



Owner's Manual

APPLICABLE EXPORT MODELS

390 / 450 / 520 / 575 / 650 / 700 / 760

VERSION 2017/1

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Introduction

Congratulations with the purchase of your new Falcon Rigid Hull Inflatable Boat (RIB).

The Falcon range of RIB's have been developed and tested over a period of 30 years, often in the most severe conditions, to ensure that you will enjoy safe and trouble-free operation for many years. No expense has been spared to research, develop and continuously evolve the Falcon range – which is why you can now be proud of owning one of the best quality Rigid Hull Inflatable Boats available.

Falcon RIBS are manufactured according to strict International Quality and Safety Standards, using only the highest quality materials and latest manufacturing processes available.

To ensure good performance we strongly recommend that the maintenance recommendations and operating instructions outlined in this manual are adhered to at all times.

Please read this manual carefully, and familiarise yourself with the boat before using it. If this is your first powerboat or RIB, we suggest that you obtain training and handling/operating experience on this type of vessel before assuming command of the craft, for your own safety.

Please note that in most Countries a Certificate of Competence issued by the relevant marine Authority is required by law to operate a boat.

Prologue

Falcon Inflatables have been manufacturing inflatable boats since 1985. Over the course of 30 years our boats have continuously evolved as a result of valuable experience and customer feedback, gained through extensive racing, recreational, government and commercial use all over the world. This feedback is constantly engineered back into the product range – this is why Falcon RIB's will always offer the latest practical design features, the most efficient hull designs, modern and highly durable construction, and built-in safety features.

Every Falcon boat undergoes strict quality control checks throughout the manufacturing process, to ensure the highest quality and durability. Whether your needs are leisure or commercial, you can rest assured that a Falcon RIB will give you years of trouble-free operation.

Please note that the environment in which boats are used includes strong currents and ever-changing sea conditions, it is therefore necessary to adjust the speed at which the boat is operated to suit the conditions.

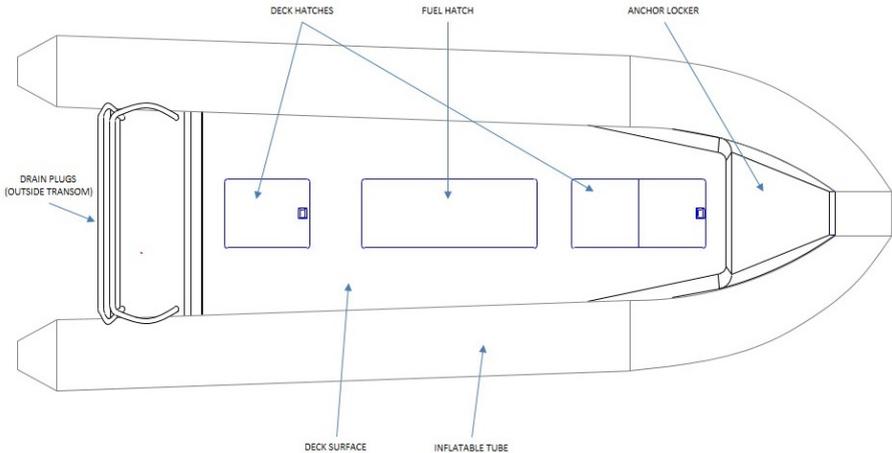
Driving your boat too fast in rough conditions could cause injury to the crew, or damage the boat hull or associated equipment. In addition, always ensure that the driver of the boat is attached to a safety cut-out mechanism ("kill switch") that will stop the motor in the event of him being thrown overboard.

Packing list

The following items have been included with your new boat:

- 1 x Inflation pump with bayonet-type valve connector
- 1 x Repair kit (fabric & instructions)
- 1 x Selection of hull and deck hatch drains plugs

Basic deck layout



Actual specifications may differ depending on your model. Accurate drawings available by request.

Inflating the tube

The inflatable tube (ponton) of your Falcon Inflatable boat is divided into either 4 (450 model) or 6 (520, 575, 650, 700, 760 models) individual air compartments by means of conically shaped baffles (dividers). The baffles can change shape to allow adjacent chamber pressure to be reduced when a rupture in a chamber occurs – it is therefore quite normal for adjacent chambers to appear slightly deflated if a chamber is deflated.

The pump supplied includes a bayonet-type fitting, which fits into the inflation valves located along the inside of the tube, above the deck.

The correct inflating procedure is as follows:

- 1) First inflate each chamber (starting from both the rear ends of the boat) only to the point where each chamber forms a normal inflated shape, but is still soft.
- 2) Repeat the procedure (starting from the two rear chambers again) only this time inflating each chamber to 0.25-0.27 bar (normal operating pressure).
- 3) The internal chamber dividers (also referred to as baffles) will indicate a pressure difference between adjacent chambers by creating an indent on the outer tube surface – equalize the pressure to rectify.

➔ **Recommended operating pressure:**

0.25 to 0.3 bar (3.6 to 4.3 psi)

Please note:

The use of air compressors or high pressure air cylinders to inflate your boat should be undertaken with great care to avoid damage to the inflatable tubes and the baffles. Overpressure in a compartment with a deflated adjacent compartment may rupture a baffle.

To better understand the variation of pressure relative to a rise or drop in ambient temperature, please study the table below:

DEGREES CENTIGRADE	BAR PRESSURE			
5	0.21	0.13	0.05	0
10	<u>0.25</u>	0.17	0.09	0.01
15	0.29	0.21	0.13	0.05
20	0.33	<u>0.25</u>	0.17	0.09
25	0.37	0.29	0.21	0.13
30	0.41	0.33	<u>0.25</u>	0.17
35	0.45	0.37	0.29	0.21
40	0.49	0.41	0.33	<u>0.25</u>
45	0.53	0.45	0.37	0.29

Thermo-bonded welded seam construction combined with modern fabrics allows the tubes of your Falcon Inflatable to have a longer useable life than traditional glued seams (note that traditional neoprene rubber “Hypalon” fabric cannot be welded); In addition your welded tube seams are also far more tolerant to temperature and altitude related pressure increases. With a much increased seam strength, the need to adjust the pressure during normal (20 degrees centigrade or less) rises in temperature is eliminated.

➔ Do however take care to never operate the boat with the tubes in an under-inflated state (less than 0.25bar). Under-inflated operation can cause cyclic vibration eventually leading to fabric de-lamination of the pontoon areas which are in contact with the water.

If unsure, rather add more air – the supplied pump is unable to achieve a pressure of more than 10% of the tube’s recommended operating pressure. A large drop in ambient temperature will contract the amount of air and resultantly reduce pressure. **Also note that the pressure in the tubes will drop if the boat is launched into colder water, therefore please recheck the pressure after launching the boat.**

➔The same applies to a rise or drop in altitude; moving from low to a high altitude will allow pressure to increase, and vice versa.

Falcon does not make use of automatic pressure release valves, as they reduce reliability of the tubes – thermo-bonded seam construction allows a tolerance level far greater than glued seams, and exceeds the requirements for normal operational conditions, thus it is not required to constantly adjust tube pressures to compensate for small temperature variations.

Before use

- 1) Check, adjust and equalize pressure in the tube to 0.25-0.3 bar. Refer to chapter “Inflating the tube” above.
- 2) Ensure that all hull drain plugs are secured in position.
- 3) Ensure that all deck hatch drain plugs are secured in position.
- 4) Check that all loose equipment aboard are stowed or secured.
- 5) Be sure you have enough fuel for your boating trip + reserve
- 6) Ensure that your boat complies with local safety regulations, and that the required documentation and safety equipment are on board and serviceable
- 7) Ensure that your inflation pump and repair kit is on board.
- 8) For outboard motor operation, please refer to the manual supplied with the motor.

Deck water-drainage

Water on deck will drain out of the self-draining scuppers on the transom when the boat is in motion. Debris washed off the deck could become lodged within the scuppers, in which case they may allow a small amount of water onto the deck when the boat is at rest. To rectify, clean the scuppers (located on the outside of the transom) via the opening on the underside.

Mooring

When placed on a mooring for a period of time, a boat cover is recommended, and all hatch drain plugs should be installed to avoid rainwater draining into the hull via unsealed hatches. It is also advisable to install an automatic bilge pump to prevent the build-up of rainwater inside the boat.

Please note that inflatable boats are not designed for long-term mooring, algae and other contaminants in the water will damage the pontoon fabric.

After use

Salt residue is any boat's worst enemy. Where possible, it is highly recommended to rinse the hull and deck, tubes, outboard motor and all exposed metal parts with fresh water to remove the salt. The motor and trailer will also require flushing, please refer to the outboard motor manual for motor flushing requirements

Cleaning & maintenance

Position the boat in a nose-high attitude, to allow wash water to drain from the hull and deck. Remove all drain plugs, and wash with a mild soap and water solution (for example dishwashing liquid or car shampoo). Do not use ammonia-based products, engine degreasers or harsh chemicals, as this can damage the hull and tubes.

To remove stubborn marks and stains, special chemical solutions are available, but should be used with care. Please refer to your dealer, a boat shop, or contact Falcon Inflatables for more information.

The fabric does not require to be polished – repeated use of silicone or wax based products can result in a build-up which bonds to the fabric, making it near impossible to effect successful repairs, if ever needed.

A periodical inspection of the hull and deck surface, as well as the tube for damage, is recommended.

Preparing for storage

- 1) Clean the boat and motor, and let dry before moving into storage.
- 2) Remove all drain plugs.
- 3) Open all access hatches to allow water vapours to evaporate.
- 4) Ensure that no wet gear is left in the boat, for example life jackets.
- 5) Disconnect the battery.
- 6) Trim the outboard motor down to allow water to drain from its exhaust.
- 7) Store the boat under –roof in a cool dry place, alternatively use a quality boat cover to protect the boat from harsh UV and the elements, as prolonged uncovered storage will degrade the pontoon and upholstery fabric prematurely

Warranty

Falcon Inflatables uses only the highest quality materials, and latest technologies to fabricate a world-class range of rigid hull inflatable boats. Strict quality control measures ensure that every Falcon is produced to the exact design specifications. A limited warranty is provided for products manufactured by Falcon Inflatables (Pty) Ltd.

Please consult your local Agent / Distributor for detailed warranty terms applicable to your country or region

Limitations of warranty

The warranty is limited to the free ex works replacement of parts or components which prove defective in material or workmanship, at the sole discretion of Falcon Inflatables, provided that the integrity of such part or component has not been compromised by improper use, rigging or installation procedures or neglect. All other forms of compensation, including consequential damages, or loss of income claims are excluded. This warranty does not constitute a full replacement of the hull/tube assembly.

Please Note:

Transportation costs to and from Falcon Inflatables are not covered by the warranty.

Costs for the installation of replacement parts by any other party than the Manufacturer are not covered by the warranty.

Items not covered

Accessories not manufactured by Falcon Inflatables (Pty) Ltd such as steering systems, boat covers, canopies, stainless steel accessories, trailers or any after-market products are excluded from this warranty. The suppliers of these components have individual warranties in place; please contact your dealer if you require more information.

Conditions excluded: General

- Defects caused by normal wear and tear.
- Defects caused by misuse, negligence, abuse, excessive speed or use outside the scope of “normal use” for which the boat and equipment was designed.
- Defects caused by accidents, overloading, overpowering, excessive speed, any form of competition, racing or endurance contests
- Defects caused by lack of experience/skills/qualifications of the operator
- The incorporation of, or use of, unsuitable attachments, parts and equipment.
- Exceeding manufacturer’s maximum power and weight ratings.
- Any complaints not based on defects in quality or workmanship such as instability, transit damage, storage damage, corrosion.
- Defects attributable to repairs not performed by Falcon Inflatables, or modifications of any nature.
- Defects due to incorrect installation of equipment & machinery by a dealer, agent, marine workshop, private person, or any entity other than Falcon Inflatables.
- Acts of nature (i.e. storms, flooding, fire, earthquake, acid rain)
- Defects and damage caused by impact, collision or accident.
- Premature deterioration arising from permanent outdoor & uncovered storage in direct sunlight and the elements of nature

Conditions excluded: Tube specific

- Discoloration, puncture, fading, tearing, ripping, cracking, abrasion, negligence or unauthorized modifications or repairs. The warranty applies to the structural integrity of the outer fabric, seams and valves' ability to retain air to within ISO6185-3 specification.
- Damage caused by under-inflated operation or towing.
- Damage caused by over-inflating or exposure to large temperature rises without re-adjusting the air pressure
- Damage caused by improper methods of inflating, such as the use of an air compressor, high pressure cylinder, or damage to tube baffles as a result of not following proper inflation procedures.
- Defects arising from exposure to unsuitable chemicals or cleaning materials (Petrol, MEK, Acetone, products containing ammonia, acids or solvents).

Conditions excluded: Hull specific

- Defects and damage caused by incorrect trailering, incorrect methods of launching or retrieving the boat, incorrect trailer design or setup.
- Surface finish, including gelcoat stress cracks (also known as hairline cracks) and abrasion or impact damage.
- Collision or contact with foreign objects in the water.
- Defects and damage arising from beaching or retrieval.
- Defects or damage caused by structural modifications.

Customer's responsibilities

- To operate and maintain the Boat and equipment as specified in this manual.
- To give notice to an authorized Falcon dealer of any and all apparent defects within 10 (ten) days after discovery and make the boat and/or equipment available at that time for inspection and repairs at such dealer's place of business.

- Provide relevant information to the failure as may be requested.
- Refrain from using the boat until the defect has been rectified, unless approval for continued use has been given by Falcon Inflatables or an authorized representative of the Manufacturer. Continued use could cause additional damage, which could void this warranty.
- Provide transport to and from the dealer to affect such warranty repairs / replacements.

FALCON INFLATABLES reserves the right to:

- Make design and specification changes and modifications on Boats and Accessories at any time without incurring any obligation to modify or update Boats or equipment previously manufactured or sold.
- Replace complete assemblies and /or units only if damage is so extensive that it would be less expensive to replace the complete unit than to repair it.
- Alter the terms and warranty conditions from time to time

Fibreglass hull repairs

Periodically inspect the surface of the rigid hull of your inflatable boat. The best way to do it is by rubbing your hand over the surface. Generally, you will feel the scratches and chips before seeing them, more so when they do not extend right through the gelcoat to the GRP laminate. Minor chips and scratches of this type can be left in most cases without fear of the damage worsening. Some marks are easy to repair, while others require a specialist. If you would like to effect repairs to the fibreglass, please contact the Manufacturer or an authorized dealer for instructions appropriate to the repair required. For major fibreglass damages, repairs are to be effected only by a person authorized by the Manufacturer – repairs without prior approval may void your warranty.

Tube repairs

Your Falcon Inflatable boat is supplied with a tube repair kit, which consists of several patches and glue to effect minor repairs. If your boat has suffered a tear or a cut longer than 1cm it is recommended that repairs be conducted by the Manufacturer or an authorized representative.

Determining the leak

You must first determine whether there is a leak. A tube could appear deflated if a significant drop in altitude (moving from high to low altitude) or temperature (more than 10 degrees centigrade) has occurred since it was last checked. If you are uncertain, re-inflate and check again after at least 24 hours have passed. If the tube again appears deflated, please follow these instructions to determine the source of the leak:

1. Check that there is no sand or debris within the air valve.
2. Inflate the buoyancy chambers to the correct pressure.
3. Close the cap on all the valves.
4. Wash the boat with soapy water, including the perimeter of the inflation valves.
5. A leak would be indicated by air bubbles forming around the leak
6. Mark the area with a PENCIL, not a pen or a marker, as these will stain the fabric.

Re-tightening the valve

If the origin of the leak is around the perimeter of the valve, it could be that the valve requires being re-tightened. The visible part of the valve is threaded at the back, like a bolt, whilst a plastic nut is attached to the inside of the tube. Carefully tighten the valve clockwise, using a pair of plumber's pliers, but take care not to exert too much force, which could damage the valve.

Repairing a valve leak

If the origin of the leak is through the valve, it could be as a result of sand or debris stuck inside it. Deflate the chamber, unscrew the valve (anti-clockwise) using a valve spanner or pair of plumber's pliers. Clean the rubber base with soap and water, and re-install. If it still leaks, you will need to replace the valve, obtainable from the Manufacturer or an authorized representative.

Repairing a puncture or cut in the fabric

Small holes, such as those from hooks or small sharp objects can be repaired without applying a patch. Deflate the air chamber, clean the surrounding area and apply a small drop of quick-dry "superglue" to re-seal the skin. Once the glue has dried, re-inflate. In the case of a minor cut or tear in the fabric, please refer to the instructions enclosed with your repair kit.

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