

Rigid Inflatable Boat

# SILVER LINE

Models:

S470, S470L, S470S

User's Manual

## INTRODUCTION.

"GRAND" inflatable motor boat of the "SILVER LINE" series: S470, S470L, S470S 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, the use as a floating means on board of launches, yachts and other vessels.

## TECNICAL DATA SPECIFICATION

Model	Unit	S470 / S470L/S470S
Length overall	m	4,7
	ft-inches	15'5"
Length inside	m	3.45
	ft-inches	11'4"
Width overall	m	2,05
	ft-inches	6'9"
Width inside	m	1,02
	ft-inches	3'4"
Tube diameter max	m	0,5
	ft-inches	20"
Number of chambers		4
Passenger capacity	pers.	8
Load capacity	kg	1000
	lbs	2200
Boat weight	kg	170/195/225
	lbs	371/429/495
Engine power recommended	HP	30-50
	kW	22,1-36,8
Engine power max	HP	70
	kW	51,5
Engine weight max	kg	110
	lbs	242
Engine shaft length	ft-inches	20" (long)
Tube color		light-grey
Boat design Category (Dir.94/25/EC)		C

## COMPLETE SET

Model				S470	S470L	S470S
Description	unit	q-ty	availability	availability	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 seat 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 Double seat with stowage SD-02	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.5 Bolt M8*25	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 Set of spare part and repair kit:	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.8 Maintenance kit & User's manual	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Steering console CL-03	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 Steering system	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.3 Steering cable	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.4 Steering wheel	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.5 Screw M6*25	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.6 Screw bush (bush #1)	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.7 Bush #2	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.8 Cup	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.9 Washer 6*18	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

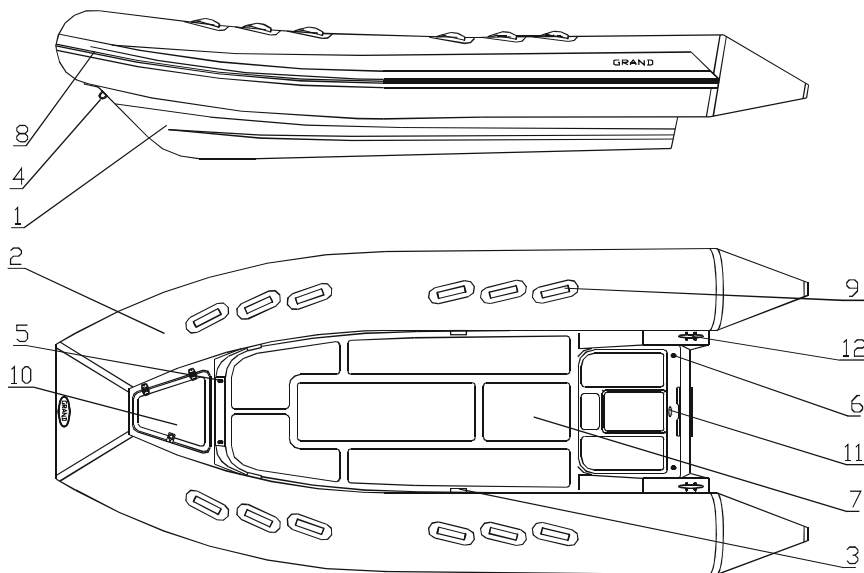
## COMPLETE SET

Description	unit	q-ty	availability	availability	availability
2.11 Nut M6					
2.12 Washer 8*24	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.13 Serrated lock washer 8	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Steering console CS-01 «Sport»	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1 Windscreen	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2 Steering system	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3 Steering cable	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4 Steering wheel	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.5 Windscreen railing	pcs.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.6 Support windscreen railing	pcs.	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.7 Screw M6*25	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.8 Screw bush (bush #1)	pcs	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.9 Bush #2	pcs	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.10 Cup	pcs	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.11 Washer 6*18	pcs	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.12 Arrester nut M6	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.13 Bolt M8*25	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.14 Washer 8*24	pcs.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.15 Bolt M12*20	pcs.	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.16 Washer 12*24	pcs.	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



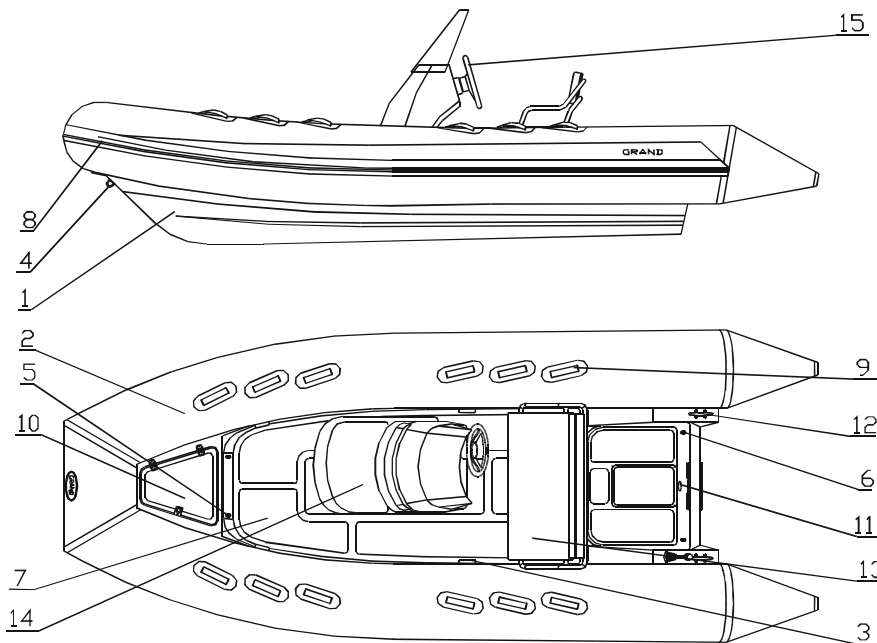
— Your "GRAND" boat "SILVER LINE" complete set included this items.

# S470



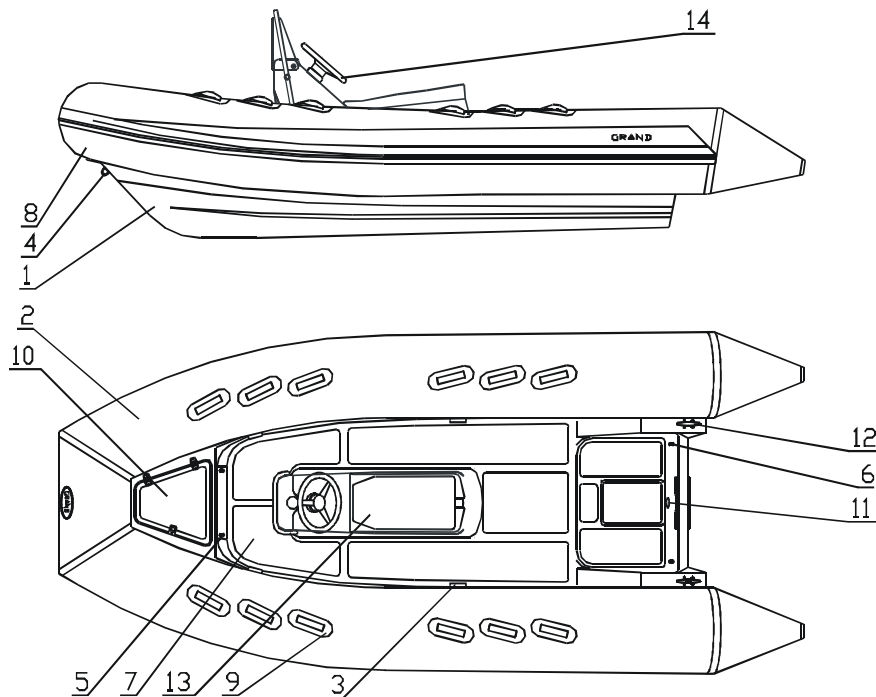
Pos	Item
1	Fiberglass hull
2	Buoyancy tube
3	Inflation / deflation valve
4	Bow towing eye
5	Bow lifting eye
6	Stern lifting eye
7	Antiskid deck surface
8	Raised rubbing strake
9	Safety grab handles
10	Molded-in bow stowage
11	Hull drain plug
12	Rear cleat

# S470L



Pos	Item
1	Fiberglass hull
2	Buoyancy tube
3	Inflation / deflation valve
4	Bow towing eye
5	Bow lifting eye
6	Stern lifting eye
7	Antiskid deck surface
8	Raised rubbing strake
9	Safety grab handles
10	Molded-in bow stowage
11	Hull drain plug
12	Cleat
13	Double seat SD-02 with container, cushion,soft back
14	Steering console CL-03
15	Steering wheel

# S470S



Pos	Item
1	Fiberglass hull
2	Buoyancy tube
3	Inflation / deflation valve
4	Bow towing eye
5	Bow lifting eye
6	Stern lifting eye
7	Antiskid deck surface
8	Raised rubbing strake
9	Safety grab handles
10	Molded-in bow stowage
11	Hull drain plug
12	Cleat
13	Steering console CS-01 with container and cushion
14	Steering wheel



### PREPARATION FOR EXPLOITATION.

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

- unfold the inflatable tube;
- mount the outboard engine on the transom in accordance with its own installation instruction.

For boats S470L, S470S:

- extend the engine remote control cables and steering system cable from the engine mounting place to the steering console mounting place .

### INFLATION / DEFLATION VALVE OPERATION.

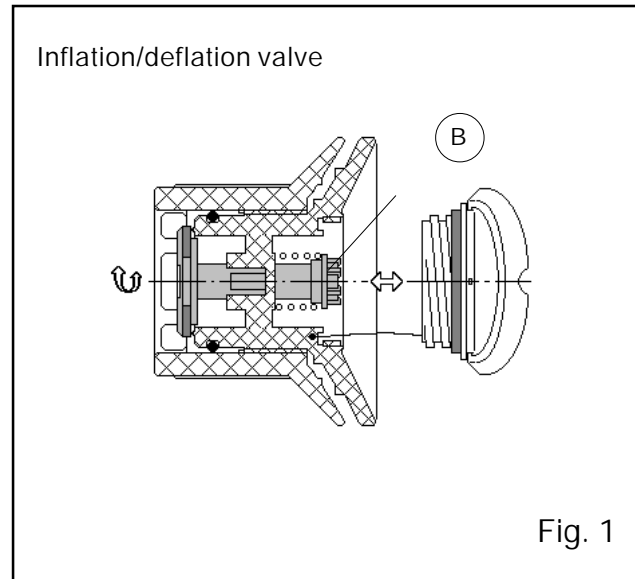
The valve has two positions of sliding part A corresponding to its two conditions (modes):

- sliding part A is with drawn - operation condition of the valve (compartment air filling mode);
- sliding part A is recessed - valve in condition "OPEN" (compartment air discharge mode).

In order to switch the valve over from one condition to another, just press sliding part A with your finger to turn it by 90 degrees in any direction until it is fixed (See Fig.1).

Prior to begin the compartment filling process set all valves in the operating condition. On completion of filling close the valves with bonnets B (rotate them clockwise).

In order to discharge air from the compartments, open the valves (by counterclockwise rotation) and switch the valves over into condition "OPEN".



**ATTENTION !** Overinflating of your boat, when the air pressure is more than nominal, sufficiently decreases the boat life time.

## STEERING CONSOLE INSTALLATION

Mount the engine remote control block on the right side of the steering console;

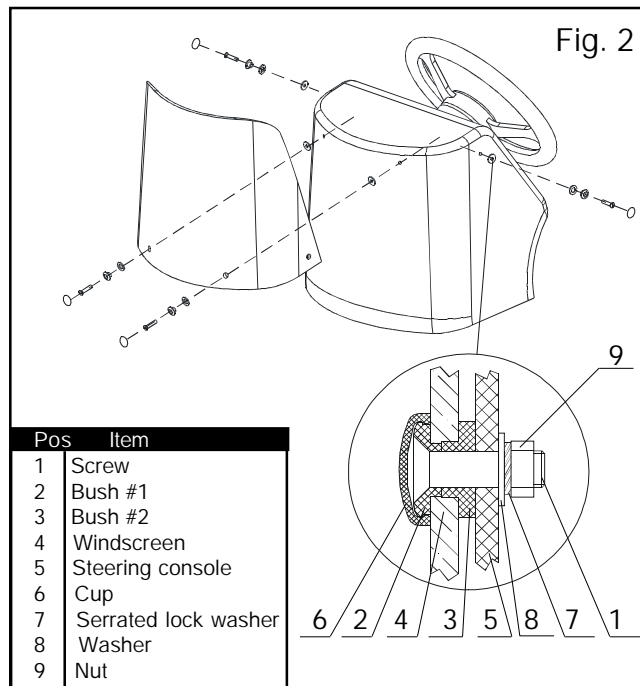
In order to install the windscreen onto the console perform the next operations ( Fig. 2 ):

- unfix and hinge out overhead part of steering console or seat for steering console CS-01 «Sport»;
- align holes in the windscreen with holes in the console overhead part;
- fix windscreen by means of the screws M6x25, bushes , washers and nuts M6 from the complete set;

For steering console CS-01 «Sport»:

- align holes in the windscreen railing with holes in the console «Sport»;
- fix windscreen railing by means of the bolts M12x20, support windscreen railing and washers from the complete set;
- tighten all the bolts and screws.

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



In order to install the steering console CL-03 on the deck perform the next operations ( Fig. 3 ):

- align holes in the bottom of steering console with holes on the deck;
- fix steering console to the deck by means of bolts M8\*25 and washers (see Fig.3);
- attach steering system cable in accordance with its own installation (manual);
- replace and fix overhead part of the steering console by means of serrated lock washers, washers and nuts M8 from complete set (see Fig.3).
- tighten all the bolts and nuts.

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

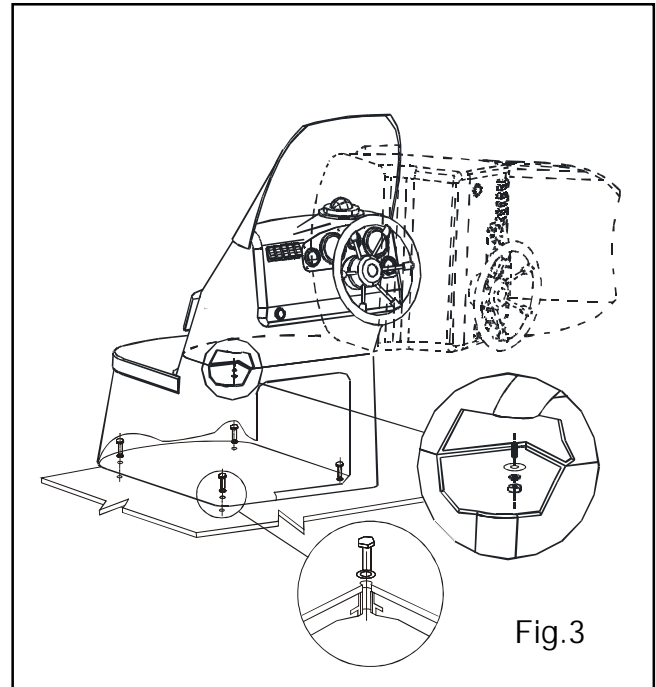
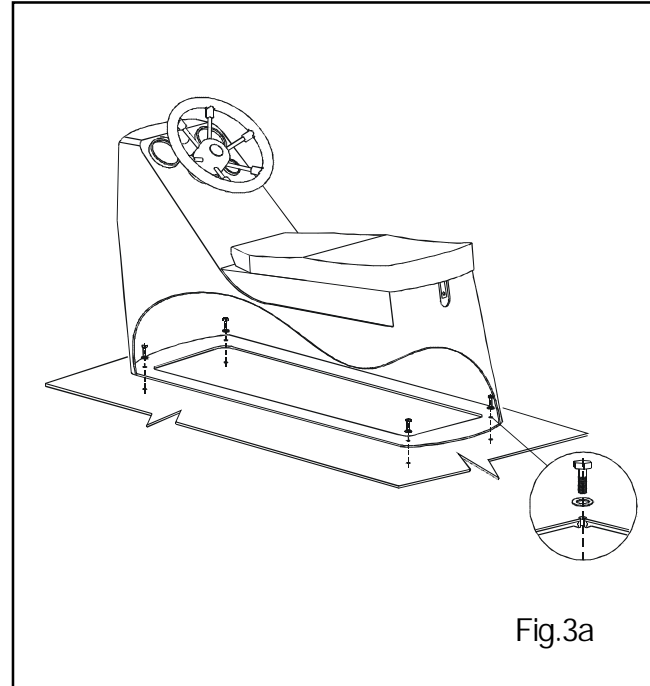


Fig.3

For steering console CS-01:

- align holes in the bottom of steering console with holes on the deck;
- fix steering console to the deck by means of bolts M8\*25 and washers (see Fig.3a);
- attach steering system cable in accordance with its own installation (manual);
- tighten all the bolts.



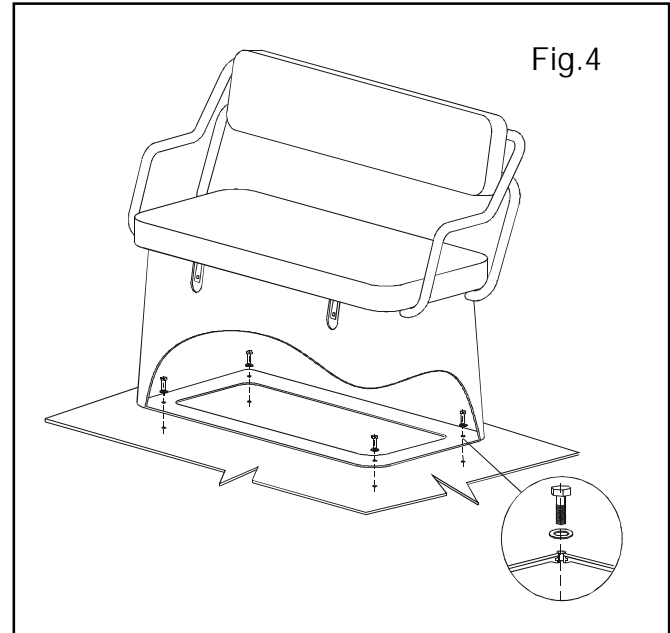
**ATTENTION !** To avoid the water penetration into the console and hull inner layers, please, tight all the hole free space with any water resistant filler.

**CONTAINER INSTALATION**

In order to install the container onto the deck perform the next operations ( Fig. 4):

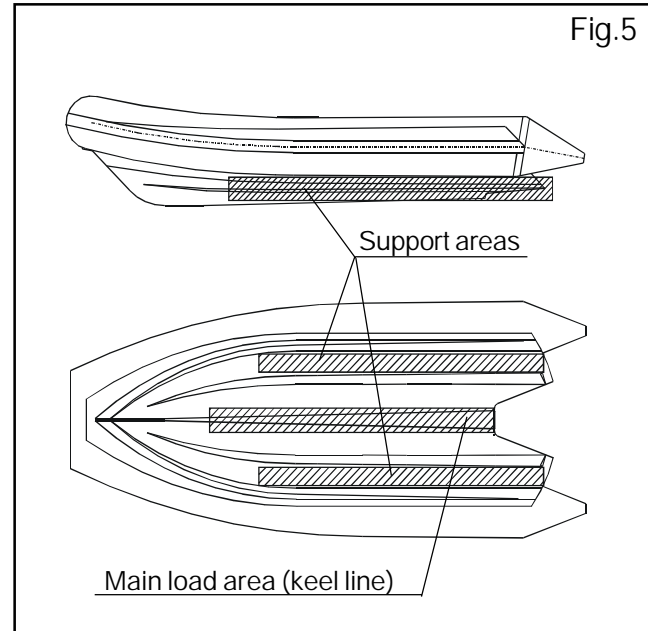
- hinge out the seat;
- align holes on the bottom container with holes on the deck;
- fix container to the deck by means of bolts M8\*25 and washers (see Fig.4).
- tighten all the bolts.
- replace the seat.

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



**BOAT TRAILERING**

When trailering fix the boat securely on the trailer, bearing rollers must support the boat on signled out position (Fig.5). The maximum load should be located on the keel line. The side areas of the bottom may be used for support purposes only.



**IT IS FORBIDDEN!**

In order to avoid the hull damage trail the boat staying on the aforesaid areas only.

**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 authorised 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);
- 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