



SOLLINER ·
Instruction Manual V7.0

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1. INTRODUCTION

Congratulations on becoming the owner of Solliner boat. We are honored that you have chosen the boat from Green Dream Boats shipyard. We hope that your state-of-the-art boat will satisfy your strictest requirements.

This Instruction Manual was developed to help you in safe and pleasant operation of your boat. It contains information about the boat, pieces of equipment mounted in the boat or supplied with the boat, and their operation. Read the Instruction Manual carefully and familiarize with the boat before you attempt any operation.

Your boat was designed and executed in accordance with requirements included in cl. 3.2 Stability and freeboard and in cl. 3.3 Buoyancy and flotation of Annex 1 to Directive 94/25/EC, relating to yachts and recreational vessels, amended by Directive 2003/44/EC of the European Parliament. The CE symbol means that boat quality during the production process met or excelled the requirements as formulated by International Standardization Organization (ISO).

This Owner Manual is not a course in safe sailing or honing of sailing skills. If this is your first boat, or if you switched to the type of boat that you are not familiar with, make sure for your own comfort and safety that you are experienced enough to control and handle the boat before "taking command". Seek information on local sailing schools or competent instructors from your boat dealer or nearby yacht club.

Make sure that forecasted wind strength and state of the water region is suitable for the design class of your boat, and that you and your crew are capable of sailing the boat under such circumstances. Permitting weather conditions for the boat are described in this Instruction Manual.

This Instruction Manual is not a detailed manual of boat maintenance and detection of defects. Describes routine boat operation activities. In case of any difficulties, please contact the boat manufacturer or his agent. Maintenance, repairs or modifications should be always sublet to trained and

qualified personnel. Modifications that impact boat safety should be assessed and executed by competent specialists.

Boat manufacturer shall not be liable for any unauthorized modifications. Also, pre-season and post-season inspections should be sublet to a competent specialist.

The license or certificate to sail the boat may be required under national regulations.

Always maintain the boat in adequate condition and consider its aggravation due to ageing, intense wear or improper handling of the boat.

Every boat, regardless of how strong it is, may be seriously damaged when not used properly. Always adjust speed and direction of the boat to conditions on water.

Make sure that there is suitable, not expired safety equipment (life jackets, life buoys, smoke buoy, signal rockets, fire extinguisher) onboard. Deck crew should be familiar with use of all safety equipment and with emergency maneuvers (man overboard, towing, etc.)

All persons on board the boat should be wearing suitable life jackets (life vests/life belts). Note that in some countries there is a legal requirement of constantly wearing the lifejacket.

Make sure that each person navigating your boat is familiar with its Instruction Manual.

Store this Instruction Manual in a safe place.
and when selling the boat, hand it over to the new owner.

2. GENERAL

2.1 DANGER GRADE WARNINGS

The following risk grade information is adopted in this Instruction Manual:

DANGER!

Indicates exceptional danger posing high risk of death or permanent injury when no suitable safety measures are implemented.

WARNING!

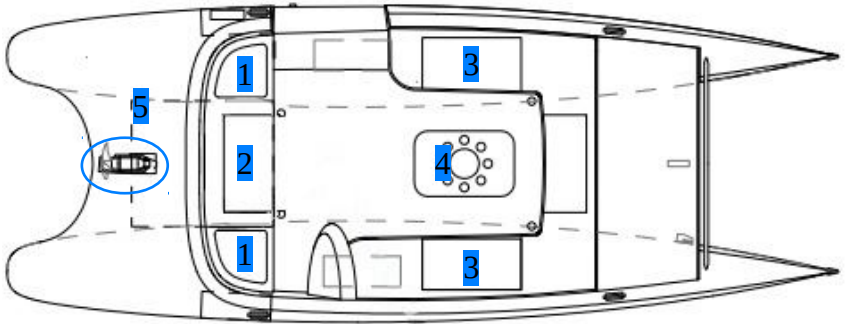
Indicates danger posing high risk of injuries or death when no suitable safety measures are taken.

+

CAUTION!

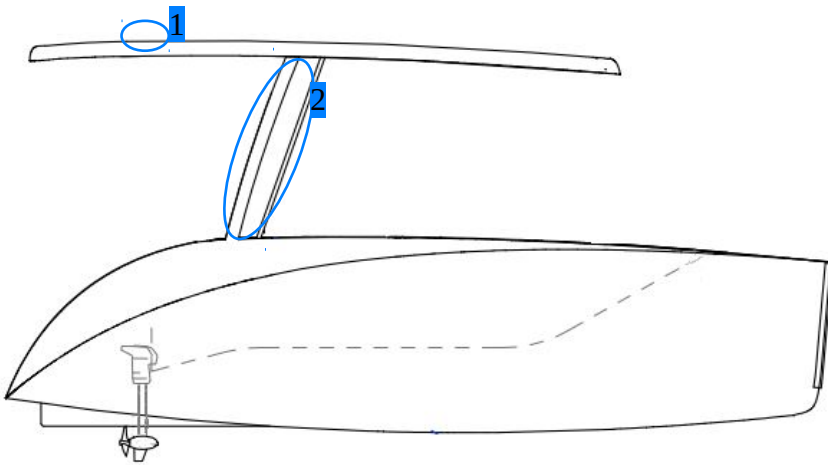
It reminds about safe conduct or points out dangerous practice that might result in injuries or damage to the vessel, or part(s) thereof, or damage to environment.

Marking points for warning labels.



Rys. 1: Top projection on the cockpit - placement of warning labels

1. Warning label - Do not stand on the cover of the refrigerator!
2. Warning label - With the flap raised: Attention! The possibility of a hand jamming
3. Warning labels
 - Danger! Electrical devices may only be exchanged by a person authorized to do so
 - Attention! Risk of electric shock
 - With the flap raised: Attention! The possibility of a hand jamming.
4. Warning label - Do not step on the table!
5. Warning labels:
On the engine:
 - Do not stand on the engine
 - Danger! Make sure there are no objects or third parties near the screwOn the engine lift
 - Look at your hands!



Rys. 2: Location of warning labels - Roof and roof pilers.

1. Warning label - Do not stand on the Roof
2. The warning label - Caution movable element!

2.2 GUARANTEE

Both the boat and the equipment installed on the boat by Green Dream Boats are covered by guarantee. Terms and conditions of guarantee are specified in the document "TERMS AND CONDITIONS OF GUARANTEE", whereas guarantees for such equipment as motor, solar panels, batteries, etc. are provided by respective manufacturers.

2.3 ESSENTIAL TECHNICAL DATA

2.3.1 BOAT VARIANTS

Boats in Solliner family are manufactured in following motor variants:

Motor	2kW	4kW
Batteries on the boat	2 x 254 Ah	4 x 254 Ah + 1 x 70 Ah

Manufacturer	GREEN DREAM BOATS Sp. z o.o
Model	Solliner S
Design category:	C/D
Hull length:	6,12m (20,1 ft)
Overall length:	6,20m (20,3 ft)
Hull width:	2,20m (7,2 ft)
Total width (including fender):	2,25m (7,4 ft)
Maximum draught:	0,45 m (1,48 ft)
Min. lateral height (roof lowered, motor lifted)	2,05 m (6,73 ft)
Max. lateral height (roof lifted, motor lowered)	3,25 m (10,66ft)
Max. height above water (roof lifted)	2,60 m (8,52 ft)
Min. height above water (roof lowered)	1,75 m (5,74 ft)
Transport height (on trailer, roof lowered)	2,65 m (8,69 ft)
Crew	6/10 os
Empty boat weight (2.0kW)	800 kg
Empty boat weight (4.0kW)	1100 kg

Maximum load capacity (crew+equipment+luggage)	590/890 kg
Fully loaded boat weight (2.0kW)	1390/1690 kg
Fully loaded boat weight (4.0kW)	1590/1890 kg
Electric motor E-Tech	2,0 kW lub 4,0 kW
Maximum motor output	6,0 kW
Maximum speed (depending on motor and load)	10-11 km/h (5,5-6,0 w.)

Some information is provided on the manufacturer's nameplate attached to the boat. For complete explanation of such information see relevant sections of the Instruction Manual.

2.3.2 PERFORMANCE

Approximate range depending on weather conditions:

On a sunny day	unlimited
Without solar charging – full speed	2 hours with 2kW motor
Without solar charging – full speed	1.2 hours with 4kW motor
Without solar charging – 7km/h	8-10 hours
Without solar charging – 4km/h	18 hours

2.3.3 CHARGING

With proper energy management and night charging, the boat may be used all-day-round, regardless of weather.

Charging time of batteries using the feed from land, from low to 90%, is ca. 12 hours, depending on the motor variant.

In cloudy weather solar panels ensure following charging levels:

- 60% at broken cloud cover,
- 30% at opaque cloud cover.

2.3.4 DESIGN CATEGORY AND PERMITTED NAVIGATION CONDITION

Design categories are defined in the standard ISO 12217-1. This standard provides for following design categories:

- **category A** – Designed for extended voyages where conditions may exceed wind force 8°B (Beaufort scale) and significant wave heights of 4 m and above, and vessels largely self-sufficient. Anomalies, such as hurricanes, are not considered. Such conditions may be encountered during long ocean voyages or during coastal voyages on water regions not shielded from wind and waves for hundreds of nautical miles.

- **category B** – Designed for voyages in coastal waters, large bays, estuaries, lakes and rivers where conditions up to, and including, wind force 8°B and significant wave heights up to, and including, 4 m may be experienced. Such conditions may be encountered during long sea voyages or during coastal voyages on water regions not shielded from wind and waves for dozens of nautical miles. Such conditions may be also encountered on inland waterways the size permitting creation of such wave sizes.

- **category C** – Designed for offshore voyages with a wind force not exceeding 6°B and significant wave heights not exceeding 2 m. Such conditions may be encountered on open inland waterways, in river mouths and coastal water under moderate weather conditions.

- **category D** - Designed for voyages on small lakes, rivers, and canals where conditions up to, and including, wind force 4°B and significant wave heights up to, and including, 0,5 m may be experienced. Such conditions may be encountered on shielded inland waterways and on coastal waters under good weather conditions.

Note: Significant wave height is the average height of one third of all highest waves, which is roughly the equivalent of the wave height as assessed by an experienced observer. Some waves shall be twice that size.

Boats in the Solliner family were designed in category C and D, depending on the number of persons onboard. You may, therefore, navigate on water regions and under weather conditions for category:

C - with **six** persons onboard, and

D - with **ten** persons onboard.

Always bear in mind that sailing the boat on water regions and under circumstances assigned to design category is permitted provided that specific principles of good sailing practice are adhered to:

- the crew has the required skills and experience,
- no maximum load capacity of the vessel is exceeded,
- the boat is seaworthy (for more on seaworthiness see the SERVICING section)

WARNING!

Never exceed the maximum recommended number of persons.

Irrespective of actual number of people on the boat, the total weight of persons and equipment may never exceed the maximum load capacity of the boat.

When navigating on waves take the designated seat.

When loading the boat never exceed the maximum recommended load.

Always load the boat and distribute the load correctly, so as to maintain the design trim (the keel should be roughly level).

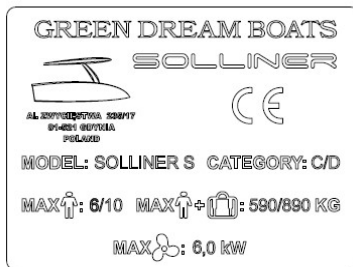
Avoid stacking large loads high.

CAUTION!

Recommended maximum quantity persons onboard: 8

2.4 MANUFACTURE'S NAMEPLATE AND CIN NUMBER

The recommended method to demonstrate meeting by a recreational vessel, or part thereof, of essential requirements in Directive 2013/53/EU, is using standards harmonized with said Directive when assessing design and structure of such a vessel. CE symbol means that the product is meeting relevant standards.



Solliner S boat manufacturer's nameplate provides essential parameters of the vessel.

Pic. 3: Producer plate location

CIN Number: unique serial number of the vessel, located on aft. The copy of CIN number is located in a hidden space, to enable identification of a stolen boat. Example CIN: PL-GDB0A115C60



Pic. 4: CIN aft side location

3. SYSTEMS

3.1. ELECTRICAL SYSTEM

DANGER!

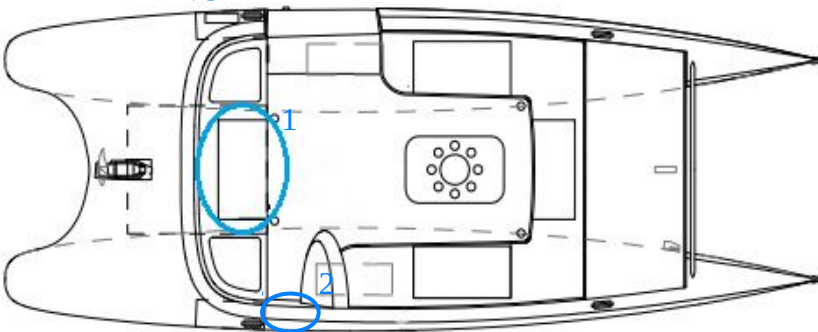
Incorrect use of DC and AC electrical system may lead to electric shock!

CAUTION!

Incorrect use of DC and AC electrical system may lead to fire or explosion!

On Solliner boats there are two types of main electrical installation: 24V with 2kW OR 48V motor with 4kW motor.

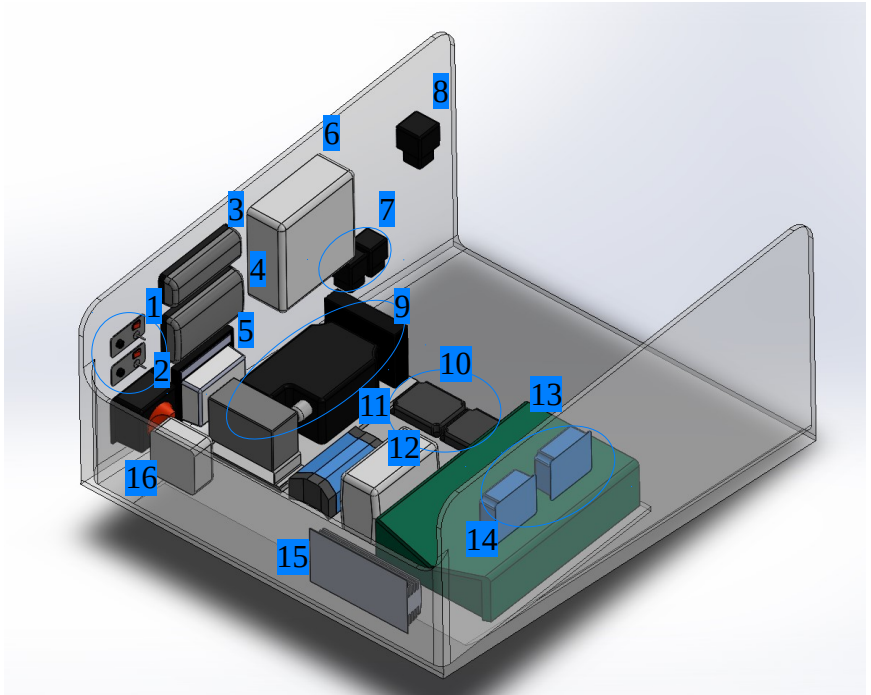
Position of the main switch of the drive motor, fuse box, and bilge pump switch, inside the aft locker.



Pic. 5: Top-down on the boat's cockpit.

1. The main electrical installation devices are located in the stern locker.
2. In the right float there is a distribution block of solar panels.

Description of devices for 24 V installation for a 2 kW motor.



Pic. 6: Locker aft - view of the main electrical installation 2kW.

Device description:

1. Switch of bilge pumps:

Two bilge pump switches, the upper switch applies to the pumps located in the right float and the lower switch applies to the pumps from the left float. Remember that the pumps are always set to auto mode when the boat is on the water.

2. Main switch / main switch:

Turns off the battery power. Remember that photovoltaic panels must be covered before disconnecting the batteries.

Attention! Do not turn off the main switch when the boat is on the water.

3. 12 volt fuse box

Fuse system:

1. Roof control from the entry position
2. Steeringman's ignition switch
3. Supplying the reset button of the charging regulator from the solar panels

4. 12 volt fuse box behind the ignition switch

Fuse system:

1. Low voltage socket up to 12 V
2. A sound signal
3. LED lighting for the Solliner boat
4. Navigation lighting
5. Controlling the roof from the helmsman's console
6. Raising the engine
7. Radio
8. Reflector type lighting
9. Navigation system

5. 24V fuse box

Fuse system:

1. Drive unit
2. Shore charger
3. Roof lift
4. Photovoltaic panels
5. DC / DC converter
6. The roof elevator motor contactor
7. Charge controller from solar panels
8. Engine controller

6. Relay box and reset button of the charging regulator from the panels.

Relay system:

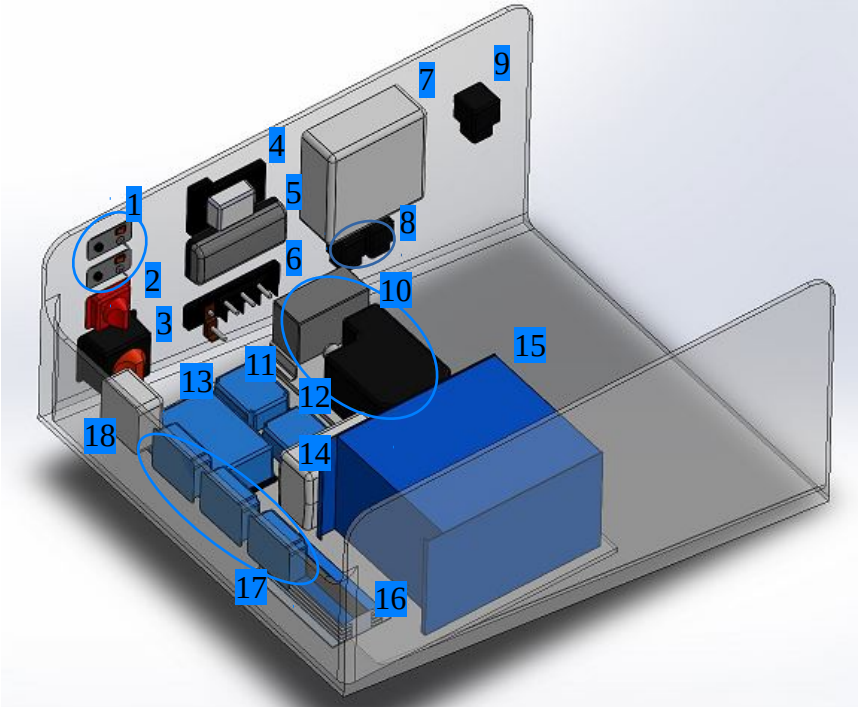
1. Control console
2. Engine switch
3. Roof lift, top
4. Roof lift down
5. Trim up
6. Trim down
7. Charging regulator from solar panels
8. A sound signal

Reset button of the charging regulator from the panels:

If diodes on charge controllers from solar panels (9) will start to light up red, press the button on the relay box casing (illuminated in blue). This happens when the batteries are discharged.

7. Engine lift relays - up and down
8. The roof elevator motor contactor.
9. E-Tech engine controller
10. Charging regulators from solar panels
11. DC / DC converter
12. Residual current circuit breaker
13. Edge loader
14. Battery level compensators
15. Galvanic isolator
16. Collection point "-".

Device description for 48V installation for a 4 kW motor.



Pic. 7: Locker aft - view of the main electrical installation 4kW

Device description:

1. Switch of bilge pumps:

Two bilge pump switches, the upper switch applies to the pumps located in the right float and the lower switch applies to the pumps from the left float. Remember that the pumps are always set to auto mode when the boat is on the water.

2. 12 V on / off switch (small battery):

Turns off the power from the smaller battery.

3. Main ON / OFF switch:

Turns off the power from the primary batteries. Remember that photovoltaic panels must be covered before disconnecting the batteries.

Attention! Do not turn off the main switch when the boat is on the water.

4. Fuse box:

Fuse system:

1. Roof lift
2. Steering console equipment
3. Engine lift
 - A. Roof control from the entry position
 - B. Roof elevator contactor
 - C. Steeringman's ignition switch

5. Fuse box connection after the stabilizer

Fuse system, connection behind the stabilizer:

1. LED lighting for the Solliner boat
2. Navigation lighting
3. Radio
4. Searchlight type lighting

Fuse system, connection before stabilizer:

1. Low voltage socket
2. A sound signal
3. Roof control
4. Control of the engine lift
5. Navigation system
6. Voltage stabilizer

6. 48V fuse box

1. Drive unit
2. Shore chargerr
3. Charging regulator from solar panels
4. DC / DC converter

7. Relay box

Relay system:

1. Steering console
2. Motor switch
3. Roof lift, top
4. Roof lift, down
5. Roof lift, curtain level

6. A sound signal
7. Engine lift, top.
8. Engine lift, down
8. Engine lift relays - up and down
9. The roof elevator motor contactor.
10. E-Tech engine controller
11. DC / DC converter
12. Voltage stabilizer
13. Charge controllers from solar panels
14. Residual current circuit breaker
15. Edge loader
16. Galvanic isolator
17. Battery level compensators
18. Collection point "-".

WARNING!

Never loosen or remove cable clamps from batteries nor break the electric circuit by switching off the power switch when the motor is running - this might cause damage to control devices!

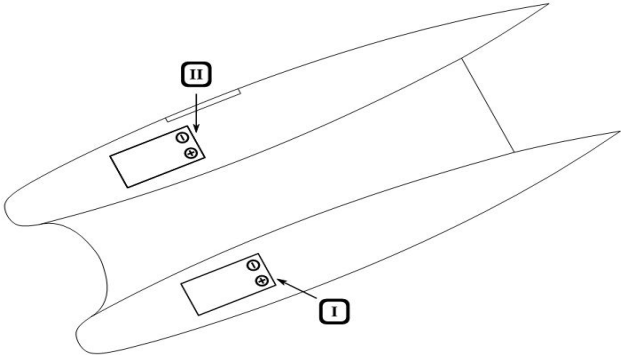
CAUTION!

NEVER DISCONNECT THE MASTER FUSE.

Disconnecting the main switch shall reset the battery charging indicator and, in the consequence, incorrect indications.
In the event of problems, charge to 100%.

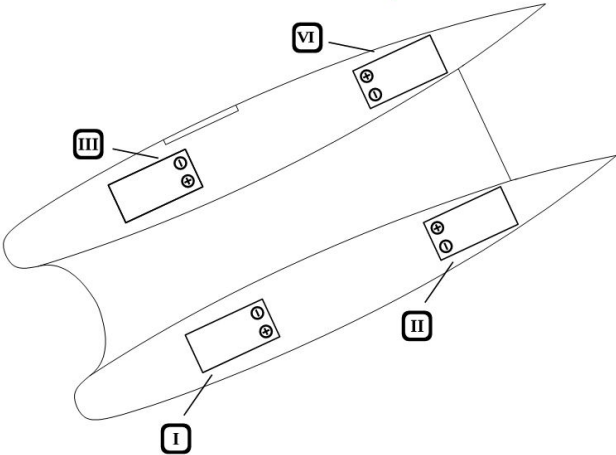
Never disconnect fuses when using specific device.

Battery distribution for 2 kW (2 pcs)



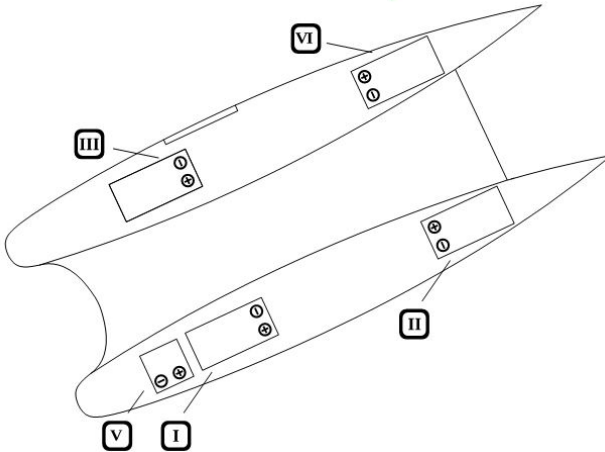
Pic. 8: Top throw to floats - location of 2kW boat batteries

Battery distribution for 2 kW (4 pcs)



Pic. 9: Top throw to floats - location of 2 kW boat batteries with the option of four batteries

Battery distribution for 4 kW installations



Pic. 10: Top throw for floats - location of 4 kW boat batteries

Batteries used are Standard. They do not require special ventilation. When installing the battery, remember to observe correct polarity of terminals (+ and -). The maximum battery charging time from low threshold level to the full charge, using shore charging cable is 44.5 hours.

DANGER!

Never let the end of the shore charging cable into water. This may cause electric shock or death of people in the water near the boat.

To minimize the risk of electric shock and fire:
First connect the shore charging cable to the socket located on the boat and then to the socket located onshore.

When disconnecting, first disconnect the plug onshore.

CAUTION!

Discharging of batteries below 20% poses the risk of battery damage.

CAUTION!

PRECAUTIONS!

1. Check the operation of bilge pumps at regular intervals. Remove contaminations from pump inlets. In the event valves are installed on the prow or stern bulkhead, keep them closed, opening them only to drain water to main bilges.
2. Remember about keeping the outlets free from obstructions.
3. Water level in the bilge should be checked frequently, especially during heavy rainfalls, sailing on rough sea or a prolonged stay in the port.

Always remember that bilge pump switch is always in "auto" position when the boat is on water.

Make sure that bilges of the boat are emptied for winter, as water freezing in in the pump may render the pump useless.

Do not install or replace electrical devices or devices with components for a current exceeding the rated current in the given circuit

WARNING!

Fuses may be replaced **ONLY** by authorized personnel.
Do not work on the installation of live alternating current

UWAGA !

The whole control system, in particular connections of wires and components,
require periodic inspections.
Regular inspections shall eliminate any irregularities in its operation.
MINIMUM once a year

BASIC FAILURES IN ELECTRICAL SYSTEM.

When observing significantly reduced voltage, not returning to normal values, proceed as follows:

- check the condition of fuses in the locker
- check the condition of fuses of individual devices
- Check if the charger is switched on. Use the ON push button.
- check the cleanness of solar panels
- as regards 24V electric system, in the event of allowing the low per cent charge of the battery pack, reset charging controllers from CIS panels
 - As regards the main system 48V with 4kW motor, upon observing dramatically reduced value of 12V utility system voltage, feeding also the convertible roof lifting motor, check also the safety fuse of 12V battery charging controller
 - Lighter socket not working: check the fuse
 - Roof controls at the skipper console do not work: check the fuse
 - Roof controls at the entrance gangway do not work. check the fuse

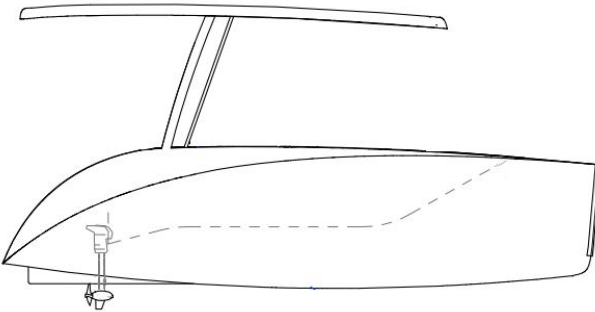
- helmsman's console devices do not work:
check the fuses of individual devices.
- In the event of motor failure, error codes are specified in the Instruction Manual attached with the motor.

3.2 POWER TRANSMISSION SYSTEM

The boat is driven by outboard electric motor by E-Tech. The motor is mounted directly on the motor lifting device CMC Power Tilt & Trim. The power lift enables lifting the motor above the waterline, to enable inspection of the motor column and propeller when the boat is on the shore. Check periodically if motor mounting screws are tightened properly.

When slipping the boat, the motor should be lifted as in the lowered position it protrudes beyond the float level and poses the risk of damage to propeller and the motor.

The location of the motor



Pic 11: Projection to the starboard showing the location of the propulsion engine mounted on the boat transom.

A photo of the motor perpendicular to the surface
(position for swimming)



Pic. 12: E-Tech motor mounted on the transom.

Motor lift control button



Pic. 13: Engine lift control button

Motor lift control button is located at the helmsman's seat.

To lift the motor up press the button up. At the maximum upper motor position, a red LED will light up at the button.

When leaving the motor, keep the button pointing down. With the motor set perpendicular to the water level, the lower LED will glow green.

Starting the motor:

After making sure that the engine is lowered and that there are no objects or third parties in the vicinity of the boat, turn the ignition key off. Immediately after turning the key, press the start button, located on the bottom of the helmsman's console.



Pic. 14: Helm console - the starter motor.

DANGER!

Before starting the motor, make sure that there are no objects or third parties in the screw area.

ATTENTION !

Before you start cruising, make sure that the motor is lowered. The motor must be perpendicular to the water surface

3.3 BOAT CONTROL SYSTEM

Mechanical boat control system comprises:

- steering wheel,
- steering wheel gear,
- rudder chains (propeller steering rod),
- chain and motor link,
- motor lifting system.

The whole control system, in particular connections, require periodic inspections. Regular inspections and periodic maintenance eliminate any irregularities in its operation.

Throttle lever is used to control motor (boat speed)

Motor operating principle:

- sailing direction "forward", throttle lever tilted to the front
- sailing direction "backward", throttle lever tilted to the rear

DANGER!

Prior to starting the motor make sure that there are no foreign objects or third parties near the propeller.

WARNING!

The control system is self-centering.

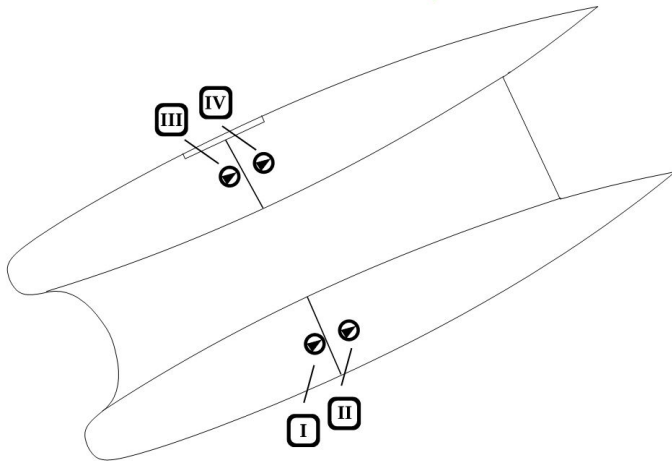
When steering consider the following:

motor operation, propeller thrust, motor column inclination,
wave direction and size, boat direction and speed.

Only when all those considerations are taken into account, boat
operation is safe.

3.4 BILGE AND DRAINAGE SYSTEM

The bilge system comprises four bilge pumps, water outlet hose led outside and the ejector. Two pumps are installed in each float, one in each section of the float. They are activated automatically (always remember to set the "auto" option on when the boat is on water) when the water penetrates to floats, but they may be also switched on manually from the stern locker.

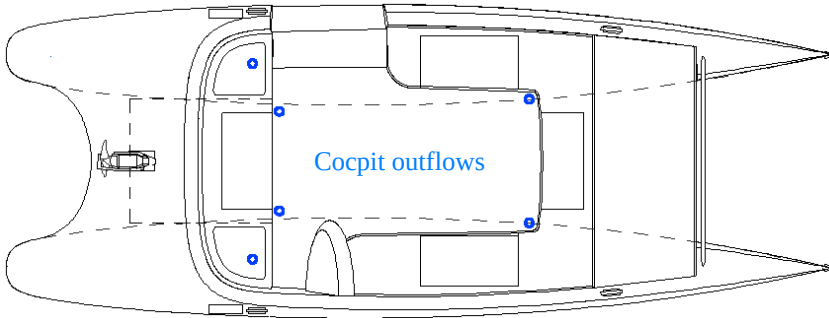


Pic 15: Top view on floats - placement of bilge pumps.

The efficiency of prow section pumps is at least 45 l/min.
Stern section pump efficiency:38 l/min

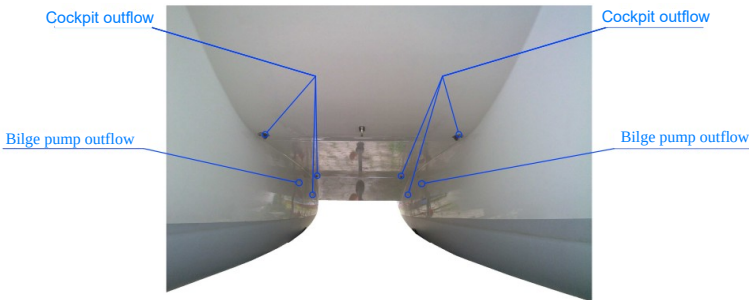
Drainage system comprises of four cockpit outflows, in the form of openings in the deck floor plating. There are also two locker outflows under the stern seats and two outflows per each float, from fridge inserts and bilge pumps, respectively.

Below presented are drawings of the bilge system, drainage system and the layout of openings in the boat plating.



Pic 16: Top-down on the cockpit - the schedule of the cockpit's rafts.

All openings in the plating are located on the inner side of floats. Openings are located above the waterline.



Pic. 16: Bow connector - distribution of trips.

WARNING!

Bilge system is not designed for drying of a damaged boat.
Before the rainfall, seal all locker hatches.

CAUTION!

Do not

1. Never perform any work on live electrical systems!
2. Never modify the electric system of the vessel by yourself: always have the competent marine electrician to carry out any modifications and maintenance work.
3. Never modify nor adjust rated current values of overcurrent protections (fuses).
4. Never install or replace electrical instruments or equipment with components supplied with current exceeding the rated value of the current in specific circuit.

Remember that the bilge pump switch is always set to auto when the boat is on the water

Make sure that during wintering your boat the bilge is empty, because freezing water in the pump can make it unserviceable.

3.5 ROOF LIFTING SYSTEM

CAUTION!

Before attempting to lift the roof, make sure that the roof is not held in place by belts!

Climbing the roof is prohibited, as this may damage roof panels, roof structure and poses the risk of falling.

WARNING!

When lifting/lowering the roof, exercise extreme care. Keep your hands and cloths far away from post entry points to the deck.

Lifting/lowering of the roof poses the risk of hitting the head.

Exercising caution.

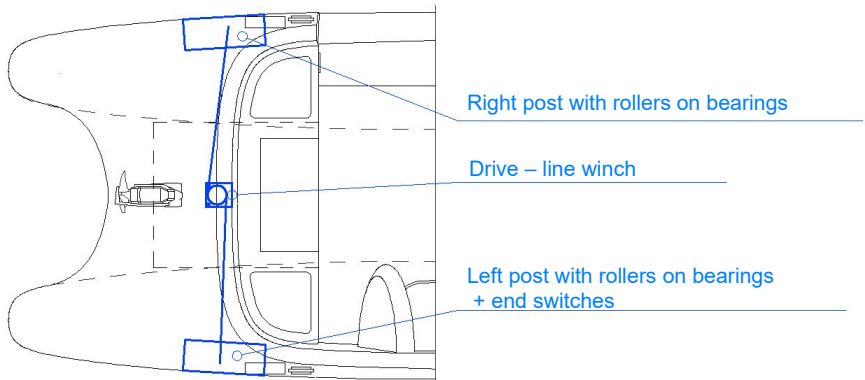
Avoid lifting/lowering the roof under bad weather conditions, including high waves.

There is a risk of hitting the head.

Never lift the roof when cruising under the low bridge.

Roof lifting system comprises:

- drive motor
- end switches,
- panel buttons,
- cockpit entrance gangway buttons,
- chain systems,
- two lateral moving posts with rollers on bearings
- roof security system,



Pic. 17: Top view taking into account the location of the roof winch.



Pic. 18: Roof lifting system - winch.

There are two roof control systems available on the boat: One from the skipper console and the other from the boat gangway providing convenient boat entrance.

Control from the skipper console:

There are three roof movement control push buttons on the panel (see layout of the equipment). Both the central activating-locking push button and up or down button controlling the lifting and lowering motion of the roof have to be pressed.

Roof controls at the entrance gangways:

There are two push buttons installed on the left internal wall of the stern seat. Apply magnetic kill-switch to the center of the left cleat (place marked with a Solliner logo sticker) to activate the push button. In order to start the roof, apply kill-switch device to activate control buttons and push the up or down button.

System maintenance.

System maintenance extends the lifecycle of components. We recommend frequent inspections of the system:

- lubrication of rollers
- checking the condition of rope
- checking the condition of safety lock

Usage:

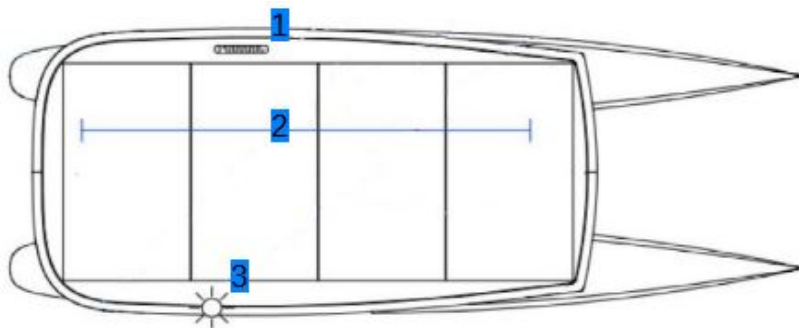
Always operate the roof lifting system smoothly, avoiding short jerky movements.

4. OPERATION AND SERVICING

ATTENTION !

Before using the boat, it is recommended to read the information about individual boat installations contained in the INSTALLATIONS section!

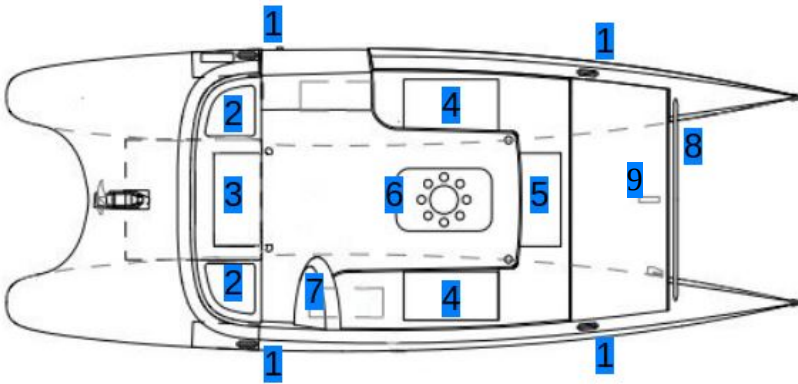
4.1 EQUIPMENT LAYOUT



Pic. 19: Top-down projection - equipment layout.

Device description:

1. Reflektor radarowy
2. Solar panels, 4 pcs..
3. Top navigation light, white, 360°.



Pic. 20: Top view on the cockpit - boat equipment layout.

Device description:

1. Cleat, 4 pcs.

2. lockers in the refrigerator

3. locker aft

this locker is not used to store things, only electric devices that are part of the solliner's electrical installation can be accommodated there.

4. Locker side, entrance to floters

5. Locker bow

6. Tabel

7. Console helmsman

8. Bow landing

9. Tow bar, located on the connector.

On the equipment of the boat, in the part of the cockpit, there is also:



Coastal charger socket, located below the stern locket opening in the near vicinity of the entry stairs.

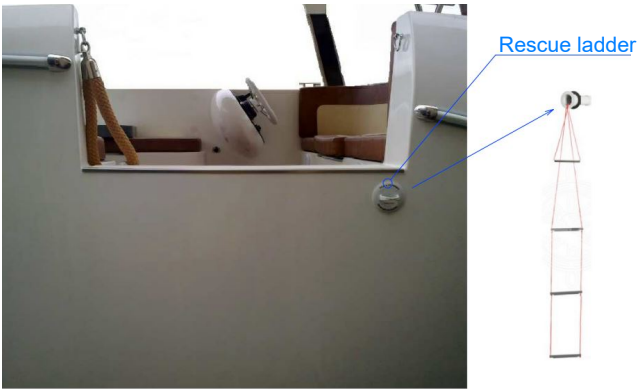
Pic. 21: Shore charger socket



Low voltage socket.
Socket located under the helmsman's console. The base is a cigarette lighter socket,

Pic. 22: Low voltage socket

Rescue ladder:



Pic 23 Cockpit entry - rescue ladder.

Helm console device.



Pic. 24: Helm console - console device.

Device description:

1. Steering wheel
2. Panel of lighting switches
3. Roof control buttons.

The roof control consists of three buttons. The first raises the roof up, the third button leaves the roof. To raise or lower the roof first press and hold the middle (second from above) button and then, simultaneously press the up or down button.

4. Sound signal button.

5. Display of engine parameters

The display will check the data on: power consumed, battery charge status, current intensity and voltage, etc.

6. Digital monitor (option)

7. Radio

8. Ignition

9. motor throttle

The following can be found in the central prow locker:

- emergency helm
- fenders (optional)
- mooring lines (optional)
- boat hook (optional)
- shore charging cable
- Instruction Manuals for the equipment installed on the boat (e.g. electric drive motor, bilge pumps, radio, etc.)

For details concerning the boat equipment see relevant Instruction Manuals attached.



Pic. 25 Solliner boat from the bow - boat equipment.

4.2 SAFE SAILING TIPS

4.2.1 BEFORE STARTING A CRUISE

After each winter break or any prolonged period of not using the boat:

- Perform battery diagnostics
 - check the mounting and the condition of clamps, apply lubricant to contact connections if necessary
- Check the condition of photovoltaic panels
- Check the equipment operation.
- Each time before starting a cruise
- check if bilges are dry. Remove any water from bilges. Should the pump fail to activate automatically, check if suction pipes are not obstructed.
- check the battery charging level,
- make sure that nothing in the stern locker blocks the rotating movement of motor column;
- check the operation of roof lifting system

4.2.2 DURING THE CRUISE

During the cruise always adhere to recommendations below:

- cruising speed has to be adapted to the current state of the sea,
- crew members should not stand or sit at the edge of the cockpit,
- crewmembers staying onboard should wear life vests,
- crew members who cannot swim should wear life vests,
- when navigating the rough sea bilges should be dry and manholes and hatches sealed, in order to minimize the risk of water ingress. Stability and floatability of the boat were assessed following checking that the boat is not susceptible to flooding,
- remember about keeping the outlets shown in the drawing of bilge system and drainage system free from obstructions.
- pamiętaj o zachowaniu drożności odpływów pokazanych na rysunku instalacji zęzowej i odwadniającej.

4.2.2.1 LOAD

The maximum recommended load considers the weight of all persons on board, all stocks and personal items, as well as all the equipment not included in the empty weight of the vessel (see the "Essential technical specification" table - Maximum load, p.6).

WARNING!

When loading the boat never exceed the maximum permitted load.

Always load the boat and distribute the load correctly, so as to maintain the design trim (the keel should be roughly level).

Avoid stacking large loads high.

4.2.2.2 STABILITY AND FLOATABILITY

REMEMBER!

1. Each change in mass distribution on the boat side (changing the motor, adding a radar, etc.) may significantly affect stability, trim and behavior of the boat.
2. The quantity of bilge water should be as small as possible.
3. The boat stability is further reduced with each additional load stacked.
4. In bad weather, hatches, doors and lockers have to be closed in order to reduce the risk of water ingress.
5. Stability may be reduced during towing or lifting large objects with the davit.
6. Breaking waves pose significant danger to boat stability.

BEFORE FRIST USE CHECK THE FOLLOWING:

- If the main switch of the motor is in ON position
- If fuses are in ON position (red color)
- If the throttle lever is in neutral position
- If the key in the ignition is in ON position
- If the motor is in lowered position.
- Does the motor display indicate sufficient charge for the system:
With 24V system: min. 25 V
With 48V system: min. 50 V SPrawdzić jakie wartości

Note:

When the main motor or roof lifting motor is started the voltage may fluctuate for a while, soon returning to normal value.

4.2.3 MAXIMUM SPEED FORWARD

The maximum cruise speed on calm water is ca. 6 knots, depending on propeller type and the boat load.

4.2.4 MAXIMUM SPEED REVERSE

When navigating in reverse the speed should not exceed 3 knots, especially with the boat fully loaded.

4.2.5 NAVIGATING IN THE NIGHT

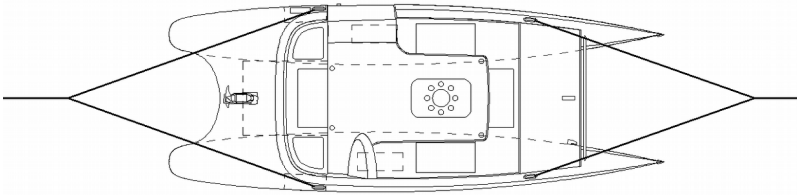
Solliner boat is prepared for sailing both during the day and during the night. When navigating at night remember to switch the navigation lights on. As regards Solliner boat, there is one white mooring light installed on the roof and green and red lights installed on boat sides. Lighting of roof and hull is not part of the navigation lighting. When sailing, the roof and hull lights are to be off for navigation reasons.

4.2.6 ANCHORING, MOORING AND TOWING

Locations of mooring and towing cleats are shown in the drawing. Helmsman of the vessel is obliged to control the condition of mooring and towing lines and selecting line types suitable for the boat. During each mooring use pneumatic fenders in order to secure boat sides against damage.

Towing maneuvers should be always performed at low speed. Towing line fixture should enable its release under load at any time.

Recommended distribution of lines when towing/being towed:



Pic. 26: Top projection - towing points.

4.2.7 OTHER NAVIGATION RELATED NOTES

4.2.7.1 BOAT REGISTRATION

In some countries, the boat may be subject to registration requirement. Requirements in this respect may vary for private and commercial operations.

4.2.7.2 INSURENCE

Boat insurance covers the consequences of damages caused on water, during transport and storage on land. Remember checking if the scope of insurance covers lifting operations. The insurance shall also facilitate correct conduct during an accident - permitting you to focus on the most important thing: saving life and health. TPL insurance for serious emergencies involving third person injuries is also very important. We recommend purchasing insurance from the insurer specializing in yacht insurance.

4.2.7.3 SKILLS AND LICENSES

Depending on national regulations, minimum age and license to navigate the vessel may be required. Sailing and motorboat training courses may help acquire essential skills. However, efficient operation of the boat, maneuvering, navigation, mooring and anchoring may be only obtained through practice.

The boat is not designed for sailing in winter, especially in crushed or solid ice cover and covered with ice.

Do not make sudden turns or reversals when navigating at full speed, with crew in the cockpit on one side of the boat. For safety and convenience reduce your speed on waves. International Regulations for Preventing Collisions at Sea (COLREGs) and right of way require that ongoing observation is ensured when navigating and that that right of way is adhered to.

Never use the vessel with motor of the capacity exceeding the value specified on the manufacturer's nameplate attached to the boat (6.0kW).

4.2.7.4 REGULAR INSPECTIONS

Perform regular inspections of the following:

- water level in bilge,
- operation of bilge system,
- mounting of batteries,
- mounting of clamps,
- battery voltage,
- operation of the steering rod,
- operation of the roof lifting system,
 - condition of the winch line,
 - check the operation of pilers guide rollers

DANGER!

Rotating propeller may cause death or permanent injury to any person in the water that is near the propeller.

Always switch off the boat motor when a crew member is below the boat (except during a rescue operation - then maneuver carefully and switch the motor off only when picking up a man from the sea).

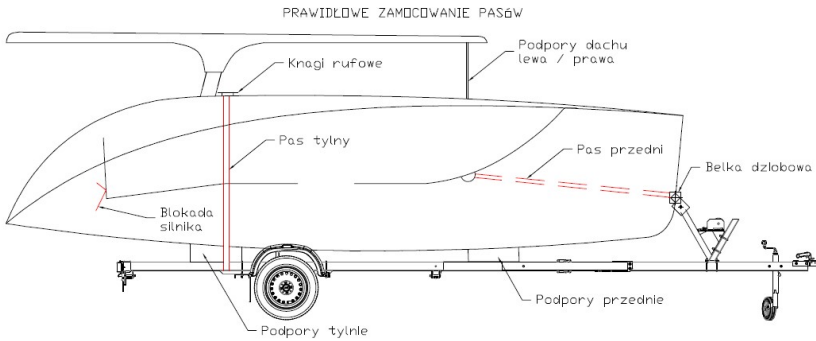
WARNING!

Meeting the criterion of stability and floatability will not prevent the boat from capsizing or sinking when boat's operating conditions are not taken into account.

To this extent, the helmsman is not released from responsibility for boat safety and obligation to adopt good seafaring practice.

The boat stability is further reduced with each additional item stacked. To ensure boat stability, the quantity of bilge water should be as small as possible. Always remember that breaking waves pose significant danger to boat stability.

4.3 LAUNCHING AND TRANSPORTING ON THE TRAILER



Pic. 27 Example of setting and securing a boat on a trailer

When moving the boat with a crane, the boat should be in vertical position.

Adequate security measures, such as soft pads, are to be placed between the lifting equipment / security belts and the hull in order to secure the hull surface against damage. In order to secure the boat against uncontrolled movement when suspended from the ropes attached to its prow and stern should be long enough to enable controlling the boat position.

When placing the hull on the trailer, make sure that prows of the boat are in close contact with the front beam - support and motion limiter. Lifting line/tape of the winch should be attached to lifting eyes of the hull. The whole arrangement is to prevent sliding the hull toward the end and overbalancing. The boat should be also pressed against the trailer at rear supports. Do this using sufficiently long and solid security belts.

Lower the roof for transport and secure it against vibrations with two dedicated supports.

Support can be found in the stern locker. Install them in outlets located under the mattress on the sun deck.



Pic. 28: Abandoned roof supported by supports, fastened by a transport belt

The roof correctly prepared for transport of the boat: the roof is lowered, supported and held by the transport belt (with soft pads inserted between the transport belt and the roof).

Never load the boat transported on the trailer. When moving the boat on a trailer, the motor column should be in the lifted position, with the propeller removed or secured in accordance with applicable road traffic regulations. Transport height (on the trailer, with the roof lowered) is 2.65m (8.69 ft).

DANGER!

When lifting the boat, prevent the presence of persons under the lifted load or in the direct vicinity of the lift.

UWAGA !

Przed podniesienie dachu sprawdź czy nie jest spięty z pasem!

WARNING!

Tow the boat using a trailer suitable for the boat's type and weight. The hull is susceptible to damage during launching, transport and storage on land.

4.3.1 PRZYGOTOWANIE ŁODZI DO ZWODOWANIA

CAUTION!

Before launching the boat, make sure that all openings, bottom gangways, are tightly sealed, that all hoses are on their stub pipes and all bands are attached correctly. When launching the boat, check the condition of bilges and ensure the tightness of wire connections. In the event of flooding, verify the condition of electrical equipment.

The boat must be launched from the trailer suitable for boat transport and fitted with float supports that ensure correct placement of the boat. Optionally, the boat may be launched using the overhead crane: in such case seek lifting sling points on boat sides, at the level of antifouling coat line. Before attempting the launch, proceed as follows:

- unbuckle the transport belt connecting the boat and the trailer - the belt goes through stern cleats
- detach trailer reel safety device from the towing hook of the boat. (in the event of launching the boat from launching slip, reel safety device is to be removed only when the majority of the boat is in the water)

4.3.2 STARTING THE BOAT AFTER LAUNCH

After launching the boat and mooring it to the pier, the following inspections have to be performed: (Before attempting inspection, activate panel instruments by turning the ignition key)

a) operation of the equipment

- winch for lifting the roof
 - check the roof lifting functionality from the outside. Apply magnetic kill-switch to the central part of the cleat and use push buttons: bottom – down, top – up
 - check the roof lifting functionality from the helmsman control panel. In order to lift or lower the roof, first press and hold the central (second from top) button, and then simultaneously press the up button or the down button.
- navigation lights and LED lights
- sound signal - horn

b) operation of the motor

- make sure that there are no foreign objects or third parties near the propeller;
- set the throttle lever in neutral position
- also perform the motor test controlling the direction of rotation
 - throttle lever up: propeller rotating clockwise
 - throttle lever in neutral: propeller stop
 - throttle lever down: propeller rotating counterclockwise

4 . 4 WINTERIZING

Preparation of the boat for storage:

- clean the boat from the outside using suitable cleaning agents and freshwater, and then dry the boat;
- clean and dry the boat interior, not forgetting the bilge, as water freezing in in the bilge pump may render the pump useless;
- remove all mattresses from the boat,
- empty all water systems and blow them with compressed air,
- secure all rubber gaskets with suitable agent, such as glycerin;
- when the boat is secured against rainfall, hatches and locker doors are to be left open or ajar in order to ensure ventilation of the interior;
- make sure that electrical equipment is resistant to winter conditions (low temperatures), remove from the boat if necessary and store in dry place secured against frost;
- the boat is to be protected against direct sunlight and rainfall (water freezing inside hollows may cause serious damage); when covering the boat with a tarp, make sure you leave her some "breathing room".

4 . 5 SERVICING BATTERIES IN WINTER

The best solution, as far as battery lifecycle is concerned, is continuous tapping to the mains system and periodic inspections of charging status. When this is not be possible, remove batteries and move them to a location secured against frost and inspect them periodically, charging when necessary.

Re-commissioning

When installing the battery, remember to observe correct polarity of terminals (+ and -).

CAUTION!

Prior to removing batteries, cover photovoltaic cells with a sunlight blocking film

4 . 6 MAINTENECE AND REPAIRS

4.6.1 PLATING

Hull plating, deck plating and some components of the interior are made of polyester and glass laminate, with external surface of gel coat. Frequent washing and cleaning facilitates maintenance of its surface and makes your boat look great. The best cleaning agent is water and soap. Never use abrasive or scraping media, solvents, ammonia, chloride, acetone or ketone-based solvents, as they may damage the gel coat surface. Have serious repairs of the hull and the motor carried out by professionals.

4.6.2 BOAT BOTTOM

Directly after removing form water the boat bottom has to be cleaned with pressurized water and all the fouling removed. In order to avoid fouling the hull bottom, replenish and renovate the antifouling coat as instructed by coat manufacturer. Appearance of algae, shells and slime in the bottom of the boat is a normal process, which occurs in all hulls. When cleaning the bottom avoid using hard, abrasive or scraping materials or tools.

4.6.3 PLASTIC COMPONENTS

Clean plexiglass using cloth and water-solution of a detergent. Never use strong and caustic agents, such as acetone, benzine. This will cause permanent matting and damage to the surface.

4.6.4 STAINLESS STEEL

Polished stainless steel is resistant to corrosion. Tips provided below shall help you maintain stainless steel accessories in good condition:

- in order to secure the surface, apply the car wax after washing
- minor traces of corrosion may appear sporadically on stainless steel surfaces This is not due to defect in material, but solely due to failure in maintenance.
- after each cruise on saltwater or on contaminated water, wash the onboard equipment with freshwater,
- onboard equipment of your boat should be inspected periodically - at intervals depending on operating conditions (temperature, humidity, salt content, pollution).
- adequate maintenance extends the lifecycle of your onboard equipment significantly.

4.6.5 TEAK

Exercise proper care and regular maintenance of teak in order to prevent its greying. Teak maintenance involves washing it first with freshwater and then with teak cleaning agent. When dry, soak it with a few batches of teak oil. Deck made of this type of wood should be thus oiled 2 or 3 times per season.

4.6.6 PHOTOVOLTAIC PANELS

Make sure photovoltaic panels are always clean. They shall not work to full capacity when heavily soiled. Clean using soft cloth and water solution of a mild detergent. Exercise extreme care, never use sharp tools.

CAUTION!

Prior to removing batteries, cover photovoltaic cells with a sunlight blocking film

4.6.7 ROOF CONTROL SYSTEMS

Regular diagnostics of the system, i.e. rolls, winch lines, end switches and winch motor shall extend the system lifecycle. Check system operation before each cruise.

5. ADDITIONAL INFORMATION

5.1 RESCUE EQUIPMENT

Pursuant to good seafaring practice, each member of the crew should be wearing a life vest during a cruise. Make sure your boat is fitted out with a life buoy with 20 m line, which could be thrown to a person that fell overboard.

Your boat is not unsinkable - you should fit the boat out with life jackets in the quantity corresponding with the maximum number of persons on board. It is also recommended that pyrotechnic signaling devices (e.g. smoke, buoy, parachute flare) are stored onboard in case of emergency in the open sea.

The list of mandatory rescue measures on board the yacht:

- life vests for each crew member, with suitable size and displacement;
- life vests for each crew member, with suitable size and displacement;
- life buoy is fitted with 20m line and the light
- smoke buoy,
- 6 signal rockets (flares)
- bucket with rope,
- first aid kit.

5.1.1 FIRE FIGHTING EQUIPMENT

The boat should be fitted out with dry chemical extinguisher. Make sure it is placed in readily accessible location.

5.2 NAVIGATION EQUIPMENT

The complete seafaring equipment of the boat comprises:

- anchor 6.5kg with anchor chain 5mm - 30m,
- towing line dia. 12/14 mm (polyamide/polypropylene) length 40m,
- 2-4 mooring lines, each 10 mm in diameter and 10 m in length,
- 4 fenders,
- boat hook,
- GPS-compatible nautical chart of the sailing area (WGS-84 chart).
- marine grade binoculars,
- timer,
- compass,
- 2 marine harnesses,
- water-proof torch with spare batteries,
- spare fuses, light bulbs, batteries,
- tools, pliers, knife.

RESPECT TO ENVIRONMENT

Familiarize yourself with local environmental protection plan and International Convention for the Prevention of Pollution from Ships (MARPOL) and adhere to such to the extent possible.

6. ZAŁĄCZNIKI

1. Certification of the Polish PRS Ship Register



Polski Rejestr Statków

RAPORT Z BADAŃ (MODUŁ A1) EXAMINATION REPORT (MODULE A1)

Nr
No. CW/RCD/2413/2017

ZAŚWIADCZA SIĘ,

że Polski Rejestr Statków S.A. (PRS) przeprowadził odpowiednią procedurę badania wymienionej niżej jednostki rekreacyjnej i stwierdził, że spełnia ona zasadnicze wymagania określone w załączniku I do dyrektywy 2013/53/UE (RCD), w następującym zakresie:

THIS IS TO CERTIFY

that Polski Rejestr Statków S.A. (PRS) has undertaken the relevant examination procedure for the recreational craft identified below, which was found to meet the essential requirements of the Annex I to Directive 2013/53/EU (RCD), within the following scope:

A.3.2 Stateczność i wolna burta
Stability and freeboard

A.3.3 Wyporność i pływalność
Buoyancy and flotation

Producent Manufacturer	GREEN DREAM BOATS sp. z o.o. Al. Zwycięstwa 235/17, 81-521 Gdynia, Poland		
Nazwa typu Brand name	SOLLINER	Rodzaj jednostki Type of craft	łódź motorowa / motor boat
Kategoria projektowa Design category	D / C	Materiał kadłuba Material of hull	lps / GRP
Długość kadłuba Length of hull	6,20 m	Szerokość kadłuba Beam of hull	2,35 m
Maksymalna moc silnika(ów) Maximum engine(s) power	6,0 kW	Powierzchnia ozaglowania Sail area	- m ²
Masa jednostki pusty wyposażonej Light craft condition mass	1100 kg	Maksymalna liczba osób Maximum number of persons	10 / 6
Maksymalna nośność Maximum load	900 / 590 kg		
Informacje dodatkowe Other information	elektryczny silnik przyczepny / electric outboard engine		

Badania jednostki przeprowadzono zgodnie z normą
The examinations of the craft were carried out according to the standard

PN-EN ISO 12217-1:2016-02

Wyniki tych badań są opisane w sprawozdaniu nr
The results of these examinations are described in the report No.

CW/AK/5/17

Raport traci ważność po wprowadzeniu zmian w konstrukcji i wyposażeniu jednostki bez uprzedniego uzgodnienia z PRS.
This report becomes invalid after modifications in construction or equipment of the craft without prior agreement with PRS.

Nr Rejestru PRS
PRS Register No. 637399



Papirski

Gdańsk, 2017-08-11

Jackek Papirski







Nr jednostki notyfikowanej
No. of Notified Body
1463

C/130/01

Polski Rejestr Statków S.A.
al. Gen. Józefa Hallera 129
80-416 Gdańsk, Poland

Tel: (+48) 58 75 11 273
Fax: (+48) 58 34 17 769
e-mail: dc@prs.pl
www: http://www.prs.pl

2. DNV certification

	
Report No: RCDA100001F8	
EXAMINATION REPORT - EC	
<hr/>	
This is to certify:	
That the Recreational Craft	
with type designation(s) Sollinner 5	
Manufacturer Green Dream Boats Sp. z o.o. Gdynia, Poland	
Has been assessed with respect to Directive 2013/53/EU of the European Parliament and of the Council	
Annex I, Essential Requirements Clause 3.2 –Stability and Freeboard Clause 3.3 –Buoyancy and Flotation	
According to conformity assessment procedure "Module A1" described in Annex II of the Decision No 768/2008/EC of the European Parliament and of the Council, and found to comply with the applicable requirements.	
Issued at Hamburg on 2017-09-08	
DNV GL local station: Hamburg Special & Light Craft, IWW & EC	
Approval Engineer: Peter Rüsich	Notified Body No.: 0098
	 for DNV GL SE Digitally Signed By: Masanneck, Dirk Signing Date: 21.08.2017
	Dirk Masanneck Head of Certification Body
<hr/>	
<small>Any significant in design or construction of the product, or amendments to the Directive or the applied standards may render this report invalid. The product liability rest with the manufacturer or his representative in accordance with Directive 2013/53/EU of the European Parliament and of the Council.</small>	
 Form code: RCD-401	Revision: 2016-12
	www.dnvgl.com
	Page 1 of 2
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3. Electrical installation model