

# Northern Marine 57 (2021-)

## Price

### Base Price

Prices, features, designs, and equipment are subject to change. Please see your local dealer or visit the builder's website for the latest information available on this boat model.

## Specifications

Length Overall	57'   17.37 m
BEAM	17'6"   5.33 m
Dry Weight	
Tested Weight	
Draft	5'10"   1.78 m
Draft Up	
Draft Down	
Air Draft	
Deadrise/Transom	
Max Headroom	
Bridge Clearance	
Weight Capacity	
Person Capacity	

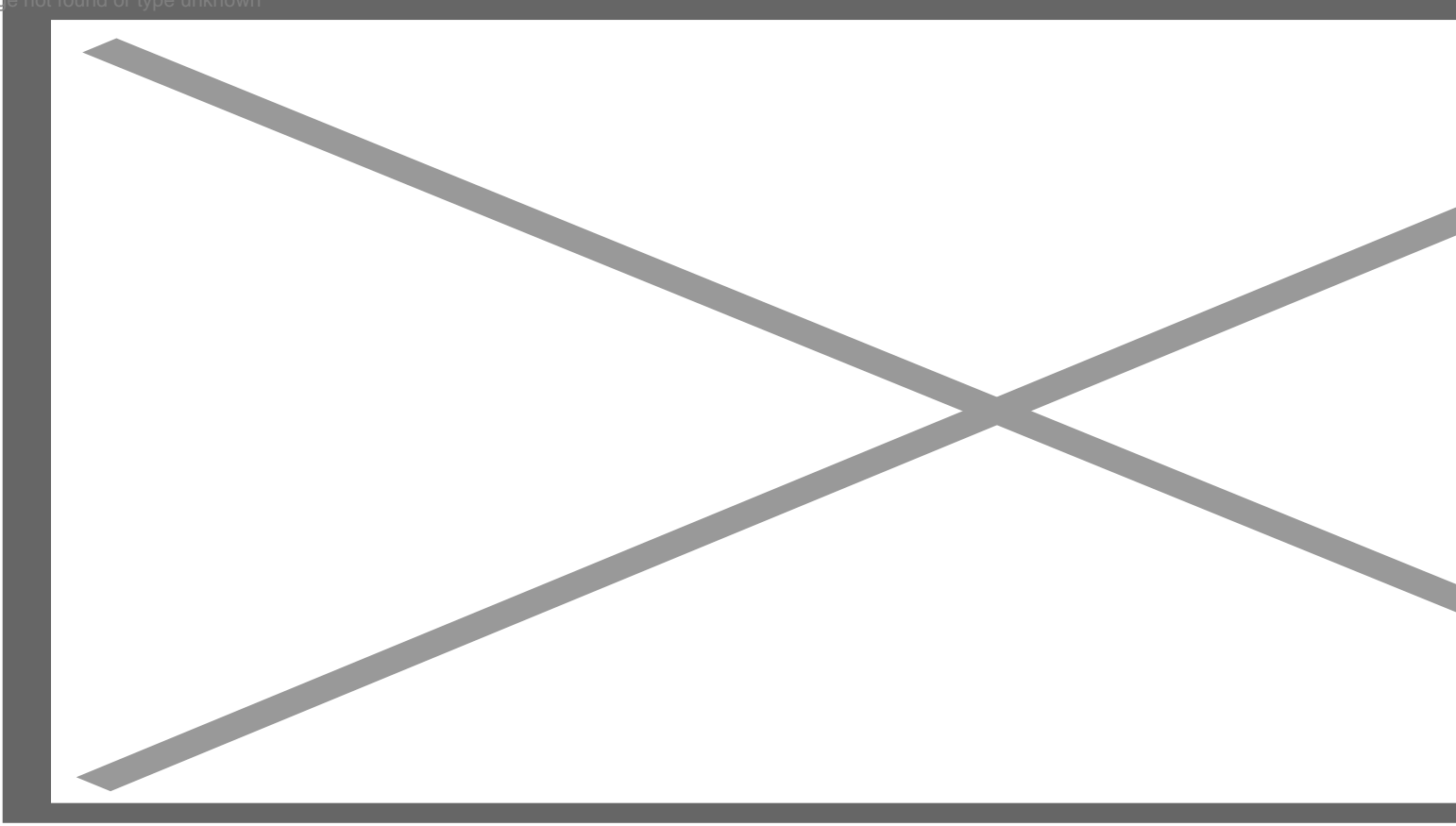
<b>Fuel Capacity</b>	
<b>Water Capacity</b>	
<b>Length on Trailer</b>	
<b>Height on Trailer</b>	
<b>Trailer Weight</b>	
<b>Total Weight</b>	
<b>Aft Deck</b>	
<b>Salon Inside Width</b>	
<b>Salon Fore &amp; Aft</b>	
<b>Salon Height</b>	
<b>Salon Volume</b>	
<b>Galley Volume</b>	
<b>Master SR Width</b>	
<b>Master SR fore &amp; Aft</b>	
<b>Master SR Overhead</b>	
<b>Master SR Volume</b>	
<b>Eng. Room Volume</b>	

# Acceleration Times & Conditions

Time to Plane	
0 to 20	
Ratio	
Props	
Load	
Climate	

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5706's deck and hull are ready to become one vessel.

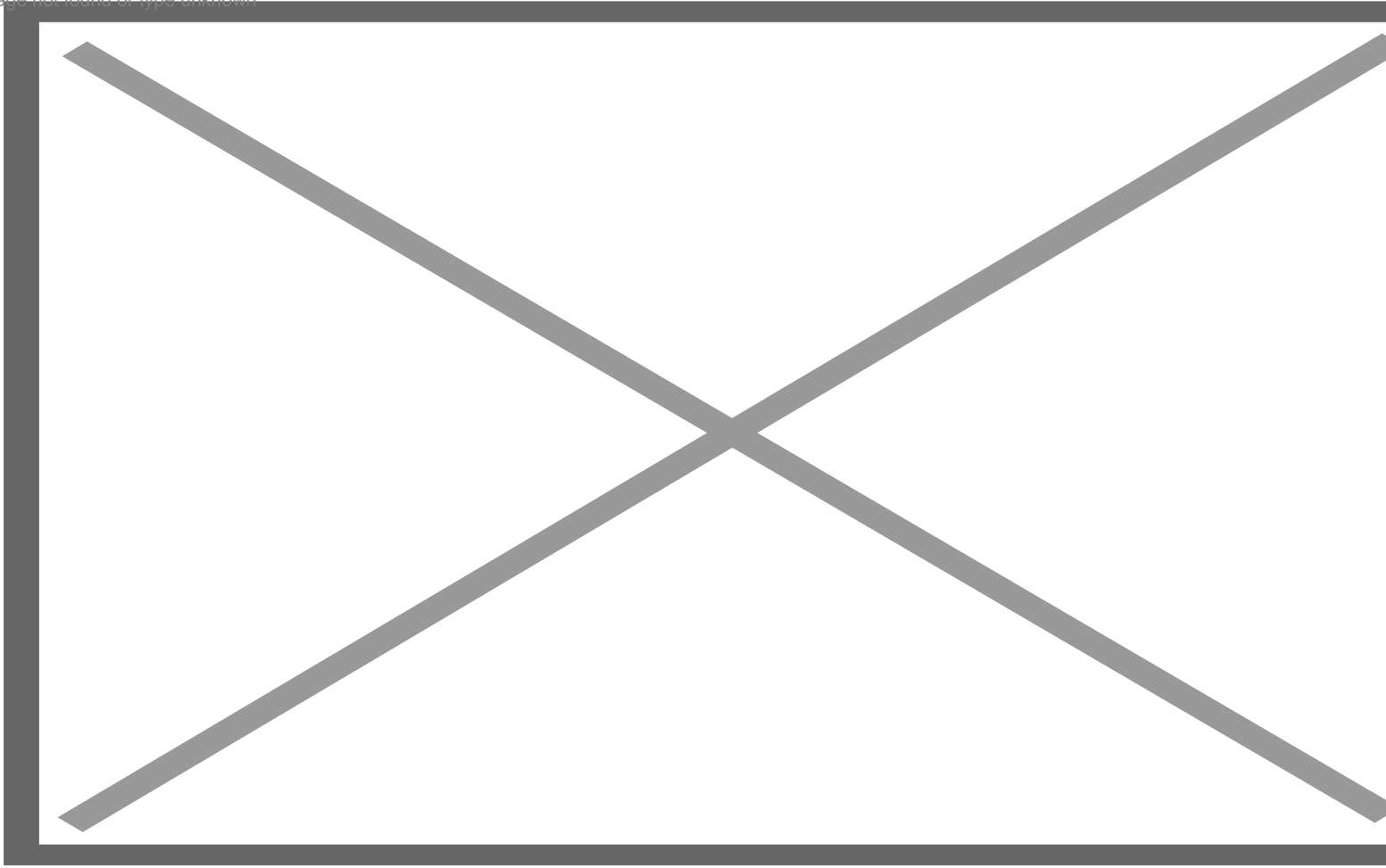
Earlier this year, Seattle Yachts International acquired Northern Marine, a builder of high-end expedition yachts known for being custom-built to each owner's specific needs and wants.

After the acquisition, the decision was made to start building a new 57' (17.37 m) yacht designed by Northern Marine's general manager Stuart Archer, a naval architect and experienced shipbuilder. He leads the team that works directly with each owner and often becomes friends with his customers. Archer says that many customers become highly involved in the design process including the floor plans, countertops, fixtures, moldings, inlays and even door handles.

## Different Approach

With 5706, the sixth of the new model to be built, the boat is being built without an owner so Northern Marine reviewed its previous projects and came up with a two-stateroom layout with walnut being the hardwood of choice. Many primary systems could be determined up front and the boat is being built so that some changes can be made to the arrangement after the boat is sold.

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Most Northern Marine yachts are built to a customer's specifications with plenty of owner input.

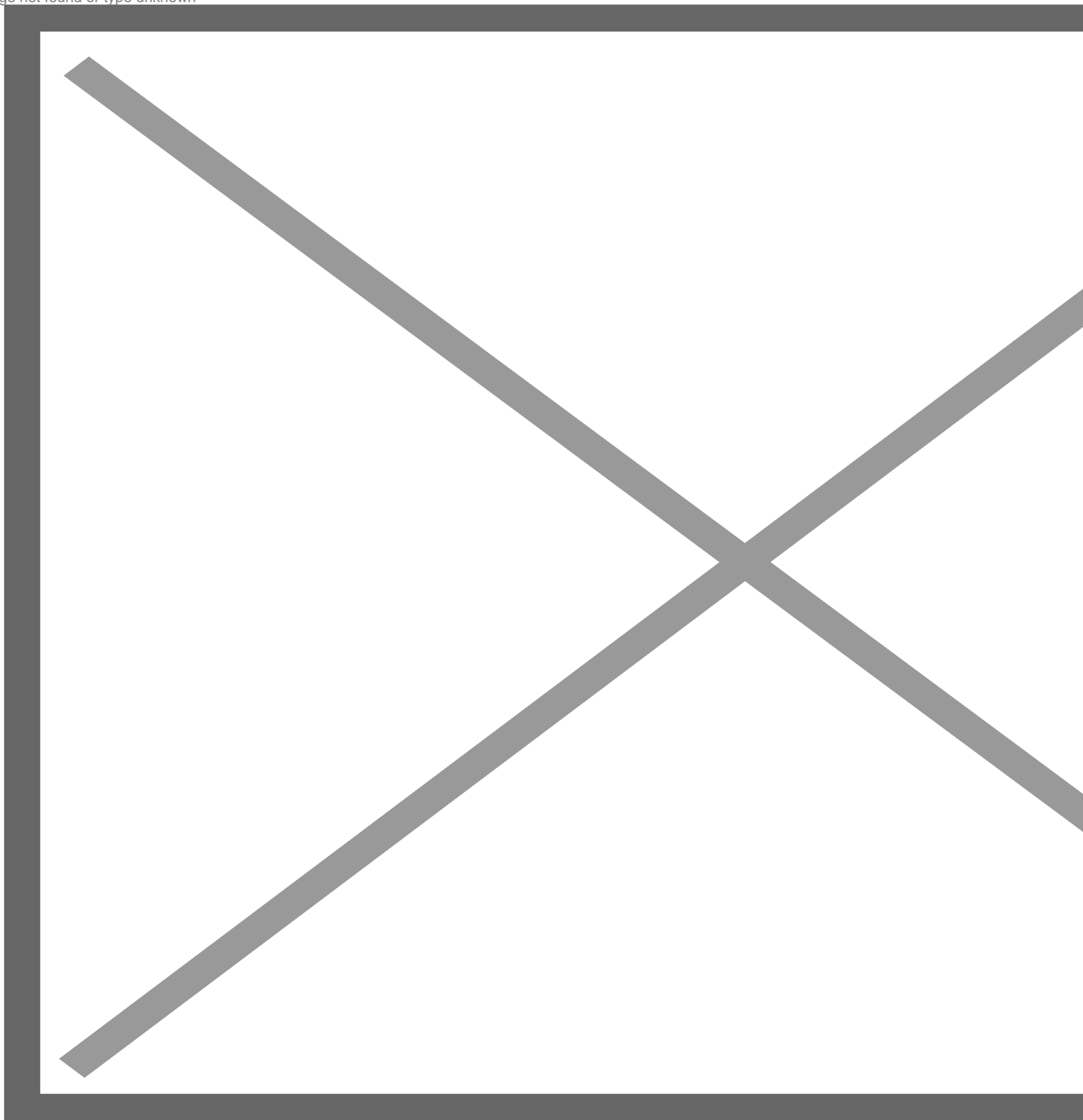
The project started before COVID-19 hit, but the company then had to shut down due to the quarantine mandated for the state of Washington. After the restrictions were eased, small teams of employees were allowed to return to continue building the new model.

## High-Tech Process

Northern Marine uses resin infusion to manufacture fiberglass parts including the hull, superstructure, flying bridge, deck, mast, hardtop and hatches. The company has been able to take advantage of the newest technology made available by Boeing Corporation, which is located nearby. The technology is considered state-of-the-art in terms of efficiency, consistency and accuracy and the process gets high marks for reduced emissions and environmental impact.

Construction starts with dry laminates being placed in a mold, the number of layers and core materials is predetermined for optimum strength and rigidity. The laminates are covered with ply release materials and channels that allow resin to flow and then the mold is encapsulated in a large plastic bag. Hoses and valves are attached to the bag in specified locations and a pump generates vacuum to suck out all the air. Once a controlled vacuum pressure remains steady over a period of time to ensure there are no leaks, the crew opens valves that draw the resin through the network of hoses to saturate the laminate and core materials. The technology evenly distributes the resin through the materials, ensuring a proper resin-to-fiberglass ratio of 70 percent fiberglass and 30 percent resin.

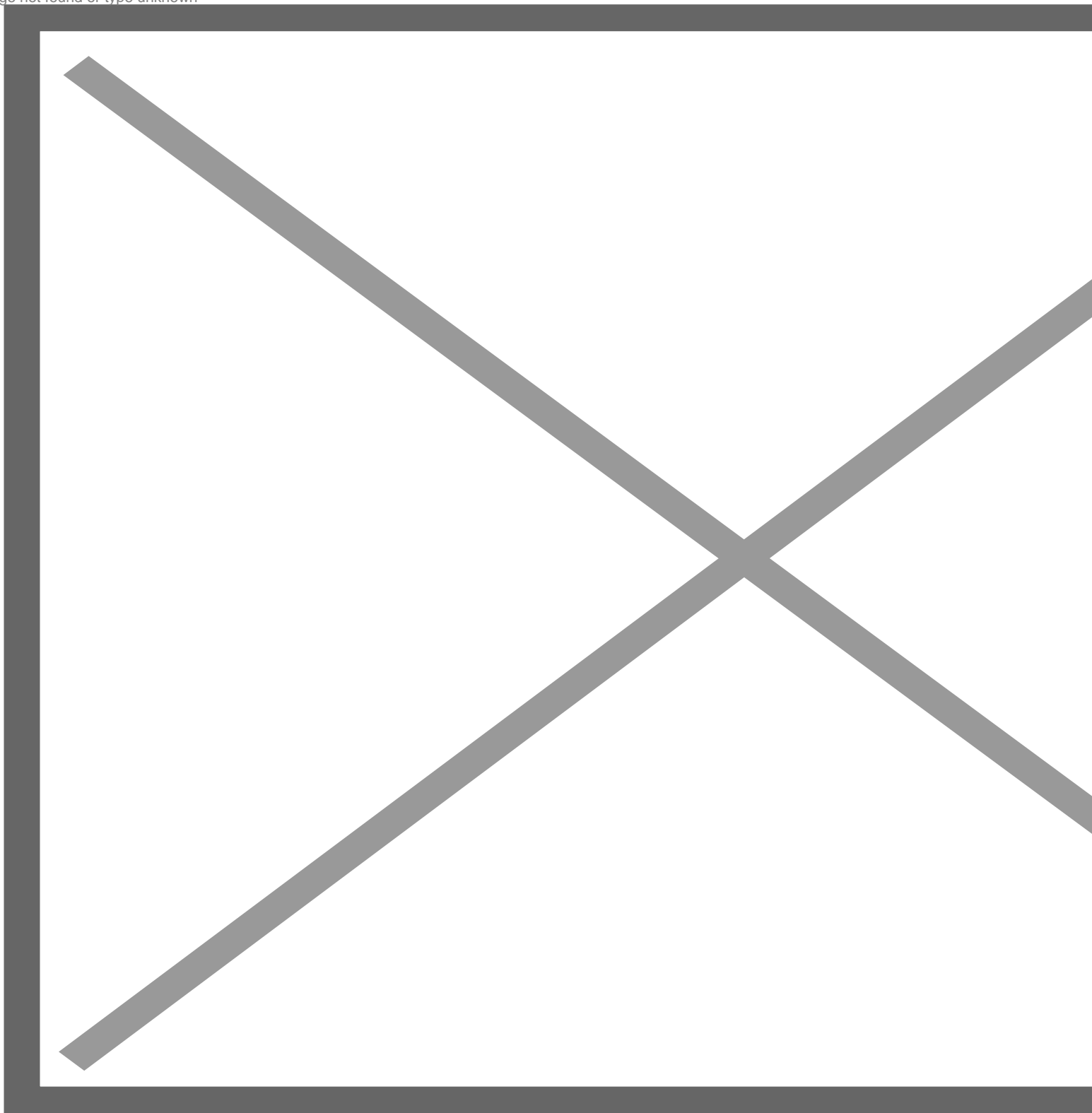
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The yellow-ish looking material in the bow is Kevlar. It's used to protect the forward 25% of the hull in the event of an impact.

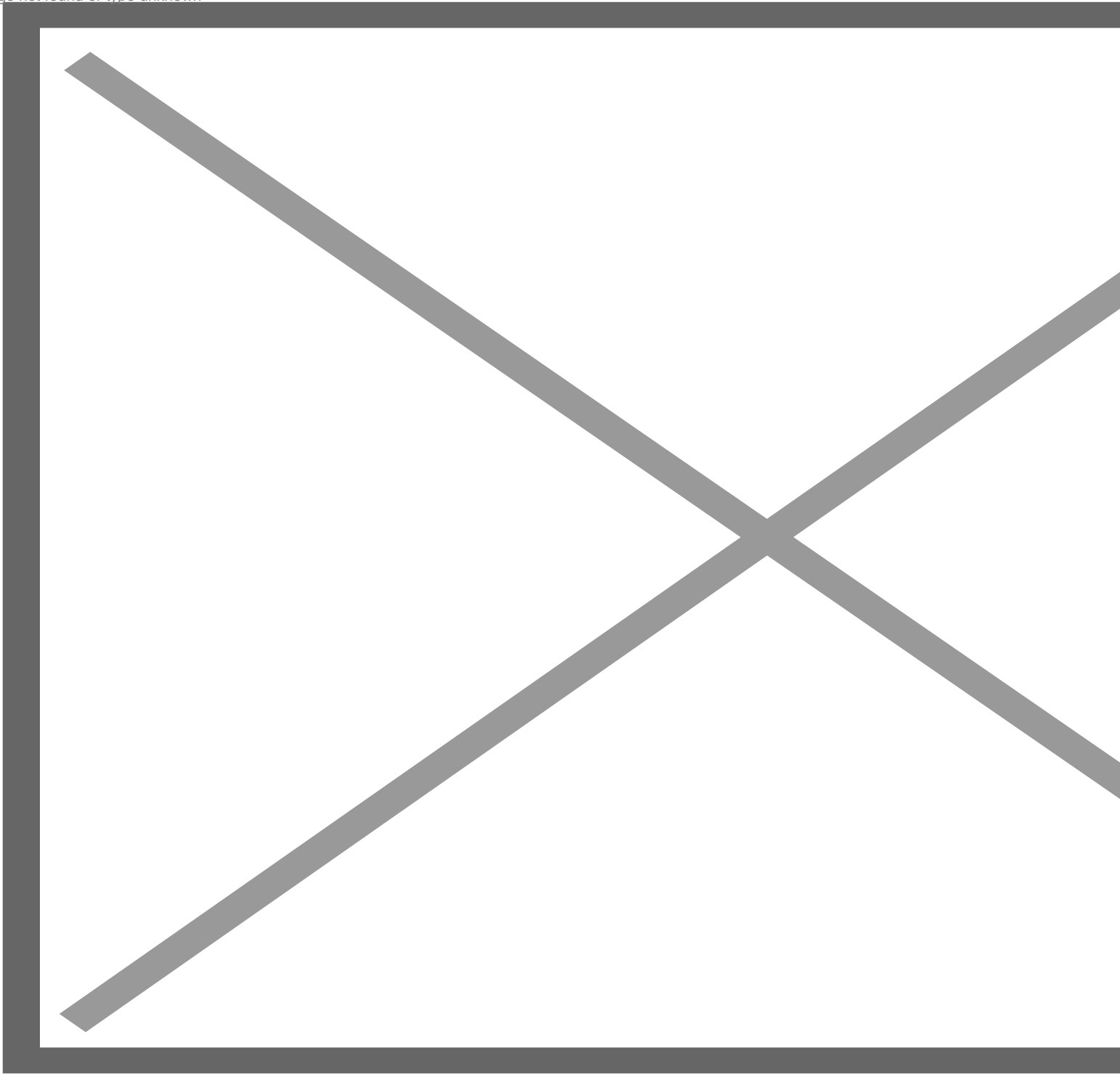


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The darker green material is a flow media that lets resin flow more easily over the surfaces.

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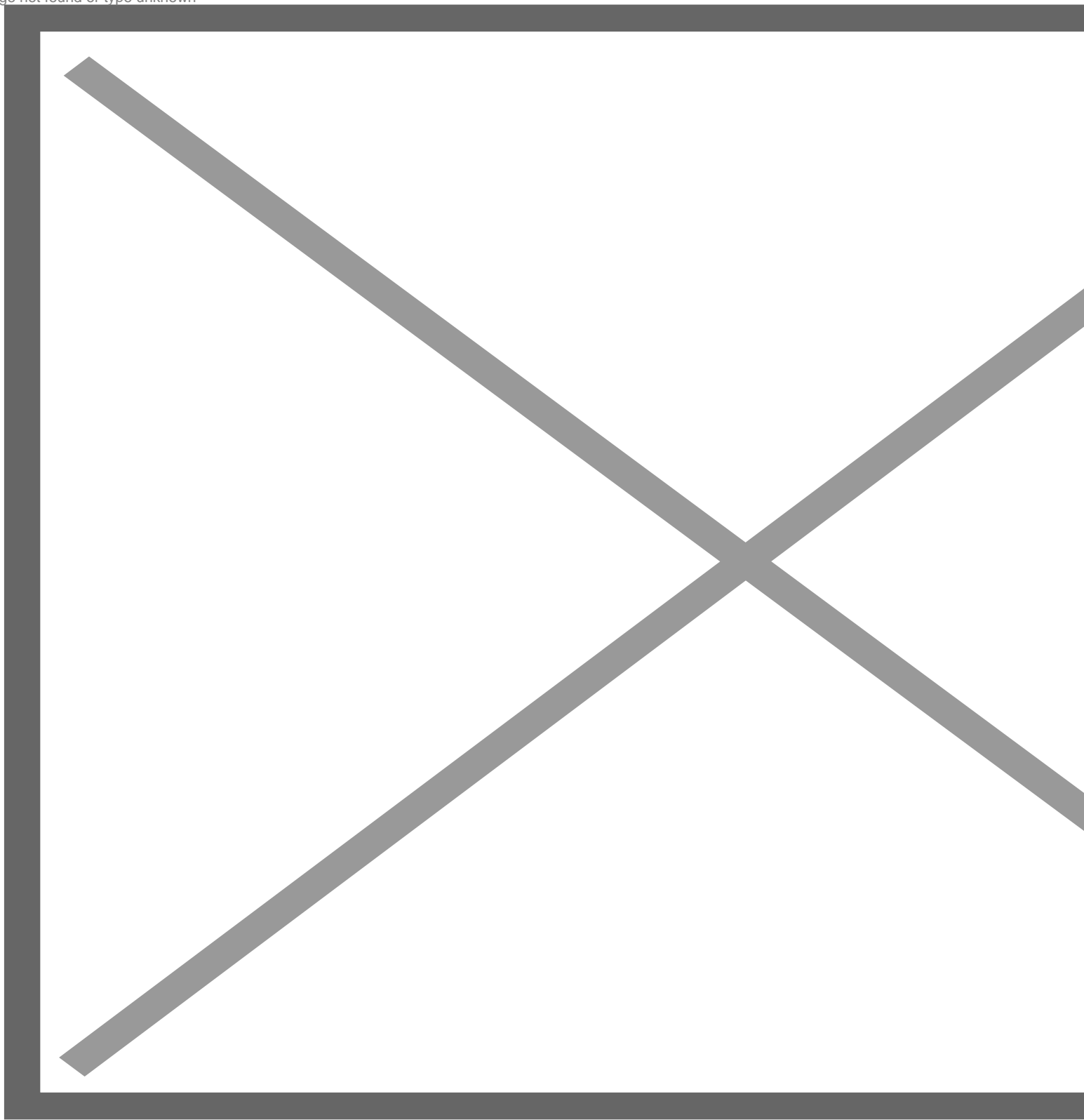
On top of the flow media, Enka Channel, a 4" (10.16 cm)-wide three-dimensional filament strip that enables fast resin flow. Resin hoses attached directly to the channel, which is designed to resist compression and it doesn't leave imprints in the laminate.

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Next, the vacuum bag is placed, covering the entire hull in plastic.

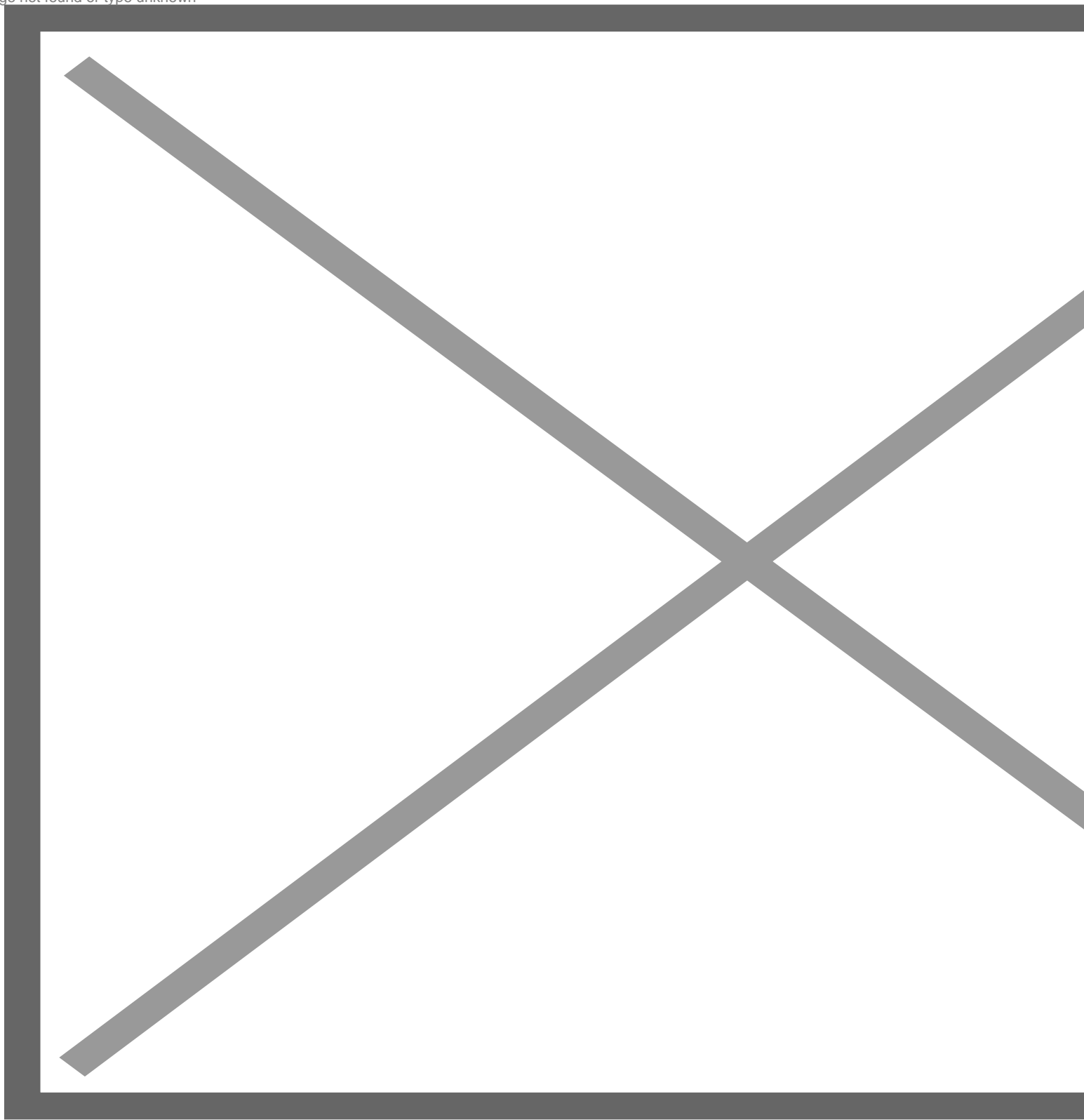
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Valves and inlet hoses are installed in the bag and butyl tape is used to eliminate leaks.

With all the hoses in place, three barrels placed around the hull are filled with resin to supply the laminate. When the valves are opened, the process happens quickly and the barrels need to be refilled many times because the 57' (17.37 m) hull requires the equivalent of 17 full drums. One of the benefits of the infusion process is the cleanliness.

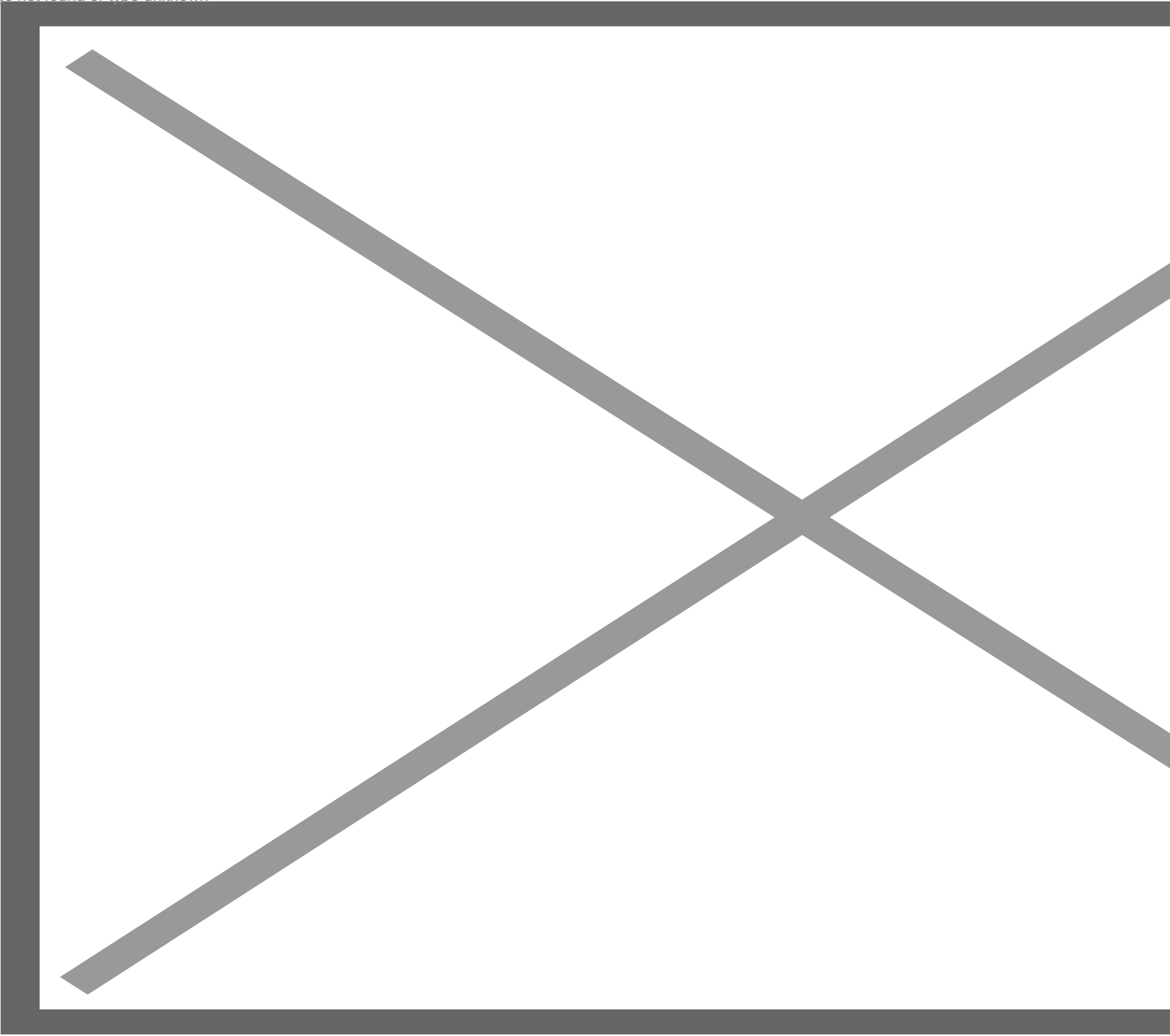
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With all the hoses in place, the resin is ready to be drawn through the laminate to evenly distribute the resin.

After the hull cures, the hoses are pulled out and the foam stringers are placed in the bottom and bonded in place with the infusion process.

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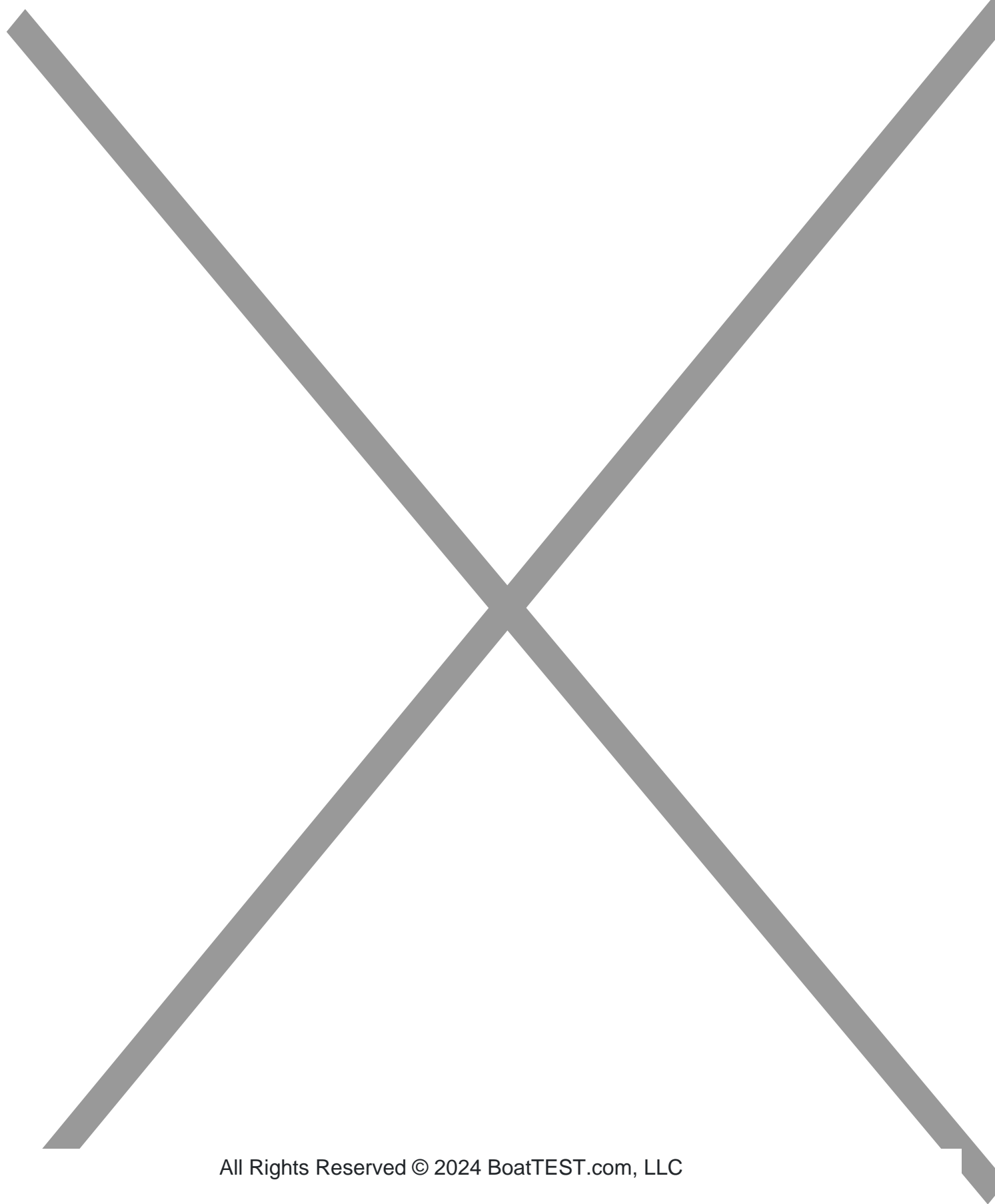


After the crew removes the bag and hoses, the new hull is clean and ready for the stringers, bulkheads and equipment.





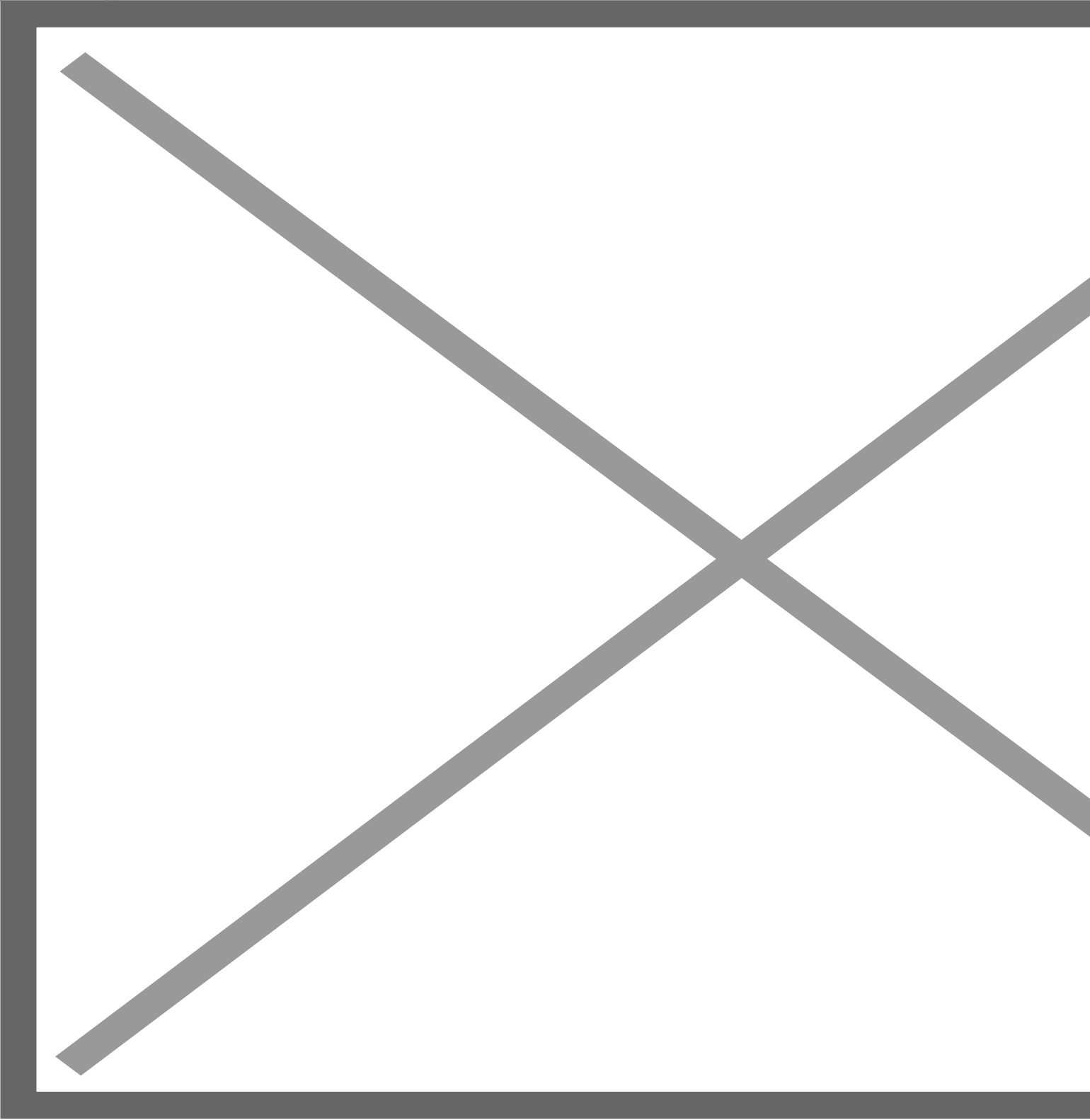
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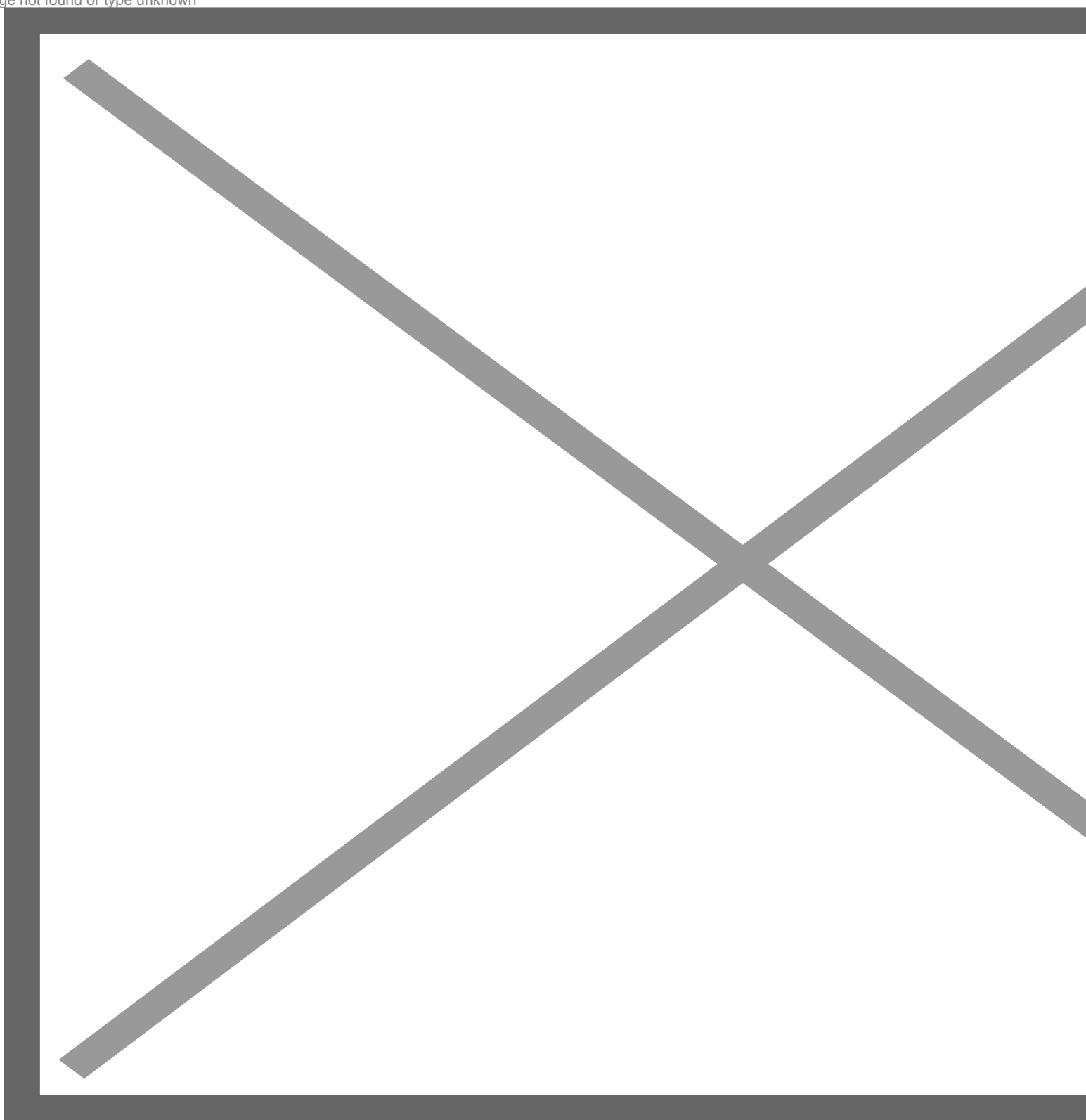
The bulbous bow is indicative of the boat's long-range cruising intentions.

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The stringers are laid in place and run the length of the hull bottom.

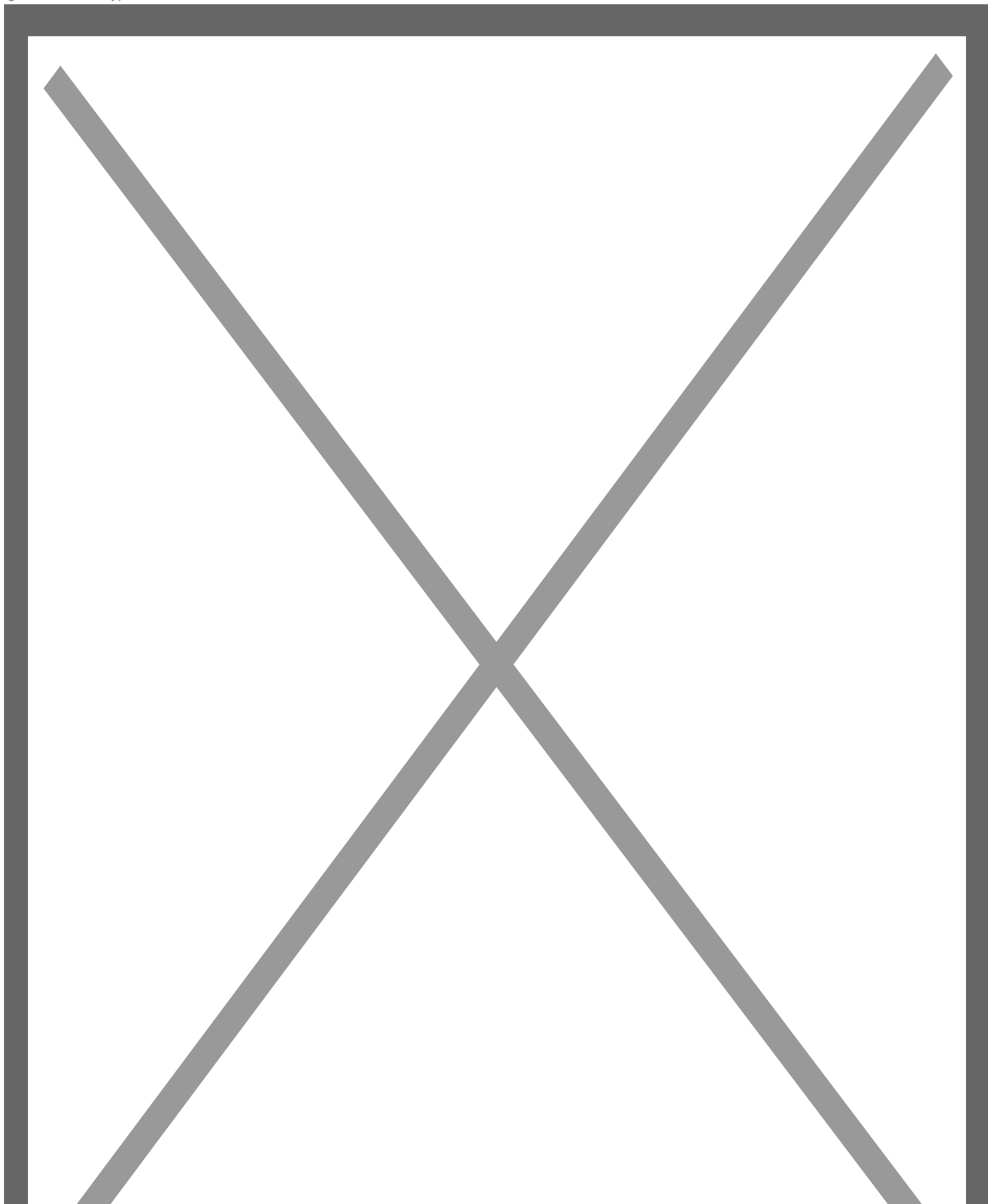
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The same infusion system bonds the stringers to the hull bottom and notice that the technicians don't need to wear respirators thanks to the cleanliness of infusion.



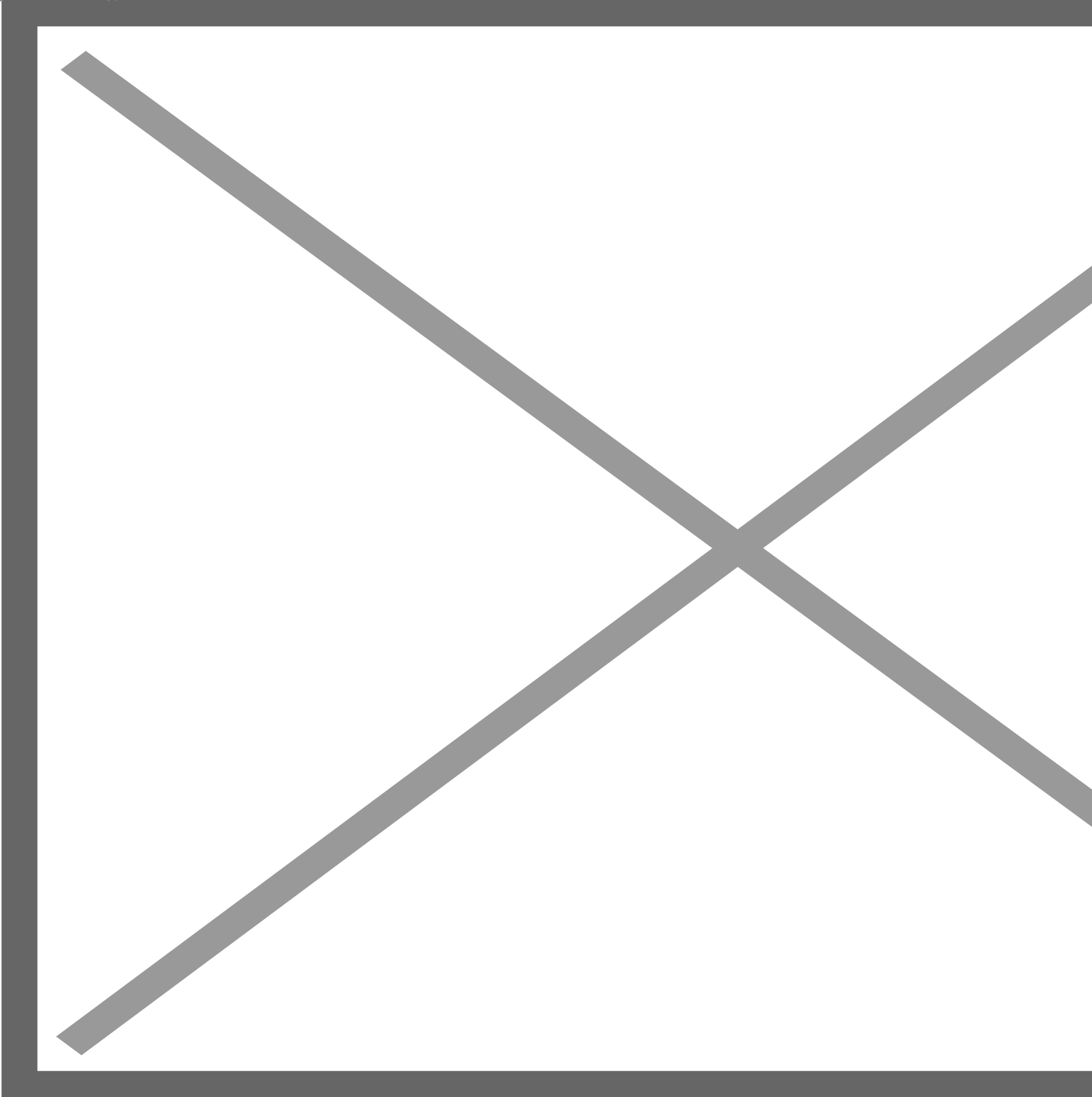
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The superstructure and all other fiberglass parts are also laminated with resin infusion.

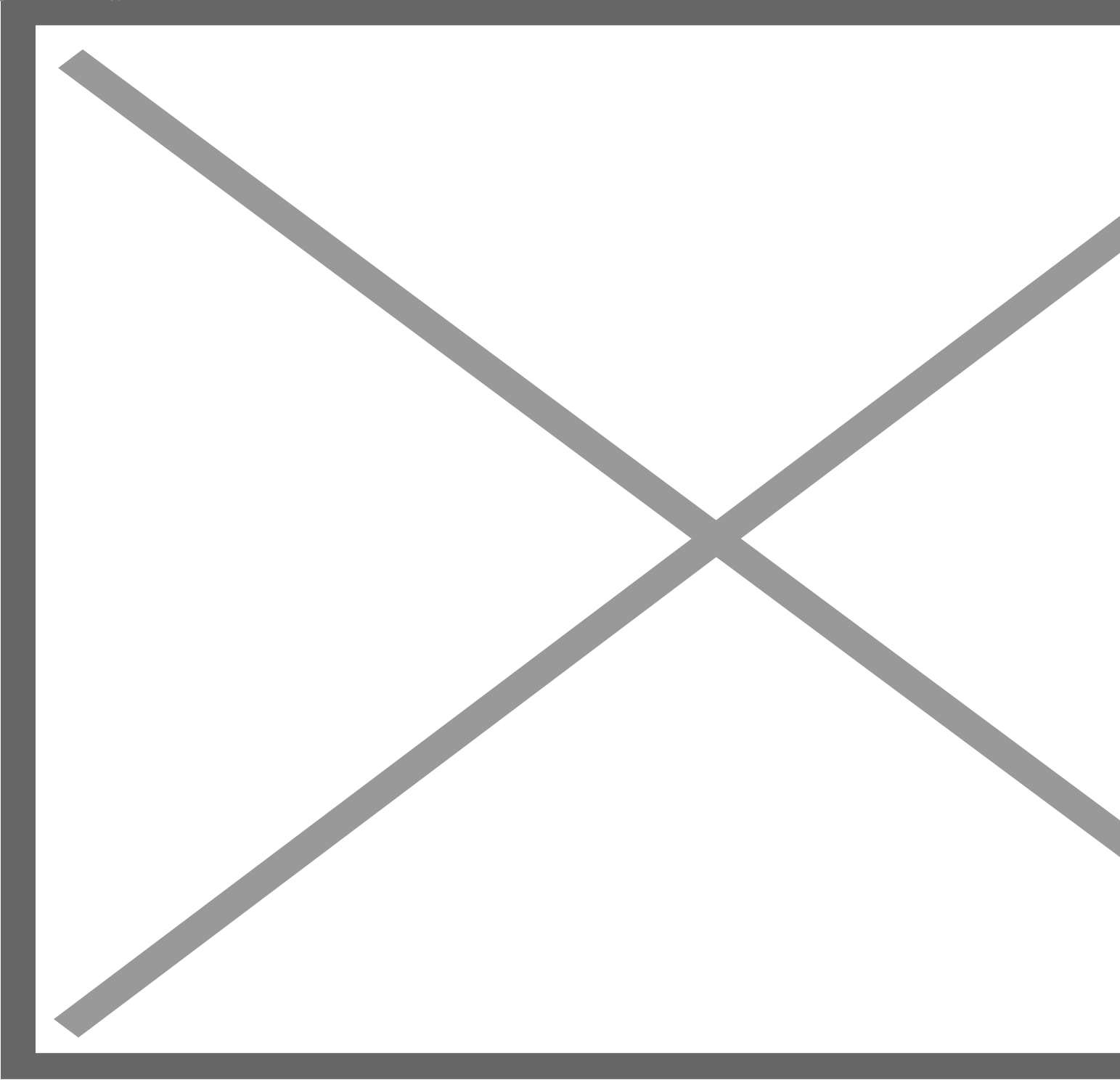
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The flying bridge is a little more challenging to pull from the mold because of all of its angles.

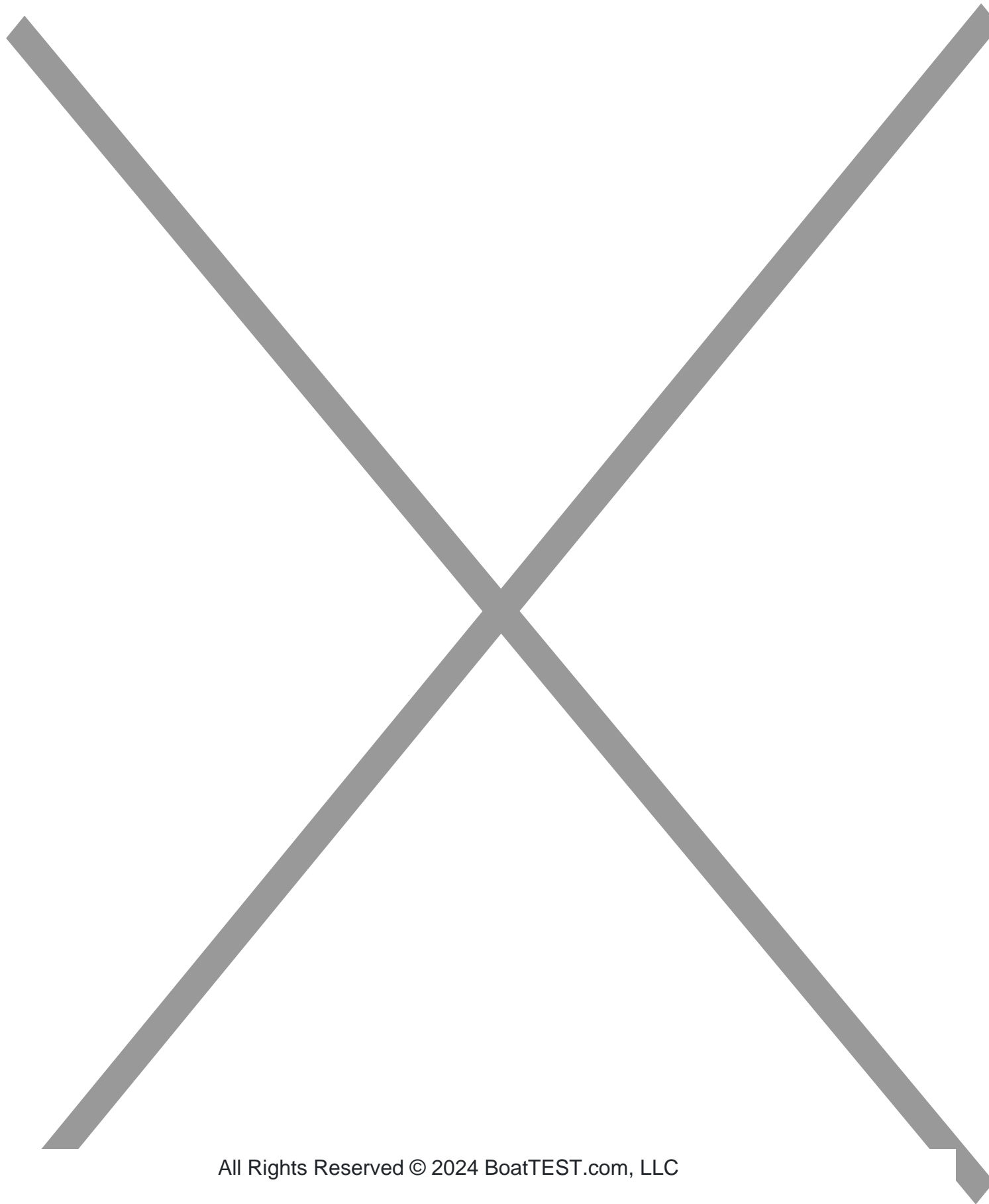
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The superstructure is finished and ready for the windows to replace the wooden panels in the openings.



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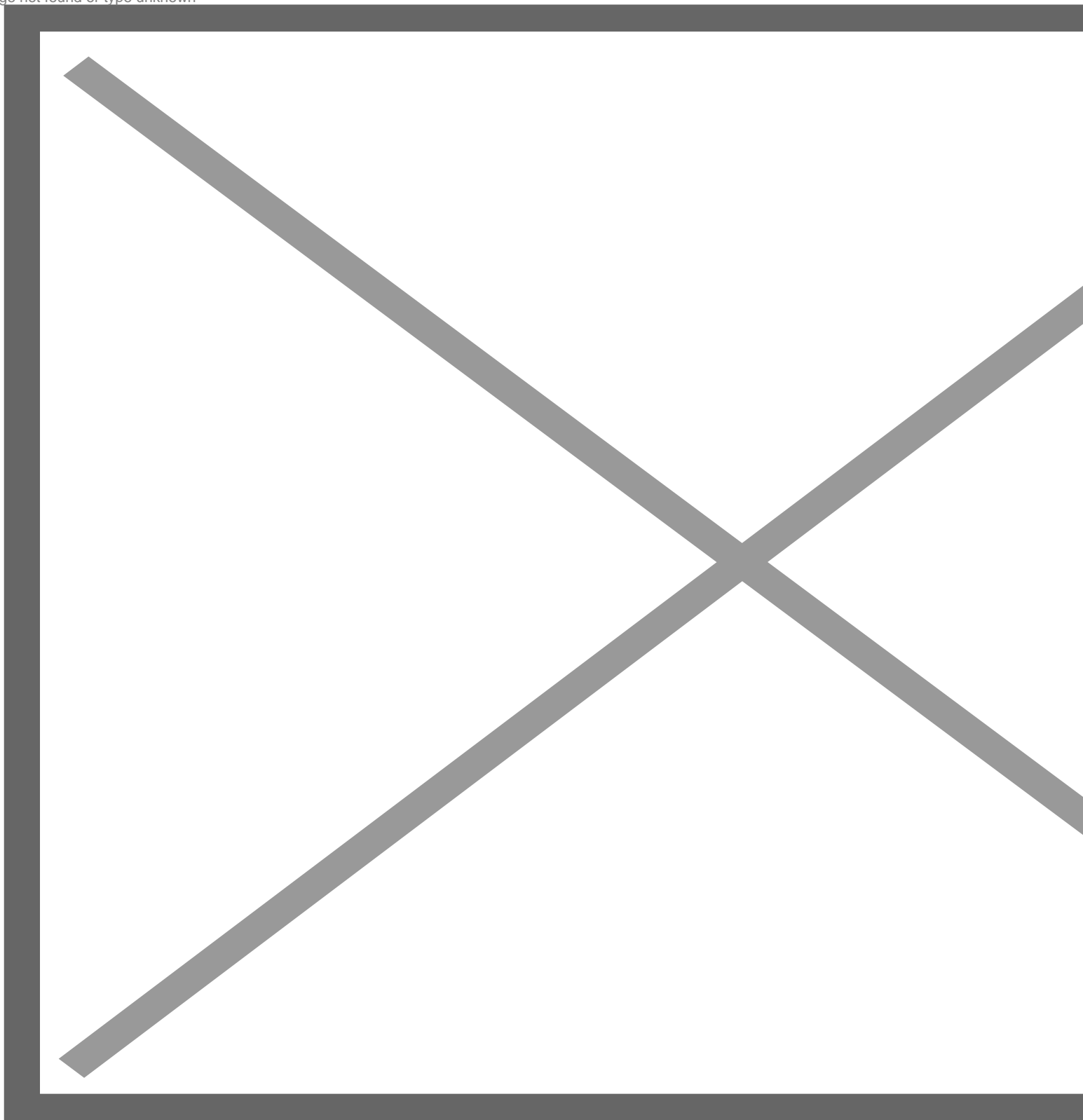
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The large aft deck can accommodate a tender and is a versatile area that can have many uses during a long cruise.

## **Ballast and Equipment**

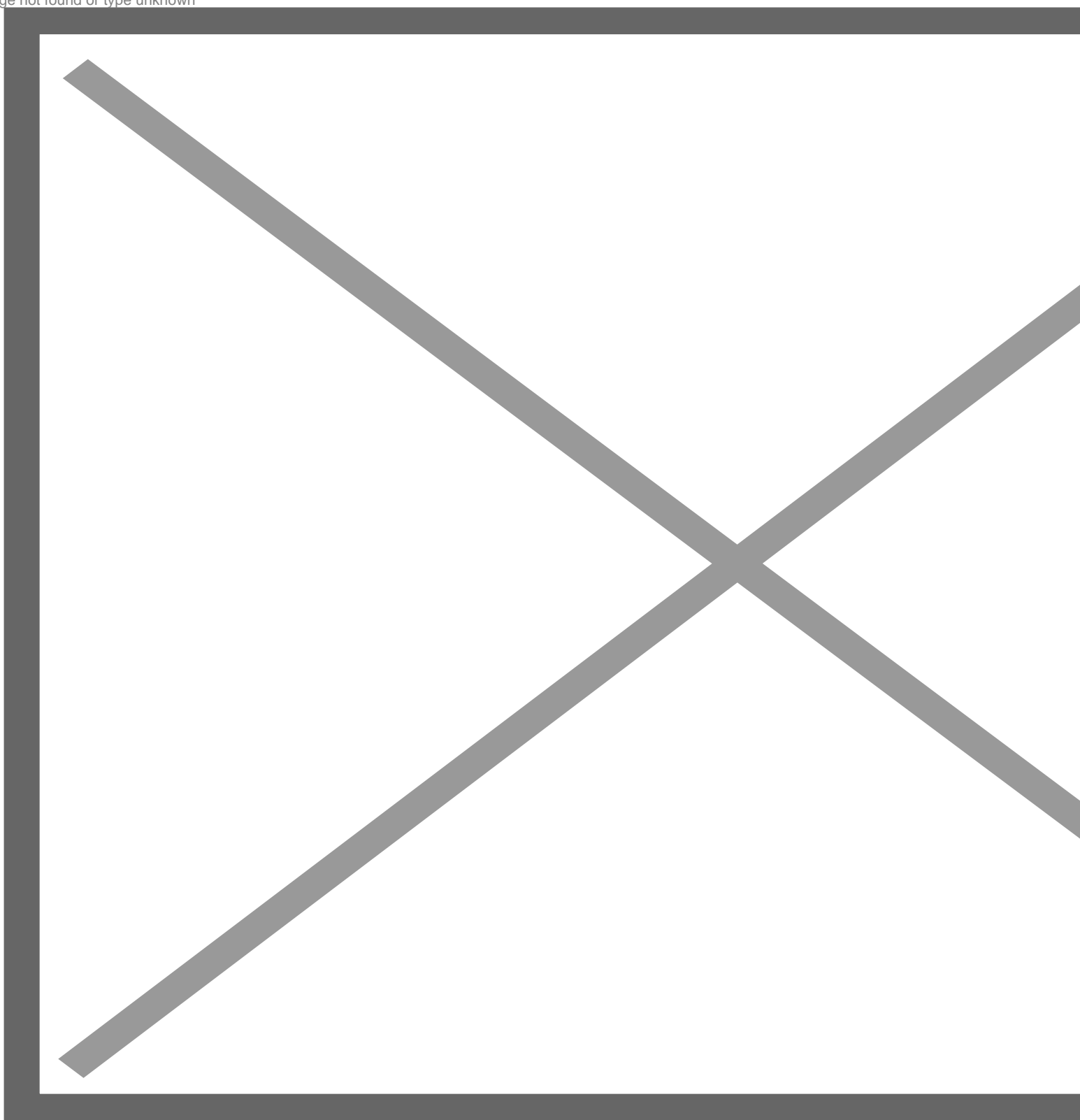
For ballast, Northern Marine uses copper-coated lead bullets. The two ballast spaces are on each side of the centerline gray water and black water tanks and each is filled with 6,500 lbs. (2,948.35 kgs) of lead. The bullets' size lets them settle tightly into the space, maximizing density. After the ballast is in place, the compartments are sealed with fiberglass coverings before the sole is installed over the entire area.

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Surplus lead bullets with copper jackets are used for ballast in Norther Marine yachts.

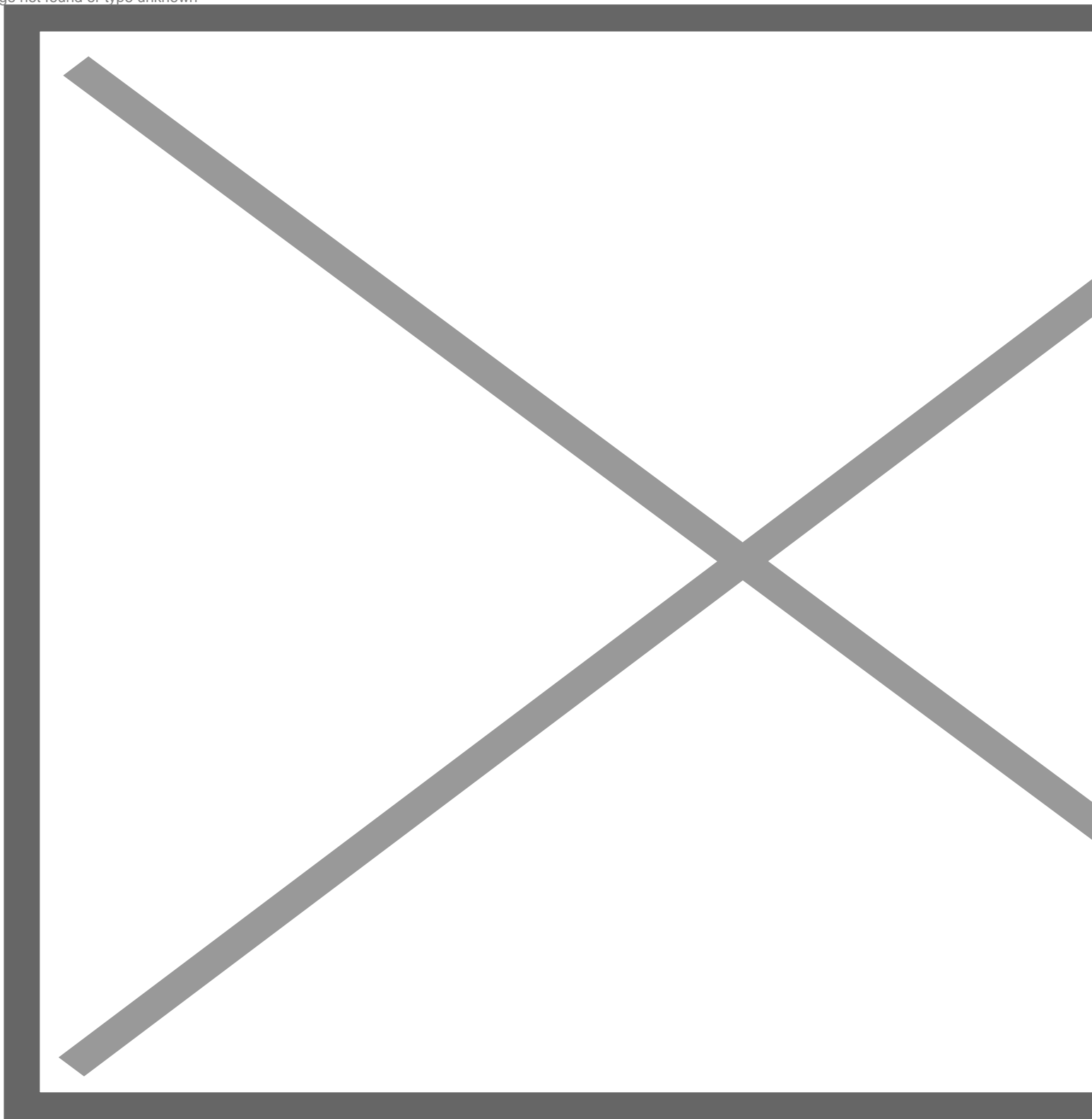
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The bullets are placed in dedicated compartments outboard of the gray and black water tanks and all will be covered by the sole that will be fiberglassed in place over them.

After the main bulkheads are fiberglassed in place, 5706's twin fuel tanks are built outboard of where the engine will be installed. The hull is not part of the tank, but each reservoir is formed to match the hull's shape. Each tank is tested to 3 psi.

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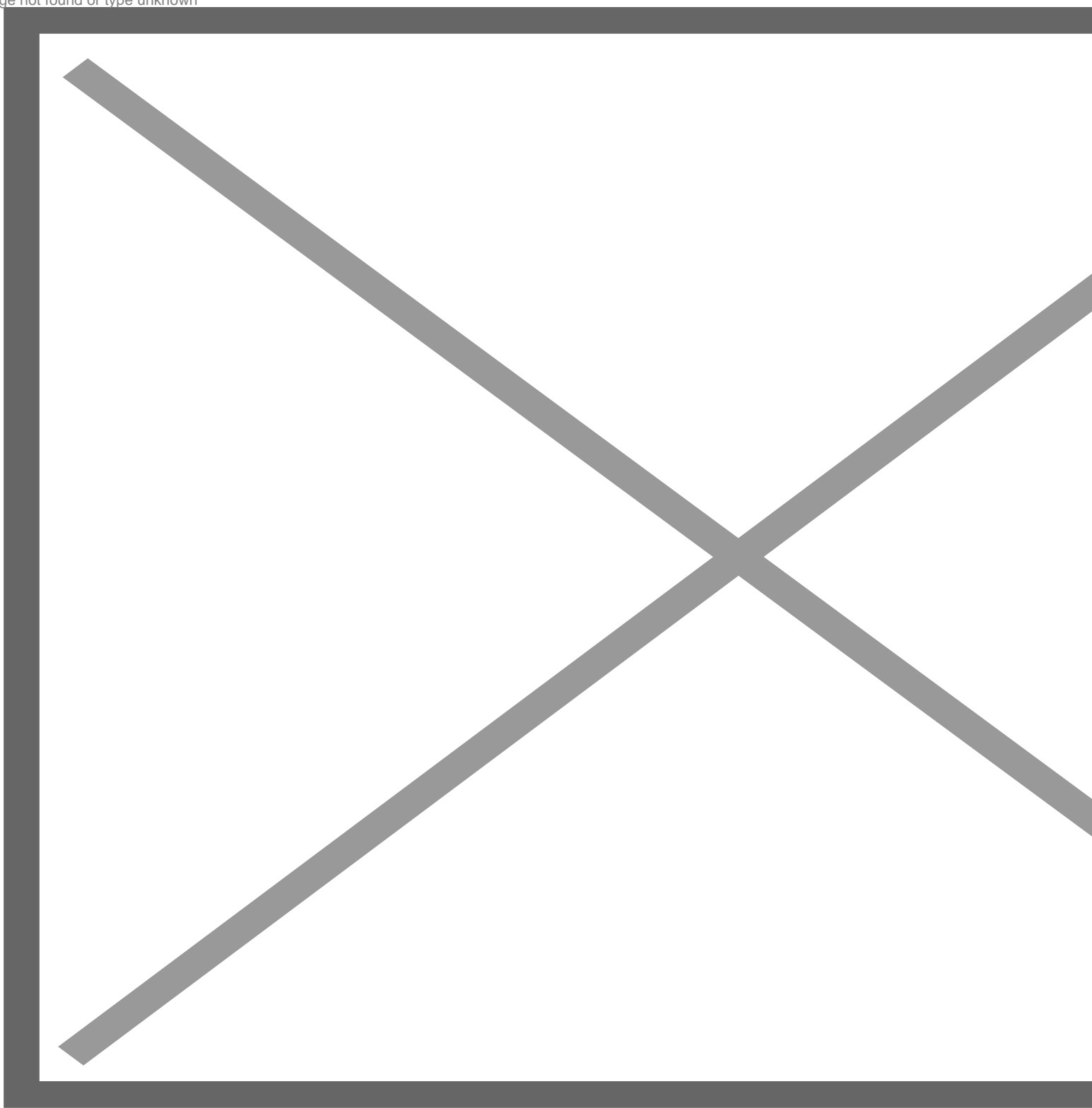


The main fuel tanks are saddle-style and they conform to the shape of the hull bottom.



The engine is a 325-hp John Deere 6090 diesel and it has a power take off. There is also an emergency hydraulic drive that is powered by one of the boat's two 17kW generators. It can push the boat at 5 knots. To ensure that maintenance can be done in comfort, there is standup headroom in the engine compartment.

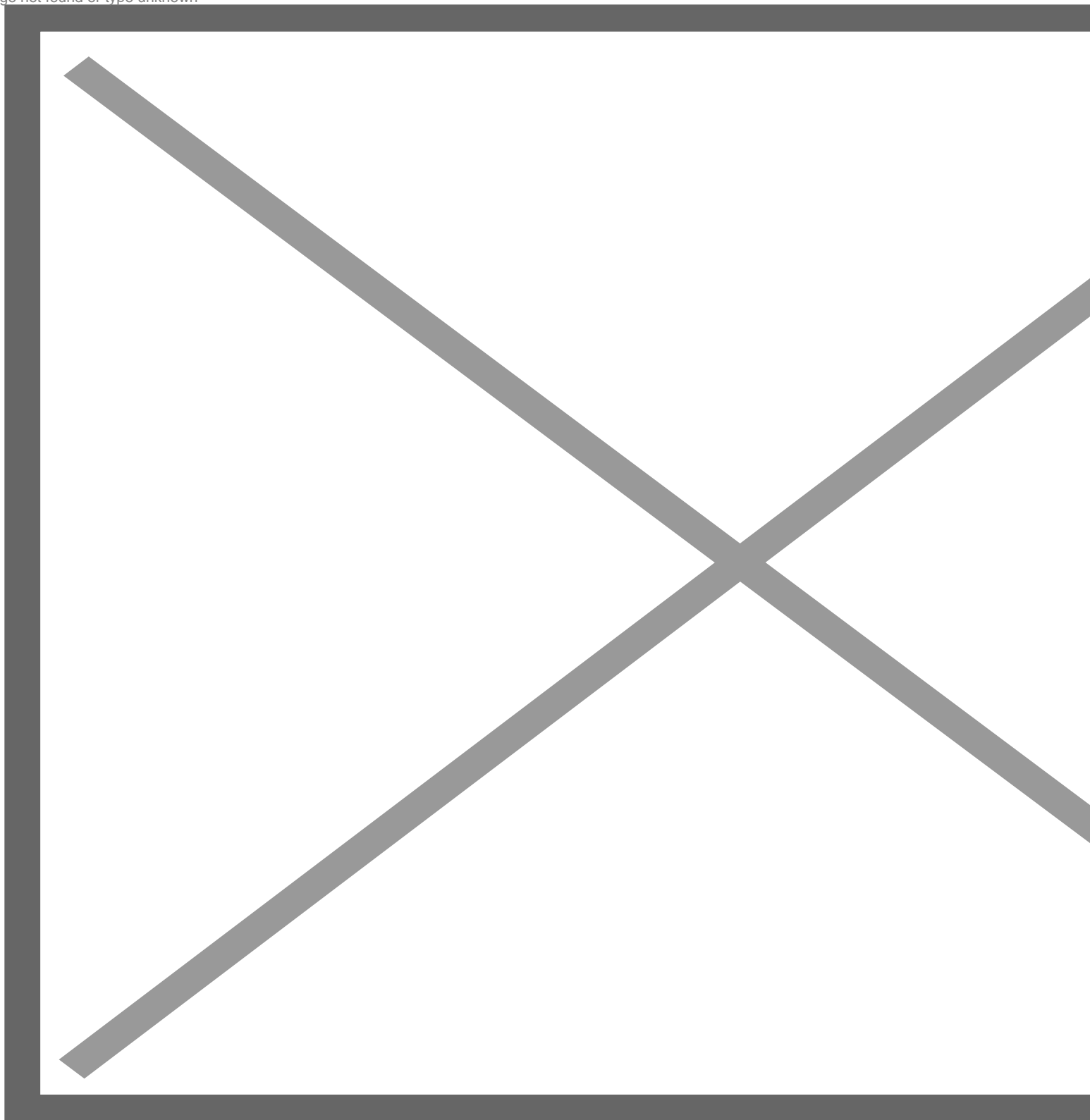
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The engine is centrally positioned and there's plenty of space to move around it on each side.

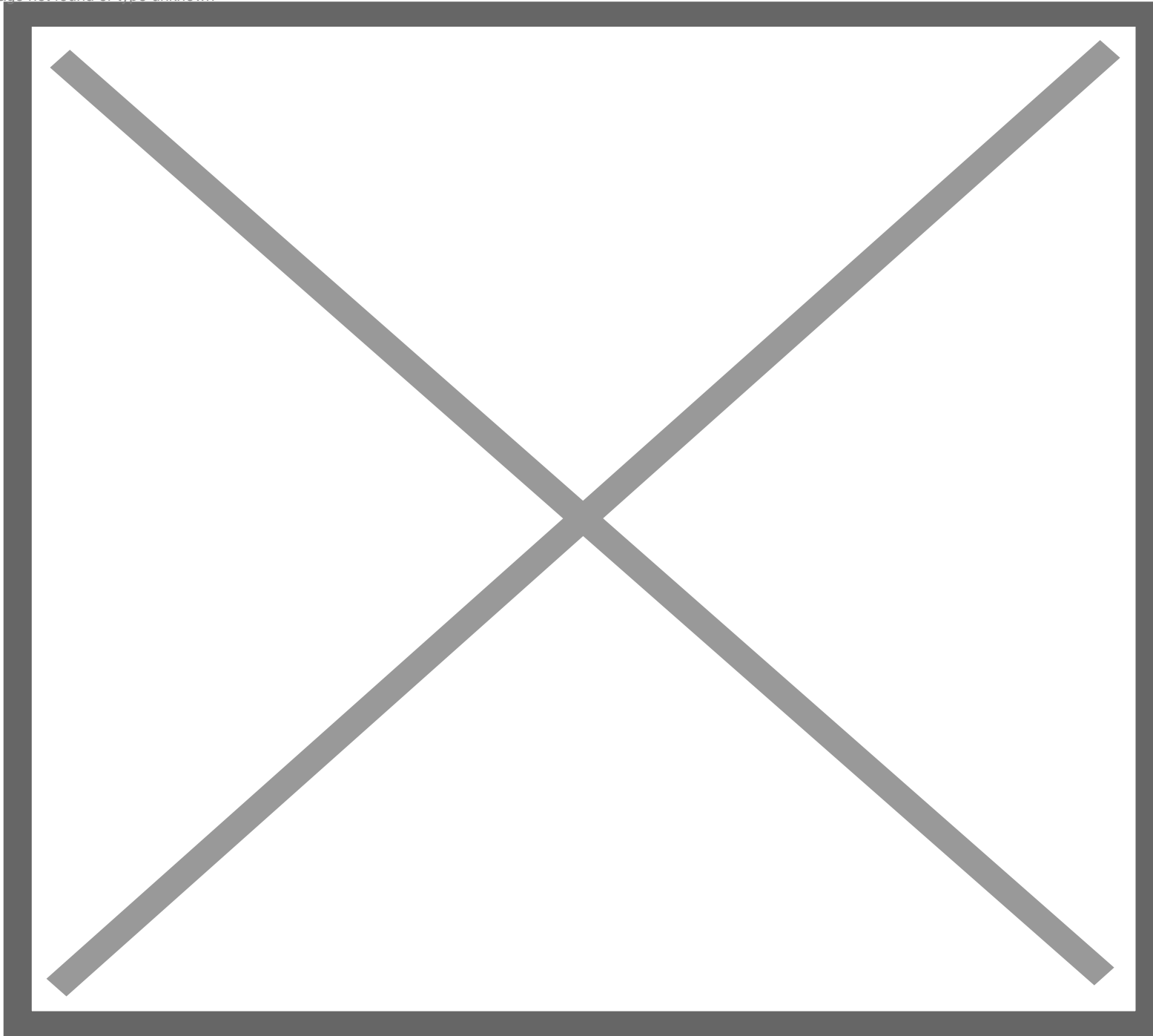
A new T-shaped sea chest lets eight systems draw sea water from a single through-hull. Outboard of the master stateroom on each are stabilizer fins. A steel shoe runs the length of the keel to protect the bottom during accidental groundings.

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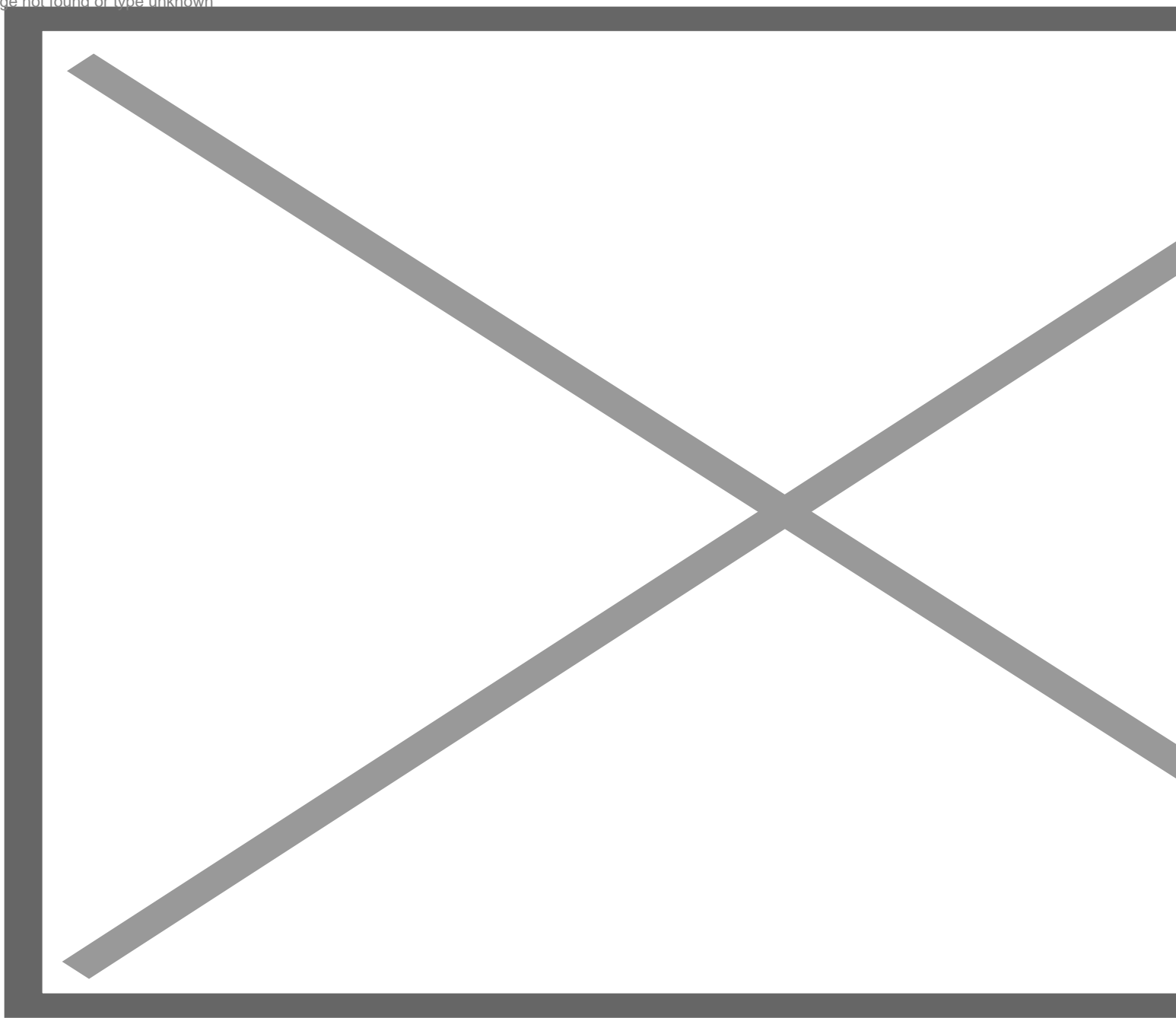
The T-shape of the sea chest means that eight different systems can draw water from a single through-hull fitting.

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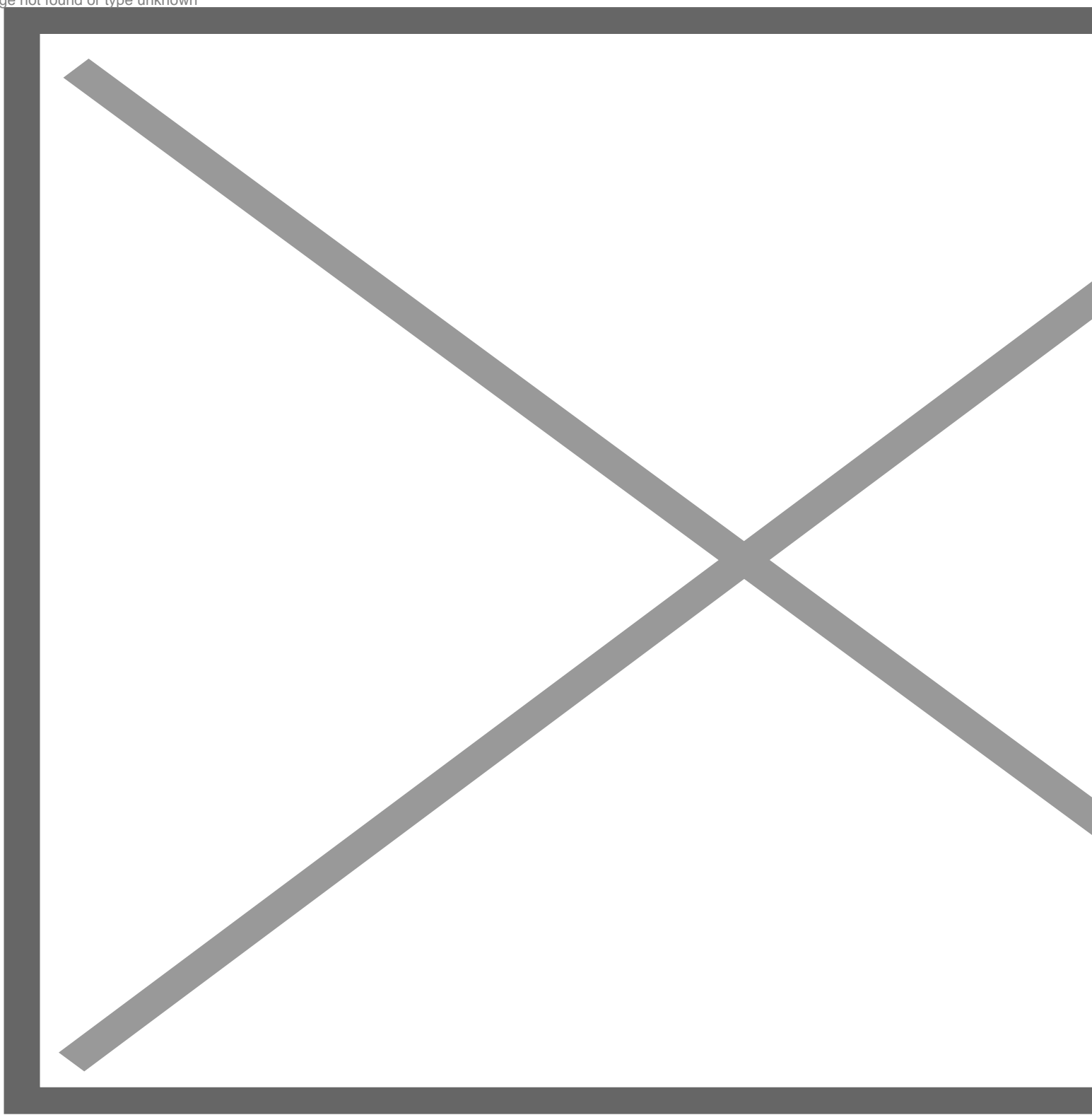
Notice the copper strip running from the stabilizer aft to a large zinc in the engine compartment where it can be easily checked.

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Twin 17kW generators are installed on a fiberglass liner and then it's installed as one unit.

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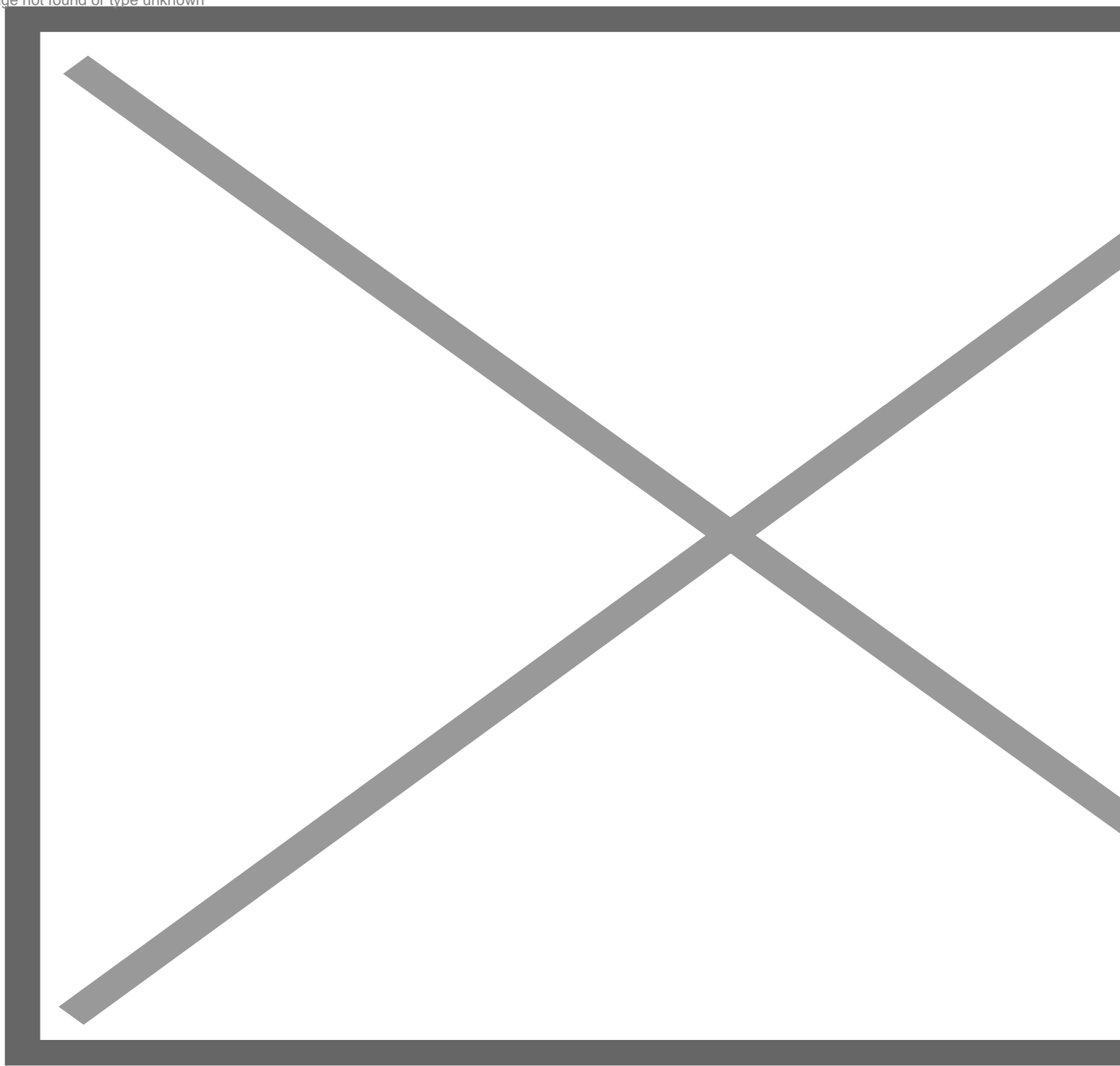
A steel shoe runs the length of 5076's keel to protect the bottom against accidental groundings.

# Fuel System

Hull 5706 has three fuel tanks, two saddle units in the engine room that hold 950 gallons (3596.14 liters) and a third is forward under the forward guest stateroom. It holds 560 gallons (2,119.83 liters). In addition to sight gauges, Norther Marine installs Maretron transducers on the bottom of each tank to measure the fuel level. When the system is ready, a fuel truck is brought to the yard and exactly 100 gallons (378.54 liters) are pumped into each tank. Then the sight tubes are marked and the electronics are calibrated. This is repeated until each tank is full.

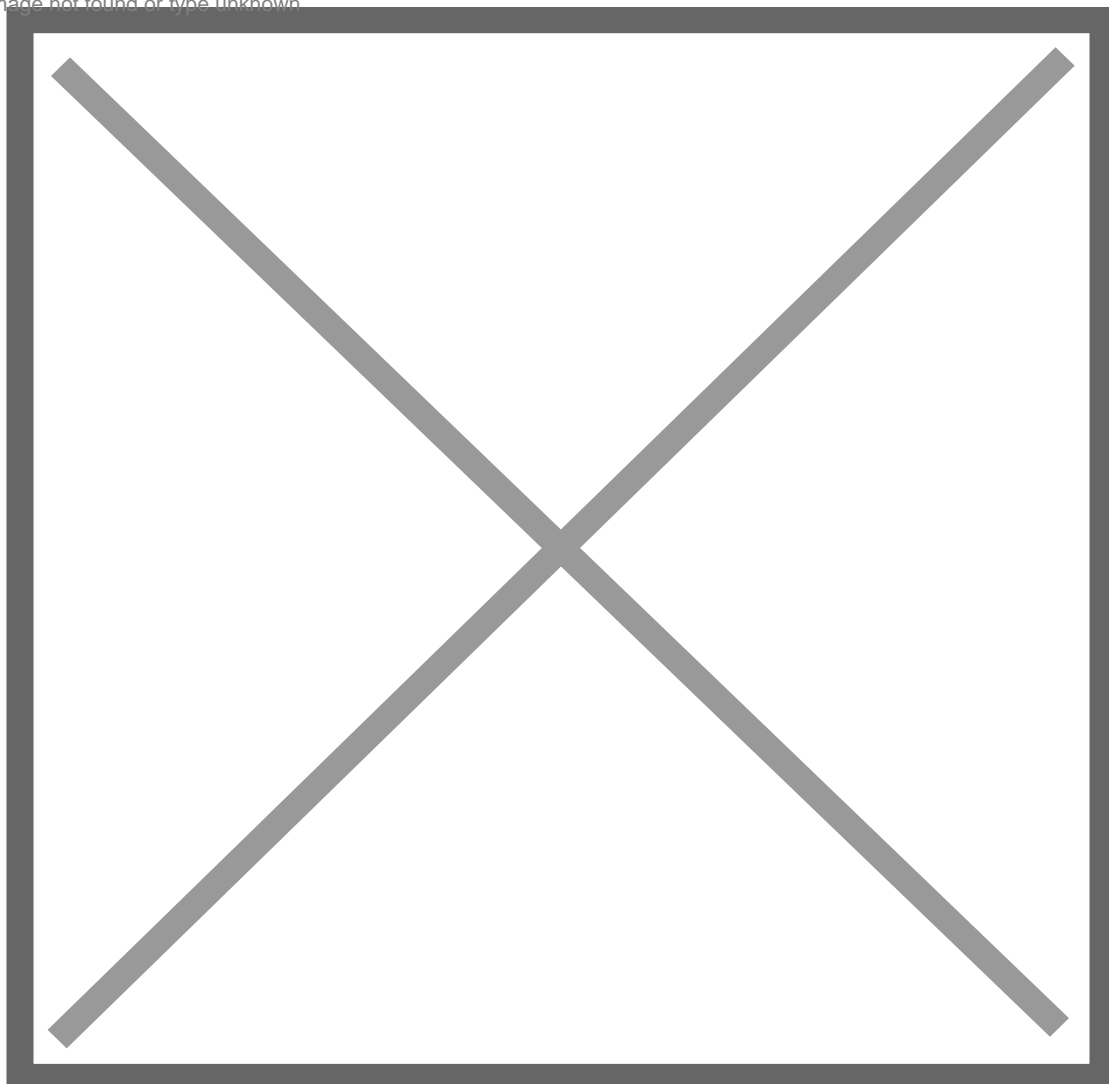


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Fuel lines on all Norther Marine yachts are 316L stainless steel and all are custom bent and shaped to the application. All fittings are JIC flared-style and there are no pickup tubes in the delivery system. Instead valves and fittings are installed at the bottom of each tank. Switchable fuel filters are readily accessible.

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Only stainless-steel lines and heavy-duty valves are used at Northern Marine.