

XO 270

RS CABIN 08

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XO BOATS

PREFACE

Congratulations on your new Finnish XO boat! We want to thank you for choosing XO and we hope you enjoy the time you spend aboard.

The purpose of this manual is to help you operate your boat with safety and pleasure. The manual contains the details of the boat and the associated or installed equipment and systems, as well as information on its operation and maintenance.

Please read the manual carefully and familiarize yourself with the boat before using it. Naturally, you cannot learn the skills of seamanship and safe boating by reading a User Manual.

If this XO is your first boat, or if you are changing to a type of boat you are not familiar with, for your own comfort and safety please ensure that you obtain handling and operating experience before assuming command of your boat. Your dealer, boating clubs

and national sailing and yacht federations will be pleased to advise you of local boating schools and competent instructors.

Make sure that your boat's design category is appropriate for the expected wind and wave conditions and that you and your crew are capable of handling the boat in such conditions. The wind and wave conditions specified for design category C may include gales and high winds, with risk of exceptional waves and gusts. Such conditions are dangerous and can be sufficiently handled only by a competent and fit crew in a well-maintained boat. This User Manual is not a detailed maintenance or troubleshooting guide. If a problem occurs, please contact your XO dealer. If a repair is required, use only the companies recommended by your XO dealer.

KEEP THIS MANUAL IN A SAFE PLACE AND HAND IT OVER TO THE NEXT OWNER IF YOU SELL THIS BOAT.



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BOAT MODEL: XO 270 RS Cabin OB

Craft identification number - Cin:

Engines make and model:

I OWNER

First name:

Surname:

Domicile:

Year of purchase:

III OWNER

First name:

Surname:

Domicile:

Year of purchase:

II OWNER

First name:

Surname:

Domicile:

Year of purchase:

IV OWNER

First name:

Surname:

Domicile:

Year of purchase:

V OWNER

First name:

Surname:

Domicile:

Year of purchase:

VI OWNER

First name:

Surname:

Domicile:

Year of purchase:

1 BEFORE DEPARTURE

Read this User Manual carefully. Before each departure, check at least the following:

Weather and weather forecast

Take the wind, waves and visibility into account. Is your boat's design category, size and equipment, as well as the skills of the helmsman and crew adequate for the waters you are about to boat?

Load capacity

Do not overload the boat and always distribute the load properly. To avoid diminishing your boat's stability, do not place heavy items too high up.

Passengers

Make sure that a life jacket is available for each person on board. Before departure, agree on the tasks to be performed by each person during the outing.

Fuel

Make sure that there is enough fuel on board, including a sufficient reserve in case of bad weather, for example. You should have at least a 20% reserve to allow for the unexpected.

Engine and equipment

Check the operation and condition of steering, electrical devices and battery, and perform all daily inspection procedures specified in the engine manual. Check the boat's seaworthiness in general: check the boat for fuel and water leaks, make sure that the necessary safety equipment is on board, etc. Check that the bilge water level is at the minimum.

Ventilation

Make sure that the fuel tank compartment is properly ventilated to minimize the risk of fire.

Securing of equipment

Make sure that all items on board are secured so that they remain in place in rough seas and high wind.

Nautical charts

If you are not fully familiar with the planned route, make sure that you have nautical charts that cover a large enough area.

Departure procedures

Agree with the crew on whose task it is to detach each line, etc. Make sure that the mooring lines or any other lines do not get caught in the propeller during manoeuvring.

REFER TO THE SEPARATE ENGINE MANUAL FOR ADDITIONAL INSTRUCTIONS ON THE ENGINE.

2 GENERAL

The purpose of this User Manual is to help you familiarize yourself with the characteristics of your new boat. Separate manuals for the equipment installed on the boat are attached and also referred to in a number of sections of this manual. Naturally, you can complement this manual with manuals of any device installed later on. There is also space reserved for your own notes at the end of this manual. The warnings and precautions in this manual are defined as follows:

The units used in this manual are in accordance with the SI system. In some cases, however, other units are added in brackets. An exception to the above is the wind force, which is expressed in the Beaufort scale in the Recreational Craft Directive (RCD). In this User Manual the right side of the hull is called/abbreviated STB and the left side is called Port.

DANGER!

Indicates a serious hazard that will most likely result in death or permanent injury unless appropriate precautionary measures are taken.

WARNING!

Indicates a hazard that could result in injury or death unless appropriate precautionary measures are taken.

NOTE!

Indicates a reminder of safe practice or directs attention to a dangerous practice that could result in injury or damage to the boat or its components.

*Optional equipment

2.1 WARRANTY

This boat and the equipment installed by the boat builder are covered by a warranty as specified in detail in the enclosed warranty clause. The engine, trim tabs, compass, any navigation devices and other retrofitted devices are subject to any warranty of their respective manufacturers. Separate warranty cards for these devices and appropriate supplier information are included as an attachment. For other warranty issues, please contact your XO dealer indicated on the front cover.

2.2 BEFORE USING YOUR BOAT

2.2.1 REGISTRATION

In many countries, even a small motor boat must be registered. Contact the local authorities for the registration requirements in your country. To drive a registered boat, one must usually meet the requirements for minimum age and also possibly have a separate boat driver's license.

2.2.2 INSURANCE

Boat insurance can cover for damage when the boat is in use, transported or stored. Remember to check the insurance coverage separately for lifting operations. Insurance also has an indirect effect on safety at sea: in the event of a serious accident, you can focus fully on the essential – saving lives above all else. More detailed information on various insurance alternatives is available from insurance companies.

2.2.3 TRAINING

There is a lot of boating literature available, and a great deal of beneficial and practical information can also be gained from boating clubs and by attending navigation courses. These can provide a sound basis for your skills, but sureness in handling, navigating, mooring and anchoring the boat is only acquired through practice.

3 BOAT CHARACTERISTICS

This User Manual is not intended to be a comprehensive maintenance guide or repair manual. Instead, the purpose is to help you familiarize yourself with the characteristics of your new boat and show you how to use it properly.

3.1 PRINCIPAL BOAT DATA

PRINCIPAL BOAT DATA INCLUDES THE FOLLOWING:

Boat type:	XO 270 RS Cabin OB
Design category:	C (inshore)
Maximum recommended load:	1140 kg

See also Section 3.2.3 'Load capacity'

Category A:

This boat is designed for conditions in which the wind force can exceed 8 on the Beaufort scale and the significant wave height may exceed 4 m. (see NOTE! 1), and the boat is mostly independent. Extreme climate conditions are not taken into account. Such conditions can occur in long distances, for example when crossing an ocean, or in the proximity of a shore that is unprotected from wind and waves for a distance of hundreds of nautical miles.

Category B:

This boat is designed for conditions in which the wind force is no higher than 8 on the Beaufort scale and the waves are consistent with the wind force (the significant wave height 4 m at the most). Such conditions may occur in long distances at open sea, or in the proximity of a shore that is

unprotected from wind and waves for a distance of dozens of nautical miles. Such conditions may also occur in freshwater in case of an area large enough for the forming of waves of this size.

Category C:

The boat is designed for conditions in which the wind force does not exceed 6 on the Beaufort scale (about 14 m/s) and waves are consistent with the wind force (the significant wave height must not exceed 2 m, with occasional waves of 4 m maximum). Such conditions can occur in open water on lakes, estuaries, and in coastal waters in moderate weather.

Category D:

The boat is designed for conditions in which the wind force does not exceed 4 on the Beaufort scale and waves are consistent with the wind force (the significant wave height must not exceed 0,5 m) Such conditions can occur in freshwater and in coastal waters in decent weather.

NOTE!

The significant wave height is the average height of the highest third of the waves. This roughly corresponds to an experienced observer's estimate of the wave height. Waves of double this height may occasionally be experienced.

***Optional equipment**

3.2 MAIN DIMENSIONS AND CAPACITY:

The length, beam, draught, total weight, etc., and fuel tank capacity of the boat are described in Appendix 1 ‘Technical specifications’.

3.2.1 BUILDER’S PLATE



Figure 1. Builders’s plate

Part of the above information is indicated on the builder's plate (1) attached to the boat in the vicinity of the helm station. More detailed information is given in the appropriate sections of this manual. Please note that, for example, the maximum load capacity indicated on the builder's plate does not include fuel, but the fuel is included in the maximum recommended load specified by the manufacturer.

3.2.2 MAXIMUM RECOMMENDED NUMBER OF PERSONS

The maximum recommended number of persons on this boat is 10. The designated seating arrangement is shown in Figure 2.

WARNING!

Do not exceed the maximum recommended number of persons on board. Irrespective of the number of persons on board, the total weight of the persons and equipment must never exceed the maximum recommended load (see Section 3.2.3 ‘Load capacity’). Always use the seats in the boat. If your boat is not equipped with seats for 10 people, the passengers must sit on the sole in the positions indicated in the figures.

3.2.3 LOAD CAPACITY

The maximum recommended load for XO 270 RS Cabin is 930 kg

The maximum recommended load is:	850 kg
Total weight of persons on board:	750 kg
The maximum weight of engines:	625 kg
	(2 x 312,5)
Fuel:	340 kg
Fresh water*:	40 kg
Septic tank:	40 kg
Maximum load allowed:	1190 kg
Weight of the boat without load*:	3020 kg
Weight with maximum load:	4210 kg

* Includes the weight of the engine 625 kg, of the basic equipment of 52 kg and of the batteries, 40 kg.

Any liquids in the tanks reduce the maximum load allowed in the boat.

WARNING!

Never exceed the maximum recommended load when loading your boat. Always load up the boat carefully and distribute the load properly so that the designed water-line is maintained (approximately on an even keel). Avoid placing heavy weight in a high position.

3.2.4 ENGINE AND PROPELLER

The maximum rated engine power for XO 270 RS Cabin OB is 2 x 184 kW (500 hp). When starting the engine, check that the cooling water flows properly and make sure that the gear is in the neutral position. If the engine starts when the gear is not in neutral, contact your nearest service centre.

3.2.5 DRAINING SYSTEMS

The XO boat is equipped with a self-draining system at the forward and rear decks, which includes three drain holes. (see Figure 2). The openings in both deck (1 and 2) are directly connected to the sea.

In addition to rainwater, the drain holes are intended to drain water ending up on the deck through splashing or from breaking waves. The drain holes must be open at all times and the holes regularly cleaned by removing any accumulated debris to prevent clogging.

The system is built so as to drain the water from the deck in normal use. Do not close the taps when using the boat or when the boat is attached to the dock.

NOTE!

The self-emptying open space is meant for the removal of such water that ends up on the deck through rain, splashing or from breaking waves. A part of the rain water as well as water condensation in the bilge may end up in the bilge.

Do not leave the boat unattended in the water for a long time. Observe the floating position of the boat and empty the bilge when necessary. Leaving the boat unattended in the water for a long time may cause damage.

WARNING!

Do not close the drain holes when using the boat.

***Optional equipment**

3.3 BILGE PUMPS AND DRAINAGE

The location of draining devices is shown in Figure 4. The bilge pumps are positioned as close to the bottom plate as is practically possible. Despite this, it is completely normal that a small amount of water remains in them bilge so that it cannot be discharged by the bilge pump.

XO 270 RS Cabin OB is equipped with an automatic, electric bilge pump. It discharges water accumulated in the bilge when the level sensor detects water. The automatic pump has a direct supply switch, so the pump can be used even if the main switch would be off. The pump can also be activated manually with the spring-loaded switch located on the switch panel.

The manual bilge pump is meant to be used in case the electric bilge pump is out of use. The pump can be operated by opening the lid and attaching the separate handle located next to the pump to the bilge pump.

Regularly check the electric bilge pump inlet and remove any debris.

NOTE!

Check the amount of bilge water by emptying the bilge manually with the spring-loaded switch located on the switch panel every time before use. It is recommended to have at least one bucket or bailer on board.

WARNING!

The bilge pump system is not designed to deal with a leak resulting from running aground or other damage. Do not close the drain holes when using the boat.

NOTE!

Regularly check the operation of the bilge pump. If you notice that the bilge pump does not operate properly, remove any debris from the pump inlet and contact your XO dealer if necessary.

3.4 STABILITY, BUOYANCY AND FLOTATION

The stability of your XO boat is excellent due to its hull design and weight distribution. However, remember that high breaking waves always represent a serious danger to stability. Also note that the stability of your boat will be compromised if any weight is placed in a high position.

Any changes in the positioning of different weights in the boat can have a significant impact on the stability, trim and performance of your boat. If you are planning such changes, please contact the boat manufacturer. The amount of bilge water should be kept at a minimum because freely moving water in the boat always impairs the boat's stability. Also note that stability can be diminished when towing or being towed.

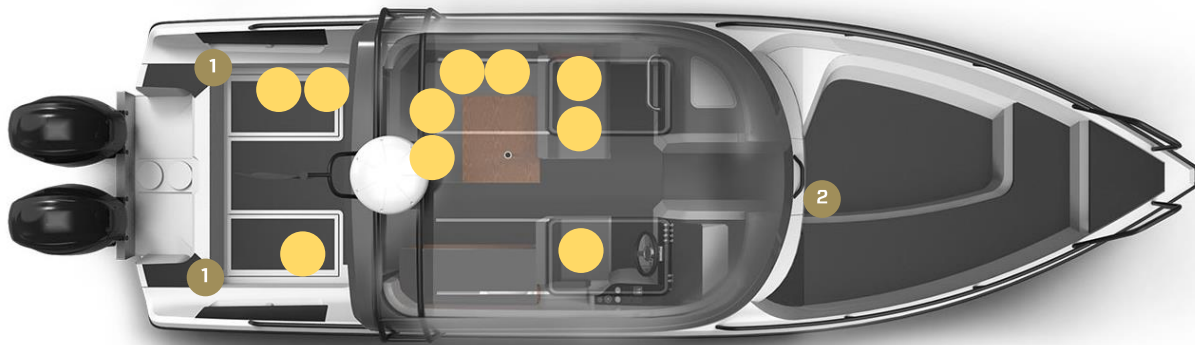


Figure 2. Seating, maximum numbers of persons allowed



Figure 3. Drain holes

***Optional equipment**



Figure 4. Bilge pumps



Brand: Attwood
 Model: Sahara 750S
 Efficiency: 63 l/min
 Function: Automatically and manual



Brand: Whale
 Modell: Urchin PB 9013 25-38
 Efficiency: 45 l/min
 (Depending on pumping speed)
 Function: Manual

4 MINIMIZING RISK OF FIRE AND EXPLOSION

4.1 ENGINES AND FUEL SYSTEMS

The XO 270 RS Cabin OB is equipped with two fixed fuel tanks, which are located under the aft deck. Shut down the engine before refuelling. Do not smoke or use a naked flame. Do not use any electrical devices.

The fuel fillers are located under the STB side hatch of the aft deck. To prevent fuel from getting in the bilge in case of overflow, lift the spare fuel tank out of the boat for refuelling. When you refuel in a fuel station, do not use a plastic funnel that will prevent discharge of static electricity between the pump nozzles and fill fitting.

After filling the tank (for the tank capacity, see Appendix 1 'Technical specifications'), check that no fuel has leaked into the bilge or engine compartment, and immediately remove any spilled fuel. You can visually check the condition of the fuel hoses through the service hatch.

Do not keep spare fuel canisters in an unventilated space or have them loose in the boat, and do not keep any equipment containing fuel in a place that is not specifically designed for it. At least once a year, visually check the condition of the hoses through the service hatch.

4.2 FIRE-FIGHTING AND PREVENTION

It is recommended that the owner / user of the boat takes care of that there is easy access to a fire bucket with a line attached to it in the boat. Make sure that the fire extinguishing equipment is easily accessible also when the boat is loaded.

Inform all members of the crew are aware of the location and operation of the fire extinguishing equipment. Keep the bilge clear of fuel and check the fuel system for leaks regularly. The smell of fuel is a definite sign of leaking fuel. In case your boat is equipped with a heater, please refer to the heater manufacturer's instructions for its safety instructions.

NOTE!

Never

- obstruct access to the safety equipment, fire extinguisher, fuel valves or main switch
- block any ventilation openings as they are designed to vent out any fuel vapor.

4.2.1 FIRE EXTINGUISHER

Whenever the XO 270 RS Cabin OB is used, it must be equipped with fire extinguishers with a minimum fire rating of 8A 68B. The minimum fire rating for an individual fire extinguisher is 5A 34B. A hand-held fire extinguisher is located in the front section of the port seat console, on the left-hand side of the storage compartment, as shown in Figure 5. You must have the hand-held fire extinguishers inspected regularly at specified intervals, depending on the legislation in your country.

Contact the local fire authorities for the inspection policy in your country. If you are unsure of the inspection policy in your country, have your hand-held fire extinguishers inspected once a year.



Figure 5. Location of the fire extinguisher

NOTE!

Also, never

- make changes to your boat's electrical or fuel system, or allow an unqualified person to make changes to any system on the boat
- fill the fuel tank or handle fuel when the engine is running smoke or use a naked flame when handling fuel
- keep fuel in a space that is not designed for such purpose. If the boat is not equipped with a heater, a spare fuel tank can be stored in place of the heater's tank.
- leave the boat unattended when a cooker or heater is in use.

The manufacturing date of a hand-held fire extinguisher is indicated on a label attached to the fire extinguisher. Fire extinguishers that are more than ten years old will not be approved unless the pressure vessel is pressure tested again. When replacing a hand-held fire extinguisher, it must be replaced with an extinguisher with an extinguishing capacity that is at least the same as the old one.

5 ELECTRICAL SYSTEM

5.1 12 V DC SYSTEM

Your craft is equipped with the 12V electrical direct current (DC) system. The 12-Volt DC-electrical system consists of engine driven alternators, batteries and equipment. The power supply happens from charger or alternator via diodes for batteries. Most equipment of the craft uses the 12 V system. 12V equipment is working only when a main switch and a switch in the Main switch panel is switched on. Damaged equipment must be maintained before taking back to use.

The boat's wiring diagram is shown in Appendix 4. The main switch is located on the starboard side, behind the helm station. When the circuit is closed, the various devices can be operated with the switch panel at the helm station.

The electrical system is pre-fitted for adding various kinds of optional equipment, and is fully fitted for adding a radio/CD player and

WARNING!

Do not alter the electrical system of the boat or any related diagrams; all changes and maintenance must be taken care of by a professional qualified technician specialized in marine electrical systems.

two speakers. The boat is also partially fitted for adding a fuel-burning heater.

WARNING!

Never switch off the current when the engine is running, because this may cause damage to the alternator.

WARNING!

Never leave the craft unattended with the electrical system energized, except automatic bilge pump, fire protection, and alarm circuits.

WARNING!

Never use the hull for earthing. Both the negative and positive sides of all electrical installations must be insulated from the hull.

WARNING!

Never do any reparations to the electric circuits when they are connected.

5.2 BATTERIES

As standard equipment your craft is equipped with two batteries: Start battery (1) and Service battery (2).

The recommended battery capacity in the boat is 2 x 100 Ah.

The location of the batteries are under floor of the storage in the Port side of the aft deck. Remove the battery from the craft for winter storage. When removing the battery, detach the negative pole first.



Figure 6. Batteries

5.3 FUSES

The fuses of the electric circuits are located to the main switch panel at the right side of the driver (see figure 7). XO boats include so called automatic fuses that bound off in case of overload. They can be reconnected by pressing the knob back down.

There is one excess electrical circuit with a fuse in the system (Aux

(10A)) (F10 in the /electric diagram), and optional equipment can later be attached to this. The wires of the circuit can be found in the switch panel. Do not change fuses to greater currents, and do not install such components that exceed the gross ampere figure on the circuit.

WARNING!

Before connecting an electric circuit make sure that the circuit is not damaged and that there will be no short circuit or a fire caused by possible damages in the electric circuit. Any damaged equipment must be maintained or changed before they are again taken into use.

WARNING!

When removing, connecting or loading batteries make sure there are no flammable liquids or materials nearby.

5.4 DIRECT SUPPLY SWITCHES

Some of the boat's devices are supplied with direct supply switches. The switches are presented in figure 7. Direct supply switches are intended for such equipment that need current when main switches are turned off.

The switches (1-4) are equipped with an automatic fuse and power switch features. The fuses 5-7 are not equipped with a power switch feature. Switches 1-4 can be turned off, if the devices that get their power from through those switches are not in operation. Fuses 5-7 are meant for devices that constantly need power, so they are not allowed to be switched off.

WARNING!

Turning the direct supply switch off too early may cause the device (e.g. heater) to break or catch fire, because the devices have a ventilation feature that works even if the device is otherwise switched off. Make sure the device is cooled down before turning it off completely. For more information, see the manual of the device in question.

NOTE!

Use the AUX circuit if you are installing optional equipment to the boat. Connect the device to both power supply as well as the negative wire. Never use the hull for earthing.

When leaving the boat for a longer time, turn off the main switch. Detach the battery from the system when doing electrical installation. When detaching or attaching batteries, be careful not to touch the aluminum parts of the boat or both poles of the battery simultaneously with a metal tool.

Charge the batteries only with either the engine, shore power charger* or a battery charger. Charging with too big current may cause danger of explosion. Make sure the battery space is adequately ventilated. The hydrogen that is released while charging the battery may explode if the ventilation is prevented.



Main switch panel

Direct supply switches

- 1 Fresh water pump*
- 2 Septic crusher
- 3 Extra
- 4 Refrigerator
- 5 Heater*
- 6 Bilge pump
- 7 Radio memory

- A Septic crusher switch
- B Start battery main switch
- C Service battery main switch

Fuses

- 8 Headlights
- 9 Horn / windscreen washer
- 10 Wiper STB
- 11 Wiper Port
- 12 Map light
- 13 Extra
- 14 Cabin lights
- 15 Deck lights
- 16 Search light*/bow light
- 17 Extra
- 18 CD player
- 19 12 V outputs
- 20 Trim tabs
- 21 Navigate equipment
- 22 VHF*

Figure 7. Main switch panel

5.5 MAIN SWITCHES

Main switches control the different power circuits in the craft. When the power circuit is connected on, the switch background colour is green and marking ON visible and when the circuit is connected off, the switch background colour is red and marking OFF visible.

Power supply for engines is switched on by turning the Engine switch (B) to ON position. Power supply for equipment of the craft is switched on by turning the Aux switch (C) to ON position.

When leaving the craft for a longer period of time, please switch off the power from the main switches but, if needed, leave direct supply switched on.

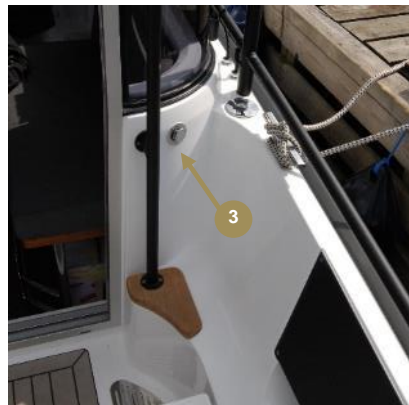
5.6 SHORE POWER

If the craft is equipped with a shore power system* it is powered by direct coupling to a shore based main supply. Shore power system use 230 V current, so it is possible to use normal mains current devices through the sockets. Shore power can be used when the shore power cable is connected to the shore power plug (3), placed next to the cockpit door.

Shore power main fuse (1) is located in the STB side storage box in the aft deck. Next to the fuse is located shore power charger (2). Check the operation of the fuse monthly. Shore power cable plug (3) is located in the engine room. The location of the components is presented in Figure 8. The following equipment requires 230 V voltage: shore power battery charger and three sockets.



Figure 8. Shore power system



5.7 GENERAL INFORMATION ABOUT THE ELECTRICAL SYSTEM

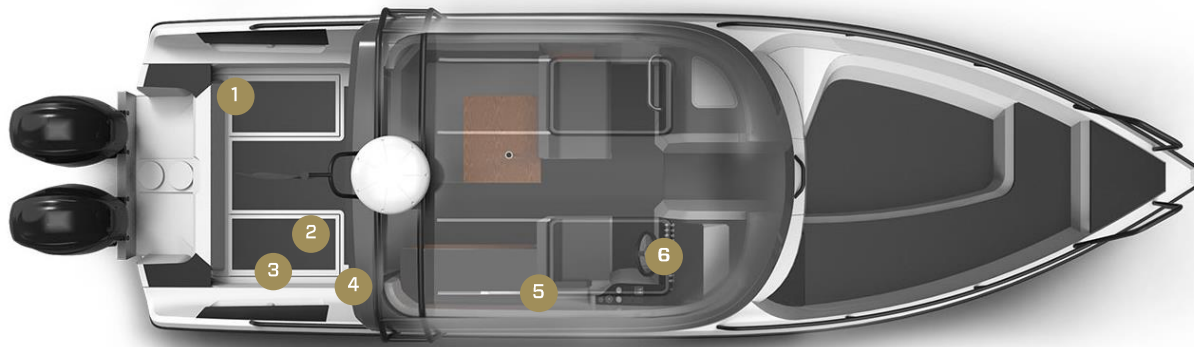


Figure 9. Electrical system

- 1 Batteries
- 2 Shore power charger*
- 3 Shore power main fuse and 2 x 230 V socket*
- 4 Plug for shore power cable*
- 5 Main switch, 12 V socket and 230 V socket*
- 6 Driver's console

WARNING!

Do not leave the shore power cable hanging down in the water. The cable may form an electric field in the water, and thus cause serious injury or death to any swimmers nearby.

6 BOAT HANDLING

6.1 HANDLING CHARACTERISTICS

6.1.1 DRIVING AT HIGH SPEED

Do not use the boat if it has an engine with a higher power rating than that indicated on the builder's plate.

Use the engine's electro-hydraulic power trim feature as follows:

When you are lifting the boat to plane, adjust the trim to the 'bow down' position. Once the boat is on plane and if the waves are small, lift the bow until the boat starts to porpoise, the propeller loses grip or the engine reaches the upper limit of its normal adjustment range. Then lower the bow from this position slightly so that the ride feels stable. You can use the speed log to optimise the trim.

When running into a head sea, lower the bow to make the run smoother. In a following sea and a very high head sea, lift the bow slightly to prevent it from diving in. Do not drive the boat at high speed when the trim is negative, i.e. when the bow is low, because the boat can heel and become unstable to steer. To adjust the trim, also refer to the engine manufacturer's instructions.

***Optional equipment**

6.2 CONTROLLERS

The controllers are situated so that the driver can easily manage them from the steering console. Any further information on the devices can be found in other sections of this manual, as well as from the manuals of the devices.

The container of the windscreen washing liquid is in the front wall of the engine room.

WARNING!

Waves impair the handling of the boat and can cause it to heel. Take this into account and reduce speed when waves become higher.

WARNING!

If you drive at high speed, adjust the trim carefully as it will radically change the behavior of the boat. Do not drive with the bow too low because the boat can suddenly turn. Do not drive the boat at high speed when the trim is negative (bow low). The boat can heel or become unstable in turns.

WARNING!

Handling is impaired at speeds exceeding 40 knots. Rapid turns can lead to loss of control. Slow down before sharp turns in either direction. Avoid rapid movements while driving at high speed. Do not drive at full speed if traffic on the waterway is high or visibility is restricted.



- 1 Switch panel
- 2 Chart plotter
- 3 Compass
- 4 Maplight
- 5 Engine control screen**
- 6 RPM gauge**
- 7 Switch panel
- 8 Trim tabs control panel
- 9 Bow thruster control panel
- 10 Engine starting panel**
- 11 Engine remotecontrol**
- 12 Engine gauges**
- 13 Heater control panel*
- 14 230 V socket
- 15 12 V output
- 16 Main switch panel

* Optional equipment

** Depending on manufacturer of the engine



6.2.1 SWITCH PANEL



Figure 11. Switch panel

- | | |
|-------------------------|------------------------|
| 1 Horn | 6 STB windscreen wiper |
| 2 Driving light | 7 Windscreen washer |
| 3 Deck light | 8 Bilgepump manual use |
| 4 Search light* | 9 Aux |
| 5 Port windscreen wiper | |

6.2.2 NAVIGATION

Learn and obey the rules of navigation on waterways, and also familiarize yourself with the rules known as COLREGs (International Regulations for Preventing Collisions at Sea) that you must follow at all times. According to the rules, every vessel must maintain a proper

look-out and obey the give-way provisions at all times.

Navigate carefully and use new or updated nautical charts. Always adjust your speed in relation to the prevailing conditions and environment.

There must always be a compass in the boat, as well as an up-to-date chart, even if the boat is navigated with a GPS chart plotter for example. GPS supports navigation, but it should not be used as primary means of navigation. The commander of the boat should always master basic navigation skills at least.

Pay attention to the following:

- Waves (also consult your passengers on their opinion of a comfortable speed)
- Your own wake (highest when rising to plane and lowest at displacement speed, i.e. below 10 knots).
- Always observe no wake zones. Slow down to reduce your wake to be courteous and also for the safety of yourself and others in the area.
- Visibility (islands, fog, rain, blinding sun)
- Knowledge of the route (time required for navigation)
- Narrowness of the route (other traffic, noise and impact of wakes on shore)
- Space required for stopping and taking evasive action.

***Optional equipment**

6.2.3 VISIBILITY FROM THE STEERING POSITION

Driving in beautiful and calm weather is easy once you ensure proper visibility which also complies with the rules of COLREG. Always ensure that visibility from the steering position is as good as possible:

- Position the passengers so that they do not impair the helmsman's visibility
- Do not drive continuously at planning threshold speed at which high bow rise impairs visibility
- Adjust the engine power trim and possible trim tabs to set the boat position so that the rising bow does not impair visibility
- Remember to keep a good lookout astern as well, especially on fairways in case of approaching ships.
- Use appropriate navigation lights after dark and in limited visibility (fog, heavy rain).

6.3 SAFE OPERATION – OTHER RECOMMENDATIONS AND INSTRUCTIONS

6.3.1 PROTECTION FROM FALLING OVERBOARD AND MEANS OF REBOARDING

Your boat's working decks are indicated in Figure 11 in orange. Do not sit, stand or stay on any other section of the boat when moving. It is not recommended to move about in the forward or the rear of the deck while driving.

Before you get underway, make sure that the aft rails are in the locked position. If someone falls overboard, the easiest

way to reboard is via the bathing/rescue ladder on the stern. A person in the water can also deploy the ladder (1). Keep the gates at the open space closed while driving.

6.3.2 SECURING LOOSE EQUIPMENT

Secure all heavy equipment (for example, anchors) before getting underway. Pay attention to lightweight items as well because they can be easily taken away by wind. Keep all hatches closed when underway. Do not let loose equipment block the drain holes.

DANGER!

A rotating propeller can be lethal for a swimmer or person who has fallen overboard. Use the dead man's switch and shut down the engine when a swimmer or water skier climbs on board.

WARNING!

Do not seat in the front part seats if boat is moving very fast.



Figure 12. Working decks

6.4 ANCHORING, MOORING AND TOWING

Always moor your boat carefully, even in sheltered places, because conditions can change rapidly. The mooring lines should be equipped with appropriate absorbers to dampen shocks. For the location of fastening points, see Figure 12.

Do not use other boat components for fastening, towing or anchoring. Use sufficiently large fenders to protect the boat from chafing. The eye on the stem is only designed for docking on a slipway or for fastening the boat to a trailer. It is not to be subjected to lateral forces present when, for example, the boat is secured to a dock.

The owner/user of the boat is responsible for ensuring that the mooring, towing and anchoring lines, as well as the anchors and anchor chains are appropriate for the intended use of the boat, and

that the tensile strength of the lines and chains does not exceed 80%

of that of the corresponding fastening points. However, wear and tear of the lines and knots weakening the lines must be taken into account. If you tow the boat, note that the strength ratings for the front cleats differ from those of the aft and centre cleats.

If you are going to beach the boat at an excursion harbour or similar natural harbour, make sure that the depth of the water is sufficient and **DROP YOUR ANCHOR AT A SUFFICIENT DISTANCE FROM THE SHORE**. A fair holding power is achieved if you pay out anchor rode so that its length is 4 to 5 times the depth of the water at the point where you dropped the anchor. The grip is increased the more anchor rode you deploy. The anchor holding power is also significantly increased if the first 3 to 5 metres of the anchor rode is weighted line or chain.

When you moor your boat, bear in mind the wind-direction changes, rise and fall of water level, wakes, etc. Additional instructions can be provided by your insurance company, for example. If you tow another boat or if your boat is being towed, always drive slowly and use a floating tow line that is sufficiently strong.

WARNING!

Do not try to stop the boat by hand or place your hand or leg between your boat and a dock, shore or another boat. Practice docking and beaching in good conditions and remember to apply the engine power in a gentle but determined manner.

Start towing carefully, avoid sudden jerks and do not overload the engine. Make sure that the tow line cannot get caught in the propeller. If the boat you are towing is of the displacement hull type, never exceed its hull speed.

If you tow a small dinghy, adjust the length of the tow line so that the dinghy rides downhill on your wake. However, you should pull the dinghy close to the transom in narrow passages and on high waves to minimize wiggling.

Carefully secure all equipment in the dinghy in case it capsizes. Cover the dinghy if you tow it on waves in open water to prevent it from being filled by splashing water. If you tow another boat or if your boat is being towed, attach the tow line to the fastening points shown in Figure 12. Attach the tow line so that it can be detached under load.

The tensile strength of the lines or chains should normally not

exceed the tensile strength of the fastening point in question.

Always attach the tow line so that it can be detached under load.

The strength rating for the front cleat in towing and anchoring is 26 kN. For mooring purposes, the forward force rating for the front and centre cleats is 21 kN, and the rearward force rating for the aft cleat is 18 kN.

WARNING!

The tow line is subject to high tension. If the line breaks, the loose end could cause death due to high speed. Always use a line that is sufficiently thick, and never stand in line with the tow line.

NOTE!

The tensile strength of the lines or chains should normally not exceed the strength of the fastening point in question.

Always attach the tow line so that it can be detached under load.

When towing another boat or being towed, always drive slowly. If the boat you are towing is of the displacement hull type, never exceed its hull speed.

6.5 TRAILERING

Before lifting your XO boat onto the trailer, make sure that the trailer is suitable for your boat: that there are a sufficient number of supports to distribute the weight properly without excessive point loads, and the capacity and dimensions of the trailer are sufficient to carry the boat and its engine, equipment, battery, boating accessories and fuel on board.

Carefully familiarize yourself with the national road traffic regulations on towing a trailer and associated license requirements. Also check that the towing capacity of your vehicle is sufficient for the intended combination. Before loading the boat on the trailer, remove any unnecessary weight from the boat and drain the bilge water. Adjust the side supports of the trailer so that the most weight of the boat rests on the keel supports and the side supports only offer lateral support.

Use only the eye on the stern to load the boat on the trailer because the other fastening points are not strong enough to withstand the weight of the boat in loading operations. Fasten the boat securely to the trailer before trailering on the road. Protect the boat by placing suitable padding between the tie-down straps and the boat if necessary. Refer to the engine manual for any instructions on trailering.

In addition, pay attention to any equipment and accessories in the boat during trailering. Make sure you secure all loose items in the boat. Do not use a hood, canopy, tonneau cover or other similar top or cover on the boat during trailering. These hoods

and covers can become detached at high speeds and damage the boat and cause a danger to traffic.

Moreover, a hood or other cover flapping in the wind during trailering can damage the boat surface. Keep the hood in its dedicated storage compartment during trailering, or remove the hood completely if necessary. Also make sure that the boat door is properly closed before trailering.

NOTE !

The trailer must be a little nose heavy. Make sure that the boat is securely fastened to the trailer, that it cannot move into any direction, and that the side supports provide an even support for the weight of the boat. The hull of the boat can be damaged if the boat swings against a single support during transport.

WARNING!

A boat trailer that does not have sufficient capacity or that is poorly maintained can become damaged and cause a danger on the road. Make sure that the trailer capacity is sufficient to also carry the weight of the engine, fuel and equipment.

***Optional equipment**

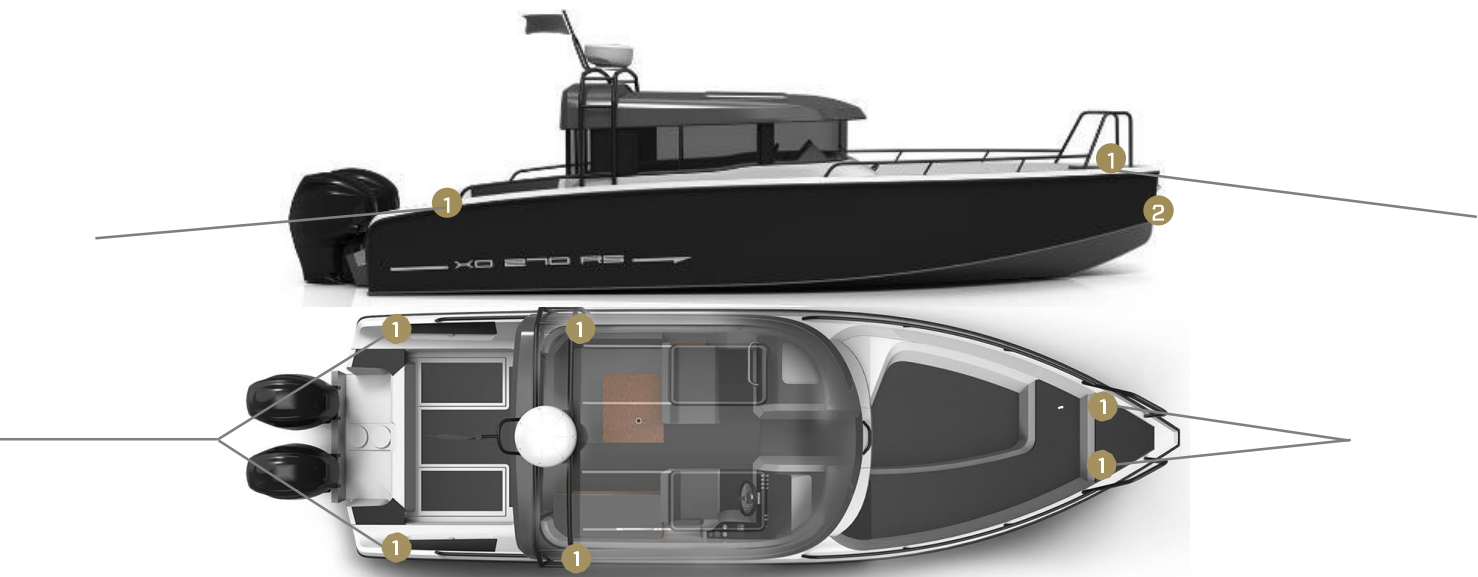


Figure 13. Towing

NOTE!

The middle cleats are meant only for fastening the boat from the dock and not from the boat. It's possible to fall from the boat when reaching for the middle cleats.

7 TECHNICAL SYSTEMS

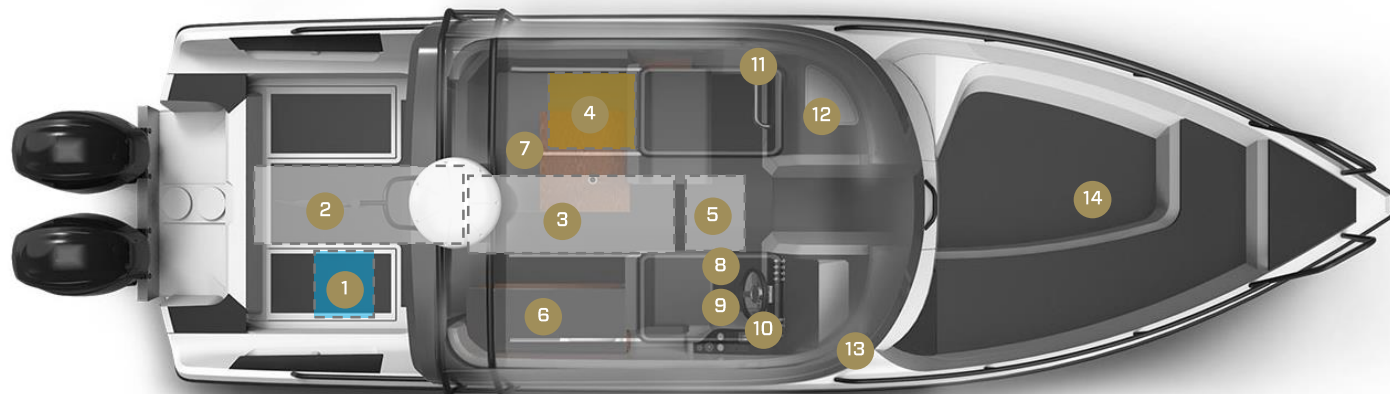


Figure 14. Location of equipment inside the boat

- | | | |
|----------------------------------|-----------------|------------------------|
| 1 Fresh water tank and pump* | 6 Pentry | 11 Radio and CD-player |
| 2 Aft fuel tank | 7 Cockpit table | 12 Toilet seat* |
| 3 Front fuel tank | 8 Refrigerator | 13 Heater* |
| 4 Septictank and septic crusher* | 9 Driver seat | 14 Bow thruster* |
| 5 Heater diesel tank* | 10 CE-plate | |

***Optional equipment**

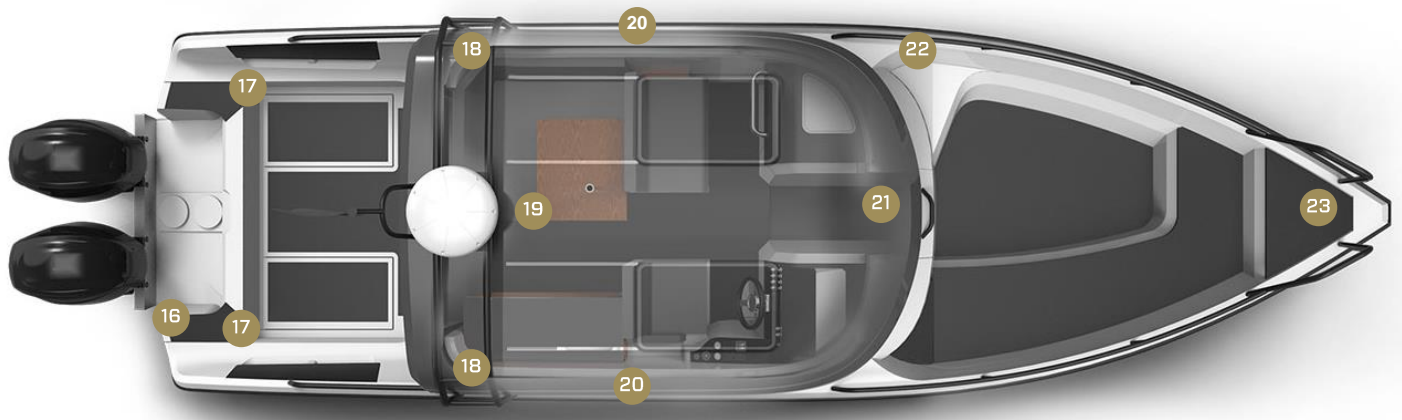


Figure 15. Location of equipment on the deck

- | | |
|----------------------------|----------------------------------|
| 16 Anchor winch* | 21 Extra lights* |
| 17 Aft deck gate* | 22 Septic tank suction drainage* |
| 18 Fuel tank filling inlet | 23 Bow anchor box |
| 19 Driving light | |
| 20 Side lights | |

7.1 WATER SYSTEM

The boat may be equipped with a fresh water system*. The fresh water system consists of a fresh water tank (1), and the taps of pentry* (6) and toilet. (see Figure 22).

The fresh water tank is filled directly into the tank. If the system is used, the fresh water pump must be switched on. The switch of the pump is located in the main switch panel. Make sure to check the filter of the pump at regular intervals.

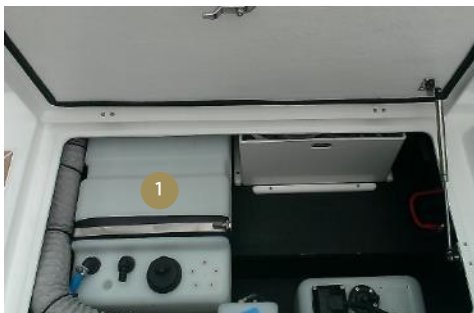


Figure 16. Fresh water system

NOTE !

The fresh water system must be thoroughly emptied for winter storage. It is not recommended to use any antifreeze products in the fresh water system.

7.2 FUEL SYSTEM

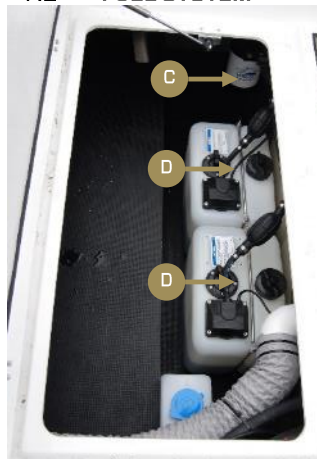
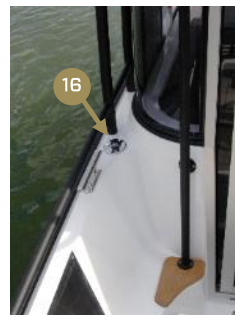


Figure 17. Fuel filter

The boat is equipped with two aluminium fuel tanks. The fuel system includes fittings, fuel tanks, an oil container (D) (in case it is a two-stroke boat) and a fuel filters (C). The filter and the oil containers are located under the floor hatch on the STB side of the aft deck. Check filter regular intervals. See more information from manufacturer's manual.



Filling fittings for fuel are located in the front corners of the rear deck. When fuelling the boat check the level of the fuel from the fuel indicator, so that the fuel wouldn't spill. Always check after fuelling whether any fuel has poured into the bilge.

The location of the tanks is shown in figure 14. The forward fuel tank can be reached through a hatch under the salon door. The tank at the aft can be reached through the hatch in the locker that is in the Port side of the open space. The fuel system of the engine is equipped with fuel taps. Always make sure that the taps are open when using the engine.

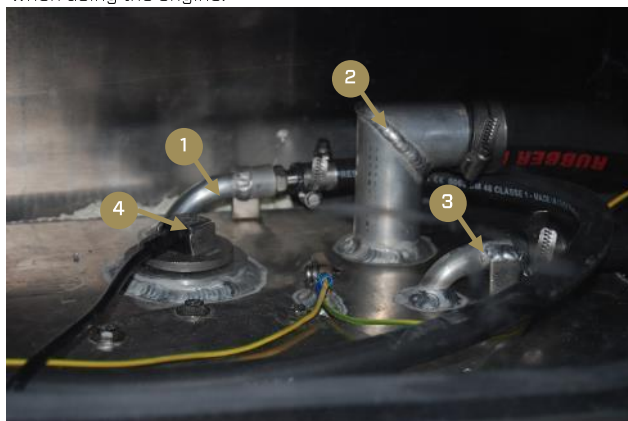


Figure 18. Fuel taps

- 1 Ventilation hose
- 2 Filling hose
- 3 Engine inlet hose
- 4 Fuel level sensor

Boats that are equipped with an outboard motor have a diesel tank for the heater. The tank is filled through a fitting in the Port side rear corner of the forward deck (22). The tank can be reached through the maintenance hatch of the toilet.



Figure 19. Diesel tank inlet

CAUTION!

Do not use wrong kind of fuel in the fuel system. Wrong fuel type may break the engine and the ignition system of the heater

7.3 SEPTIC SYSTEM

If there is a toilet seat in the boat, it means the boat has a septic system*, which includes a septic tank (7), septic crusher (7), sea water drainage tap and suction drainage seacock for septic tank (22). The septic tank and septic crusher are located under the salon floor.

For sea water drainage the sea water tap must be opened. The tap can be found behind the hatch in the legroom of the front seat passenger. Secondly, the switch for the septic crusher must be turned on and wait until the tank is empty. The switch is in the main switch panel. After the tank is emptied the sea water tap must be closed.

The septic tank can be drained by sucking the tank empty via the seacocks with the assistance of a draining pump on land. During the drainage the sea water tap must be closed. Remember to leave the draining pipe and the seacock in decent condition after drainage.



Figure 20. Septic tank suction fitting

CAUTION!

Draining the septic tank into seawater is against the law and good seamanship.

*Optional equipment

7.4 CABIN

The amount of equipment in the cabin depends on the number of the optional equipment acquired. If the boat is equipped with a pantry, there are a small gas cooker and a tap in the salon. Make sure that the cooker is cool before shutting the lid, and also that the lid is closed while driving.

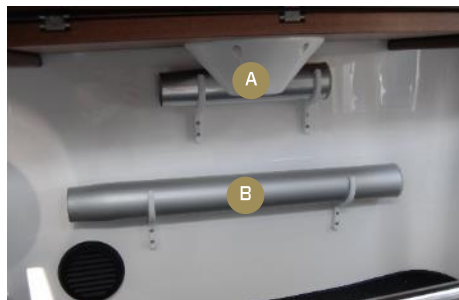


Figure 21. Table legs

The table legs of the cabin are under the pantry table. There are two separate legs for the table (6) to be used in the lower (A) and higher (B) position. The seat of the driver (8) has suspension and can be adjusted. The seat has adjustment possibilities for the suspension and range. The seat can also be turned around and thus vertically adjusted. For more information, refer to the manual of the seat.

There is a refrigerator (9) in the cabin. Its direct supply switch is in the main switch panel. Do not switch off the refrigerator before you are assured that it is cooled down. For further information please see the manual for the refrigerator.

On the left side of the front seat passenger is the radio / CD-player (11)*. Its USB input is on the right side of the radio. The radio has its own remote access panel (13) in the front cabin.



7.5 WC

A manual or electrical flush toilet seat is an optional device for the boat. Open the water tap for the toilet when flushing the toilet. The tap is behind the maintenance hatch on the front wall of the toilet. The tap must be closed after use.

The contents of the seat are drained into the septic tank. The pump for the electric flush is behind maintenance hatch in front of the toilet.

The toilet can be equipped with a sink that is connected to the sea.



Figure 22. WC

- A Toilet-seat
- B Service hatch
- C Switch of the electrical flush*
- D Septic tank gauge

7.6 BOW THRUSTER

Bow thruster (14) is located under the front deck and can be reached through the maintenance hatch (see Figure 23) The Service battery gives power to the bow thruster. The switches of the bow thruster are located in the control panel. Use the equipment only for short periods at a time, and don't exceed the maximum amount of four periods of use (30sec periods during 25 minutes). Wrong use may cause the bow thruster to overheat and short-circuit.



Figure 23. Bow thruster maintenance hatch

The main switch (Aux) is located in the Main switch panel. The main fuse of 200 Ah is located next to the bow thruster (see Figure 24). In case of overloading the fuse happens please contact professional boat service. It is not recommended to open the lid, because of the

danger of serious injury by electric shock. All batteries must be detached from the circuit before changing the fuse. For more information, see manufacturer's manual.



Figure 24. Bow thruster fuse

WARNING!

Use the bow thruster only short periods at a time. A long period of use may result in overheating and a risk of fire.

DANGER!

Do not open the maintenance hatch if the main switch Aux is turned on. Even when the power is turned off, it is not recommended to change the fuse of the bow thruster. An electric shock from the bow thruster may be fatal.

***Optional equipment**

7.7 ANCHOR WINCH

The boat can be equipped with an aft anchor winch. The switch of the winch is located in the control panel. The power switch is an Aux switch in the main switch panel. The Service battery gives power to the anchor winch and the 200 Ah fuse is located right next to the winch.

When using the anchor winch, always check that the winch is ready to be used and is allowed to move freely. Also make sure that it will not damage the boat when it is lowered. The anchor winch is to be fastened mechanically in to its place while driving (arrow picture 25). For more details, see the manufacturer's manual.



Figure 25. Anchor winch

DANGER!

Always fasten the anchor wing into its position while the boat is moving. If the anchor winch is detached while the boat is moving, it can cause substantial damage to the boat, its passengers as well as others.

DANGER!

Do not touch the anchor winch or its fuse, if the main switch Aux is switched on. Even if the power were switched off, it is not recommended to change the fuse of the winch. An electric shock caused by the anchor winch can be fatal.

7.8 HEATER

A heater* may be added to the boat as a piece of optional equipment.

Heater:	Webasto AT3900
Heating power:	1,5-3,5 kW
Number of nozzles:	3 (next to the cabin door, in the control panel and the front cabin)

Cabin heater main control (1) is located in the right side of the driver (see Figure 10). The heater uses the diesel fuse from diesel tank (see Figure 19). The heater is equipped with a direct supply switch. For more information see section Main switch panel. The heater is located in front of the toilet and can be reached by maintenance hatch (see arrow figure 27) of the storage department. For more information see the manufacturer's manual.



Figure 26. Heater



Figure 27. Location of the heater

WARNING!

To prevent the devices from breaking and fire, make sure you do not switch off the direct supply switch too early. The devices have a ventilation feature that operates even if the device is otherwise switched off. Make sure the device is properly cooled down before switching it off.



7.9 LIGHTS

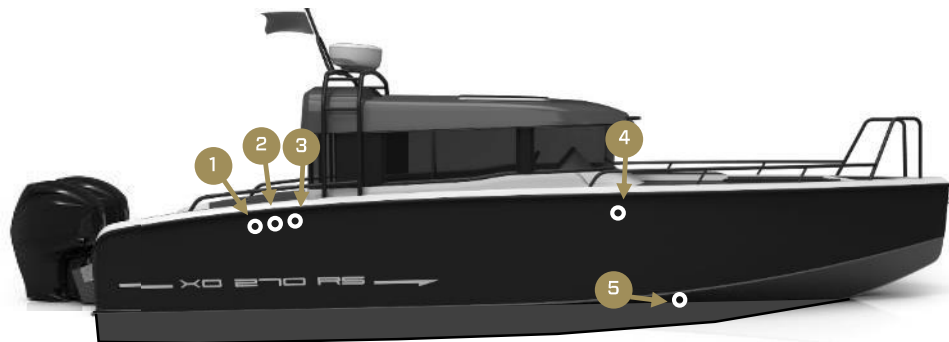


Figure 28. Lights of the boat

The boat is equipped with different kinds of lighting systems. There are lights inside the boat, with switches next to the doors and near openings.

The boat has anchor lights (2) and lights on the sides. When operating the boat in the dark, turn on anchor lights and sidelights. Check the condition and functioning of the light regularly. Extra lights (1) and a searchlight (3) can be added to the boat as optional equipment. The switches for the lights are located in the control panel.

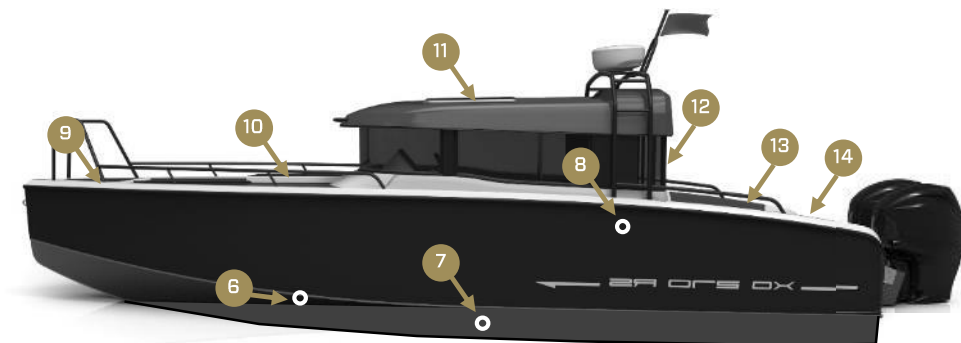
7.10 HATCHES AND SEA-COCKS



Sea-cocks

- 1 Manual bilge pump draining
- 2 Automatically bilge pump draining
- 3 Fuel tank ventilation
- 4 Heater exhaust*
- 5 Front deck STB side self-draining
- 6 Front deck Port side self-draining
- 7 Septic tank sea water output
- 8 Septic tank ventilation

* Optional equipment



Hatches

- 9 Bow anchor box
- 10 Deck hatch
- 11 Roof hatch
- 12 Cockpit door
- 13 Storage boxes
- 14 Maintenance hatch

There are several inlets through the boat that include taps for opening and closing the inlets. It is recommended to keep these closed if the boat is out of use for a long time, and to open them again when the boat is used again. The taps of the draining systems in the aft and fore decks must be open when the boat is in the water.

It's recommended to keep the windows, doors, deck hatches and vents shut while driving. However, on occasion and depending on the weather they can be kept open. In stormy weather, always keep deck hatches, storage room doors and openings closed to minimize the risk of water getting into the boat.

In certain conditions and speeds it is possible that water is sprayed inside through canopies, hatches or other openings, due to negative pressure or other effects. This can be prevented by closing the canopies, hatches or other openings.

WARNING!

The bow hatch must be closed while driving, because an open hatch may detach from its locking and damage the hatch and passengers aboard.

NOTE!

Avoid opening and fastening the hatch in case of big waves. A moving hatch or stairs can be dangerous.

***Optional equipment**

8 SERVICE, REPAIRS AND WINTER STORAGE

For information on your boat's maintenance, winter storage, service and repairs, please consult your local XO dealer. If you detect any major damage on the aluminium or surface finish, it should be repaired by an authorized XO dealer. In case of a problem with the engine or retrofitted equipment, please consult Always check the functioning of the most important equipment regularly. These include for example bilge pumps, headlights and the engine. The zinc anodes should be checked every year. The anodes are located in the badge and

NOTE!

If not carried out properly, many installation and modification operations can damage the structures of the boat or create a safety hazard. Please contact the manufacturer before doing any of the following: construct new earthing points or hatches, fasten or install new equipment on the boat, or mount other metal alloys to aluminum.

must be changed when they are more than 50% worn out.

NOTE!

If you are installing new equipment to the boat, make sure to use dielectric boards under the surface (the installing surface of the equipment or the socket of the screw) that is touching the finished aluminum surface.

8.1 INSTALLING OPTIONAL EQUIPMENT

XO 270 RS Cabin can be equipped with a range of optional electrical equipment for which the necessary circuits are already fitted and wires routed. Below is a description of the possible optional equipment and the location of appropriate wiring. For more detailed installation and operating instructions, refer to the instructions supplied by the equipment manufacturer.

8.2 RESPECT FOR THE ENVIRONMENT

Archipelagos and lakes are unique, and their conservation is a matter of honor for all boaters.

Do your best to avoid the following:

- Fuel or oil spills
- Disposing rubbish or waste into the water or on shore
- Discharging detergents or solvents into the water
- Loud noise both out on the water and in harbours

- Generating high wakes, especially in narrow passages and shallow waters.

Observe the local environmental legislation and regulations. Familiarize yourself with the international regulations on the prevention of marine pollution (MARPOL) and comply with these regulations as far as possible.

NOTE!

Please make sure that the detergents, surface finishing products or conserving agents are suitable for aluminum or other surface materials. Make sure to observe the instructions by the manufacturer of the chemicals in question.

APPENDIX 1 TECHNICAL SPECIFICATIONS

The boat is marked with a running serial number known as the CIN (Craft Identification Number). The CIN is marked on the hull, on the starboard side of the stern, on the outer surface of the transom beside the edge strip. You can record the CIN of your boat in the table below. When contacting the builder or a dealer, indicate the CIN and the boat type to make it easier to supply the correct spare parts.

Type identification:	XO270 Cabin 0 B
CIN:	
Engine make and model:	
Engine serial number:	
Hull material:	Marine aluminium AlMg4,5 / 5083

TECHNICAL INFORMATION

Main dimensions:

Overall length:	8,37m
Waterline length:	7,35m
Beam:	2,59m
Height above waterline:	2,75m
Draught:	0,95m

*Optional equipment

Weights:

Weight, without load:	3020 kg
Weight, fully loaded:	4210 kg
Manufacturer's maximum recommended load:	1190 kg
Maximum capacity on the fixed fuel tank:	450 l
CE Category:	C – Inshore

NOTE!

The specified tank capacity is not necessarily fully available, depending on the trim and load on board. The tank should always be kept at least 20% full.

Capacity:

Maximum recommended number of persons: 10 person

Performance:

Maximum rated engine power, kW (hp):	2 x 183 (500)
Speed at the max. rated power:	42 knots

Control cables:

Hydraulic steering hoses:	6,50m
Engine control cables:	6,50m

Additional load components:

Basic equipment:	52 kg
Contents of the fixed fuel tanks:	338 kg (450 l)
Life raft:	40 kg
Other load of equipment:	100 kg

Due to reasons associated with the production technology, the main dimensions and capacities may vary slightly. Please note that the specified tank capacity is not always available, depending on the trim and heel angle of the boat.

MANUFACTURER

XO-boats Oy
Pulittitie 18
00880 Helsinki
Suomi
Module used: B (EY-type examination)

NOTIFIED BODY

VTT Expert Services Oy
Identification number: 0537
P.O. Box 1001,
02044 VTT
Suomi

Description of the recreational craft

Boat make and model: XO 270 Cabin 0 B
Design category: C - inshore
Type examination certificate No:
Boat type: Open, monohull stern drive/outboard motor boat
Construction material: Aluminium alloys, fibre-reinforced plastic, PE-HD

The references to relevant harmonised standards and requirements are listed on the next page.

I declare that the recreational craft mentioned above complies with all applicable essential safety requirements in the way specified overleaf, and is in conformity with the type for which the above-mentioned EC type examination certificate has been issued.

XO Boats Oy

Henrik Thelen, TJ

Date of issue: 14.05.2014

***Optional equipment**

APPENDIX 2 GENERAL REQUIREMENTS

Principal data:	EN ISO 8666:2002
Craft identification:	ISO10087:1996/A1:2000
Builder's plate:	RCD annex I, 2.2, 2.5
Owner's manual:	EN ISO 10240:2004

Layout and equipment:

Man-overboard prevention:	EN ISO 15085:2003/ A1:2009
Life raft stowage:	RSG Guidelines
Escape:	EN ISO 9094-1:2003
Anchoring and towing:	EN ISO 15084:2003
Navigation lights:	1972 COLREG
Discharge prevention	-

Installations:

Engines and engine compartments:	EN ISO 11105:1997
Fuel system:	EN ISO 10088:2001, EN ISO 11105:1997
Electrical system:	EN ISO 10133:2000
Steering system:	EN ISO 10592:1994/A1:2000
Gas systems -	
Fire protection:	EN ISO 9094-1:2003

Dimensioning:

Construction:	EN ISO 12215-3:2002, EN ISO 12215-5:2008, EN ISO 12215-6:2008
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Hydrostatics:

Stability and freeboard:	EN ISO 12217:2013
Buoyancy and flotation:	EN ISO 12217:2013
Maximum load capacity:	EN ISO 14946:2001/AC 2005
Openings in the hull, deck and superstructure:	EN ISO 9093-2:2002, EN ISO 12216:2002
Flooding:	EN ISO 11812:2001, EN ISO 15083:2003, EN ISO 8849

Handling characteristics:

Flooding:	EN ISO 11812:2001, EN ISO 15083:2003, EN ISO 8849
Handling characteristics:	EN ISO 11592:2001
Visibility from the steering position:	EN ISO 11591:2000
Engine identification:	Engine CE marked
Noise emission levels:	Engine CE marked

APPENDIX 3 ENGINE INFORMATION

ENGINE 1

MAKE: _____

MODEL: _____

SERIAL NUMBER: _____

ENGINE 2

MAKE: _____

MODEL: _____

SERIAL NUMBER: _____

PROPELLERS

MAKE: _____

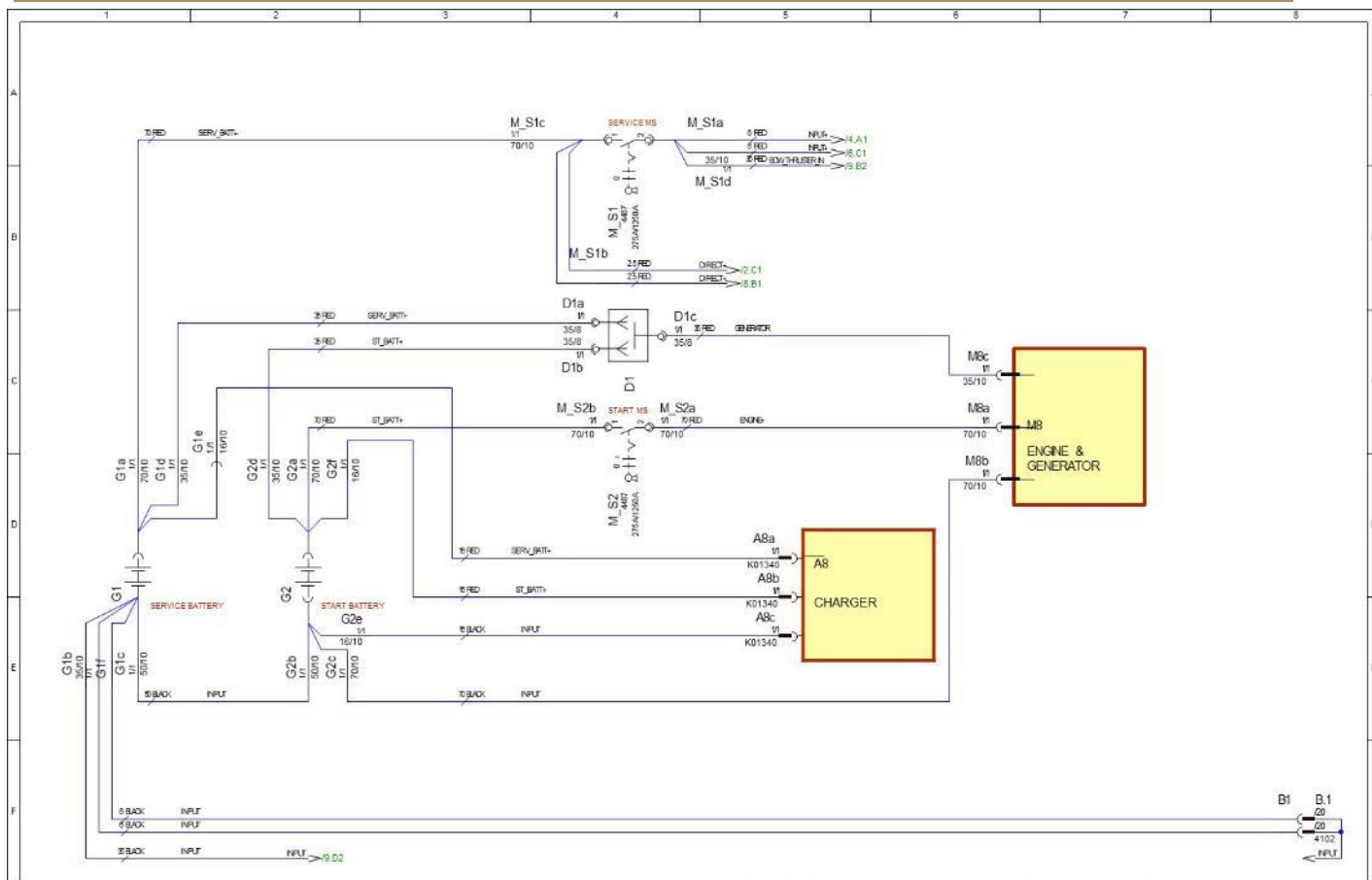
MODEL: _____

SERIAL NUMBER: _____



***Optional equipment**

APPENDIX 4 ELECTRICAL DIAGRAMS



11.11.2011 TUM BOW THRUSTER CABLES ADDED.

Date 20.1.2011

Drawing by RN



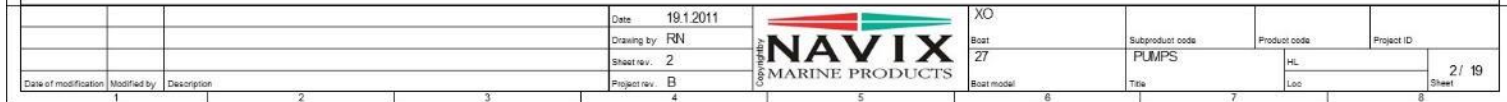
XO

Boat

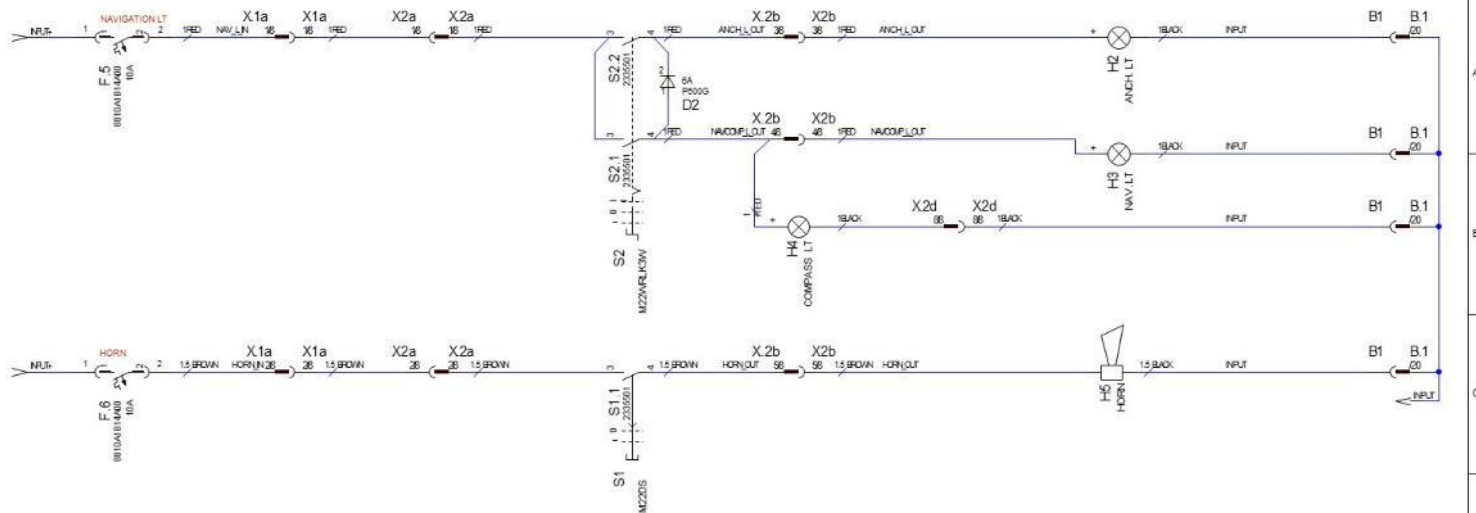
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Product code

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Date: 19.1.2011

Drawing by: RN

Sheet rev.: 2

Project rev.: B



XO

Boat

27

Boat model

Subproduct code

NAV. LT, HORN

Title

Product code

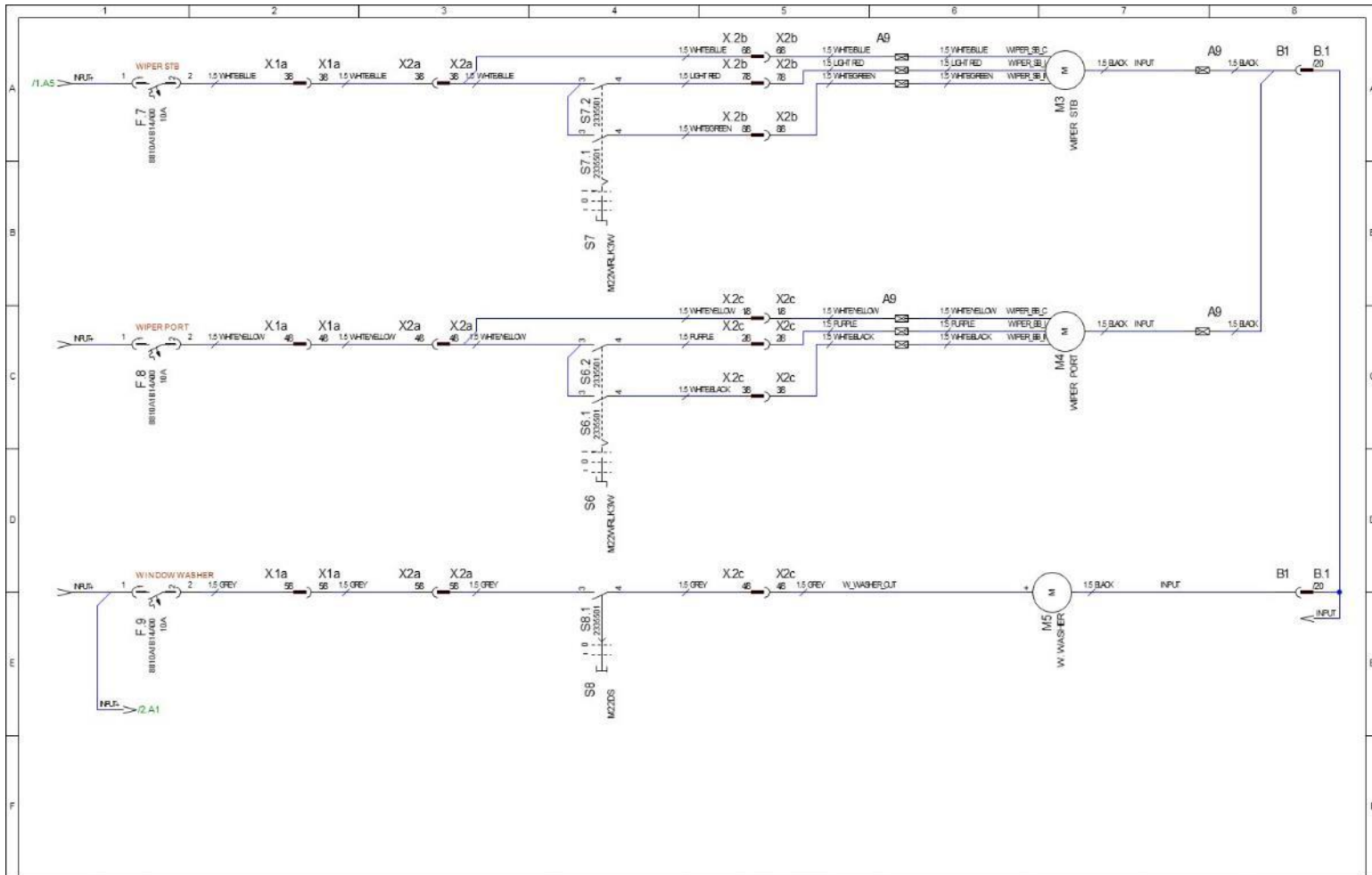
HL

Loc

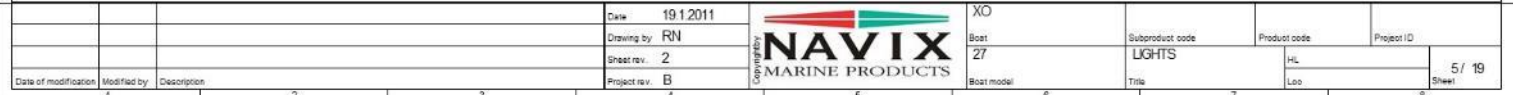
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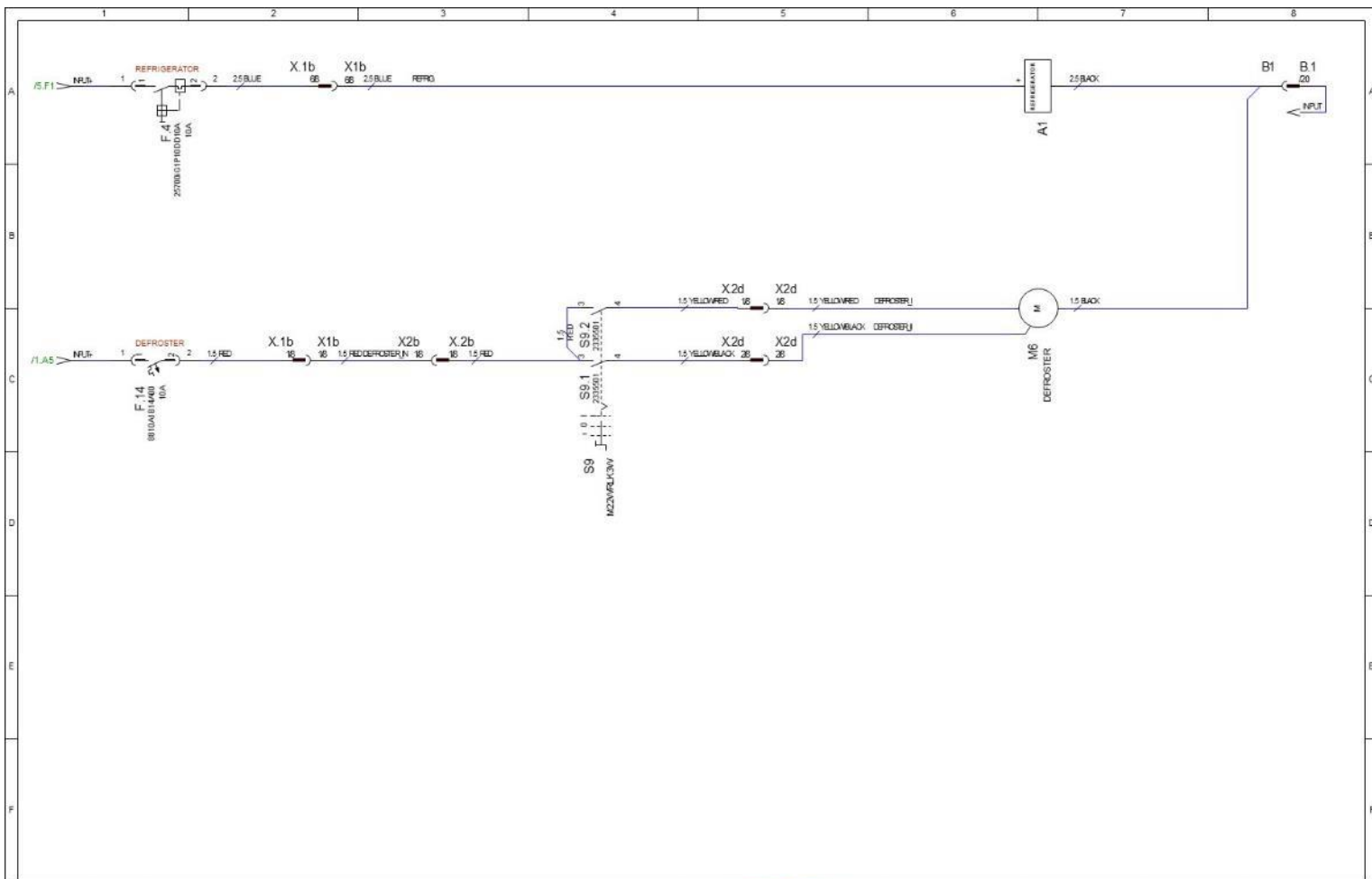
3/ 19


Sheet



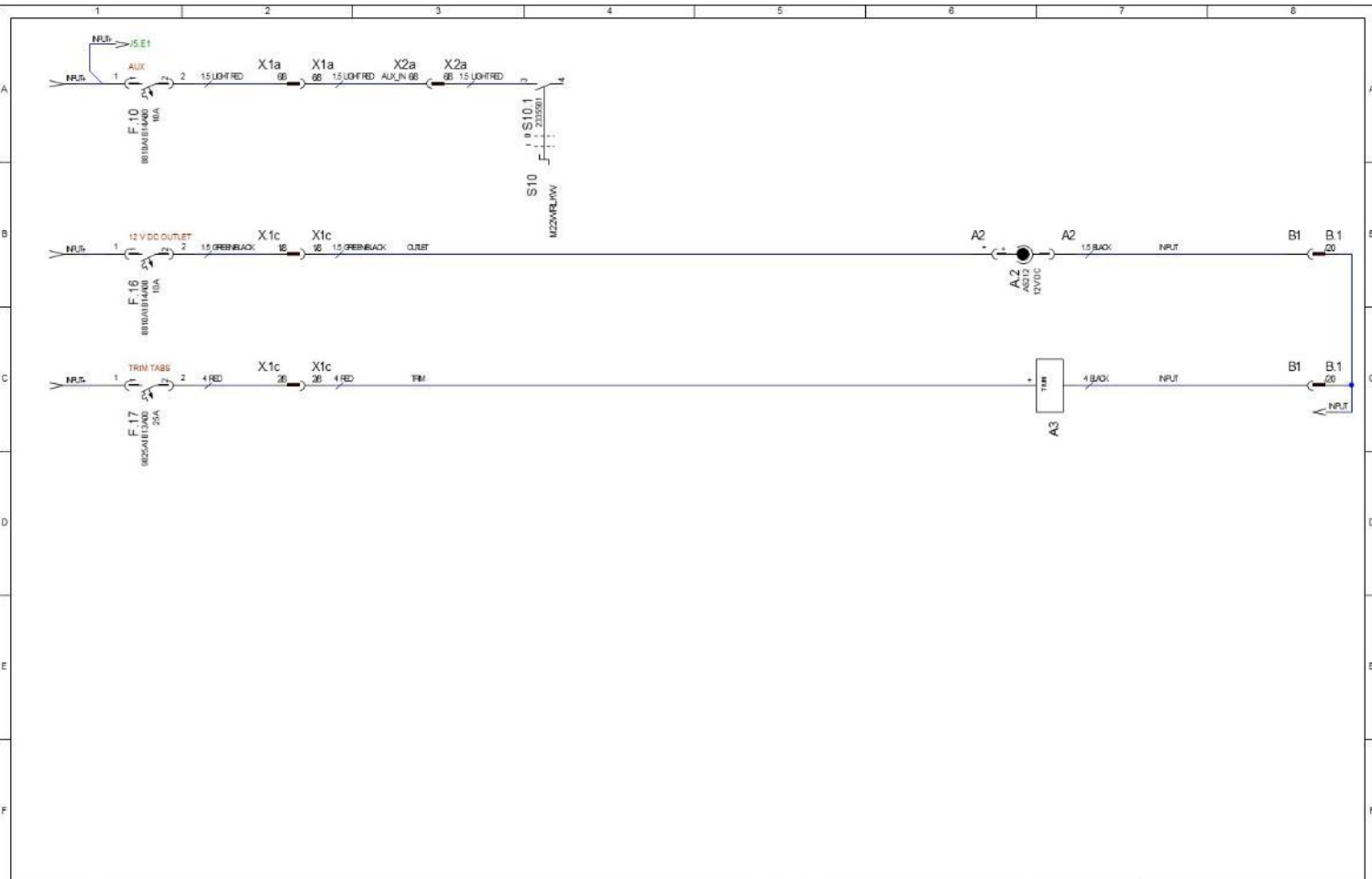
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			Drawing by	RN		Boat			Subproduct code	Product code	Project ID	
			Sheet rev.	2		27			WIPER, W. WASHER		HL	
			Project rev.	B		Boat model			Title	Loc	4 / 19	
Date of modification	Modified by	Description										




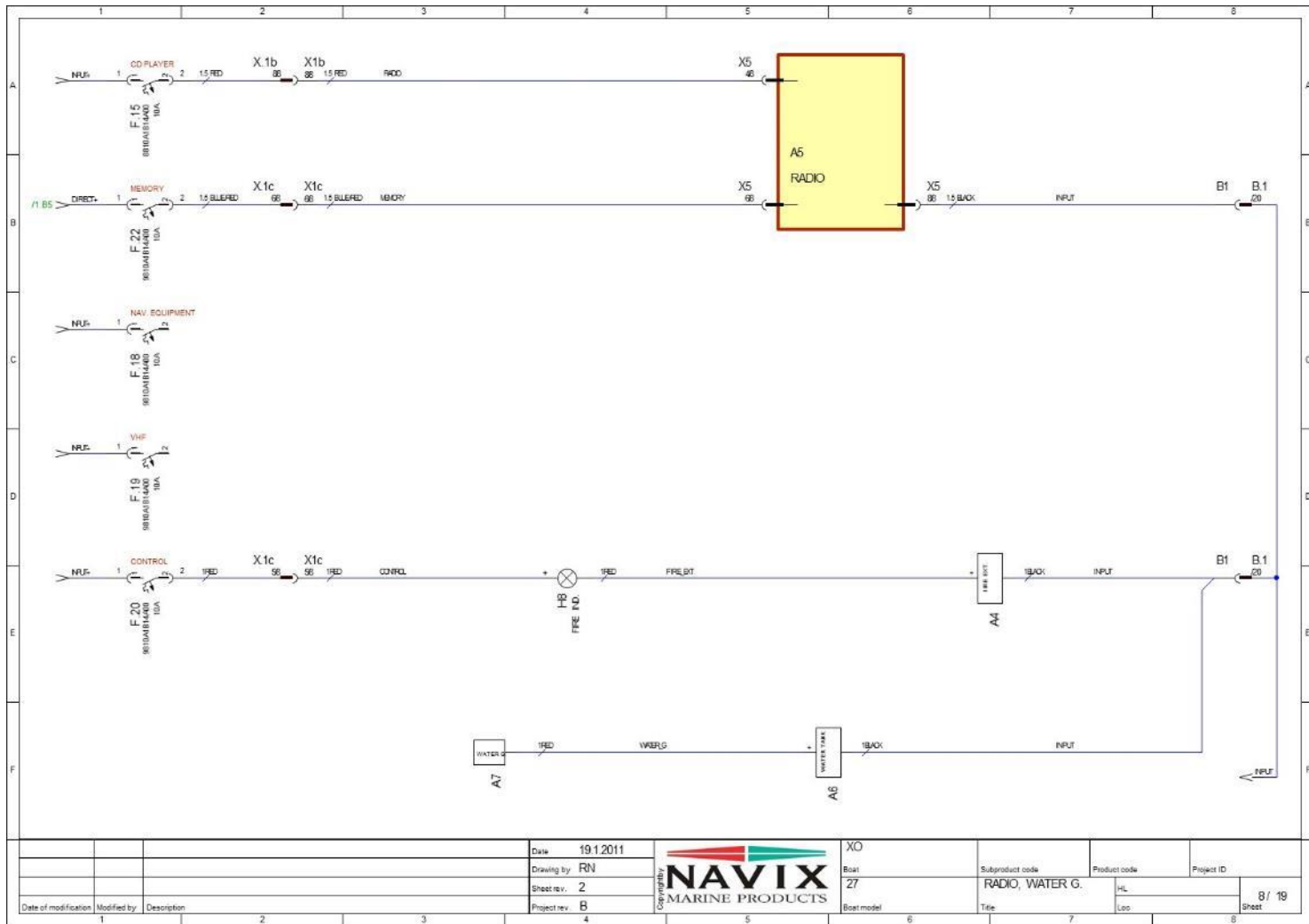


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			Drawing by	RN		Boat	27	Subproduct code		Product code		Project ID	
			Sheet rev.	2		DEFROSTER, REFR.		HL				6 / 19	
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title		Loc		Sheet	

Optional equipment



					Date	19.1.2011		XO				
					Drawing by	RN		Boat		Subproduct code	Product code	Project ID
					Sheet rev.	2		27		AUX, OUTLET, TRIM	HL	
					Project rev.	B						7 / 19
Date of modification	Modified by	Description						Boat model	Title	Loc	Sheet	
1		2	3	4	5	6	7	8				

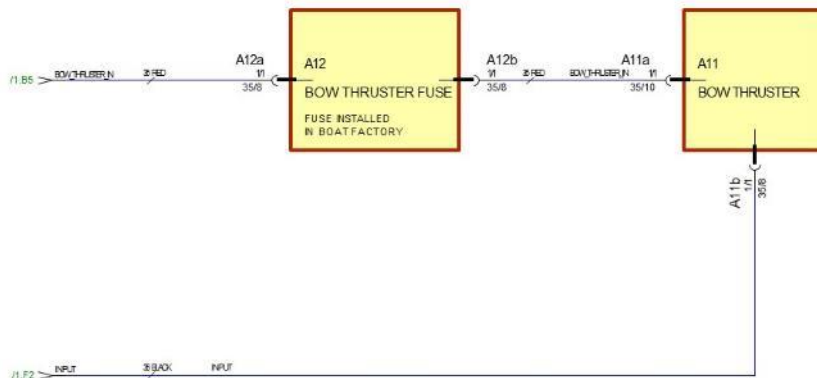



*Optional equipment



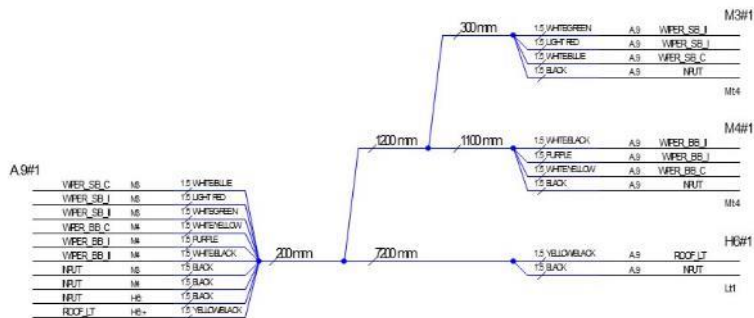
XO	Subproduct code	Product code	Project ID
Boat 27	RADIO, WATER G.	HL	8 / 19
Boat model	Title	Loc	Sheet

			Date	19.12.2011
			Drawing by	RN
			Sheet rev.	2
Date of modification	Modified by	Description	Project rev.	B
1		2	3	4



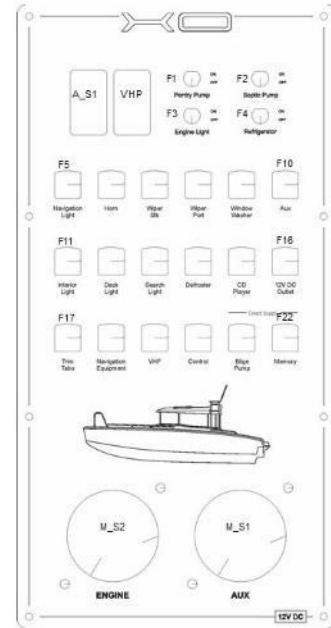
11.11.2011	TUM	INTRODUCTION PICTURE	Date	11.11.2011		XO					
			Drawing by	RN		Boat		Subproduct code	Product code	Project ID	
			Sheet rev.	1		27		BOWTHRUSTER CABLES			
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title	Loc		9 / 19
1		2		3	4	5	6	7	8		



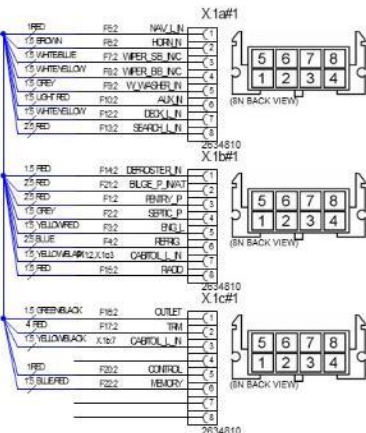


13.4.2011	RN	B2: CONNECTOR & PINS REMOVED	Date	21.1.2011	XO	Subproduct code	10979	Project ID	
			Drawing by	RN	Boat		Product code		
			Sheet rev.	2	27		ROOF HARNESS	HL	
Date of modification	Modified by	Description	Project rev.	B	Boat model	Title	Loc	11 / 19	Sheet
1		2	3	4	5	6	7	8	





***Optional equipment**



13.4.2011	RN	B2: CAB/TOIL L IN JUMP ADDED; A NEW PANEL
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Date	21.1.2011
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Drawing by RN

Sheet rev.

Project rev. B



	XO
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Boat

27

Boat model

10977

Subproduct code	1111 015
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MAIN SWITCH UNIT

10980

Product code	
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5

Project ID

14

Loc

13
Sheet

