



# OWNER'S MANUAL





Ranger R380, R420, R460  
**OWNER'S MANUAL**





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## SAFETY INFORMATION

### INTRODUCTION

Thank you for choosing a Grand boat.

If you need assistance or advice please contact your Grand Dealer or Distributor who has qualified specialists, special tools, original spare parts and accessories and will be happy to assist.

This Manual provides an overview for the safe operation of your Grand boat. Please take time to read it carefully so as to become familiar with your new boat. Make sure that you fully understand the controls and instructions before operating the boat. Improper operation can be extremely dangerous!

Please, note that most boating-related accidents happen when safety instructions are ignored. We want you to enjoy your experience on your boat so please be sure to take our guidance seriously and comply with safety instructions at all times.

The basic safety rules are stated throughout the Manual, additional precautions are indicated by the special **PRECAUTIONARY SYMBOLS**:



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## PRECAUTIONARY SYMBOLS

The following precautionary symbols are used throughout this Manual:



Denotes that an extreme intrinsic hazard exists which would result in a high probability of death or serious injury if proper precautions are not taken.



Denotes that a hazard exists which can result in injury or death if proper precautions are not taken.



Denotes a reminder of safety precautions or directs your attention to unsafe practices which could result in personal injury, damage to the craft or components or the environment.

**PLEASE NOTE** that in some countries a boat operating license or other form of authorization may be required.



# SAFETY

Operators should be familiar with the use of all safety equipment and emergency procedures (e.g. man overboard recovery, towing etc.). We strongly recommend that appropriate training is undertaken from a recognized boating and/or safety organization prior using your boat.

Please note that in some countries it is a mandatory requirement to wear a buoyancy aid.

Some information may not apply to your boat since standard and optional equipment may vary from model to model.

Data sheets and specifications given in this manual relate to the boat's characteristics at the time of publishing. Grand reserve the right to introduce changes in specifications and equipment without notice and without obligation.

We continually work with our customers to improve quality and to ensure you will be completely satisfied with your Grand boat.

If you have any additional questions after reading this manual, please feel free to ask for your dealer.

**PLEASE KEEP THIS MANUAL IN A SECURE PLACE, AND HAND IT OVER TO THE NEW OWNER WHEN YOU SELL THE CRAFT.**



## GENERAL INFORMATION

Name of craft Manufacture: GRAND MARINE. Models: R380, R420, R460.

According to the Recreational Craft Directive 2013/53/EU of the European Parliament and of the Council of 20<sup>th</sup> November 2013, which is in force, your boat has design category: C, i.e., the craft is designed to operate in the following conditions:

Wind (Beaufort scale) up to and including Force 6.

Significant wave height ( $H^{1/3}$ , meters) up to and including 2 meters.

*Explanatory note:*

A watercraft given design category C is considered to be designed for a wind speed up to and including Force 6 and significant wave height up to and including 2 m.



**BE RESPONSIBLE, TAKE NOTICE OF THESE PARAMETERS WHEN YOU PLAN YOUR NAVIGATION PROGRAM AND DO NOT BOAT IF THE WIND/WAVE CONDITIONS ARE LIKELY TO EXCEED THESE PARAMETERS.**



# SAFETY

## MAXIMUM NUMBER OF PERSONS

The Maximum number of people (adults + children) authorized to be on board according to design standards ISO 6185, ISO 14946 and ISO 12217 is given in the technical data sheet in the “TECHNICAL INFORMATION” section.



### WARNING

**DO NOT EXCEED THE MAXIMUM RECOMMENDED NUMBER OF PEOPLE. REGARDLESS OF THE NUMBER OF PEOPLE ON BOARD, THE TOTAL WEIGHT OF PEOPLE AND EQUIPMENT MUST NEVER EXCEED THE MAXIMUM RECOMMENDED LOAD. ALWAYS USE THE SEATS/SEATING SPACES PROVIDED.**

## MAXIMUM LOADING CAPACITY

You can find the maximum load capacity in the “TECHNICAL INFORMATION” section in this Manual. It is also shown on the manufacturer’s plate affixed to the hull. Please note that the maximum load capacity includes the weight of all people onboard, outboard engine, provisions, personal effects, and additional equipment. Note that excess and unevenly distributed load within the boat can create unstable steering conditions and even loss of control.

** WARNING**

WHEN LOADING THE CRAFT, NEVER EXCEED THE MAXIMUM RECOMMENDED LOAD. ALWAYS LOAD THE CRAFT CAREFULLY AND DISTRIBUTE LOADS APPROPRIATELY TO MAINTAIN DESIGN TRIM (APPROXIMATELY LEVEL). AVOID PLACING HEAVY WEIGHTS HIGH UP.

**ENGINE INFORMATION**

Information about recommended engine capacities, maximum engine capacities, maximum engine weights for each model are given in the technical data sheet of “TECHNICAL INFORMATION” section.

** DANGER**

NEVER USE A MOTOR WITH A POWER OUTPUT GREATER THAN THE MAXIMUM RECOMMENDED, OR HEAVIER THEN INDICATED ON THE MANUFACTURER'S PLATE. THIS COULD RESULT IN LOSS OF CONTROL.



## RISK OF FLOODING AND STABILITY

### COCKPIT DRAINAGE



### CAUTION

WHEN THE BOAT IS ON LAND/DAVIT OR TRAILER, OPEN THE COCKPIT DRAIN VALVE SO THAT WATER (RAINWATER, FOR INSTANCE) CAN EASILY DRAIN OUT OF THE BOAT.

The boat is equipped with two cockpit drain valves located at the transom.



Fig. 1. Cockpit drain valves.



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## STABILITY AND BUOYANCY

The stability and buoyancy of the craft have been thoroughly assessed by the Manufacture in compliance with the requirements of the Recreational Craft Directive 2013/53/EU.

The craft manufacturer guarantees that the boat meets all safety criteria during normal operating conditions.

However, the person responsible for operating the craft must always keep in mind that the safety of the craft and crew should be their priority at all times and that conditions on the water can change suddenly with little prior notice.

Before using your boat, it is strongly recommended that appropriate training is given to all crew members in the safe operation of the craft.

In case of an accident, do not panic and reassure passengers.

- Be aware that your boat, even if damaged, may provide the best shelter and facilitate your rescue. Never leave the boat whilst it remains afloat. Remember that an inflatable boat, even when full of water, is virtually unsinkable.
- If, after an accident, a tube compartment deflates, bring it inside the boat, restore the load balance to the opposite side of the deflated compartment and return to port at reduced speed.



# SAFETY

- In case of a collision or an impact with a floating object, stop to examine the hull, the buoyancy tubes, the motor and its attachments and return to shore at a low speed.
- Signal for help.

Following an accident and before using the craft again, make sure that it is examined by your dealer or a qualified technician and any defects are repaired.



## WARNING

**NEGLECTING REGULAR INSPECTIONS AND REPAIRS MAY LEAD TO A SERIOUS INJURY OR DAMAGE AND WILL REDUCE THE LIFE OF YOUR BOAT.**

## RISK OF FIRE OR EXPLOSION

For information concerning safe operation of the engine consult the manufacturers instruction manual.

Consult your Dealer for more detailed information on this subject before operating your boat.



## DANGER

**AVOID CONTACT OF FLAMMABLE MATERIALS WITH HOT ENGINE PARTS.**

**DANGER**

CHECK FOR FUEL AND GAS VAPOURS OR FUEL LEAKS AT REGULAR INTERVALS AND BEFORE STARTING THE ENGINE. NEVER USE A FLAME TO CHECK FOR LEAKS.

DO NOT SMOKE OR USE AN OPEN FLAME WHEN FUELING THE BOAT.

**BATTERY****DANGER**

1. AVOID SPARKS AND EXPOSED FLAMES NEAR BATTERY. IT MAY EXPLODE.
2. KEEP BATTERY TERMINALS PROTECTED SO AS TO AVOID A SHORT CIRCUIT OR CONTACT WITH ANY METAL OBJECTS.
3. TURN OFF THE ENGINE WHEN INSPECTING OR SERVICING THE BATTERY.

**ENGINE STARTING**

Refer to the engine manufacturer's manual for correct procedures before using the engine.

**CAUTION**

BE SURE THE ENGINE IS NOT IN GEAR BEFORE ATTEMPTING TO START IT!



# SAFETY

## MAN-OVERBOARD PREVENTION AND RECOVERY

The working deck has an anti slip surface. When the boat is underway, the operator and passengers should always occupy designated seating areas, using handles when necessary.



### **WARNING**

**IF PASSENGERS ARE NOT IN DESIGNATED SEATING WHEN UNDERWAY THERE IS A RISK OF FALLING INSIDE THE BOAT OR OVERBOARD CAUSING SERIOUS INJURY OR DEATH.**

## MEANS OF REBOARDING

Due to low freeboard, there are no specific devices to re-board. When using safety lifeline caution must be paid to prevent the boat from capsizing. Make sure the engine switched off and propeller is not rotating.

## DANGER FROM MOVING PARTS

Even in neutral, engine's propeller may rotate and may cause injury. If a person is in the water near the boat, immediately switch off the engine to avoid injury from the propeller rotation.



### **WARNING**

**KEEP AWAY FROM MOVING PROPELLER! IT COULD RESULT IN INJURY OR DEATH!**



## SAFETY EQUIPMENT

The owner/operator is responsible for ensuring that appropriate safety equipment is onboard and is in proper working condition. The type of safety equipment and quantity will depend on the conditions expected and length of trip.

The type of safety equipment required will depend on local or national regulations. In most countries, safety equipment of the following type is required:

- Emergency Engine Kill Switch Lanyard.
- Personal Flotation Devices (PFD).
- Horn or Whistle.
- A manual bailing device for removing water from the boat (bucket, hand pump).
- Visual Distress Signals.



**CONSULT YOUR LOCAL DEALER REGARDING REQUIRED SAFETY EQUIPMENT IN YOUR COUNTRY/STATE BEFORE GOING AFLOAT.**



# SAFETY

## SAFETY DRIVING RULES



### WARNING

- DO NOT EXCEED THE AUTHORIZED NUMBER OF PERSONS OR MAXIMUM WEIGHT FOR THE CRAFT.
- MAKE SURE YOUR PASSENGERS REMAIN SEATED ON SEATS OR ON THE FLOOR. AVOID SITTING ON TUBES.
- AVOID BOW RIDING AS IT MAY BE ILLEGAL AND IS EXTREMELY DANGEROUS.
- DO NOT MAKE SHARP TURNS AT HIGH SPEEDS: YOU COULD BE EJECTED FROM THE BOAT.
- DO NOT MAKE VIOLENT CHANGES IN DIRECTION WITHOUT INFORMING PASSENGERS.



## BOAT IDENTIFICATION

### BOAT'S IDENTIFICATION NUMBER

Every boat has “Watercraft Identification Number” (WIN), which uniquely identifies your boat and is important for safety and identification purposes. The WIN is marked on a non-removable metal plate, which is fixed to the transom area of your boat (fig. 2).



Fig. 2. Location of the WIN plate.



# BOAT IDENTIFICATION

## BUILDER'S PLATE

The builder's plate (fig. 3), which is fixed to the craft, provides information about the Builder including builder's name, registered trade or trade mark plus contact name and address, CE marking, craft design category, maximum recommended load, number of persons recommended by the builder for which the craft was designed. This information may not however comprise a complete list: safety requirements (obligatory safety equipment carried on the boat, maximum authorized distance you can navigate from a port, etc.) may vary according to the country or state.

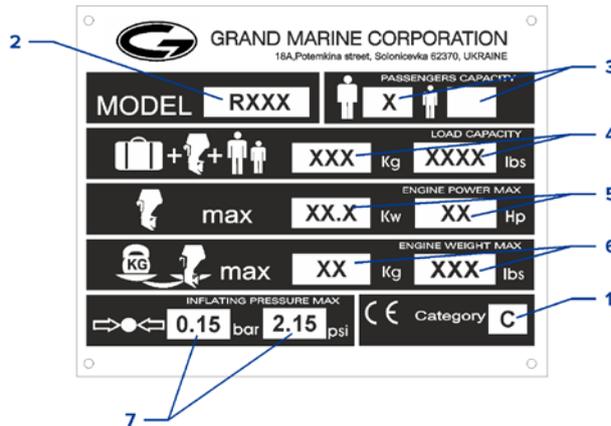


Fig. 3. Builder's plate.

- 1 - Design category\*
- 2 - MODEL: Catalogue name or model number.
- 3 - Maximum number of people authorized on board (adults + children) according to ISO and DIN standards.
- 4 - Maximum load capacity of the boat allowed by the builder and expressed in kilograms and lbs.
- 5 - Maximum outboard power allowed by the builder for the boat and expressed in kilowatts and HP.
- 6 - Maximum weight of outboard motor allowed by the builder expressed in kilograms and lbs.
- 7 - Nominal Pressure of the buoyancy tubes in Bar and Psi. Other parts of the boat may require different pressures. Refer to the INFLATION section in this manual.



Always refer to local regulations for information on additional requirements.

\*Design category (European directive 2013/53/EU):

Category	C	D
Navigation	"Inshore"	"Protected water"
Wind speed (Beaufort scale)	Up to and including F6	Up to and including F4
Significant height of wave to consider (in meters)	Up to and including 2m	Up to and including 0.3m



**BE RESPONSIBLE, TAKE NOTE AND DO NOT NAVIGATE IF THE CONDITIONS ARE LIKELY TO EXCEED THESE PARAMETERS.**



# BEFORE OPERATING YOUR CRAFT

## BEFORE OPERATING YOUR CRAFT

1. **OBTAIN INFORMATION** on local regulations and hazards related to marine activities and boat operation.
2. **CHECK** weather forecast, local currents, tides and wind conditions.
3. **ADVISE** someone on land when you expect to be back.
4. **EXPLAIN** basic boat operation to all passengers.
5. **ENSURE** that at least one passenger is able to operate the craft and motor, provide training as needed.
6. **FAMILIARISE** all passengers with safety procedures and drills.
7. **LEARN** how to estimate the distance you can cover with a full tank of fuel. Always be sure you have enough fuel to reach your destination or a place of safety.
8. **CHECK** you have all necessary documentation and licenses.



### **WARNING**

**CHECK THAT THE BOAT AND ALL EQUIPMENT ARE IN GOOD WORKING ORDER.**



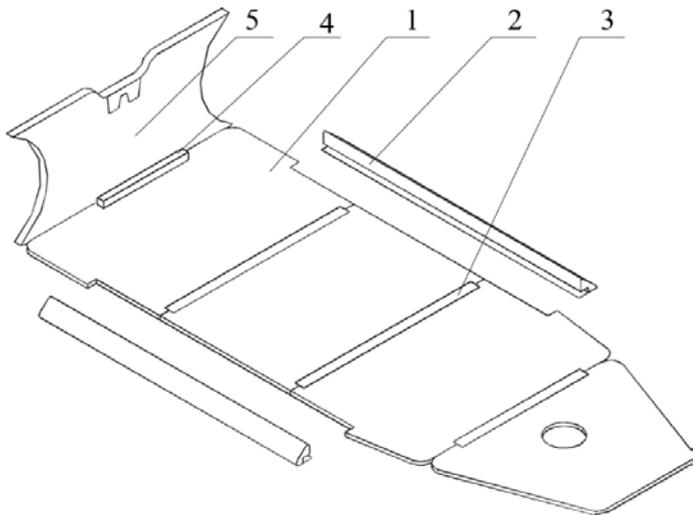
## OPERATING THE CRAFT

Unpack the boat and unfold the inflatable tube. Activate all valves into inflation position (look below).

Straighten the keel along the bottom axis so that the keel valve may be faced upwards.

Assemble the rigid floor following the instructions below.

## SECTIONAL FLOOR INSTALLATION



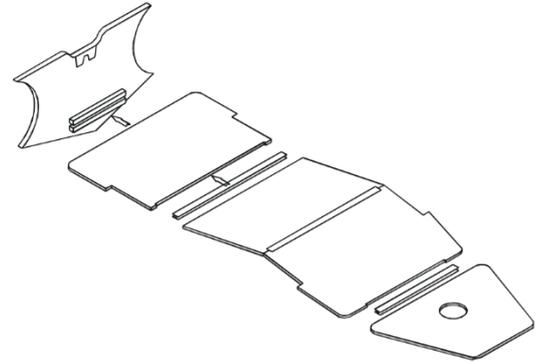
1. Floor section
2. Lateral beam
3. Removable H-shaped stop
4. Transom stop
5. Transom

Fig. 4. Sectional floor. General view.



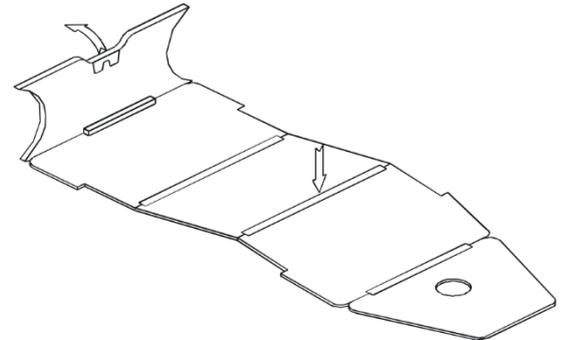
## OPERATING THE CRAFT

- Insert the first section (the section number is applied on the section upper surface) as far as possible into the bow angle.
- Insert the transom section (last section) between the stops provided on the transom as show on fig. 5.
- Set the removable H-shaped stops in the cut-outs provided on the sections and fit all section together as show on fig. 5.



**Fig. 5. How to assemble a floor. Step 1.**

- Check that all section and H-shaped stops are correctly aligned.
- Make sure that the edges of the remaining sections fall within the folding line of the balloon and bottom connecting tape.
- To flattening floor apply the force to the sections connecting zone apex as show on fig. 6.

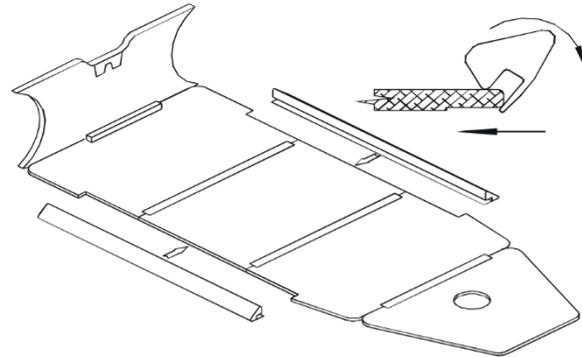


**Fig. 6. How to assemble a floor. Step 2.**



**Set the lateral beams in the cut-outs provided on section, for that:**

- Hook the floor edge with the beam from below and make a pushing motion from top to bottom and forward as show on fig. 7.
- Check to ensure that the beams don't "catch" the balloon.
- Make sure again that the section edges and beams fall within the folding line of balloon and bottom connecting tape.



**Fig. 7. How to assemble a floor. Step 3.**



# OPERATING THE CRAFT

## WOODEN KEEL INSTALLATION PROCEDURE

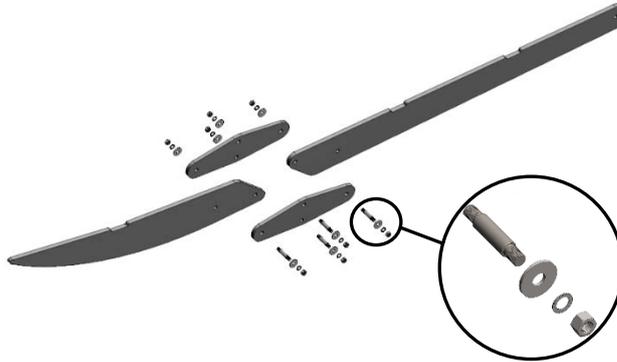


Fig.8. Assembly of wooden keel.

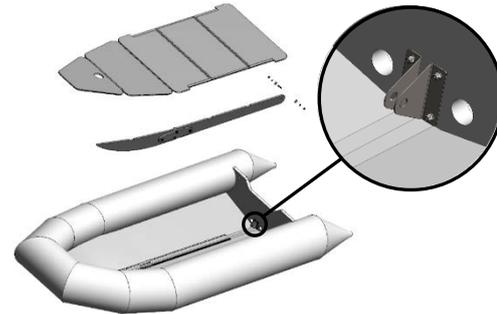


Fig. 9 Fastening of stern part of the keel to the transom.

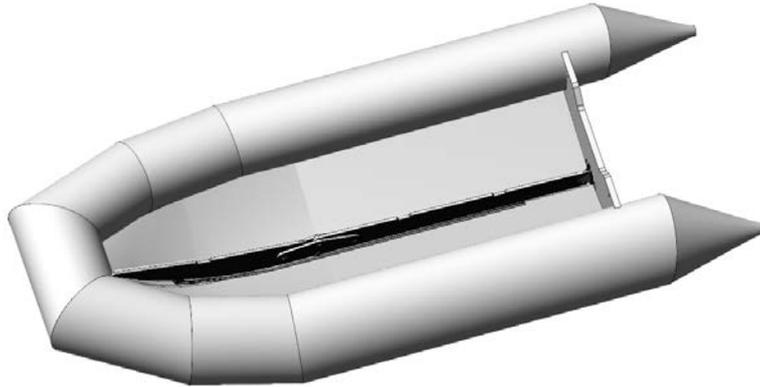


Fig. 10. View of installed keel.

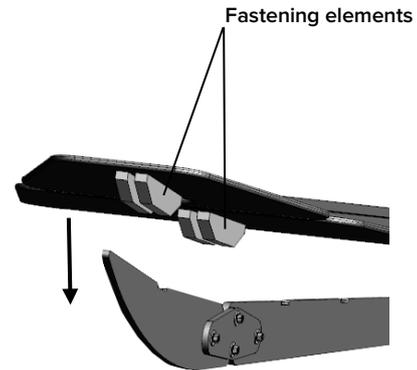


Fig. 11. Floorboards installation.



# OPERATING THE CRAFT

## TUBE AND KEEL INFLATION

*Inflation valve.*

The boat is equipped with a valve as shown in figure 12.

To open the valve cap turn it a quarter counter clockwise. The plunger should be in the upper (closed) position.



Fig. 12. Inflation valve.



To inflate the tube chambers and keel, use the foot pump (fig.13) supplied.



Fig. 13. Foot pump.



Fig. 14. Special adapter.

Insert the end of the hose into the inflation valve using one of the adapters supplied (fig. 14).

Make sure the adaptor makes an air-tight connection with the valve and inflate using foot pump.



## OPERATING THE CRAFT

To inflate the boat connect the special “bayonet” type adaptor into the valve and secure it by twisting a quarter turn clockwise. Use the foot pump (fig. 13) supplied to inflate the tube. To remove the adaptor turn it a quarter turn counter clockwise.

To release the air from the tube chamber, depress the plunger. To fully deflate the tube chamber fully depress and then release the plunger, so that it locks in the lower "open" position.

To inflate the tube/keel, you can also use a small electric boat pump.



### CAUTION

**IF YOU USE A SMALL ELECTRIC PUMP, COMPLETE THE PROCEDURE BY USING THE FOOT PUMP TO REACH THE REQUIRED NOMINAL PRESSURE.**

Begin the inflation procedure according to the sequence shown in figure 15. Initially, partially inflate each chamber (approx. 0.1 bar (1.45 psi) then repeat the procedure inflating each chamber to its nominal pressure, 0.15 bar (2.15 psi).

*The nominal pressure is 0,15 bar (2,15 psi).*

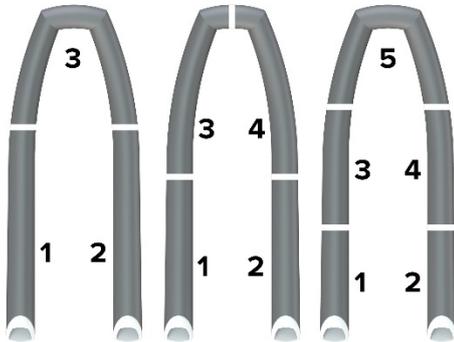


Fig. 15. Tube inflation sequence.

Check the pressure in each chamber with a pressure gauge. If you do not have a pressure gauge the following procedure will serve as a guide. Press a finger firmly against the tube – if the tube is depressed by about 10 mm ( $\frac{3}{8}$  inch) this indicates that the pressure is approximately correct.

After the tube chambers have been inflated to the nominal pressure replace the valve caps. Fit the caps to the valve body and turn clockwise until secure. Valve caps protect the valves from accidental opening, provide a secondary seal and protect the valves from contamination.



## WARNING

FILL THE INFLATABLE KEEL WITH AIR UP TO THE RATED PRESSURE VALUE 0.15 BAR (2,15 psi).



## OPERATING THE CRAFT

The valves require little maintenance. Keep them clean using a standard household cleaner.

Remember that changes in ambient temperature will change the inflation pressure within the tube. A tube that is over-inflated in the morning can be damaged by a significant increase of temperature in the afternoon.

### **WARNING**

**IF THE PRESSURE WITHIN THE TUBE BECOMES EXCESSIVE, THE GLUED JOINTS MAY BE DAMAGED.**

If the ambient temperature rises significantly or you intend leaving the boat in direct sunlight, we recommend you relieve the air pressure in each chamber. It is strongly recommended that the boat be kept in the shade or under cover when not in use.

### **CAUTION**

**DO NOT USE SOURCES OF HIGH PRESSURE COMPRESSED AIR FOR INFLATING THE TUBE. EXCESSIVE PRESSURE CAN DAMAGE THE GLUE JOINTS AND THE INTERNAL WALLS.**



## OVERPRESSURE VALVE (IF FITTED)

Overpressure valves can be fitted to buoyancy tubes as shown in figure 16.

It serves to protect the tube from over inflation and excess pressure build up due to solar heat.



Fig. 16. Overpressure valve.

### CAUTION

FOR NORMAL OPERATION OF THE VALVE, THE CAP SHOULD BE OPENED.  
WITH CAP CLOSED THE VALVE WILL NOT BE FULLY OPERATIONAL.



# OPERATING THE CRAFT

## WOOD SEATS INSTALLATION

Unpack the boat and unfold the inflatable tube. Install the wooden seat. For that:

- Insert the seat stops on the lower surface of the wooden seats into the holes of the brackets on the tube.
- Turn the stops caps to 90° till they click as shown in the figure 17.

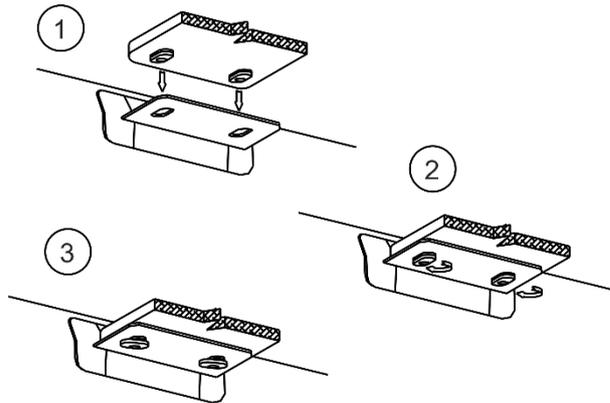


Fig. 17. Installation of wooden seats.



## OARS INSTALLATION

Assemble the oars by entering the removable parts with blades into the locks until the click. Use the holes provided in the oar handles to set the oars into the rowlocks with the blades being faced to the aft. Secure the oars in the holders.



**Fig. 18.** Installation of oars.



# OPERATING THE CRAFT

## MOTOR INSTALLATION

Information about motor trim is given for reference purposes only.

The engine manufacturer's dealer or authorized agent should undertake installation of the motor on your boat.

The optimum position is with the propeller axis parallel with the water.  
Fig. 19. Optimum trim.



If the motor is tilted too far outwards from the transom, the boat will tend to porpoise.  
Fig. 20. Trim up.



If the motor is tilted too far inwards towards the transom the boat will travel bow down.  
Fig. 21. Trim down.



Please refer to the manual supplied by engine manufacturer before operating the engine and craft.



## ENGINE KILL SWITCH LANYARD

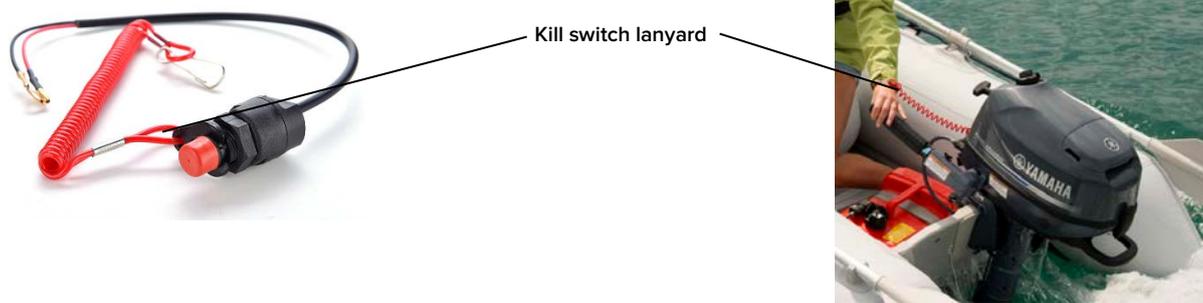


Fig. 22. Engine kill switch lanyard.

For safety reasons always use the engine kill switch lanyard.

The purpose of the engine kill switch lanyard is to turn off the engine if for any reason the operator is removed from the steering position.



**DANGER**

**WHEN THE ENGINE IS RUNNING, THE KILL SWITCH LANYARD SHOULD ALWAYS BE WORN ON THE WRIST, ANKLE, OR FIXED TO YOUR CLOTHES OR TO YOUR PERSONAL FLOTATION DEVICE. IGNORING THIS INSTRUCTION MAY CAUSE DEATH OR SERIOUS INJURY.**



# OPERATING THE CRAFT

## ANCHORING AND MOORING

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### ANCHORING

Please make sure your craft is equipped with an appropriate anchor and line. If you are not sure, ask your Dealer who will be happy to advise. Setting-up a secure anchorage requires knowledge and practice so it is important that properly trained persons undertake this procedure.

When anchoring your boat make sure that you will not create a potentially dangerous situation for yourself, other boats or people.



### **WARNING**

**ANCHOR ONLY IN AREAS WHERE YOUR BOAT WILL NOT HINDER OTHER BOATS.  
DO NOT ANCHOR IN A CHANNEL!**

Before anchoring the boat, stop the engine. When anchoring be aware that the condition of the sea bed, changes in tide, wind strength and direction and currents will affect the position of the craft. Use local landmarks to obtain an approximate fix for the craft's position and check this regularly.

Use the bow towing eyes for mooring.



## BEACHING, LAUNCHING AND RECOVERING THE BOAT FROM THE WATER

When approaching a beach or waters edge proceed slowly and with extreme caution.

Avoid hazards below the water surface such as rocks. Hazards can damage the keel, tube, motor, or propeller. Do not power the boat onto land as serious damage to the keel and tube may result.

Do not drag the boat across rough or abrasive surfaces (rocks, concrete etc.). The keel and tube can be damaged.



**CAUTION**

**NEVER DRAG THE BOAT OVER A ROUGH SURFACE (ROCKS, STONES, CONCRETE, ETC) AS THE INFLATABLE KEEL AND TUBE CAN EASILY BE DAMAGED.**



## OPERATING THE CRAFT

### TOWING

When towing an inflatable behind another boat, always connect the tow line to the bow eyes. If possible use a double tow line when towing behind another boat. The second line acts as a backup in case one line breaks or comes undone.

Use a tow line of sufficient length so that there is at least two boat lengths between boats.

Use only line intended for towing, ask your Dealer for advice and select the correct line for your application (Do not tow with three strand nylon rope).

Fasten the towed boat securely and observe it continuously. Avoid towing a tender over long distances.

Do not use a tow line with signs of damage or wear. Check tow lines for wear and damage prior to use.

Always keep hands and feet clear of tow lines.

Be prepared to cast loose or cut the tow line if necessary.

Do not tow at high speeds or while planing.



- 1. TOWING MUST BE DONE AT LOW SPEED (NOT MORE THAN 10 KM/H) AND IN GOOD WEATER CONDITIONS WITH NO WAVES.**
- 2. THE BOAT BEING TOWED MUST BE OBSERVED AT ALL TIMES.**



## TOWING EYES

There are three towing eyes located at the bow.

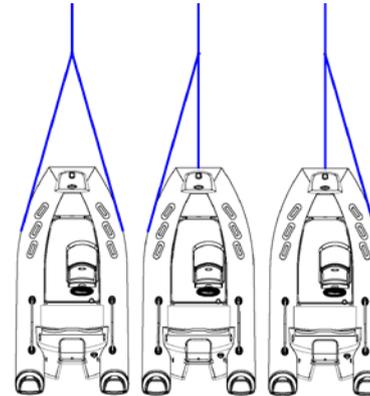


Fig. 23. Towing eyes and possible options of boat towing.

Breaking strength of bow towing eyes, kN		
R380	R420	R460
8	10	11



THE BREAKING STRENGTH OF LINES SHALL IN GENERAL NOT EXCEED 80% OF THE BREAKING STRENGTH OF THE RESPECTIVE STRONG POINT.



## OPERATING THE CRAFT

### SOFT CUSHIONS WITH UNDERSEAT BAGS (IF APPLICABLE)



Fig. 24. Soft cushions with underseat bags.



## COLLAPSIBLE BIMINI TOP (IF APPLICABLE)

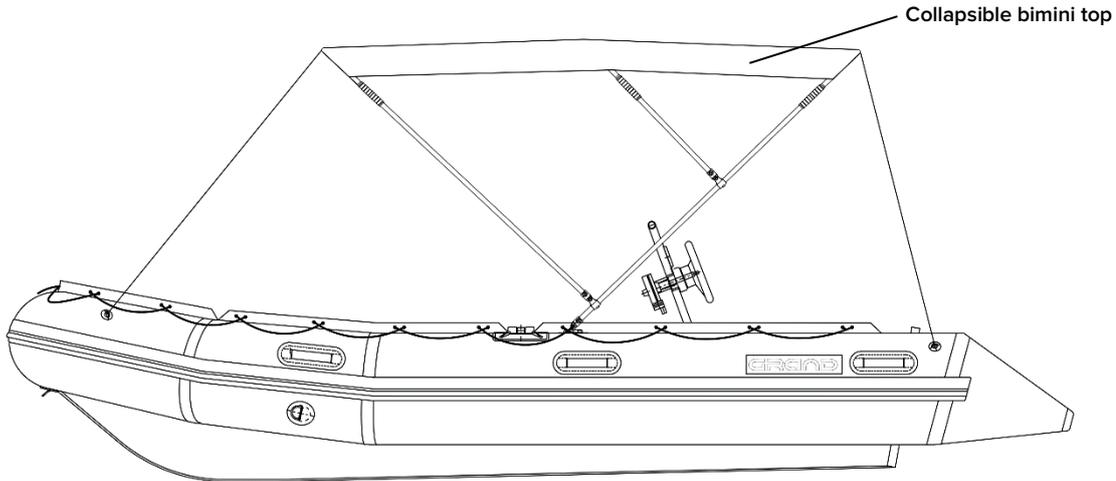


Fig. 25. Collapsible bimini top.

### CAUTION

USE A BIMINI TOP WHEN YOUR BOAT IS NOT IN MOTION. KEEP BIMINI TOP IN STOWED POSITION IF YOU PLANNING TO CRUISE AT MORE THAN 20-25 KNOTS.



# TECHNICAL DETAILS

## TECHNICAL INFORMATION

## TECHNICAL SPECIFICATIONS

See the table below for technical data of R380, R420, R460.

Model		R380	R420	R460
Specification	Unit			
Length overall	cm	380	420	460
	ft/inches	12' 6"	13' 9"	15' 1"
Length internal	cm	265	300	340
	ft/inches	8' 8"	9' 10"	11' 2"
Beam width	cm	190	205	205
	ft/inches	6' 3"	6' 9"	6' 9"
Width internal	cm	95	105	105
	ft/inches	3' 1"	3' 5"	3' 5"
Chambers	Number	3+1	5+1	5+1
Tube diameter	cm	46	48	48
	ft/inches	18"	19"	19"
Tube fabric		PVC	PVC	PVC
Bare boat weight*	kg	78	88	102
	lbs	172	194	224
Full weight**	kg	97	110	134
	lbs	213	242	295



Loading capacity	kg	700	900	1000
	lbs	1540	1980	2200
Passenger capacity	Number	7	9	10
Maximum height (light craft)	m	0.55	0.6	0.65
	ft/inches	1' 8"	1' 9"	2' 1"
Maximum draft (fully loaded), from hull's underside lowest point	m	0.26	0.3	0.32
	ft/inches	0' 8"	0' 9"	1' 0"
Engine recommended	HP	20	30	40
	kW	14.7	22.1	29.4
Engine max	HP	30	40	50
	kW	22.1	29.4	36.8
Engine weight max	kg	80	95	115
	lbs	176	209	253
Engine shaft length	inches	15 (short)	20 (long)	20 (long)
Midsection / aft deadrise	degrees	15'12"	17'13"	17'13"

## Note:

\* - The bare boat weight is just a weight of the boat without any removable accessories.

\*\* - The complete boat weight is the weight of the boat with all optional equipment, parts and accessories.



# TECHNICAL DETAILS

## STANDARD AND OPTIONAL EQUIPMENT

### STANDARD EQUIPMENT:

- Medium-V bottom
- Marine grade plywood floorboards with inflatable keel
- Anodized aluminum reinforcement system
- Reinforced integral transom for outboard engine
- 3 reinforced towing bow eyes
- Cockpit drain plug (bailer)
- Multi-chamber buoyancy tube
- Tough raised rubbing strake with splash guard
- 3 removable wooden seats ( 4 on R460 )
- 2 oarlocks with 2 oars and oar posts
- 2 Carry bags
- High efficiency foot pump
- Maintenance kit & User's manual

### OPTIONAL EQUIPMENT:

- Steering console CS-02 with steering system, steering wheel, cable and installation system
- Boat overall cover
- Overpressure valve
- Soft seat cushions with underseat bags
- Keel and Tube Protection package
- Wooden keel with solid installation system
- Upgrade to HEAVY DUTY material (1400 g/sq.m.)
- Collapsible bimini-top



## GENERAL ARRANGEMENT OF A BOAT R380

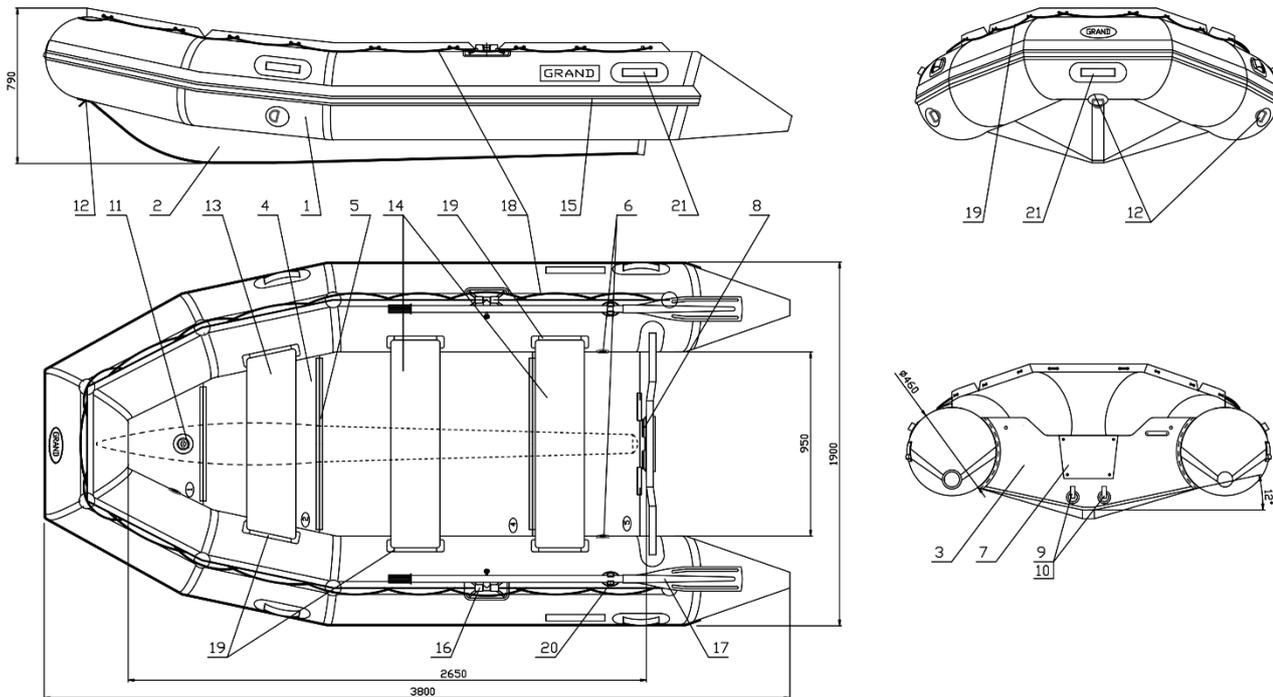


Fig. 26. General arrangement of a boat R380.



**General arrangement of a boat R380 (see fig. 26 on the previous page):**

1. Multi chamber buoyancy tube
2. V-shape bottom
3. Integral marine grade ply transom
4. Floorboards set
5. Aluminium beams set
6. Inflation-deflation valve
7. Motor plate extremal
8. Motor plate internal
9. Drain through-hull tube
10. Drain plug
11. Inflatable keel
12. Towing eye
13. Wooden seat
14. Wooden seat
15. Rubbing strake
16. Oarlock
17. Oar
18. Lifeline
19. Wooden seat holder
20. Oar holder
21. PVC handle



## GENERAL ARRANGEMENT OF A BOAT R420

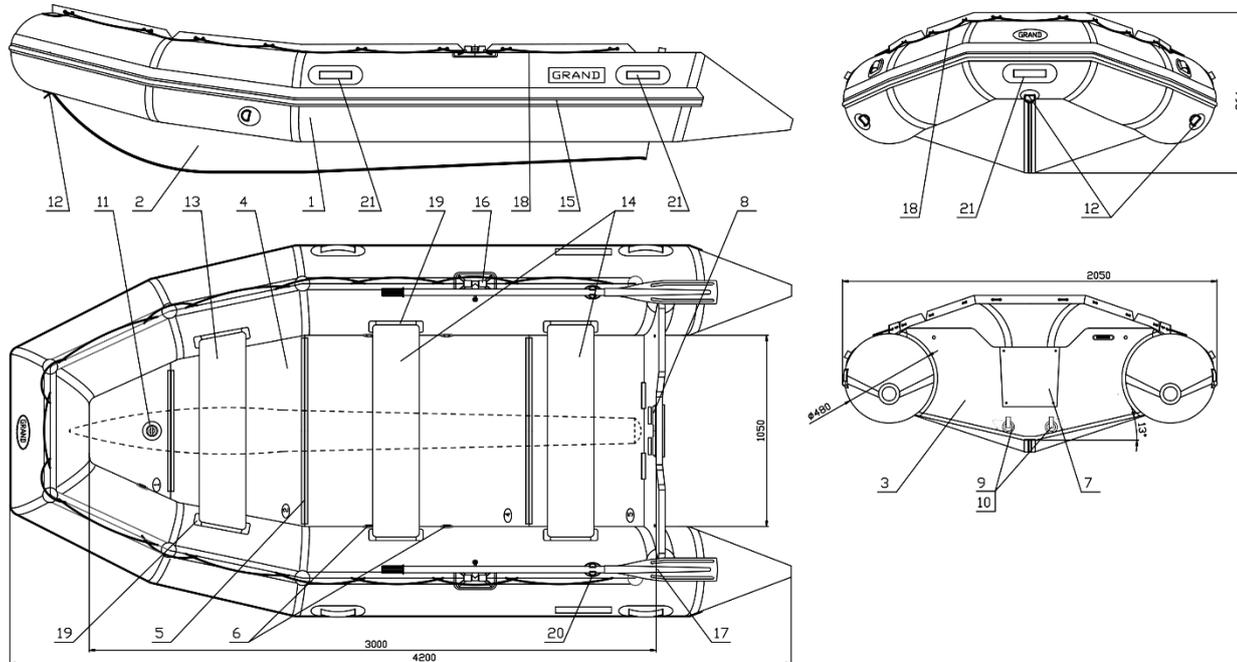


Fig. 27. General arrangement of a boat R420.



## TECHNICAL DETAILS

General arrangement of a boat R420 (see fig. 27 on the previous page):

1. Multi chamber buoyancy tube
2. V-shape bottom
3. Integral marine grade ply transom
4. Floorboards set
5. Aluminium beams set
6. Inflation-deflation valve
7. Motor plate extremal
8. Motor plate internal
9. Drain through-hull tube
10. Drain plug
11. Inflatable keel
12. Towing eye
13. Wooden seat
14. Wooden seat
15. Rubbing strake
16. Oarlock
17. Oar
18. Lifeline
19. Wooden seat holder
20. Oar holder
21. PVC handle



## GENERAL ARRANGEMENT OF A BOAT R460

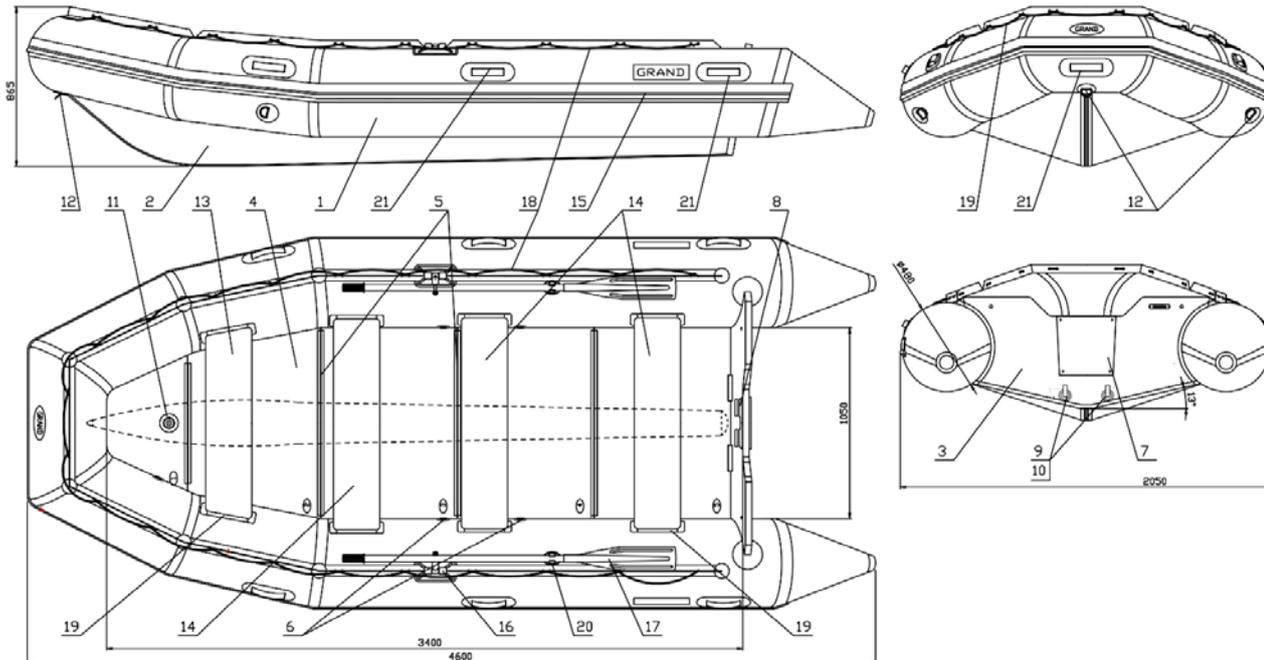


Fig. 28. General arrangement of a boat R460.



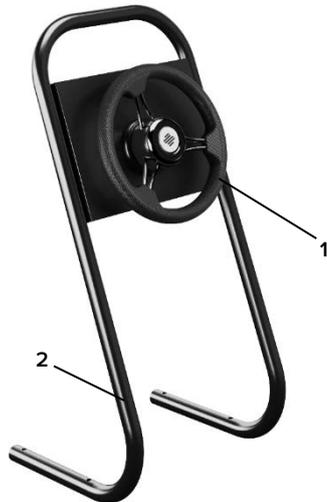
## TECHNICAL DETAILS

General arrangement of a boat R460 (see fig. 28 on the previous page):

1. Multi chamber buoyancy tube
2. V-shape bottom
3. Integral marine grade ply transom
4. Floorboards set
5. Aluminium beams set
6. Inflation-deflation valve
7. Motor plate extremal
8. Motor plate internal
9. Drain through-hull tube
10. Drain plug
11. Inflatable keel
12. Towing eye
13. Wooden seat
14. Wooden seat
15. Rubbing strake
16. Oarlock
17. Oar
18. Lifeline
19. Wooden seat holder
20. Oar holder
21. PVC handle



## STEERING CONSOLE COMPONENTS



- Steering system
- Steering cable
- Steering wheel (1)
- Frame (2)
- Throttle lever (optional\*)

Fig. 29. Steering console components.

When your trip is finished, always remove the key from the ignition switch. This will prevent theft or unauthorized use of your boat.



## TECHNICAL DETAILS

### LOADING PASSENGERS FOR R380

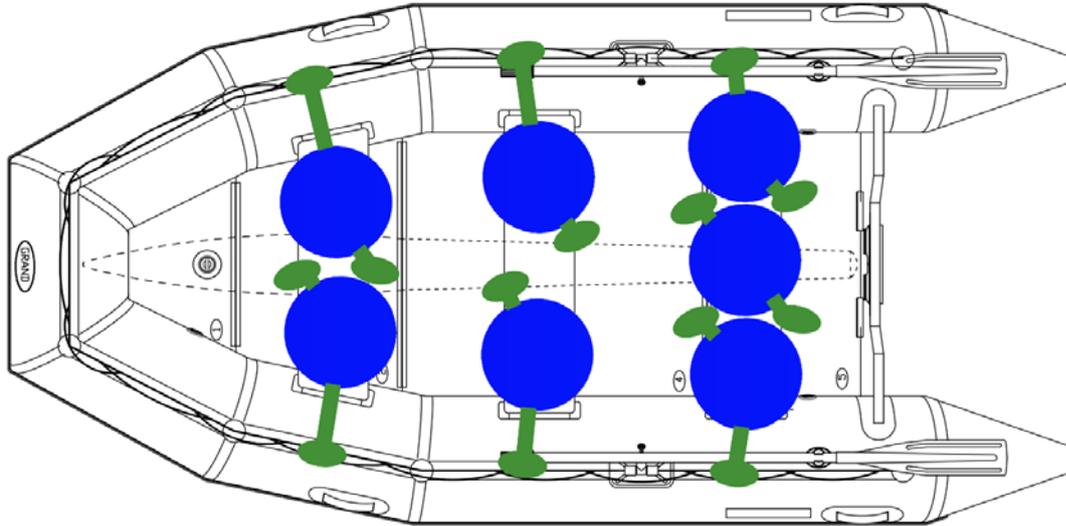


Fig.30. Recommended seating arrangement for 7 passengers.



## LOADING PASSENGERS FOR R420

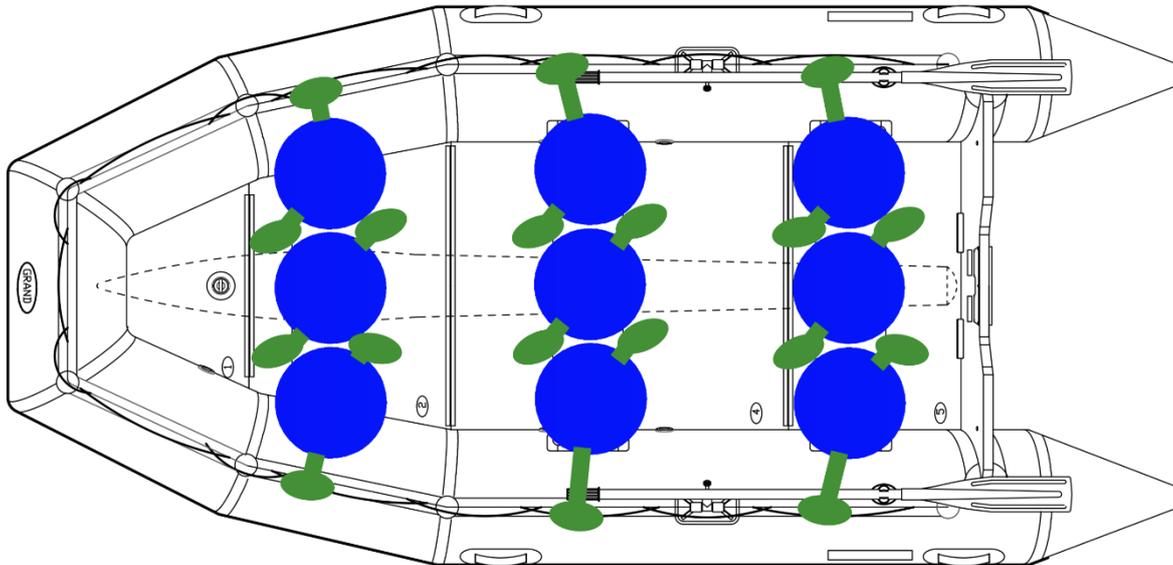


Fig.31. Recommended seating arrangement for 9 passengers.



## TECHNICAL DETAILS

### LOADING PASSENGERS FOR R460

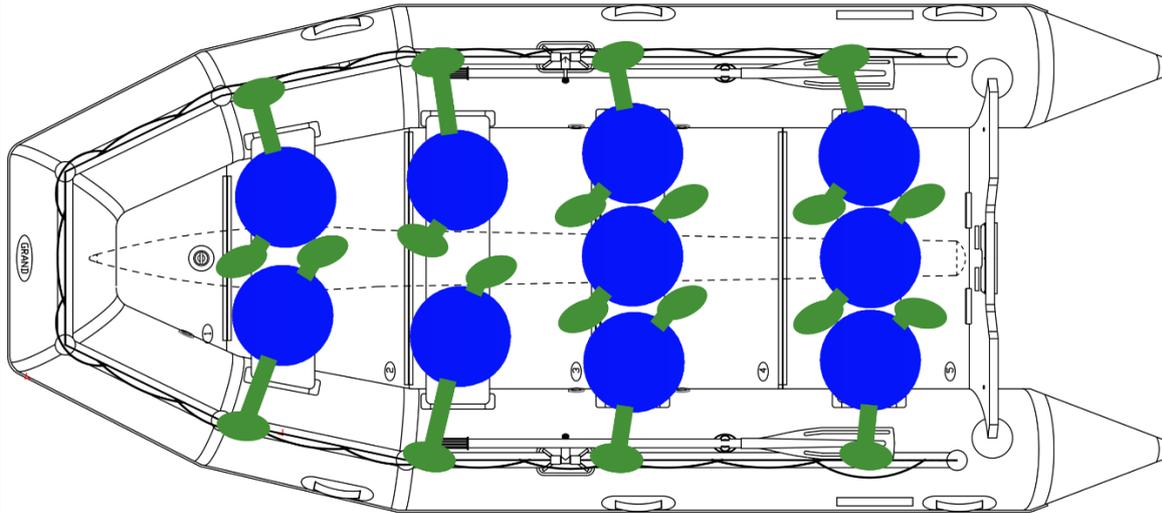


Fig.32. Recommended seating arrangement for 10 passengers.



## SERVICE AND MAINTENANCE

### CLEANING

- Regularly clean your boat and make sure this is done before winterizing.
- For cleaning use household cleaner (non abrasive) and fresh water only!
- At all times keep the inflatable tube, vinyl and other boat parts free of any chemical components such as:
  - Gasoline, grease, oil and any other oily product.
  - Suntan oils, lotions and any other body care products.
  - Pollution products, dirt and dust.
  - Silicon based products.
- To prevent damage clean and rinse the boat or relevant part as soon as possible if you find any of these items on your boat.
- When not in use keep your boat properly covered.
- Keep your boat away from or well protected against car or other exhaust smoke or pollution, which may damage the boat.



## SERVICE AND MAINTENANCE

### CLEANING OF TUBE

An important factor for the long life of tube fabric is regular adequate cleaning.

The subsequent cleaning procedure is recommended:

- Rinse off with clear, tap water (approx. 20 °C).
- Use gentle soapy water (pH value neutral to slightly alkaline) to wash the tube by means of a soft cloth or brush. Do not leave the soapy water on the surface for more than 5 minutes.
- Clean the surface very thoroughly and make sure that no soap residue remains on the surface.
- Then dry by wiping off the surface with a soft cloth.



### CAUTION

#### DO NOT USE:

- Any cleaning device that might cause mechanical damage to the surface such as hard brushes, high-pressure washers, etc.
- Any cleaning agents (scouring agents or scrubbing powder), which will damage the surface;
- Strong alkaline cleaning agents.
- Acid cleaning agents.
- Solvent based cleaning agents (e. g. based on ester, ketone, ether, furan or benzol).
- Petrol, diesel, kerosene, Self-made cleaning agents.
- Bleaching or oxidizing cleaning agents (e.g. containing hydrogen peroxide, sodium hypochlorite, chlorine dioxide or sodium dithionite).



## AIRTIGHTNESS OF THE INFLATABLE TUBE

The tube is considered to be airtight if it retains the recommended inflation pressure for 8 hours.

- As the inflatable tube is a primary safety feature - check the airtightness of your boat regularly. Inspect the condition of all inflatable components and remember that some natural release of pressure (see the information below) can occur. Make sure that:
  - There are no material cracks, holes and leaks.
  - All inflation valves and seams are intact.
  - ISO 6185 standard permits up to 20% loss of pressure in any compartment within 24 hours.
  - If you discover a significant reduction in pressure add some air using the foot pump supplied.

Never use high-pressure equipment to inflate your boat;

Changes in ambient temperature have a significant influence on air pressure within the tube. A variation of 1°C results in a variation in pressure of about +/- 4 mb (0,06 psi).



## SERVICE AND MAINTENANCE

- If you discover a significant reduction in pressure, but do not see any obvious sources of leakage:
  - Step 1: check the inflation/deflation valves and overpressure valves.
  - Step 2: check the major seams.
  - Step 3: check the tube material from top to bottom.

Contact your Dealer for advice if necessary.

If you discover any source of leakage, it must be properly repaired.



**DO NOT OPERATE YOUR BOAT IF YOU ARE AWARE OF AIR LEAKS.**



## MAINTENANCE OF STAINLESS STEEL

- We use only top quality stainless steels, which are resistant to corrosion. However, this may not be permanent and maintenance is sometimes required so:
  - Avoid contamination and scoring to the surface.
  - Frequently wash with fresh water.
  - Apply a little marine type grease and mirror polish it regularly.

If you see a sign of rust – clean and mirror polish the area as soon as possible.

## WINTERIZING AND STORAGE

- When storing your boat, keep it in a clean and dry place so that is not affected by major variations in temperature and other conditions.
- You may store the boat:
  - Assembled and partly inflated with a cover so as to protect it from direct sunlight, dirt, dust and pollution.
- For winterizing:
  - Clean and dry the boat, including seat cushions and any wooden components,
  - Completely drain all water from the hull and bilge compartment.
  - Disconnect and remove the battery.
  - Grease all metal moving parts and connections, including steering.
  - Properly close the fuel system to avoid any vapour leaks.
  - If possible allow air to circulate within the boat, a breathable canvas cover will help.

Winterize the motor, following the manufacturer's instructions.



## CAUTION

1. WHEN THE BOAT IS IN STORAGE MAKE SURE IT IS COVERED.
2. STORE THE BOAT AWAY FROM RODENTS.
3. AVOID SHARP FOLDS IN THE TUBE MATERIAL.

## REGULAR INSPECTIONS

- Check frequently all navigation lights, horn, VHF radio (if fitted), safety handles, handrails and all other safety related equipment.
- Check frequently the tightness of various screws, bolts and nuts, with particular attention to those holding the engine onto the transom. Also check all steering system components are secure and functioning correctly.
- Regularly examine your fuel system, replace old or damaged components and check the tightness of the fuel line connections.



## DANGER

REGULARLY CHECK THE TIGHTNESS OF THE ENGINE  
TRANSOM BOLTS AS THEY MAY BE AFFECTED BY VIBRATION.



## SHOW RESPECT FOR THE ENVIRONMENT

**REMEMBER THAT RESPONSIBLE BOATING BEGINS WITH YOU!**

Respect your environment by applying the following basic rules:

- **AVOID CREATING EXCESSIVE WASH.**
- **KEEP OUT OF DESIGNATED SWIMMING AREAS.**
- **RESPECT ALL ANIMAL LIFE.**
- **BE CAREFUL NOT TO OVERFILL THE FUEL TANK.**
- **DON'T MAKE UNNECESSARY NOISE.**
- **DO NOT DISCHARGE OIL OR FUELS INTO THE WATER.**
- **DO NOT LITTER.**

The health of our environment depends on us all acting responsibly to ensure a clean tomorrow. If each of us follows these few simple rules, we can help to keep the Earth's resources intact for future generations.



# WARRANTY

## GRAND'S WARRANTY

### GENERAL

Subject to the terms and conditions detailed below, Grand Marine Corporation warrants that Grand Inflatable Boats are free from defects in material or workmanship for the defined warranty period, and will, at its option, repair or replace defective parts on return of the craft to the premises of an Authorised Grand Reseller.

This warranty applies to new Grand Inflatable Boats purchased from an Authorised Grand Marine Reseller.

By using the Grand Inflatable Boats, the owner and operator understands and agree to undertake all instructions in the Grand Owner's Manual, and agrees to all warranty and liability terms and conditions contained in this warranty.

### WARRANTY PERIOD

Grand warrants Grand branded components from the date of purchase for a period of:

- 24 consecutive months for normal personal recreational use\*.

\* - Normal recreational use is defined as not more than 100 annual return trips with not more than 100 annual outboard hours. Greater annual usage than this is not covered by the Grand recreational warranty.



## WARRANTY COVERAGE

The Grand warranty covers the following:

- Grand hull and its appropriated hull components.
- Inflatable tubes.

This warranty is limited to repair, or at Grand option, replacement of parts suffering from any of the defects described above during the warranty period. The judgment of Grand is final concerning the extent of items covered under above warranty.

The outboard engine, electrical and electronic components, other auxiliaries are subject of the warranty of the appropriate Manufacturer.



# WARRANTY

## WARRANTY EXCLUSIONS

Grand warranty does not cover the following:

- Replacement of parts due to normal wear and tear.
- Routine maintenance parts and services, including but not limited to, maintenance requirements, oil and lubrication, replacement of fuses or bulbs, linkage adjustments, filters and spark plugs, tyres, and other consumable items.
- Damage caused by not following procedures and recommendations in the Grand Owner's Manual.
- Operating the craft beyond the design category.
- Damage caused by improper or lack of maintenance, winterization or storage.
- Damage caused by abuse, impact, accident, misuse, abnormal use or strain, neglect, racing, improper operation or operation not in accordance with the recommended procedures described in the Grand Owner's Manual.
- Damage or cosmetic changes due to exposure to the atmospheric or environmental conditions, including mould or marine organisms, or outside galvanic activity.
- Damage resulting from tears, punctures, abrasions, abuse, external damage, accident, submersion, water ingestion or contamination, fire, theft.



## WARRANTY CERTIFICATE

Name of Customer: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Post code: \_\_\_\_\_

E-mail \_\_\_\_\_ Phone number: \_\_\_\_\_

WIN (Serial number): \_\_\_\_\_

Signature: \_\_\_\_\_

Dealer address: \_\_\_\_\_

City: \_\_\_\_\_ Post code: \_\_\_\_\_

Date of purchase: \_\_\_\_\_

Seller and customer acknowledge by signing that seller handed and customer received hereinbefore boat including standard (optional, if relevant) equipment and manual in English and that the boat is without evident defects.

SELLER SIGNATURE:

CUSTOMER SIGNATURE:

**FOR YOUR NOTES**



# GRAND

INFLATABLE BOATS

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