

Rigid Inflatable Boat

# SILVER LINE

Models:

S650,S650L,S650GL

User's Manual

## INTRODUCTION.

"GRAND" inflatable motor boat of the "SILVER LINE" series: S650 has been designed under requirements of ISO 6185 "Plastomer and Elastomer Inflatable Boats" and DIN 7870 "Inflatable Boats with Reinforced Shells".

## PURPOSE.

The rigid inflatable motor boat of the "SILVER LINE" series relates to the category of pleasure boats and is intended for water sports, tourism and rest.

## TECHNICAL DATA SPECIFICATION

Model	Unit	S650/S650L/S650GL
Length overall	m	6.5
	ft-inches	15'5"
Length inside	m	5.00
	ft-inches	16'4"
Width overall	m	2.6
	ft-inches	8'6"
Width inside	m	1.5
	ft-inches	4'11"
Tube diameter max	m	0,55
	ft-inches	1'9"
Number of chambers		5
Passenger capacity	pers.	15
Load capacity	kg	1700
	lbs	3740
Boat weight	kg	550
	lbs	1100
Engine power recommended	HP	140
	kW	105
Engine power max	HP	175
	kW	136
Engine weight max	kg	240
	lbs	528
Engine shaft length (L-long, XL-ultralong)		2L / 1XL
Boat design Category(Dir.94/25/EC)		C

## COMPLETE SET

Description	unit	q-ty	availability		
1. Inflatable boat	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.1 Oar / paddle	pcs.	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Bow locker cushion	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Foot pump «Bravo-2»	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4 Rear seat soft back	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 Bolt M8*50	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Washer 8*24	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7 Fashion washer	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8 Arrester nut M 8	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9 Pilot seating bar SD-04	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10 Bolt M8x25	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11 Serrated lock washer 8	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.12 Washer 8	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13 Bow railing	pcs.	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.14 Rear seat extended hand rails	pcs.	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.15 Set of spare part and repair kit:	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Steering console CL-04	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1 Windscreen	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 Stainless steel windscreen railing	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Support windscreen railing	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## COMPLETE SET (continuation)

Description	Model	unit	q-ty	S650	S650L	S650GL
	availability					
2.4 Screw M6*25		pcs.	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.5 Screw bush (bush #1)		pcs.	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.6 Bush #2		pcs.	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.7 Nut M6		pcs.	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.8 Serrated lock washer 6		pcs.	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.9 Washer 6		pcs.	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.10 Bolt M8 x25		pcs.	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.11 Serrated lock washer 8		pcs.	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.12 Washer 8		pcs.	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.13 Bolt M12x30		pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.14 Serrated lock washer 12		pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.15 Washer 12		pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.16 Speedometer		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.17 Tachometer		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.18 Compass		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.19 Automatic circuit breakers		pcs.	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.20 Main boat cable		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.21 Battery wire		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.22 Electric accessory socket(phone charge pluge)		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.23 Battery disconnecter with wire		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## COMPLETE SET (continuation)

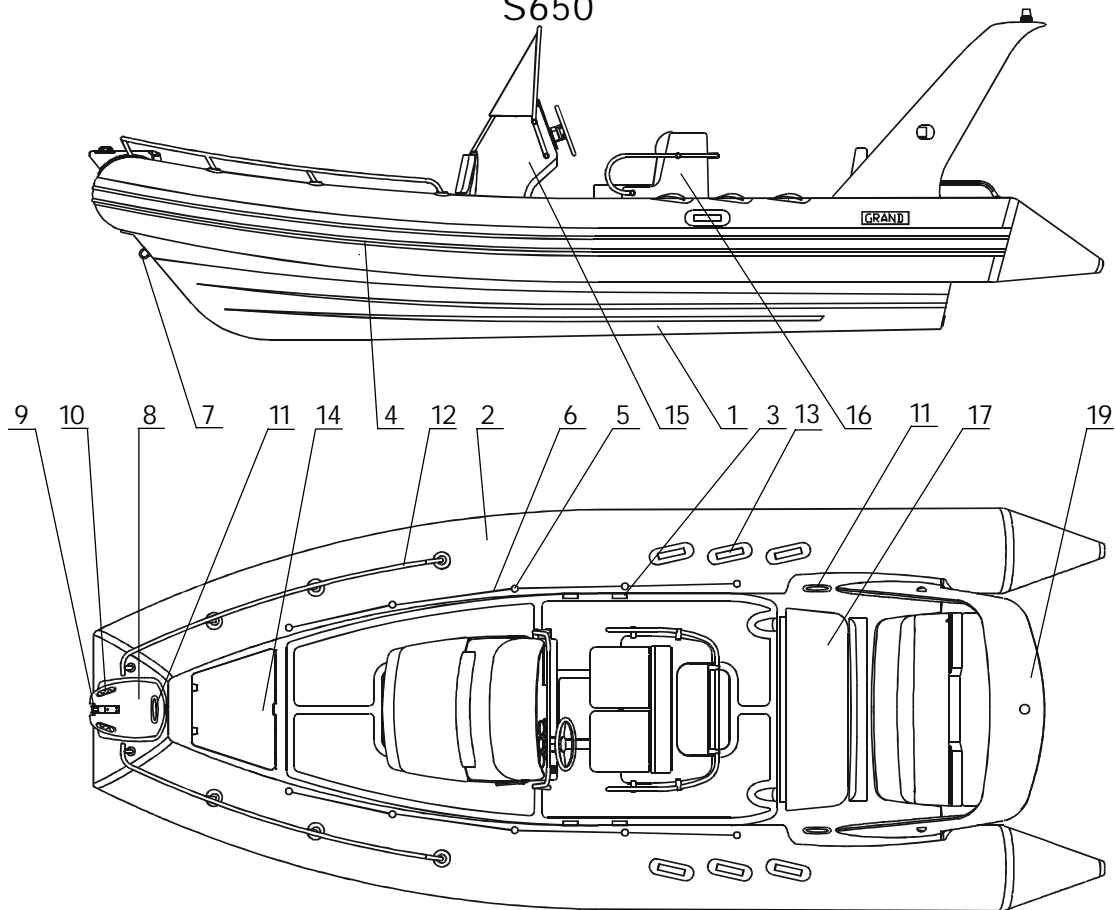
Description	Model	unit	q-ty	S650	S650L	S650GL
	availability					
2.24 Battery container		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.25 Fire extinguisher container		pcs	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Fuel system				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1 Fuel tank (150 liters)		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2 Fuel level sender		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3 Fuel level gauge		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.5 Fuel filler		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.6 Fuel tank vent		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Shower kit		pcs	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1 Water tank (50 liters)		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2 External deck water fill		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3 Shower hahdset		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4 Shower pump		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.5 Box with cap for showerhandset		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Fiberglass arc		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.1 Electric horn		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2 Masthead (white)		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3 Port (red)		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.4 Starboard (green)		pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMPLETE SET (ending)

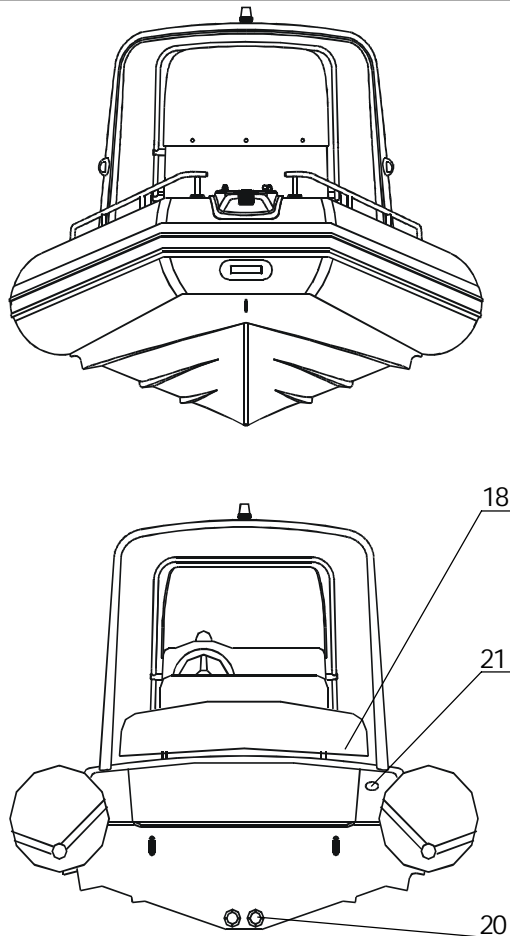
Model		S650	S650L	S650GL	
Description	unit	q-ty	availability		
5.5 Nut M12	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.6 Washer 12x36	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.7 Serrated lock washer 12x36	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Drain automatic bilge pump	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Additional options					
7.1 Transom mounted swimming ladder w/ handrail	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.2 Removable bow sundeck w/ cushion	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.3 Adjustable pilot chair	pcs.	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.4 St. console head for standart side mount engin control box	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.5 Overall cover	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.6 Console CL-04 cover	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.7 Pilot seat SD-04 cover	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.8 Hydraulic steering system set w/ wheel	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.9 Mechanical steering system set w/ wheel	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.10 Delux steering wheel	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.11 Courtesy deck lights set w/ wiring	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.12 Collapsed st.steel suntop w/ mount bases	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.13 St.steel polished navigation arch	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

– Your "GRAND" boat "SILVER LINE" complete set included this items.

S650







Pos	Item
1	Fiberglass hull
2	Reinforced buoyancy tube
3	Inflation / deflation valve
4	Doubled rubbing strake
5	Lifeline holder
6	Internal lifeline
7	Towing bow eye
8	Bow step-plate with antiskid layer
9	Anchor roller
10	Continental fairlead
11	Pull-up cleat
12	Stainless steel bow railing
13	Safety handle
14	Bow locker with access hatch
15	Molded-in console CL-04 with front stowage, cushion, soft back and rear access hatch
16	Molded-in container SD-04 with front stowages, cushions, soft backs and rear access hatch
17	Stern locker seating
18	Stern seating soft back
19	Fiberglass arch
20	Cockpit drain system socket (2pcs.)
21	Fuel fill

## INFLATION / DEFLATION VALVES OPERATION

The inflation/deflation valve is intended for:

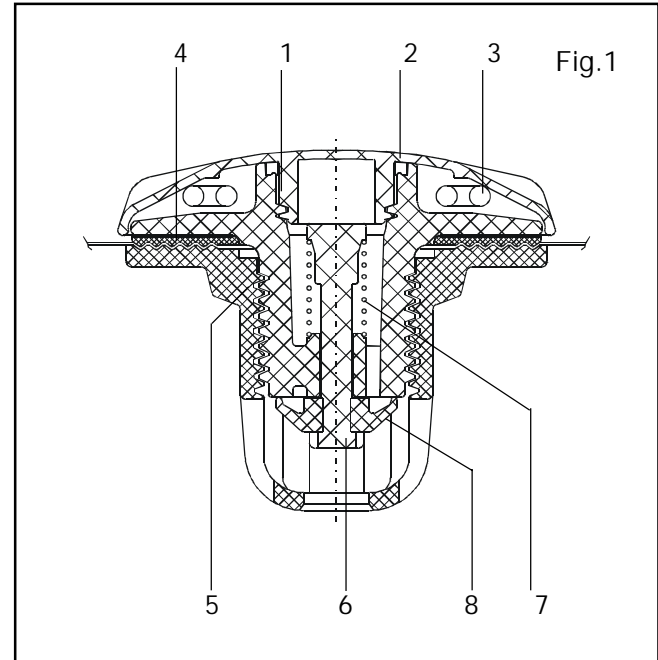
- filling the compartment with air from a standart pump or filling system and maintaining pressure in the tube for prolonged time,
- adjustable drop of pressure in compartment.

The air fill valve is designed as a tab-type non-return valve.

Every inflation / deflation valve includes the following parts : valve body 1, valve nut 5, valve cap 2 with strap 3, washerwith gasket 4, spindel 6 with spring 7, cup diaphragm 8 ( Fig.1).

INFLATION MODE : valve is closed with gasket 4 tight . To move the valve to deflation mode : push the button 6 and turn it clockwise to fix it in lower position

DEFLATION MODE : button is fixed in lower position. To move the valve to inflation mode : push the button 6 and turn it counter clockwise. The button goes to upper position.



### ATTENTION !

1. Overinflating of your boat, when the air pressure is more than nominal, sufficiently decreases the boat life time.
2. The valves are airtight just in case they are closed with the caps tight.
3. The tube is airtight in case it keeps its form for 8 hours at least.

### PREPARATION FOR EXPLOITATION.

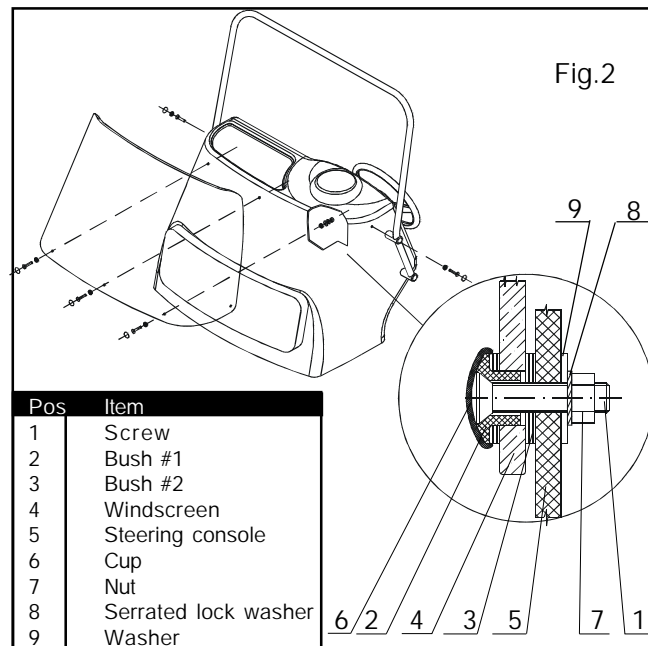
In order to set the boat in operation condition perform as follows:

- unfold the inflatable tube;
- mount outboard engine on the transom in accordance with it's own installation instruction.
- extend engine remote control cables and steering cable from engine mounting place to steering console mounting place through holes on the deck and helm stowage.

### STEERING CONSOLE INSTALLATION

In order to install the windscreen onto console perform the next operations ( Fig. 2 ):

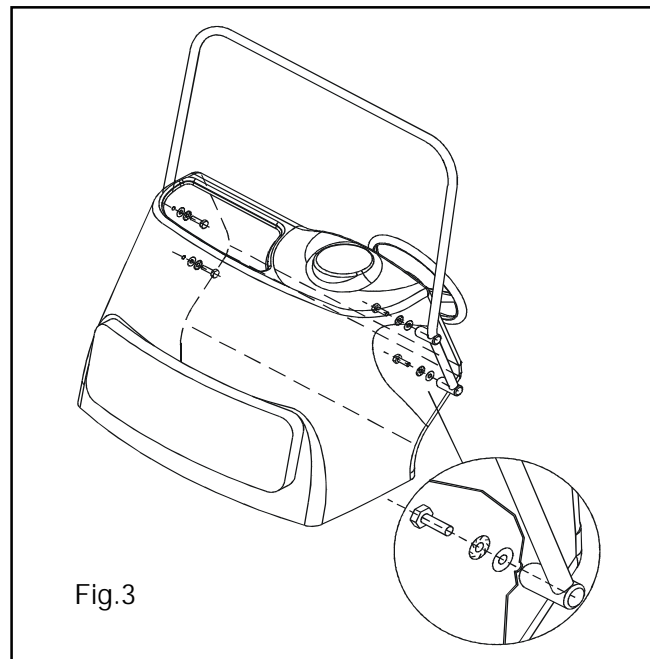
- align windscreen holes with holes on console overhead part;
- fix the windscreen by means of the screws M6x25, bushs #1, bushs #2, serrated lock washers, washers and nuts M6 from the complete set;
- tighten all the nuts.



**ATTENTION !** To avoid water penetration into the console inner layers, please, tight all hole free space with any water resistant filler.

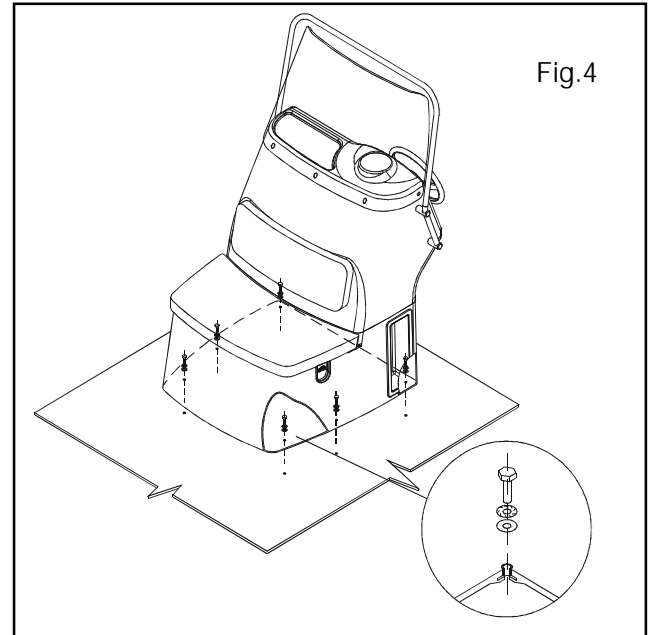
In order to install the windscreen railing onto console perform the next operations ( Fig. 3 ):

- align holes in the windscreen railing supports with holes on console overhead part;
- fix windscreen railing by means of the bolts M12x30, serrated lock washers and washers from the complete set;
- tighten all the bolts.



In order to install the steering console, perform the next operations ( Fig. 4, Fig5 ):

- hinge out the steering console overhead;
- open the front seating;
- open hatch of the console back locker;
- extend steering cable and engine remote control cables through hole in the steering console bottom;
- align console bottom holes with holes in the deck surfaces and fix console to deck by means of bolts M8x30, serrated lock washers and washers from complete set;
- attach steering cable to the steering mechanism and install engine remote control block to the overhead console;
- connect electric cable to the steering console (see wiring diagram);
- double-check that the steering and remote control cables have been connected correctly. For checking refer to the steering mechanism and engine instructions manual;
- fix the overhead console part by means of washers, serrated lock washers and nuts;
- close front seating and hatch of the locker.



**ATTENTION !** To avoid the water penetration into the console inner layers, please, tight all the hole free space with any water resistant filler.

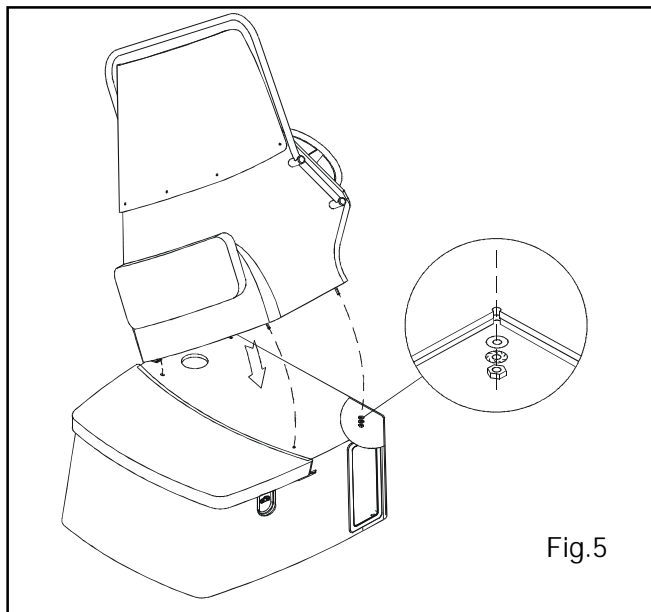


Fig.5

**ATTENTION !** To avoid the water penetration into the console and container inner layers, please, tight all the hole free space with any water resistant filler.

## CONTAINER INSTALATION

In order to install container onto deck perform the next operations ( Fig. 6 ):

- open hatch of the back locker;
- align bottom container holes with holes on the deck;
- fix container by means of bolt M8x25, serrated lock washers, washers from the complete set;
- tighten all the bolts;
- replace hatch of the back locker.

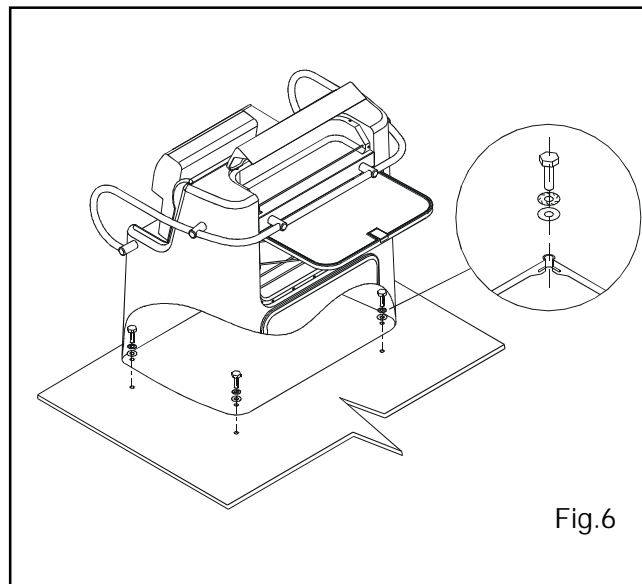
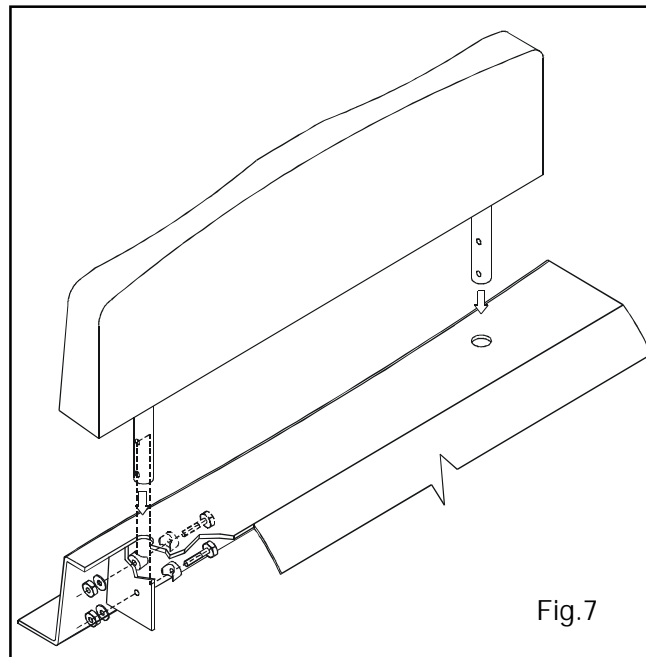


Fig.6

**STERN SOFT SEAT-BACK MOUNTING.**

In order to install the stern locker seat-back, perform the next operations (Fig.7)

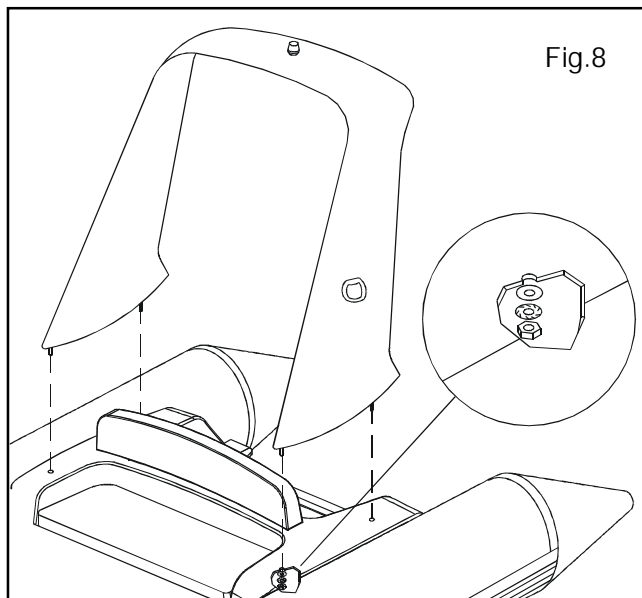
- hinge out the seat of stern locker;
- insert seat-back support into the holes of stern surface;
- fix seat-back by means of the bolts M8x50, shaped washers, washers and arrester nuts M8 from the complete set;
- tighten all the bolts;
- replace the locker seat.



**ARC MOUNTING.**

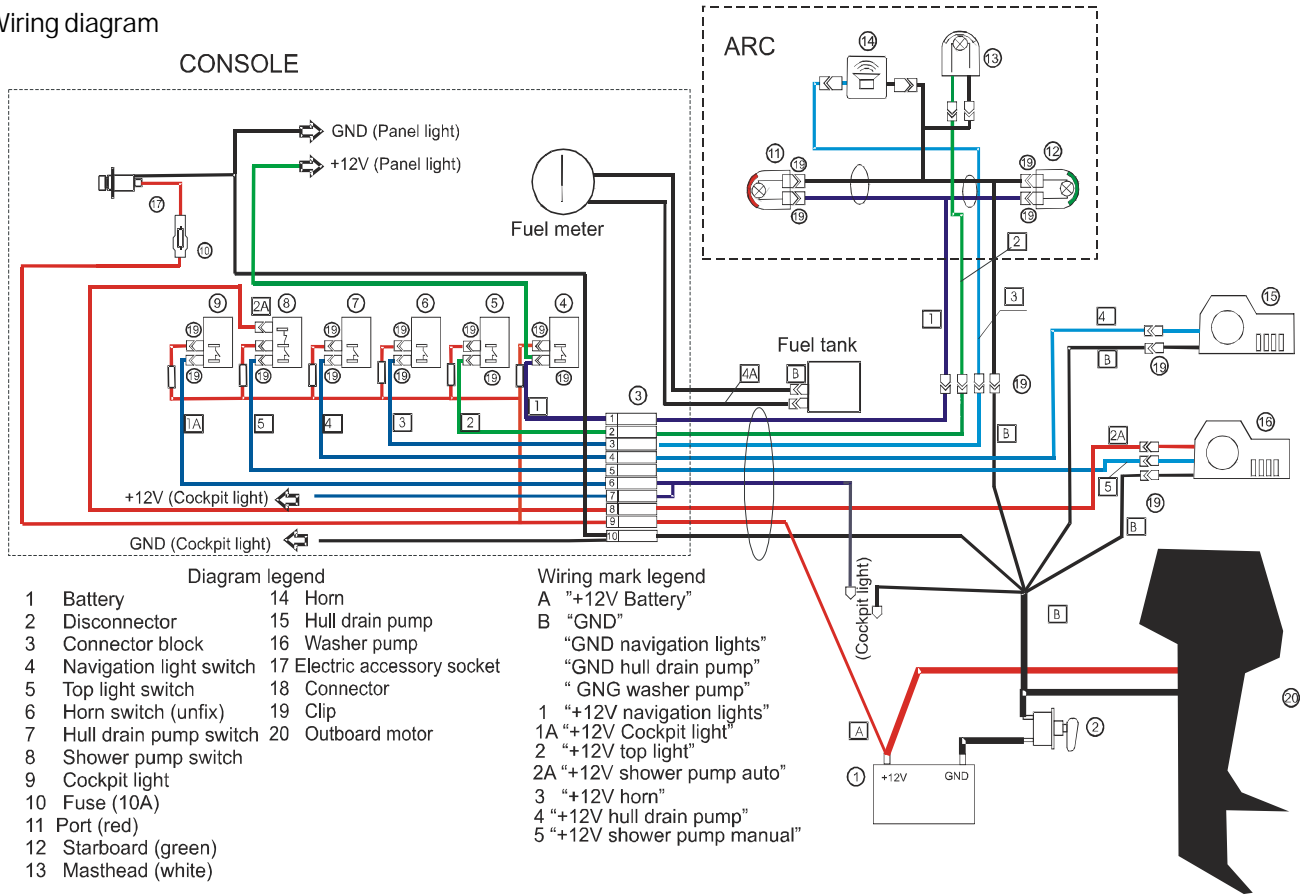
In order to install the arc, perform the next operations (Fig.8):

- hinge out the seat of stern locker;
- insert arc stud in the stern surface holes ;
- fix arc by means of the nuts M12, serrated lock washers and washers from the complete set ;
- tighten all nuts;
- replace the locker seat.





Wiring diagram



**MAINTENANCE**

Main conditions of long service life is right and careful service.

■ Avoid excessive increasing of pressure in the board, especially from heating by the sun rays.

■ After exploitation take off sand and dirt from boat surface, and carefully dry it.

■ Avoid the water getting into the chambers. If a fuel or an oil / gas gets to the boat surface it is necessary to wash the soiling place by soap water as soon as possible and dry.

■ Pay attention to the condition of bottom and seat surfaces. If the coating is destroyed it is necessary to dry this element and restore the defend ply.

■ After the season prepare the boat to winter keeping. Clean boat surface from sand and dirt and make the necessary repairs, if damages take place. If it is possible, keep the boat in the open and slightly pumped state in air temperature 0-25°C. The boat must be protected from the sun rays.

■ Insignificant boat repairing (eliminating the board punctures or cuts) you may carry out by yourself. In this case use the coated fabric patches from the complete set. Ask your dealer for the correct type of glue you may use for the repair.

■ In case if sufficient damages of hull, tube body, partitions or seams it is recommended to apply for professional repair in authorized service station.

**OPERATING REGULATIONS**

Dear user,

We thank you for your purchase and do hope that you will have a great fun of it. However, to make your joy and pleasure complete, we would request you to read carefully and observe the directions and recommendations specified below.

**IT IS STRICTLY FORBIDDEN :**

to handle the boat in the state of intoxication and without individual rescue means being used (life-saving belts, jackets, etc.)

**IT IS FORBIDDEN :**

- to overload the boat above the design weight-carrying capacity;
- to use an outboard engine of power exceeding the maximum allowable value;
- to bring the tube pressure up to the value exceeding the rated one ( 0.15 bar/ 2.15 psi );
- to drag the boat across a rough surface.

■ Danger of usage of engine having insufficient or excessive power

According to the safety regulations, each inflatable boat should be furnished with an outboard engine having the maximum allowable power. You will find the data on the maximum allowable power of the engine on the manufacturer's plate with the designation of the model type inscribed thereon. The plate is fixed in the afterbody of the boat. However, your should choose the engine power within the allowable range so as to ensure that you may safely reach the shore when heading into the wind or into the current.

**■ Observation of local shipping regulations**

For each particular water area the local shipping regulations are in force. You may apply for information to the appropriate water transport and shipping directorate, as well as to the water police.

**■ Proper usage of boat equipment and accessories**

Use the boat equipment and accessories only on their direct purpose to ensure reliable service.

**■ Availability of Oars**

Even when sailing with an outboard engine you should always have the oars available with you so that you were able to reach the shore without outside assistance in case of any damage to the boat.

**■ Usage of emergency stop switch**

On your request any outboard engine seller may provide your engine with the emergency stop switch. During navigation the switch should be connected to the wrist of your hand by means of a cord. In case you fall overboard, even if being a steersman, the switch will cut out the engine and the propeller. This arrangement will enable you to avoid any traumas and to reach the boat.

**■ Prevention of damages caused by electrolyte or fuel leakages**

Take all possible precautions against penetration of fuel or electrolyte from the storage battery into the inflatable boat. If it does happen wash thoroughly the fouled spots with water.

**■ Cargo arrangement and stowing, attachment of items and prevention of falling overboard**

You should be always sure that the number of people on board never exceeds that specified in the user's manual or on the manufacturer's plate provided on the transom. The boat will retain an adequate floatability and will not keel over only provided that the load is arranged reasonably. Therefore, do

not accommodate all passengers on the same side of the boat. Arrange the cargo to be carried uniformly inside the boat, all items being reliable secured on the bottom of the boat. All passengers should be accommodated inside the boat. The occupied seats should not be left throughout the entire sailing time. When sailing with an outboard engine the steersman should shift his body forward in the course of acceleration to prevent the boat forebody from raising under the force of upthrust waves.

**■ Presence of sharp and pricking objects on board**  
Despite the strong shell of the boat we are recommended to handle sharp and pricking objects being on board with care. For example, it concerns a knife blade, fish-hook point, etc.

**■ Rocky shore, mole, shoals (for example, sand banks, coral reefs, rocks)**

Approach rocky shores, shoals, moles, etc. carefully to avoid damages to the boat. It is strictly prohibited to drag the boat across rough surfaces (shingle, rocks, concrete, etc.).

**■ Check at navigation**

In case of prolonged navigation with the use of an outboard engine, regularly check to ensure that the engine is reliably attached to the boat. If the engine was attached carelessly the attachment may work loose under the action of vibration.

Besides, check air chambers pressure at regular intervals, since the pressure may vary under the effects of outside air temperature and atmospheric pressure variations.

Never forget to monitor regularly the quantity of fuel in the fuel tank. Keep always in mind that the quantity of fuel should be sufficient for you to sail to your final destination.

**■ Availability of rescue means (life-saving jackets, distress signals, spare parts)**

If you are planning to go beyond the protected water areas you should provide all passengers on board with life-saving

jackets. All passengers should put on life-saving jackets under strong wind and heavy seaways conditions. Those passengers who cannot swim should always carry the life-saving jackets while on board! It is also recommended to keep constantly distress signal means on board.

■ Towing

At towing the towing rope length should not be at least 3 lengths of the boat, the rope being secured to both boats in a manner ensuring its immediately, single-motion release. The steersman of the towed boat should be assisted by another crew member to monitor the process of towing. In this case, certain communication gestures should be agreed upon beforehand.

■ Damage to one of air chambers

The inflatable boat is designed to provide an adequate stability in case of the complete damage to one the air chambers (balloon compartments) at the expense of the remaining air chambers and the hull. Thanks to it, you will be able to reach safely the nearest shore. Reduce the speed and shift your body to the undamaged part of the boat. Watch changes in stability. After this immediately head for the nearest shore. To prevent penetration of water into the boat, pull the shell of the damaged air chambers upwards.

■ Anchor and mooring fast fastening

Fix the anchor and towing ropes in the forebody of the boat to the front towing ring. Fix the back spring on the transom via special holes.

■ Danger of currents and wind

Before navigation of the boat in unfamiliar waters make detail inquiries about local conditions and regulations! Currents, wind, shoals, rising and falling tides, as well as weather variations may imply serious danger!

■ In emergency stay in boat

In any unexpected situation (engine failure, boat damage, etc.) do not ever leave the boat provided it is still afloat. Even if you believe that the shore is just nearby stay in the boat, since you will be looked for in this particular place and, most probably, will be found. Should the boat become partially flooded throw heavy objects (batteries, fuel tank, engine) overboard to ensure additional floatability.

The "GRAND" Company employees would like to wish you a pleasant and safe leisure time!

MODEL

SERIAL No.

Date of manufacture

Quality inspection stamp