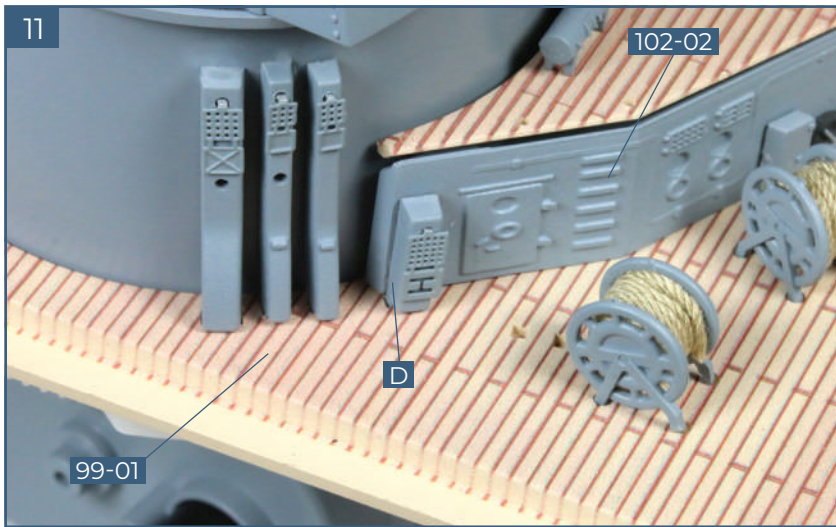
Glue one of the grilles **E** to each of the two vents **B**: the tab on each of the grilles fits in the upper hole of the fan, as shown.



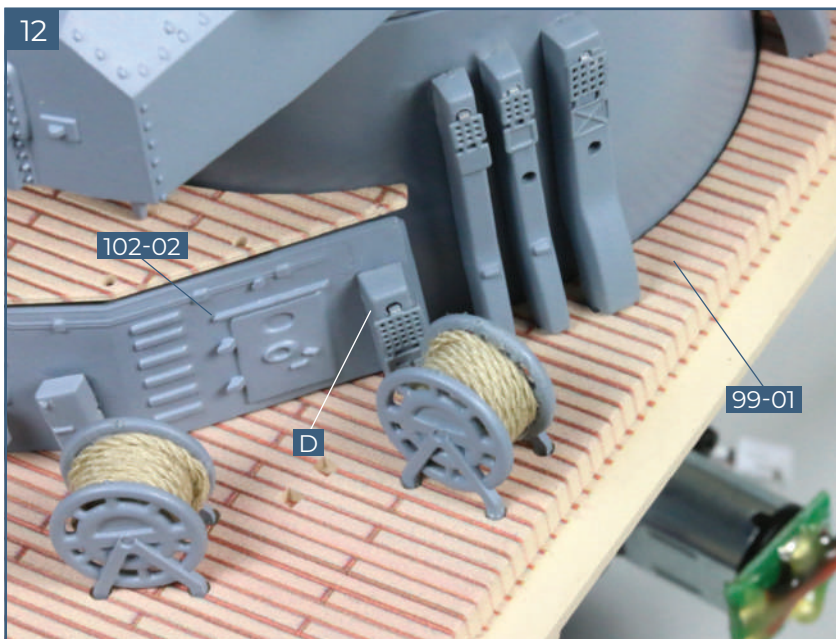
Identify the positions for the vents on the side of the barquette **112-03**, on deck section **99-01**, next to the vents **A**. Glue in place.



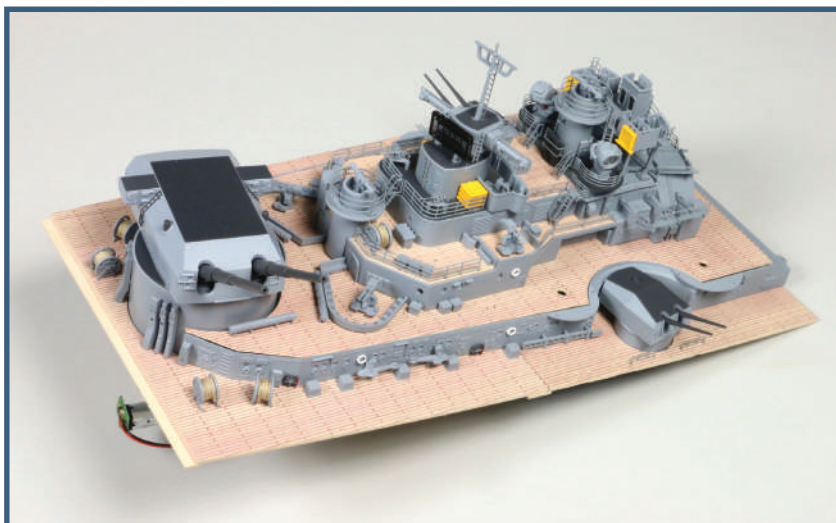
Take the vents **D** from the frames **114-07** and glue a grille **G** from frame **114-08** to each of them as shown.



Glue the first vent **D** to the aft superstructure deck **102-02**, on deck section **99-01**, close to the previously fitted vents, as shown.



The second vent **D** is glued to the aft superstructure deck **102-02** on the upper deck section **99-01** on the other side of the barbette.

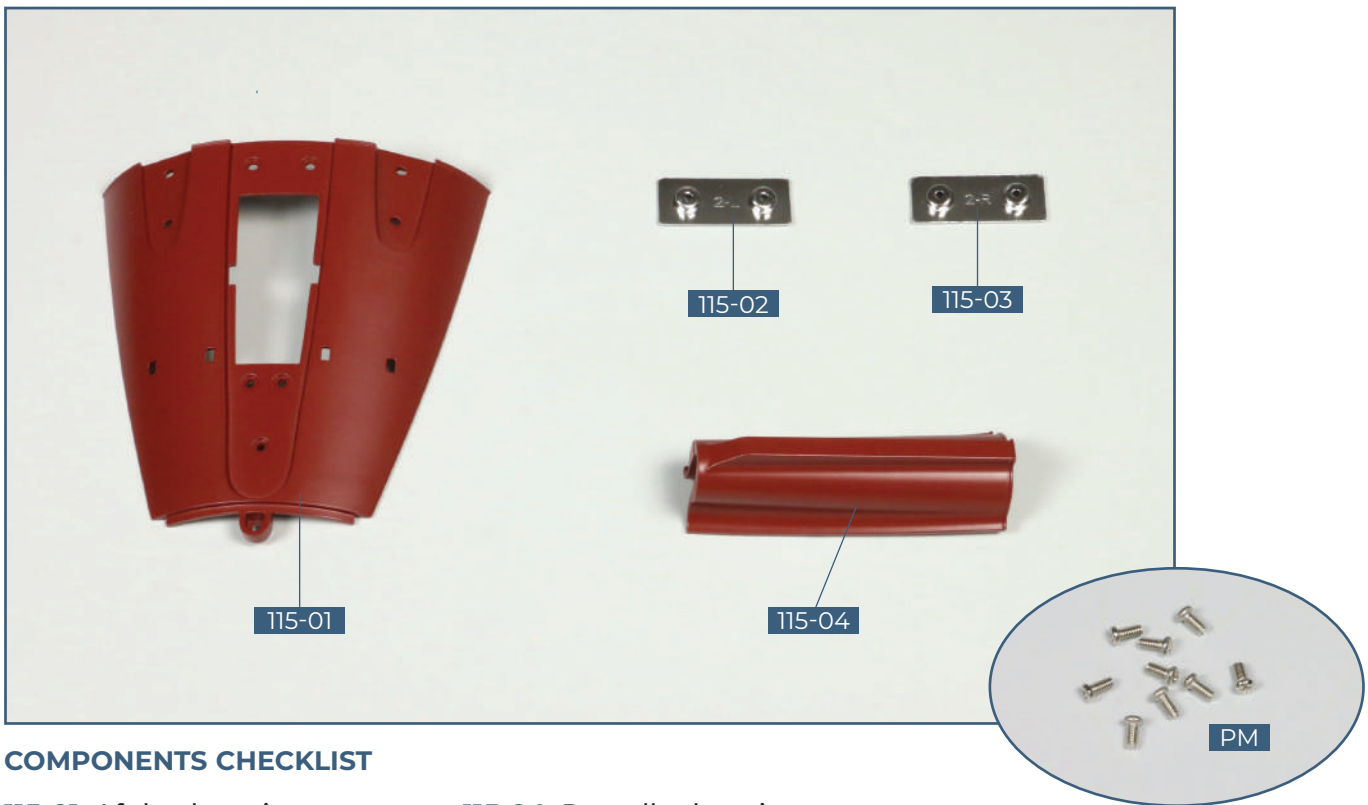


Completed work

Eight vents have been attached to the barbette of the third 38cm twin turret. Another section has been added to the hull and the bilge keels have been fitted (not shown).

STAGE 115

TWO HULL SECTIONS



COMPONENTS CHECKLIST

115-01: Aft keel section

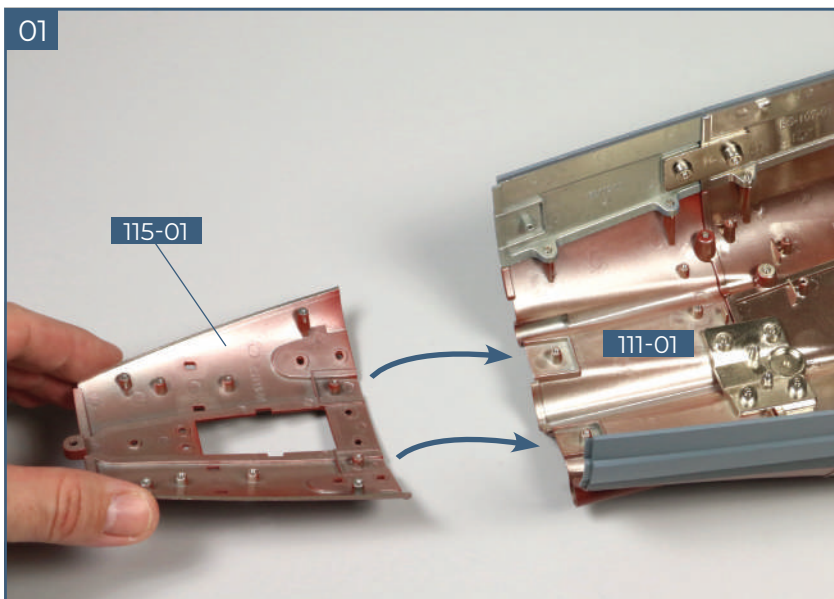
115-02: Connector (L)

115-03: Connector (R)

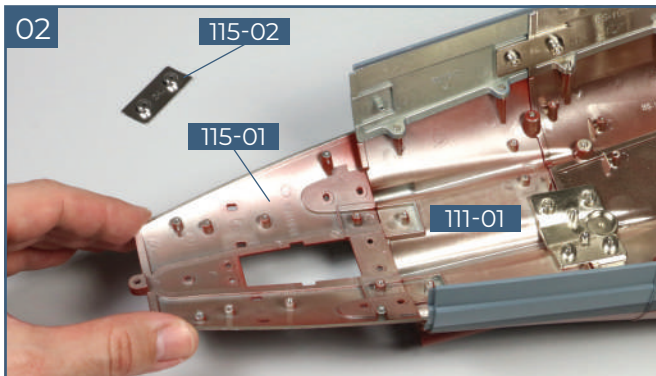
115-04: Propeller housing

PM: Nine 2 x 4mm PM screws

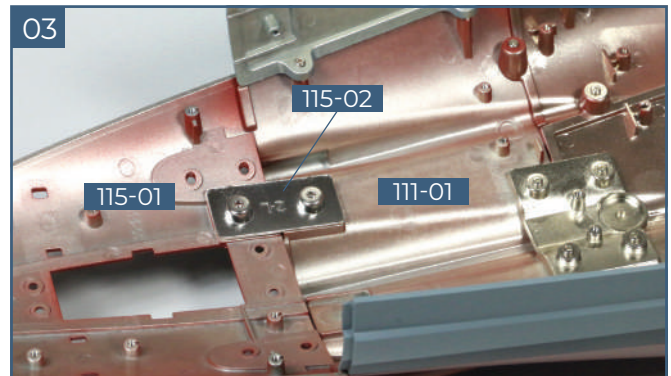
01. FITTING THE HULL SECTION



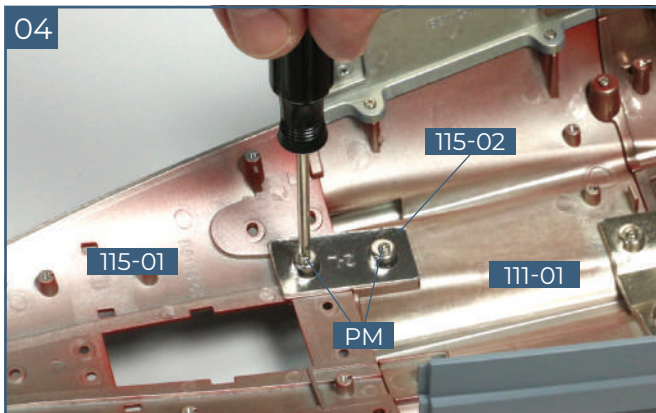
Place the model on your worktop so that you can access the stern end of the hull. Take the aft keel section **115-01** and fit it against keel section **111-01**, as indicated.



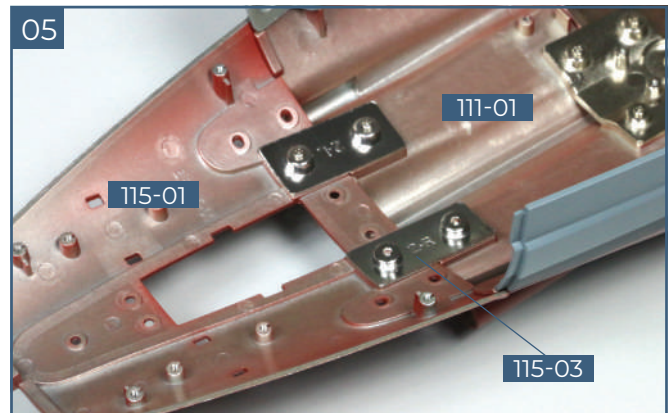
This shows keel section **115-01** correctly positioned against keel section **111-01**. It will be fixed in place with the connector **115-02**.



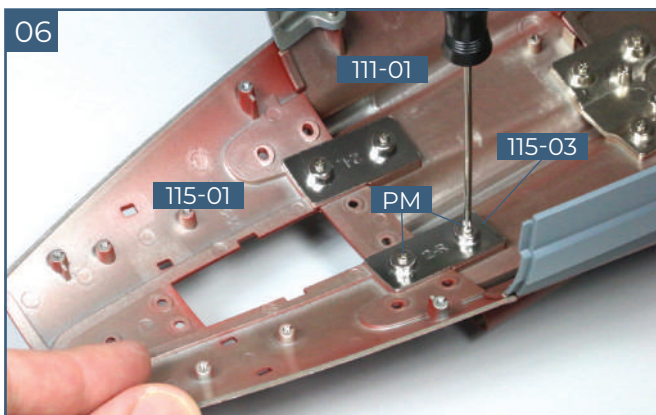
Fit the connector **115-02** (L) into the recess on the port side recess of parts **111-01** and **115-01**. Note the connector is not symmetrical, and ensure you fit it the correct way round, as shown.



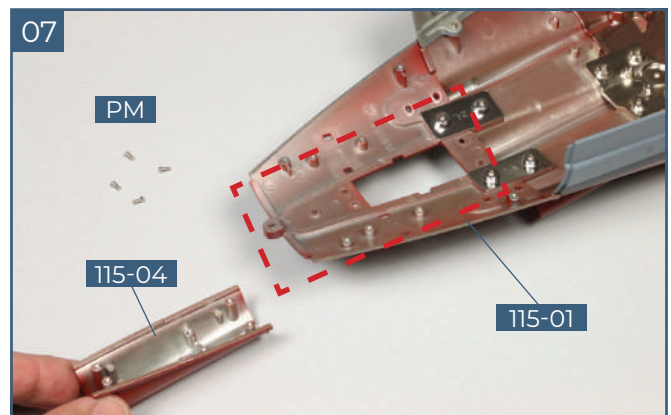
Fix the connecting piece **115-02** to parts **111-01** and **115-01** using two **PM** 2 x 4mm screws, as shown.



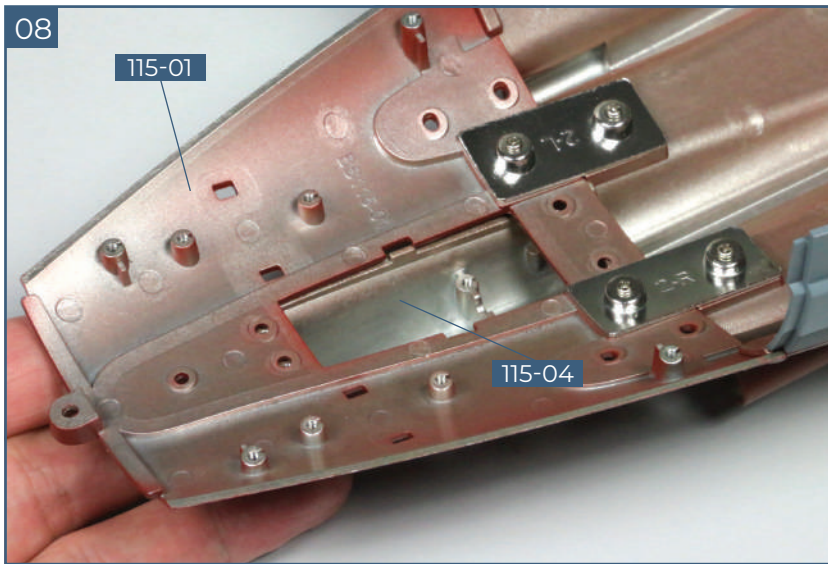
Fit the connector **115-03** (R) in the other recess on parts **111-01** and **115-01**. Again, ensure it is in the correct position.



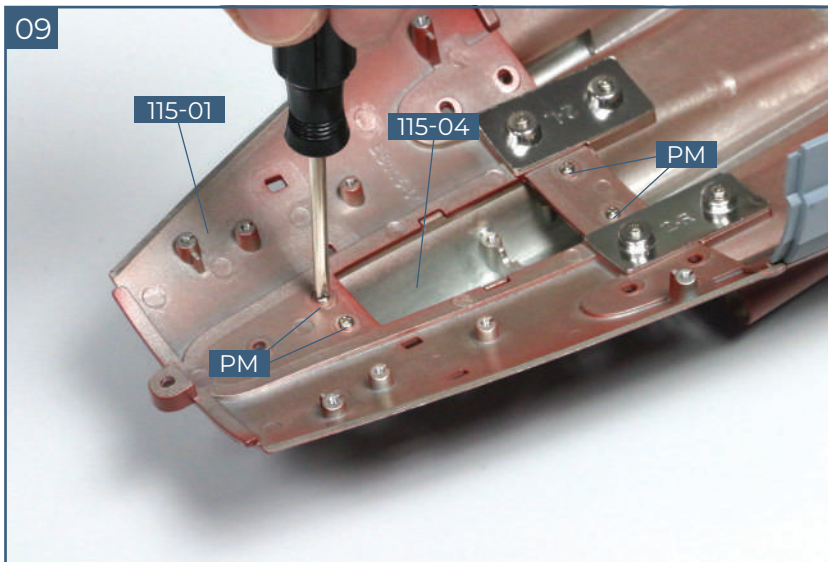
Fix the connector **115-03** in place using two **PM** 2 x 4mm screws, as shown.



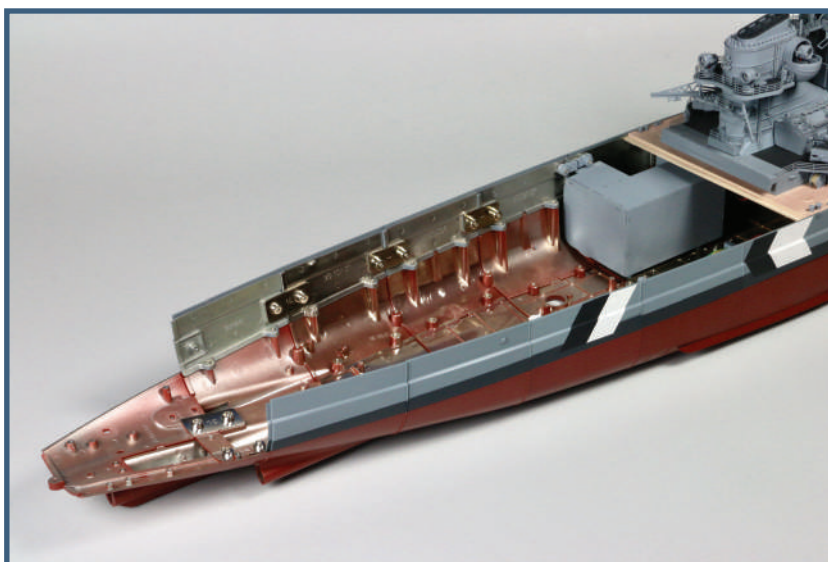
Fit the propeller housing **115-04** in position on the underside of keel section **115-01**, so that it covers the opening, as indicated. You will need four **PM** 2 x 4mm screws to fix it in place.



This shows the propeller housing **115-04** fitted in place beneath the opening in keel section **115-01**.



Fix the propeller housing **115-04** to keel section **115-01** using four **PM** 2 x 4mm screws.

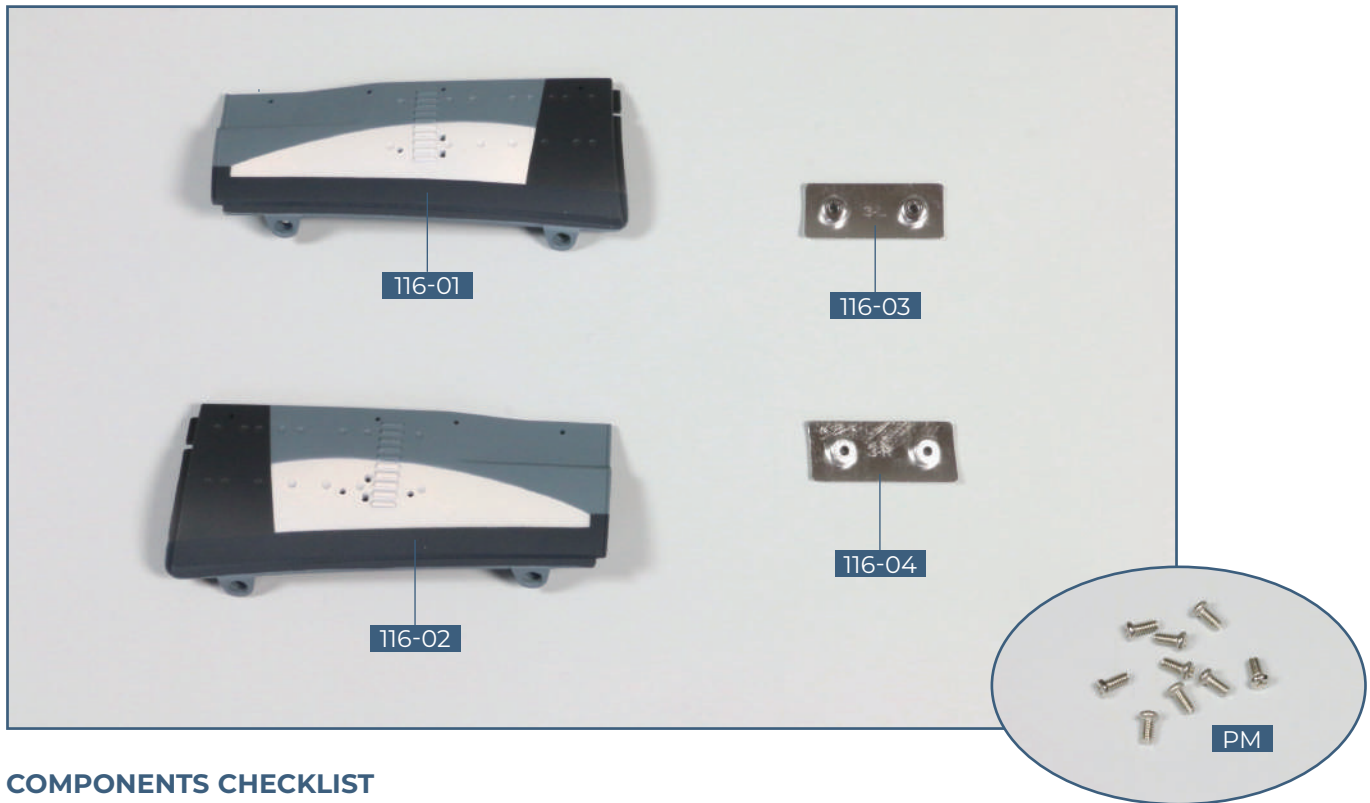


Completed work

With two more sections fixed in place, the hull is almost complete.

STAGE 116

TWO HULL SECTIONS



COMPONENTS CHECKLIST

116-01: Upper port hull section

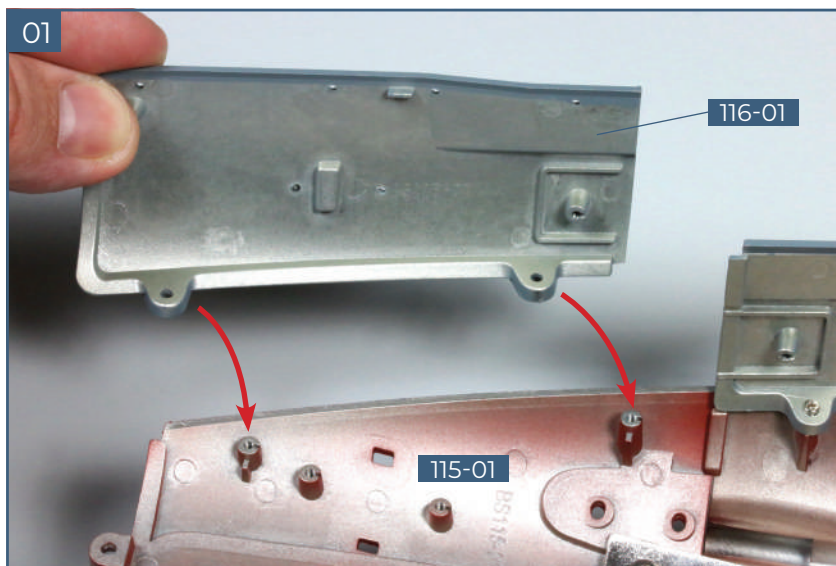
116-02: Upper starboard hull section

116-03: Connector (3-L)

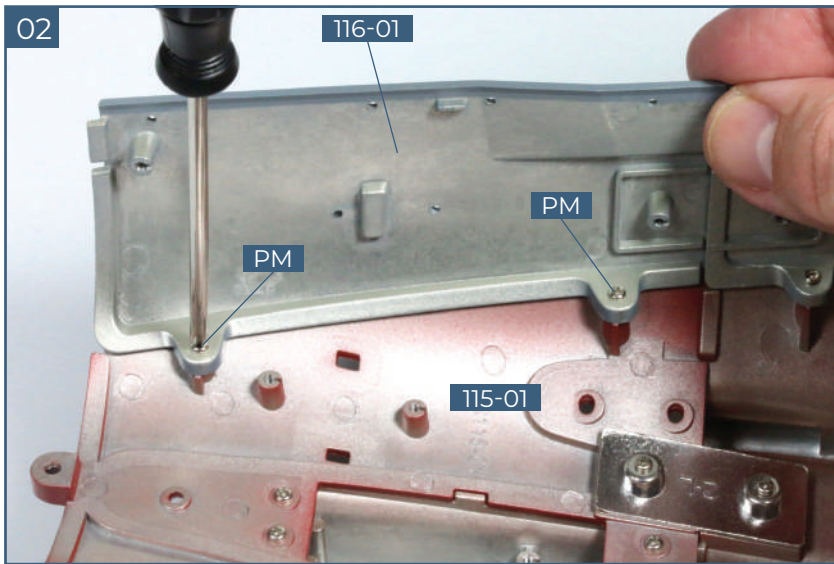
116-04: Connector (3-R)

PM: Nine 2 x 4mm PM screws

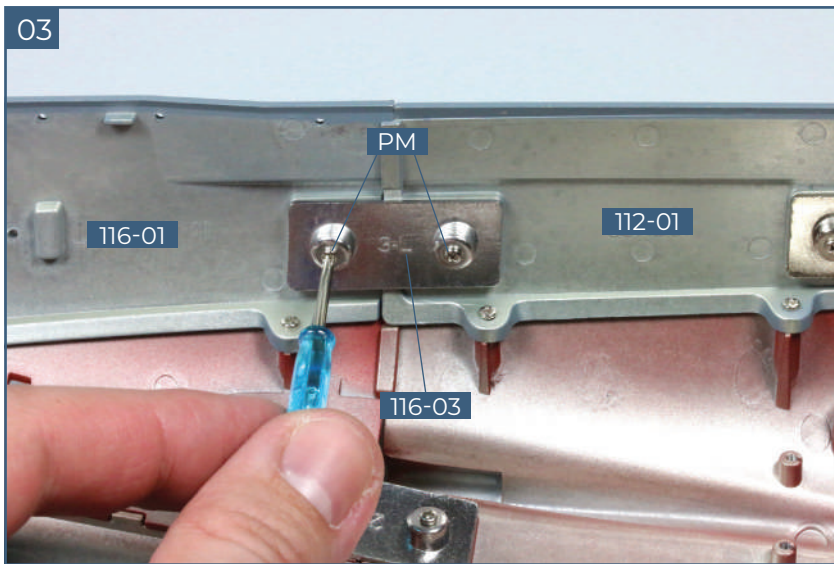
01. EXTENDING THE HULL



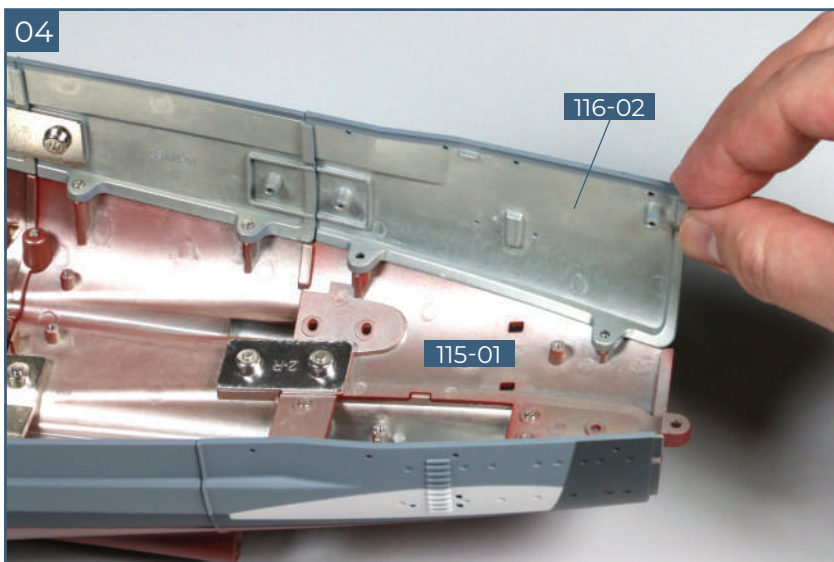
Place the model on your worktop so that you can access the stern end of the hull assembly. Take the upper port hull section **116-01** and position it along the upper edge of part **115-01**, aligning the screw holes as indicated.



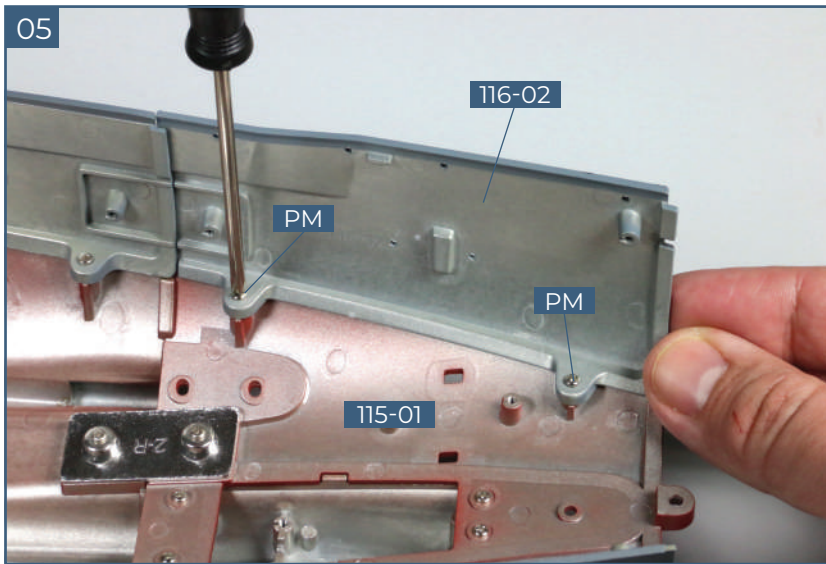
Fix the lower edge of hull section **116-01** to the section **115-01** using two **PM** screws.



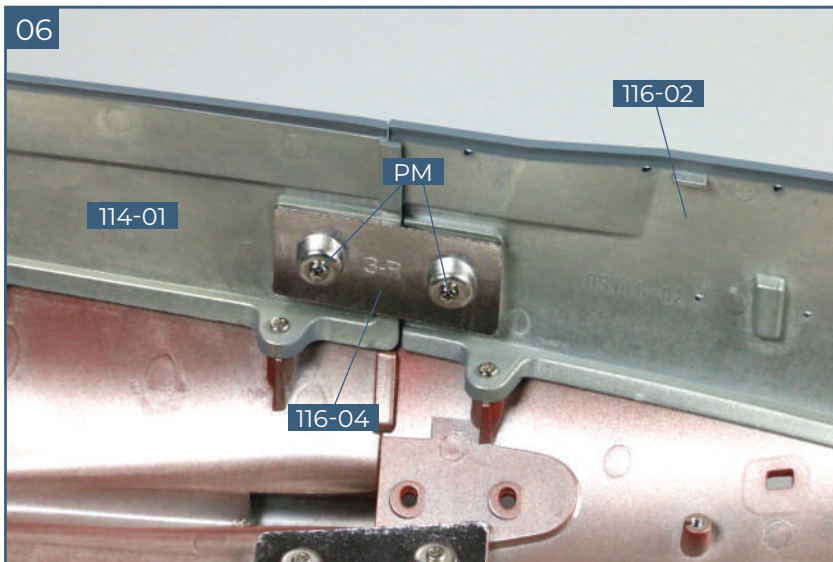
Fit the screw sockets on connector **116-03** over the raised screw sockets on the upper port hull sections **116-01** and **112-01**. Fix in place with two **PM** screws, as shown.



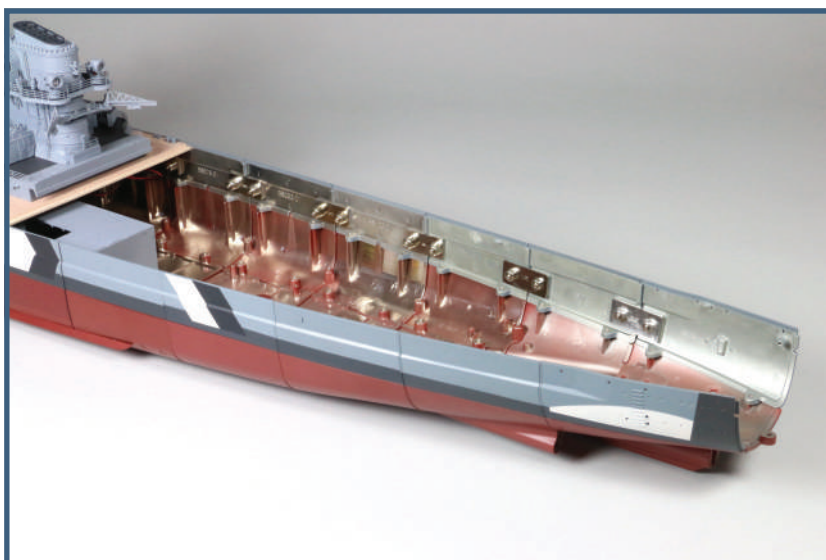
Moving to the other side of the hull, take the upper starboard hull section **116-02** and fit it along the top of hull section **115-01** with screw holes aligned, as shown.



Fix the hull section **116-02** to hull section **115-01** using two **PM** screws, as shown.



Fit the screw sockets on connector **116-04** over the raised screw sockets on the upper starboard hull sections **116-02** and **114-01**. Fix the connector in place using two **PM** screws, as shown.



Completed work

Two more sections have been fitted to the hull: there is only one more section to fit, forming the stern.