Defender®

Defender Inflatables - Operation, Maintenance & Warranty Manual

Defender
RIB 265 / 300

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380 / 430 / 470

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1. General

1.1 Introduction

This manual has been compiled to help you to operate your craft with safety and pleasure. It contains details about the inflatable boat, the equipment supplied or fitted, its systems, and information on its operation and maintenance. Please read it carefully and familiarize yourself with the craft before using it.

This owner's manual is not a course on boating safety or seamanship. If this is your first craft, or if you are changing to a type of craft you are not familiar with, for your own comfort and safety, please ensure that you obtain handling and operating experience before "assuming command" of the craft.

Ensure that the wind and sea conditions for your anticipated use are not beyond the craft's ability and that you and your crew are able to handle the craft in those conditions.

This owner's manual is not a detailed maintenance or trouble-shooting guide. In the event of an issue with your inflatable, please contact a Defender representative.

Always use trained and competent technicians for maintenance, fixing or modifications. Modifications that may affect the safety characteristics of the craft should be assessed, executed and documented by experienced professionals. Defender Industries cannot be held responsible for modifications that it has not approved.

In some countries, an operator's license is required, or specific regulations are in force. Always maintain your craft properly and make allowance for the deterioration that will occur over time and as a result of heavy use, misuse or negligence of the craft.

Any craft, no matter how well built and strong, can be severely damaged if not used properly. Improper boat handling is also unsafe for other boaters. Always adjust the speed and direction of the craft to sea conditions.

The craft should have onboard the appropriate USCG required safety equipment (lifejackets, flares, navigation lights, etc.) according to the type of craft, weather conditions, etc.

This equipment is mandatory in some countries. The crew should be familiar with the use of all safety equipment and emergency maneuvering (man overboard recovery, towing, etc.), sailing schools and clubs regularly organize drill sessions.

All persons should wear a suitable USCG approved buoyancy device (life jacket/personal floatation device) when operating the craft.

Always make sure your Defender Inflatable boat is fully inflated. Failure to do so can be unsafe, will affect performance, will shorten the life of your boat and may void the warranty coverage of your Defender Inflatable boat.

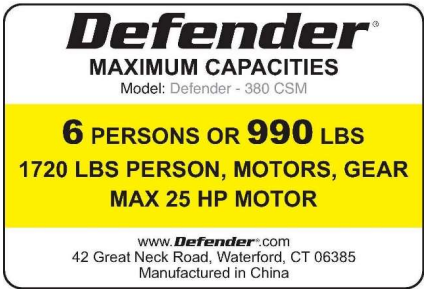
PLEASE KEEP THIS MANUAL IN A SECURE PLACE AND HAND IT OVER TO THE NEW OWNER IF YOU SELL THE CRAFT.

This manual uses the following alert to draw your attention to special instructions that should be followed.

NOTE
If this boat is used around the mother ship at open sea, take the necessary precautions. Don't lose contact with the mother ship! **Always wear a lifejacket!**

1.2 Capacity Plate

The CAPACITY plate is located on the inside of the boat transom.



Information detailed on the capacity plate:
Model Number of your Defender Inflatable boat.
Capacity – Maximum rated persons / weight.
Maximum outboard power allowed.
Maximum outboard weight allowed.

1.3 National legislation

Before you prepare for the water with your Defender Inflatable, check the local regulations and on any restrictions on the specific water you want to use. You might check for sailing restrictions, speed-restriction, outboard engines restrictions, restrictions on the airborne sounds, etc.

1.4 General safety information

☝ Safe Boating Suggestions.

In order to safely enjoy the waterways, familiarize yourself with local and other governmental boating regulations and restrictions, and consider the following suggestions.

Use flotation devices. Have an approved personal flotation device of suitable size for each person aboard (it is the law) and have it readily accessible.

Do not overload your boat. Most boats are rated and certified for maximum load (weight) capacities (refer to your boat capacity plate). If in doubt, contact Defender for assistance.

Perform safety checks and required maintenance. Follow a regular schedule and ensure that all repairs are properly made.
Operate inflatable boat with tubes inflated to full pressure at all times. Failure to do so can be unsafe, will affect performance, will shorten the life of your boat and may void the warranty coverage of your Defender Inflatable boat.

Know and obey all nautical rules and laws of the waterways.

☝ Make sure everyone in the boat is properly seated. Do not allow anyone to sit or ride on any part of the boat that was not intended for such use. This includes the transom, bow area or anywhere that an unexpected acceleration, sudden stopping, unexpected loss of boat control, or sudden boat movement could cause a person to be thrown overboard or into the boat.

☝ Never be under the influence of alcohol or drugs while boating (it is the law). Alcohol or drug use impairs your judgment and greatly reduces your ability to react quickly.
Prepare other boat operators. Instruct at least one other person on board in the basics of starting and operating the outboard, and boat handling, in case the driver becomes disabled or falls overboard.

☝ Passenger boarding. Stop the engine whenever passengers are boarding, unloading, or are near the back (stern) of the boat. Just shifting the outboard into neutral is not sufficient.
Be alert. The operator of the boat is responsible by law to maintain a proper lookout by sight and hearing. The operator must have an unobstructed view particularly to the front. No passengers, load, or fishing seats should block the operators view when operating the boat above idle speed.

☝ Always properly connect both ends of the stop switch lanyard to the stop switch and the operator.

☝ Never drive your boat directly behind a water skier in case the skier falls. As an example, your boat travelling at 40 km/h (25 MPH) will overtake a fallen skier 61 m (200 ft.) in front of you in 5 seconds.
Watch fallen skiers. When using your boat for water skiing or similar activities, always keep a fallen or down skier on the operator's side of the boat while returning to assist the skier. The operator should always have the down skier in sight and never back up to the skier or anyone in the water.
Report accidents.

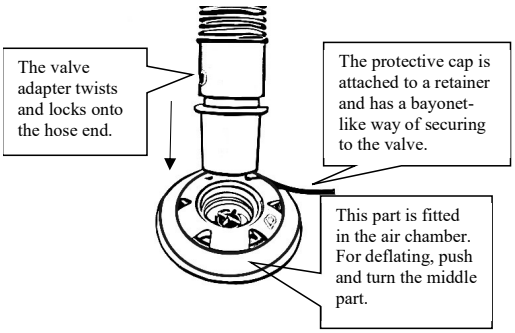
2. Assembly and disassembly

2.0 Floorboard

Defender Inflatable boats equipped with an inflatable or a non-inflatable floorboard must be operated with these floorboards properly installed before use. Using the boat without provided floorboard is unsafe, uncomfortable and it might result in damage to the boat. See section 2.4 for floorboard installation.

2.1 The air valves

The air valves are specially designed for safe and comfortable use.
The valves are designed flat to increase the comfort in the boat and to prevent damage to the boat.



Operation of the air valve:

- **The boat should be inflated with the air valves in the closed position (center stem sticking up)**.
- **To deflate the boat, open the air valves**.
- Take off protective outside cap. The valve is closed when the center spring-loaded stem is protruding. It is open when the spring-loaded stem is depressed and under load.
- To **close** the valve, push and turn the center spring-loaded stem with your finger ¼ **clockwise** until the center stem pops out.
- To **open** the valve, push the spring-loaded stem down, turn your finger ¼ turn **counterclockwise** until the stem is locked in the open position allowing air flow.

Pump connection:

Insert valve adapter into valve and push and twist slightly for snug friction fit

- Start pumping.
- Keep pumping until no more air can be put into the boat.
- When ready, remove the pump adapter from the valve.
- Be sure to put on the protective valve cap again. (for protection from dirt and damage).

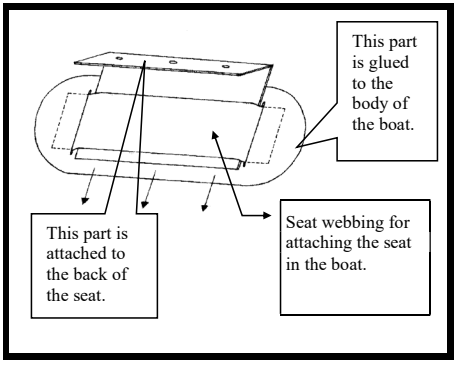
Check the valve to make sure no air is lost in the vicinity of the valve.
If any air is lost:

- Take the valve key out of your repair kit.
- Put the valve key into the valve.
- Grab the back of valve (bunch the fabric) in one hand and turn the valve stem with the key in a clockwise position to tighten the valve.
- If this does not stop the air loss, turn counterclockwise to remove valve.
- Inspect the valve for damage, dirt, or grit.
- Reinsert valve into valve nut and tighten.
- If air leakage persists, contact Defender Industries for assistance; Tel: 800-628-8225.
- Often, we can troubleshoot valve issues over the phone or by shipping you a new air valve.
- Valves should be routinely removed and cleaned with fresh water to prolong their life.

2.2 Seats and benches

If your boat is equipped with a separate seat and a "seat webbing" on the tubes, you can install the seat bench as in the following drawing.

The seat must be installed **before** you fully inflate the boat.



2.3 Inflation

NOTE

The proper inflation and deflation are essential for a long life of your boat.

Remove any sharp objects from flat surface where boat will be assembled. Roll out boat on floor.

- When the boat is unpacked, check if all parts are present.
- Check if the valves are closed. This can be done by putting your finger in the valve, pushing the center spring-loaded stem, and turning ¼ turn.
- If the stem pops out, the valve is now closed and you are ready to inflate your boat.
- (To let air out of the boat you have to press the stem in and turn ¼ turn)

☝ NOTE

Over-inflation can damage your boat. Avoid direct sunlight **when the boat is not in the water**. This might heat the air in the boat so much that expansion causes damage.

- Insert the provided pump adapter into valve by pushing and twisting slightly. The pump adapter will fit snugly in the valve.
- Put enough air in the boat to give the boat some form.

☝ NOTE

All chambers should be inflated equally to avoid damage to the baffles that separate the chambers.

2.3.1 Order of inflation:

Inflate the boat in the following order if it is not written on a tag near the valves:
1. Front chambers (if applicable)
2. Side chambers
3. Floor chamber (if applicable)
4. Keel chamber (if applicable). Always inflate the keel chamber last.

2.3.2 Inflation

☝ NOTE

Do not use mechanical compressors to inflate your boat. The pump that is delivered gives exactly the right pressure to your boat.

Step **1**: Inflate each chamber in the order of inflation, put in enough pressure to allow the boat to spread out, but do not fully inflate the tube.

Step **2**: Following the order of inflation, top off the tubes to their recommended PSI.

If inflation is done in right order, the boat has the correct pressure and there is **no distortion of fabric near the baffles**

Step **3:** Inflation is complete, ensure that all caps are tightly secured as they the final seal in ensuring air tightness.

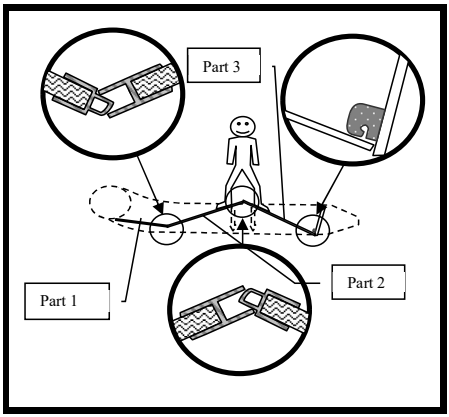
☝ NOTE

Never surpass these values!
Inflate the boat to 0.25 bar = 3.6 PSI
Inflate the keel to 0.40 bar = 5.8 PSI
Inflate the Air Floor to 0.76 bar = 11 PSI

2.4 Floorboard installation

Instructions to install the floorboards in the Defender aluminum floor models (380,430 & 470):

- Inflate the tube chambers enough to have some shape to the boat.
- Make sure that no parts of the tubes are sticking together.
- Make sure keel is not inflated and valve is open.
- Place the front section (bow board 1) of the floorboard as far in the front of the boat as possible. Make sure the hole in the bottom is straight above the valve of the keel section.
- Place part two into the boat. Line up these two sections of the floorboard so they are straight.
- Take part three and eventually part four of the floorboard and make a “bridge” with part two and three.

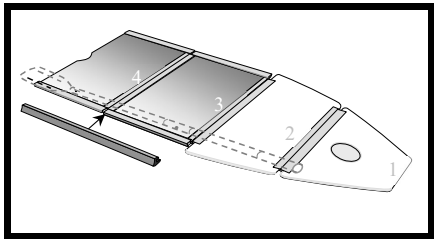


- Push down the two parts to the bottom of the boat.
- Deflate the side-tubes of the boat completely and install the aluminum stringers.

☝ With more than 3 floorboards make a bridge between the second and third floorboard seen from the transom. Floorboards are numbered from the bow.

Installation of the aluminum stringer

After installation of the floorboards, put the stringers in the sides of the floor.



☝ To install the stringers easier, it is recommended to put a paddle or similar sized item under the bottom of the boat.

This lifts the floorboards up to have easier access to put the stringers on the sides of the floor.

2.5 Rowing equipment

Defender Recreational Inflatable boats come standard with paddles or with oars, oarlocks, and a rowing seat.

- Ensure seat is properly installed (section 3.3).
- To install the oars in the oarlocks, put the oars over the oarlock pins.
- To prevent loss of the oars, be sure to put the cap on the oarlock.
- If the oars are not in use, put the oars in the clips on the sides of the boat.

☝ Local water conditions must be taken into account before operating boat with oars or a small outboard. Boat power may not be strong enough to overcome currents in tidal inlets, open seas, small channels, or shallows of shoal water regions.

2.6 Deflation

General information:

☝ NOTE

Boat should be clean and dry before rolling up for storage. Remove any sand and debris that may cling to the fabric.

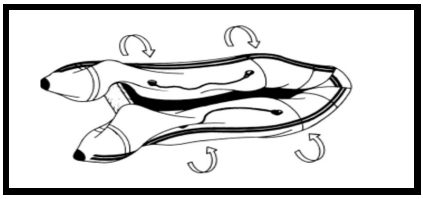
When deflating the boat, deflate all chambers evenly; this prevents damage to the baffles in the boat.

To deflate the boat:

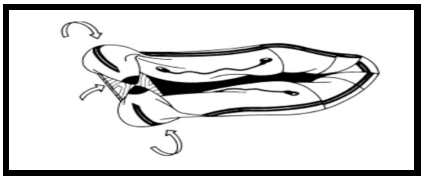
- Put your finger in the valve and turn ¼ turn (See for operation of the valves section 2.2 “the valves”).
- Release the air from all chambers.
- Make sure the inside of the valve stays open, so air can evacuate during folding.
- Push evenly on the whole boat to let as much air out as possible.

2.7 Folding the boat

- Remove seat / oars.
- Take out the floorboards.
- Fold the boat to the middle of the boat, so that the whole boat is as wide as the transom.



- Bring the cones at the back of the side chambers to the middle of the transom.



- Roll the transom forward. This helps to get the air out. Be sure all valves are in the open position.
- Folded this way the boat fits in the delivered pack (sack) for transportation.

2.8 Transportation

2.8.1 Lifting the boat out of the water

Make sure there are no sharp objects around the spot where you want to place the boat.
Use the handgrips for lifting instead of the safety ropes. **Do not lift by the lifelines.**

2.8.2 Towing the boat

If the boat is to be towed, the boat must be empty. Remove outboard, fuel tank and equipment.

⚠ Warning

- Never tow your craft with people aboard.
- Frequently inspect the towing painter.
- Periodically check the towing conditions and especially that the craft is not taking in water.
-Towing at a high or unsafe speed may void your warranty

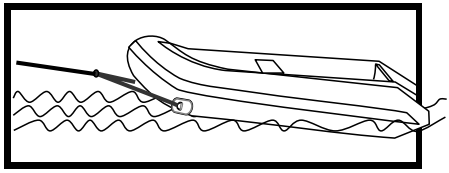
2.8.2.1 Towing of an inflatable

NOTE

IMPORTANT: The bow lift handle should never be used for towing.

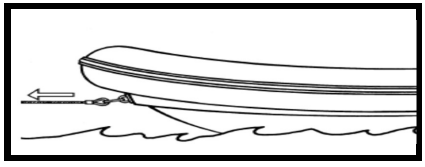
Use the port and starboard D-rings for towing. Towing this way makes the boat steady and secure behind the towing boat, and helps to avoid damage to your Defender Inflatable boat.

Attach the towing ropes as in the following scheme:



Attach a line between the towing rings to form a bridal. Attach a towing line to this bridle and tow the boat at slow speed.

2.8.2.2 Towing of a RIB



Attach a line from the bow eye in the fiberglass hull.

3. Safety and operation recommendations

3.0 Important Safety Information.

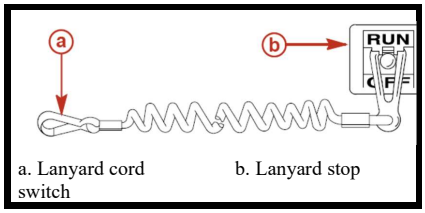
Read this:

Lanyard Stop Switch.

The purpose of a lanyard stop switch is to turn off the engine when the operator moves far enough away from the operator's position (as in accidental ejection from the operator's position). This would occur if the operator accidentally falls overboard or moves within the boat a sufficient distance from the operator's position

Tiller handle outboards and some remote-control units are equipped with a lanyard stop switch. A lanyard stop switch can be installed as an accessory - generally on the dashboard or side adjacent to the operator's position.

The lanyard is a cord usually between 4 and 5 feet in length when stretched out, with an element on one end made to be inserted into the switch and a snap on the other end for attaching to the operator. The lanyard is coiled to make its at-rest condition as short as possible to minimize the likelihood of lanyard entanglement with nearby objects. Its stretched-out length is made to minimize the likelihood of accidental activation should the operator choose to move around in an area close to the normal operator's position. If it is desired to have a shorter lanyard, wrap the lanyard around the operator's wrist or leg, or tie a knot in the lanyard.



a. Lanyard cord b. Lanyard stop switch

Falling overboard and accidental ejections are more likely to occur in certain types of boats such as low sided inflatables, bass boats, high performance boats, and light, sensitive handling fishing boats operated by a hand tiller. Falling overboard and accidental ejections are also likely to occur as a result of poor operating practices such as sitting on the back of the seat or gunwale at planing speeds, standing at planing speeds, sitting on elevated fishing boat decks, operating at planing speeds in shallow or obstacle infested waters, releasing your grip on a steering wheel or tiller handle that is pulling in one direction, drinking alcohol or consuming drugs, or daring high speed boat maneuvers.

While activation of the lanyard stop switch will stop the engine immediately, a boat will continue to coast for some distance depending upon the velocity and degree of any turn at shut down. While the boat is coasting, it can cause injury to anyone in the boat's path as seriously as the boat would when under power.

We strongly recommend that other occupants be instructed on proper starting and operating procedures should they be required to operate the engine in an emergency (e.g., if the operator is accidentally ejected).

⚠ DANGER

Should the operator fall out of the boat, the possibility of serious injury or death from being run over by the boat can be greatly reduced by stopping the engine immediately. Always properly connect both ends of the stop switch lanyard to the stop switch and the operator. It is unlawful to neglect this responsibility.

Accidental or unintended activation of the switch during normal operation is also a possibility. This could cause any, or all, of the following potentially hazardous situations:

- Occupants could be thrown forward due to unexpected loss of forward motion - a particular concern for passengers in the front of the boat who could be ejected over the bow and possibly struck by the gear case or propeller.
- Loss of power and directional control in heavy seas, strong current or high winds.
- Loss of control when docking.

⚠ DANGER

Avoid serious injury or death from deceleration forces resulting from accidental or unintended stop switch activation. The boat operator should never leave the operator's station without first disconnecting the stop switch lanyard from the operator.

3.1 Pre-Operating Check List

⚠ Warning

- Be aware of the maximum propulsion power rating for the craft (Max HP).
- Do not operate this craft with an engine of rated power larger or heavier than that posted on the capacity plate.
- Do not operate this craft at negative propulsion unit trim settings (bow down) at high speed.
-Craft may lean over on side. Instability in turns may result. Use negative trim to accelerate to planing speed from displacement speed and at lower planing speeds in choppy water (applicable to craft equipped with propulsion unit power trim).

- Do not operate at maximum speed while in congested high traffic waterways or in weather and sea conditions of reduced visibility high winds or large waves. Reduce speed and wake as a courtesy and as a safety consideration to yourself and others. Observe and obey speed limit and no wake zones.

- Observe right-of-way as defined by Rules of the Road and required by COLREG.

- "Always be certain to have sufficient distance to stop or maneuver if required to avoid collisions."

- Before each use, check the inflation pressure of the air chambers.
- Open the self-bailer drain so water may drain while underway while moving forward
- Remove any obstruction from the self-bailer floor drain.
- Check outboard for tightness on transom.
- Know the fuel capacity and cruising range.
- Check that the lanyard stop switch for the outboard works correctly.
- Be sure the boat is not overloaded. Do not exceed the maximum number of passengers or load capacity. Look at the boat capacity plate.
- Be sure there is an approved personal flotation device of suitable size for each person aboard and readily accessible.
- Check that the oars or paddles are in the boat in case of engine trouble.
- Operator knows safe navigation, boating, and operating procedures.
- A ring type life buoy or buoyant cushion designed to be thrown to a person in the water.
- Arrange passengers and load in the boat so that the weight is distributed evenly and everyone is seated in a proper seat or on the floor.
- Instruct at least one passenger in the basics of boat handling and the starting and operation of the outboard in case the driver becomes disabled or falls overboard.
- Before departing, tell someone where you are going and when you expect to return.
- No alcohol or drugs. It is illegal to operate a boat while under the influence of alcohol or drugs.
- Know the waters and area you will be boating; tides, currents, sand bars, rocks, and other hazards.

☝ NOTE

Bilge water should be kept to a minimum.

3.2 Stability and buoyancy

3.2.1 Position of persons and gear

For safe operation it is advised to have people sit in the middle of the boat as much as possible. The position of the people will directly influence the stability of this craft. When someone is sitting on the sides of the boat, try to offset their weight with someone on the opposite side.
Make sure you secure loose equipment safely when underway.

3.2.2 Rowing

Be aware of the sea and weather conditions. Manual power may not be enough to make headway in certain weather conditions, in particular, in strong winds.

Paddles are optional and are not meant for bringing the boat back to the harbor.

3.2.3 Under engine power

The bottom of your Defender Inflatable boat is designed to have a "V" shape. This improves the handling characteristics, especially when operating an outboard engine.

⚠ DANGER

While you are traveling at high speed or "on plane": avoid abrupt corners and high waves, this might endanger the passengers.

Make sure everybody holds on to the safety ropes. For comfort and safety, reduce speed in waves. Small children must be sitting **IN** the boat.

Breaking waves are a serious stability hazard. **Always wear a lifejacket!**

☝ Wave and Wake Jumping:

Operating recreational boats over waves and wake is a natural part of boating. However, when this activity is done with sufficient speed to force the boat hull partially or completely out of the water, certain hazards arise, particularly when the boat re-enters the water. Defender boats are not intended for wave jumping and doing so may void your warranty.

⚠ DANGER

Avoid serious injury or death from being thrown within or out of a boat when it lands after jumping a wave or wake. Avoid wave or wake jumping whenever possible. Instruct all occupants that if a wake or wave jump occurs, get low and hang on to a boat handhold.

☝ The primary concern is the boat changing direction while in the midst of the jump. In such case the landing may cause the boat to veer violently in a new direction. Such a sharp change in direction can cause occupants to be thrown out of their seats, or out of the boat.

☝ There is another less commonly known resulting hazard from allowing your boat to launch off a wave or wake. If the bow of your boat pitches down far enough while airborne, upon water contact it may penetrate under the water surface and submarine for an instant. This will bring the boat to a nearly instantaneous stop and can send the occupants flying forward.
The boat may also steer sharply to one side.

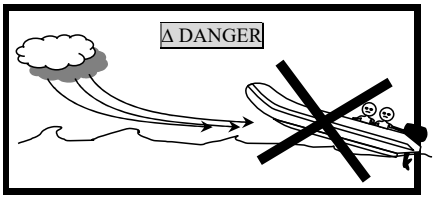
☝ When accelerating with the boat, the bow can make an upward movement. This might limit the sight of the helmsman temporarily. When the speed of the boat increases, the boat will come on plane and return to a level position again.

- If the wind blows towards you when running, a bow pointed upwards can be taken by the wind and rear upwards further.

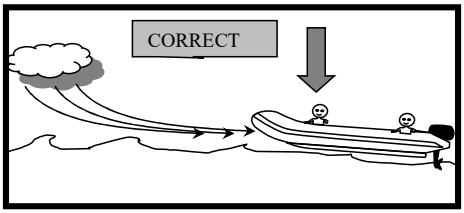
☝ **SINGLE OPERATION.** When operating under power without passengers, your weight should be as far forward and, in the middle, as practical. Sitting on the port or starboard aft tubes may not be safe in certain conditions or at high speeds.

☝ Avoid heavy weights near the transom.

RAPID ACCELERATION should be avoided to prevent the possibility of backward flip-overs.



☝ Wind and wave conditions can be highly dangerous for your inflatable. You can easily be flipped over if the load in the boat is not distributed in the bow of the boat and wind and tide are against. Drive with care in headwind and waves.



☝ Distribution of load and weight take the bow down to a safe position.

☝ The anti-cavitation plate on the engine should be no more than 2 inches under the bottom of the transom.

- If your outboard is too high on the transom, you will experience a lot of cavitation (air bubbles and slippage around the propeller).
- If your outboard is too low on the transom it will create drag and it will throw up water into the boat.

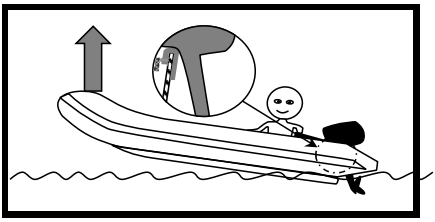
In both cases you end up with loss of speed, so try to find the ideal position before you permanently

bolt your engine to the transom (consult your engine supplier).

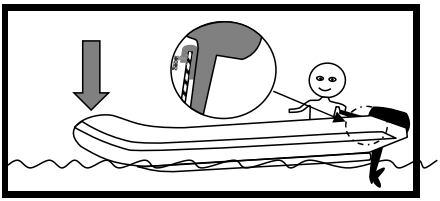
☝ At all speeds, it is advised to keep the boat LEVEL. Prevent the bow from rearing upwards and prevent the bow from pointing DOWN towards the water.

- Use the weight of the people on board to achieve the level position.
- Adjust your engine angle (see below).

☝ **REMEMBER:**



- An outboard tilted too far from the transom will drive the boat with a bow up attitude, which is both very dangerous and inefficient.



- An outboard tilted too close to the transom will drive the bow section too deep into the water, which ends up in loss of speed and/or cavitation.

☝ 1. Occasional checks should be made of motor attachment screws. Loose screws will cause erratic boat operation and possible loss of engine overboard.

2. Make a thorough review of the motor's operator's manual before operation.
3. On board loads should be monitored to avoid chaffing or puncturing of boat skin.

☝ **Turning the boat**

When taking a sharp turn, reduce the speed of your boat. The boat will tilt considerably in the direction of the turn.

3.3 Hazards

☝ **Water hazards**

1. Wrecks, reefs, rocky shores, sand bars, and shallows should be avoided or approached with caution.
2. When boating in unfamiliar waters, obtain information on local water hazards before launching.
3. BEWARE OF OFFSHORE WINDS AND CURRENTS.

☝ **Air chamber failure**

Your Defender Inflatable boat is designed with more than one air chamber. In the event of a puncture in one chamber, the boat will retain at least 50% of its buoyancy. Shift the load in the craft to the opposite side. Secure the leaking chamber as necessary (by tying-up or holding-up) and immediately proceed to the nearest shore or mother ship, whichever is nearest.
However, be careful about shallows or reefs because they can scratch or further damage your boat.

☝ **Beaching**

It is recommended that the boat NOT be powered onto the beach, dragged across rocks, sand, gravel or pavement as damage to the boat skin may result. This damage is not covered by your warranty.

☝ **Davits**

If the boat is suspended on davits, open the drain plug so that no water can accumulate in the boat.

☝ **Drain plug (RIB Models)**

The RIB is equipped with a hull drain plug, which should be in place when launching. The deck drain plug or slide bailer should be removed/opened only when the boat is under power in forward motion or when the boat is stored out of the water on davits or boat storage racks exposed to rain and water.

☝ **Sunlight**

Avoid extended exposure to sunshine. The changing air pressure inside the tubes might cause damage to your boat. Extreme sunshine (ultra-violet rays) over a longer period may accelerate aging of the materials.
Routinely clean the fabric and then apply UV protectant products to extend the life of your boat. Cover the boat to block direct sunlight exposure if the boat is to be stored for extended periods of time. Do not use products containing petroleum or silicone.

Smoking

Do not smoke while operating your craft. Especially while refueling. In fact, just quit.

Portable fuel tanks should be placed on a cushioned pad and should be strongly secured to the craft by means of straps to avoid bumps and risk of breaking during navigation.
- When refueling, always stick to the following recommendations:
- If possible, remove portable tanks from the craft to refuel.
- Refuel the tanks in the open air, far from heat sources, sparks or flames.
- Do not fill the tanks to the brim. The fuel increases volume with a rise in temperature and there is a possibility of the tank overflowing or even breaking.
- If fuel is spilled on the boat, clean or remove immediately or damage may occur to the fabric

High altitude use

Normal full inflation pressure–is 3.6 psi (.25 bar). If boat is inflated at sea level (low altitude) and transported to a high altitude (i.e., for use in a mountain lake) the air pressure must be reduced at the higher altitude to prevent over inflation.

Swimming

⚠ DANGER

Stop the propeller of your outboard engine when people are swimming close to your boat. The propeller can be extremely dangerous to anyone or anything in the water.

Stop the outboard motor immediately if you spot swimmers in the vicinity of your boat.

4. Maintenance

4.0 General maintenance

Cleaning agents.
Household cleaners should be used sparingly and not discharged into waterways. Never mix cleaners and be sure to use plenty of ventilation in enclosed area. DO NOT use strong detergents, solvents or products, which contain phosphates, chlorine, solvents, non-biodegradable or petroleum-based products. Cleaning your Defender Inflatable boat can best be done with inflatable boat cleaner. Always rinse well and follow with a UV protectant. DO NOT pressure wash tubes.

Paints.
If your boat is kept in water where marine growth is a problem, the use of anti-fouling paint may reduce the growth rate. Be aware of environmental regulations that may govern your paint choice. Contact your local boating authorities for information.

Fiberglass hulls should be regularly washed to remove dirt and polished with wax to protect the gelcoat surface.

NOTE

IMPORTANT: Waxes or cleaners containing alcohol or hydrocarbons SHOULD NOT BE USED on the boat fabric. These products will prematurely dry out or damage the boat fabric.

4.1 Repairs

⚠ DANGER

Avoid serious injury or death from a fire, explosion, or poisoning. The glues and solvents used for repairing inflatable boats are toxic and highly flammable. As a safety precaution, always work outdoors or in an area that is well ventilated, and away from any open flames, sparks, or appliances equipped with pilot lights. Breathing the vapours or exposure to the skin may be hazardous to your health. Avoid breathing the vapours and contact with skin and eyes by wearing eye protection, a carbon filter respirator and protective gear over all exposed areas of the body.

4.1.1 Small repairs

If you have any damage to your boat, it is strongly advised to consult with a local inflatable boat repair facility for the reparation.

A single-part glue is best suited for a temporary or emergency repair. A two-part glue will need to be used for a permanent repair.
If the damage is a small puncture, you can use the material you find in the repair kit.
Larger areas or if patch will overlap a seam should be patched by a professional repair technician at an inflatable repair station. Contact Defender and we might be able to assist in locating an inflatable repair station.
For the best results when gluing, the relative humidity should be less than 60%, ambient air temperature should be between 18 °C to 25 °C (65 °F to 77 °F) and not in direct sunlight.

Locate puncture by “hyper-inflating” the boat so that the tubes are drum tight. With a soapy-water solution, spray the boat surface until you see air bubbles. Re-inflation may be necessary if the hole is larger.

In general, work as follows:

- Cut out a patch large enough to overlap the damaged area by 1 inch from all sides.
- Center the overlapping patch over the damaged area and trace with a pencil the outline of the patch.
- If the fabric of your boat is CSM you have to buff, roughen with sandpaper, the patch area on the boat as well as the backside of the patch. PVC need not be buffed for repair.
- Use care when sanding the surface around the puncture and the patch. Lightly scuff with the sandpaper evenly. Avoid sanding so roughly that the thread of the fabric is exposed.
- Clean the area to be repaired and the patch with solvent (MEK for PVC, Toluol or Acetone for CSM).
- Refer to the instructions provided with the adhesive being used for the repair. Order of operations may vary based on manufacture of adhesive. Provide ample time as adhesive may need to sit after it is applied before being adhered to surface.
- Wait 24 hours before you inflate the boat again.

4.1.2 Air leak in tube by cut

A. Air leak caused by an angled cut (“L” shape)

- Check size of the cut to measure if your fingers can work inside with a small brush. If the cut is not large enough to let your fingers in, just extend the cut using a knife to get a proper space your fingers can work through. Make a patch in a suitable size which will be large enough to cover up the entire cut area.
- CSM boats, lightly abrade the interior tube surface and the patch surface. PVC & CSM clean with solvent the patch and inside of the area to be patched.
- Refer to the instructions regarding application provided with the adhesive being used for the repair. Order of operations may vary based on manufacture of adhesive. Provide ample time as adhesive may need to sit after it is applied before being adhered to surface.
- Let sit for 24 hours. Then, fully inflate to detect any air loss, by spraying or brushing area with soapy-water solution. Look for bubbles.
- If no air leak is detected, dry the soapy water completely. Now you are going to put a patch on the outside of the cut.

Make the same size of patch and follow the same procedures, as done with the interior patch.

⚠ Caution

Repaired air chamber must be aged for at least 24 hours from repair at less than 80% of the recommended air pressure. Full inflation or premature use of the boat may cause poor adhesion of the patches.

B. Air leak caused by straight cut or small hole

- Check the size of the cut or the hole to determine if your fingers can work inside with a small brush through the rip. If the rip is too small to let your fingers in, extend the cut using a knife to get a proper space your fingers can work through. Then, make a strip of material that is slightly longer than the cut and approximately 2" wide, so that the actual area of cut can be completely covered.
- Follow the same procedures as described in repairing other leaks. Inflate the chamber at less than 80% of the recommended air pressure and keep it at a dry place for 24 hours.

If any problem occurs, please contact Defender's service staff at 800-628-8225.

4.2 (Winter) Storage

☝ NOTE

IMPORTANT: To prevent hull or tube discoloration from marine growth or polluted waters, DO NOT store boat in the water for extended periods of time.

1. After use, the boat and all components should be washed with a mild soap and rinsed with fresh water. Dry all parts before storage in the carrying bag. This will help prevent mold or mildew.
2. Wood components should be inspected for damage or deterioration of the finish. Surface scratches or abrasions should be refinished with a marine grade varnish or marine paint.
3. To keep the boat looking new, store the boat in a cool dry area and avoid excess exposure to direct sun light.
4. An accessory cover is available to purchase to cover and protect your boat during storage.
5. If you store your boat for a longer period do not keep the boat in the delivered factory carton.

The boat is folded tightly in the original shipping package, which gives sharp folds in the material. Roll or fold up the boat loosely and store it on a dry place away from rodents or pests that can damage the fabric. To avoid damaging the boat during storage, do not place heavy objects on the boat.

5. Environment

Be aware of local environment laws and always respect codes of good practice.

5.1 Discharge of pollutants

Prevent pollutants from reaching the water around your boat. Using the water for water sports also means taking care of a clean water sports environment.

5.2 Discharge and disposal of waste

Waste means all forms of garbage, plastics, recyclables, food, wood, detergents, sewage and even fish parts in certain water – in short, nearly everything. We recommend you bring back everything you take out with you for proper disposal ashore.

If you have a marine sanitation device (head or marine toilet) installed, use an approved pump-out facility at your marine.

Many areas prohibit the discharge of sewage overboard or even an operable overboard waste discharge.

5.3 Advisable speeds

When running, take care of high speed as they may:

- Be dangerous to yourself or anyone or anything in the water in front of you.
- Cause considerable waves behind the boat which damages the waterfront.
- Cause unnecessary noise to fellow boaters.

5.4 Excessive noise

Noise means engine noise or even yelling. Many bodies of water have adopted noise limits.

- Music and loud conversation can carry a considerable distance on water, especially at night. Be respectful to those around you.

5.5 Exhaust emission

- Increased exhaust (hydrocarbon) emissions pollute our water and air. Keep your engine tuned and boat hull clean for peak performance. Consult your dealer and engine manual for information.

6. Warranty

LIMITED WARRANTY

Defender Industries warrants each new Defender Inflatable boat and its accessories attached thereto (hereafter referred to as "Product") to be free from defects in material and workmanship.

I. The warranty shall become effective only upon payment in full and begins on the date of original sale. This warranty shall remain in effect as described below.

A. Hull fabric is covered by a 5- year warranty for recreational use, 2-year warranty for alternate use, (including commercial, government or rental), against air holding integrity, cracking, porosity, and rot.

B. Hull seams are covered against delaminating by a limited 5-year warranty for recreational use, 2-year warranty for alternate use, (including commercial, government or rental)

NOTE: Seams are determined to have delaminated when the outer coating separates from the fabric base or the seam loses its structural strength resulting in air loss.

C. Fiberglass hull is covered by a 1-year warranty.

D. All other boat parts, including but not limited to components such as oar locks, lifting handles, inflator, boat bag, transom holder, transom, "D" rings, stringers, "H" fittings, floorboards are covered by a limited 1-year warranty.

II. Since this warranty applies only to defects in material and workmanship, it does not apply to normal wear and tear, or to damage caused by:

A. Neglect, lack of maintenance, accident, abnormal operation or improper installation or services;
B. Normal deterioration, wear, discoloration, dulling, crazing, osmotic blistering and aging of fabrics, metals, woods, plastic or fiberglass get coat (including spider cracks);
C. Use of an accessory or part not intended for use on product or approved by Defender;
D. Alteration or removal of parts;
E. Repairs made, without written authorization, in such a manner as to adversely affect the products performance or to prevent warranty repair at a future date;
F. Participating in or preparing for racing or other competitive activity;
G. Acts of God, including but not limited to, abnormal water, wind or weather conditions, etc.;
H. Damages or corrosion due to lack of maintenance, or premature wearing resulting from improper assembly, over/under inflation, etc;
I. Operation of product in a manner that is contrary to this manual or in violation of federal or state laws.

III. This warranty does not cover incidental or consequential costs or expenses such as: haul–out, launch, towing transport and storage charges; telephone or rental charges of any type, inconvenience, or loss of time or income; or other consequential damages.

IV. All claims must be reported to Defender Industries and confirmed by a Defender Boats and Motors representative for satisfaction. Digital images will be requested. Customer must provide reasonable access to the product for warranty service by delivering the product for inspection to Defender or a dealer authorized by Defender to service the product. If there is not a local service station capable of performing service work, then Defender will arrange for the inspection and repair, provided such service is covered under this warranty. Purchaser shall pay for all related transportation charges and/or any other expenses associated with that service. Any product or parts shipped by purchaser for inspection or repair must be shipped with transportation charges prepaid and are not reimbursable.

V. Defender's obligation under this Warranty shall be limited to repairing a defective part, or at its option, refunding the purchase price or replacing such part or parts as shall be necessary to remedy any malfunction resulting from defects in material or workmanship as covered by this Warranty. Defender reserves the right to improve the design of any product without assuming any obligation to modify any product previously manufactured.

VI. This warranty gives you specific legal rights, and you may also have other legal rights that vary from country to country.