Southern Pacific Inflatables

Owner's Manual

X-Tender 370 / 355 / 330 / 310 AL

Please keep this manual in a secure place and hand it over to the new owner when you sell the craft.

If this is your first craft, or you are changing to a type of craft you are not familiar with, for your own comfort and safety, ensure that you obtain handling and operating experience before assuming command of the craft. Any boat dealer or national sailing federation or yacht club will be pleased to advise you of local sea schools, or competent instructors.

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Kiwi Yachting

CONTENTS

1 WELCOME

Congratulations on becoming the new owner of a: X-Tender 370 / 355 / 330 / 310 AL

Make sure you receive a full explanation of all systems from the person transferring ownership to you.

1.1 Boating Experience

If this is your first craft, or you are changing to a type of craft you are not familiar with, for your own comfort and safety, ensure that you obtain handling and operating experience before assuming command of the craft.

Any boat dealer or national sailing federation or yacht club will be pleased to advise you of local sea schools, or competent instructors

Regardless of the craft's seaworthiness and its certified design category, protection from freak sea and wind conditions cannot be guaranteed. Beware of offshore winds and currents. The ability, experience and fitness of the crew, therefore, should be taken into consideration before making any voyage.

1.2 Responsibility

It is the boat owner/operator's responsibility to:

1. Know the limitations of your boat;
2. Follow the rules of the road;
3. Keep a sharp lookout for people and objects in the water;
4. Ensure that the anticipated wind and sea conditions will correspond to the design category of your boat and that you and your crew are able to handle the boat in these conditions;
5. Never sail when the operator is under the influence of drugs or alcohol;
6. Be aware of the crew/passenger's safety at all times;
7. Ensure all crew receive suitable training, particularly with regards to location and operation of safety equipment;
8. Reduce speed when there is limited visibility, rough water, people in the water nearby, boats, or structures;
9. Ensure the craft is properly maintained at all time;
10. Have the craft inspected by qualified personnel at regular intervals and whenever a cause for concern is raised; and
11. Ensure compliance with all legislation in place in the area of operation. These may include requirements for the carriage of life saving equipment, licensing of the helmsman and respect for the environment.

2 ABOUT THIS MANUAL

This manual has been compiled to help you to operate your craft with safety and pleasure. It contains details of the craft; the equipment supplied or fitted its systems and information on their operation. Please read it carefully and familiarise yourself with the craft before using it. Ensure that everyone who will operate the vessel reads this manual before setting out.
This manual complies with the EU Recreational Craft Directive (RCD) and should not be perceived as an exhaustive guide to the vessel. A manual is not a replacement for experience and common sense!

2.1 Original Equipment Manufacturer (OEM) Manuals

This manual includes important fundamentals regarding equipment supplied by other manufacturers. More detailed information regarding such equipment can be found in manuals provided by the OEM.

A list of these manuals is given here:

Outboard engine
Steering gear

2.2 Safety Labels

The craft and this manual show symbols which advise the owner/operator and crew of imperative safety precautions to follow when operating and/or servicing equipment. The following symbols may be found on your craft. They should be respected at all times.

	Hazard - usually followed by text description (see following section)
	Electrical Hazard
	Fire Hazard
	Location of fire extinguisher

	Read the Owners Manual
	Fuel fill point: letter 'D denotes suitability for 'diesel fuel
	Sling position for safe lifting of the vessel
	Dedicated discharge opening for extinguisher

2.3 Explanation of Hazard Warnings

	Danger	Denotes an extreme intrinsic hazard exists which would result in high probability of death or irreparable injury if proper precautions are not taken.
	Warning	Denotes a hazard exists which can result in injury or death if proper precautions are not taken.
	Caution	Denotes a reminder of safety practices or directs attention to unsafe practices which could result in personal injury or damage to the craft or components.
	Information	Denotes useful or important facts or suggestions that can greatly enhance safety and efficiency of operations.
	Caution	Do not remove or obstruct any safety label. Replace any label which becomes illegible.

3 GENERAL ARRANGEMENT

3.1 Boat Identification & CE Marking Classification

Type of Boat	X-Tender 370 / 355 / 330 / 310 AL				
Manufacturer's Craft Identification Number	NZ-QFX00000E919				
Name of Boat Manufacturer	Kiwi Yachting Consultants T/A Southern Pacific Inflatables				
RCD Design Category		A	B	C	D
Maximum recommended number of people	adults				5

1 RCD = EU Recreational Craft Directive (2013/53/EU)

2 See table in section

3 For maximum weight limit see: 3.2.3

3.1.1 RCD Design Category Explanation

This vessel carries the CE marking (shown here) to indicate that it complies with the EU Recreational Craft Directive. It has been assigned the Design Category explained below:

A watercraft given design category D is considered to be designed to operate in typical steady winds of Beaufort force 4 or less and the associated significant waves heights of up to 0,3 m and occasional waves of 0,5 m height. Typically such conditions might be encountered on sheltered inland waters, and in coastal waters in fine weather. Depending on atmospheric conditions, winds can gust to about 12 m/s.

3.2 Principal Dimensions

3.2.1 Hull Size

		350RIB-Flat end		**370RIB**
Length of Hull	L_H	3.550	(m)	3.750
Length on waterline	L_{WL}	2.800	(m)	2.800
Length - max. overall	L_{MAX}	3.500	(m)	3.750
Beam of hull	B_H	1.660	(m)	1.660
Beam on waterline	B_{WL}	1.200	(m)	1.200
Beam - maximum	B_{MAX}	1.660	(m)	1.660
Freeboard fwd	F_F	0.600	(m)	0.600
Freeboard amidships	F_M	0.400	(m)	0.400
Freeboard aft	F_A	0.380	(m)	0.380
Maximum draft	T	0.481	(m)	0.480
Air draft: max.	H_A	1.100	(m)	1.100

3.2.2 Maximum Recommended Power

Power measurement to EN ISO 8665 Marine propulsion engines and systems - Power measurements and declarations

Horsepower	30	(hp) (metric)
Kilowatts	22	(kW)

3.2.3 Weights

All weights in kilograms (kg)

A 'maximum load' has been used for assessing stability and buoyancy, comprising:

Maximum Recommended Load (ISO 14946)	475 kg
Essential safety equipment & liferaft	11 kg
Maximum Number of Persons	375
Baggage & other carry on weights	60
Heaviest allowable outboard motor	80
Edible stores & provisions	27
Portable fuel tanks	14
Max Load as on Builder's Plate	556 kg
The boat in the 'empty craft condition' has a mass of	67 kg
Unladen weight (lightcraft) without engine	91 kg
Weight Fully Laden	646 kg

3.2.4 Tubes

Specification: Product Valmex-Germany vinyl coated (PVC) with TŰV -30°- +70° or
Option: ORCA Neoprene

3.2.5 Structural Fittings

Warning	Attention is drawn to the completion process whereby structural items, for example steering consoles, seats and superstructures, are installed by parties other than the manufacturer of the boat. These items should be installed to comply with the relevant clauses of ISO 6185-4 so it can be ensured that any such installations do not invalidate the original assessment.

3.2 Principal Dimensions

3.2.1 Hull Size

		310RIB-flat-end		330 RIB
Length of Hull	L_H	3.150	(m)	3.350
Length on waterline	L_{WL}	2.800	(m)	2.800
Length - max. overall	L_{MAX}	3.500	(m)	3.350
Beam of hull	B_H	1.660	(m)	1.660
Beam on waterline	B_{WL}	1.200	(m)	1.200
Beam - maximum	B_{MAX}	1.660	(m)	1.660
Freeboard fwd	F_F	0.600	(m)	0.600
Freeboard amidships	F_M	0.400	(m)	0.400
Freeboard aft	F_A	0.380	(m)	0.380
Maximum draft	T	0.450	(m)	0.450
Air draft: max.	H_A	1.100	(m)	1.100

3.2.2 Maximum Recommended Power

Power measurement to EN ISO 8665 Marine propulsion engines and systems - Power measurements and declarations

Horsepower	20.	(hp) (metric)
Kilowatts	14.7	(kW)

3.2.3 Weights

All weights in kilograms (kg)

A 'maximum load' has been used for assessing stability and buoyancy, comprising:

Maximum Recommended Load (ISO 14946)	398	kg
Essential safety equipment & liferaft	11	kg
Maximum Number of Persons	300	
Baggage & other carry on weights	60	
Heaviest allowable outboard motor	52	
Edible stores & provisions	25	
Portable fuel tanks	14	
Max Load as on Builder's Plate	451	kg
The boat in the 'empty craft condition' has a mass of	67	kg
Unladen weight (lightcraft) without engine	91	kg
Weight Fully Laden	541	kg

3.2.4 Tubes

Specification: Product Valmex-Germany vinyl coated (PVC) with TŰV -30°- +70° or Option: ORCA Neoprene

3.2.5 Structural Fittings

Warning	Attention is drawn to the completion process whereby structural items, for example steering consoles, seats and superstructures, are installed by parties other than the manufacturer of the boat. These items should be installed to comply with the relevant clauses of ISO 6185-4 so it can be ensured that any such installations do not invalidate the original assessment.

4 SYSTEMS DESCRIPTIONS

4.1 Bilge Pumps

Information This boat is not fitted with any bilge pumps.

It is recommended that a bailer/bucket is carried aboard for emergency bailing purposes. Ensure the bucket is protected against accidental loss.

	Warning	Never use flammable solvents (i.e. kerosene) for bilge cleaning, however oily it becomes.

Battery Disconnection

2. The fluid level must be between the lower and upper markings.

4.2 Fuel System

The craft has: Portable

Petrol fuel system

The following components are supplied by the fuel system:

Item	Number	Location
Engine	1	Outboard engine

Refer to manufacturer's instructions for details of the above equipment.

	Warning	Do not smoke or use open flame when filling with fuel, when working on the fuel system and when in the engine room.
	Danger	Never use a flame to check for leaks

4.3 Steering System

Information The boat's steering system has the following components:

Steering Hardware: Tiller
Turning device: Drive unit
Mechanism: Tiller connected to stock/engine

The craft is fitted with the following steering position(s):

Outboard Tiller

	Caution	Refer to the system manufacturer's documentation for information pertaining to the steering gear.
	Caution	All components of the steering system must undergo periodic inspection & maintenance to ensure safe operating conditions. Refer to the maintenance section of this manual for further details.
	Warning	Failure of the steering system will cause loss of control of your boat. Any change in steering such as looseness, tightness, binding, etc., must be checked immediately by a qualified person.

5 PRE-LAUNCH OBSERVATIONS

5.1 Recommended Safety Equipment

Caution	The sea can be unpredictable. Be prepared by carrying the following equipment, as a minimum, at all times.

1 Life jacket or buoyancy aid for each person
2 Appropriate weatherproof clothing
3 Compass
4 Charts
5 Anchor and line
6 At least 2 warps - see section 6.4
7 First aid kit including compress and thermal blanket
8 Bucket
9 Distress flares
10 VHF radio
11 Binoculars
12 Knife in protective sheath
13 Drinking water

5.2 Risk of Loss of Stability

The stability and buoyancy of this boat has been assessed on the basis of the weights specified in section: 3.2.3

Warning	The boat should never carry more than the manufacturer's recommended load. The load should be suitably distributed, bearing in mind that stability is most significantly reduced by any weight added high up in the boat
Caution	Stability can also be adversely affected by sloshing fluid. Bilge water should be kept to a minimum
Warning	Loose equipment can cause damage to the craft and affect stability. Ensure all loose equipment is properly stowed before setting out.
Caution	The stability of this boat is significantly reduced at speeds above displacement speed.
Caution	Stability may be reduced when towing or lifting heavy weights using a davit or boom.
Caution	Breaking waves are a serious stability hazard

5.3 Risk of Flooding

	Caution	In rough weather, hatches, lockers and companionway/doorways should be closed to minimise the risk of water ingress.
	Caution	Ensure all limber holes are clear

5.3.1 Through Hull Fittings including Seacocks

The following skin fittings are fitted in the hull of the craft. They provide the frontline defence against flooding and should be regularly inspected for condition. Valves should be frequently operated to ensure free movement.

In addition, it is recommended that all but drains & bilge discharges are closed when the craft is to be left unattended.

Ref.	Description	Location	Means of Closure
1	Bilge drain plug	transom deepest point	screwed plug
2	Bailing drain automatic	transom	hose

5.3.2 Strainers

Information Bilge pump intakes inside the boat, and intakes of water from outside the boat are fitted with protective baskets to avoid blockage by weed, leaves or other debris. Ensure these are kept clear at all times.

5.4 Risk of Fire

Information Always keep the bilges clean and check for fuel regularly

	Information	NEVER • obstruct portable extinguishers in lockers • obstruct safety controls (shut off valves, switches) • modify craft's systems, especially fuel. • fill any fuel tank whilst machinery is running • smoke while handling fuel or gas • use gas lights in craft

5.5 Risk of Falling Overboard

Information The working deck is the area of the boat that is safe for use at all times. Areas outside the specified working deck should only be used whilst leaving or arriving at a mooring or whilst the boat is not underway.

On this boat, the working deck area is defined as:

all inside deck

For maximum weight limit see: 3.2.3

For crew area limits, see section: 5.2

	Warning	Most slips and falls occur during boarding and disembarking. Be aware that wet decks can be slippery. Wear slip resistant footwear at all times.

6 NAVIGATION & OPERATION

6.1 Use of Engines

The craft is fitted with the following motive power:

Engine 4 stroke spark-ignition
Any CE type of outboard engine

Propeller Engine deliverer

Information Before starting the engine:

- Check the bilge water level.
- Ensure that ventilation openings are clear to prevent overheating
- Ensure there is sufficient fuel for the anticipated journey - including a margin for contingencies.

Take care not to damage fuel lines and check regularly that they are in good condition

Avoid placing flammable materials on or near hot parts.

Danger	If a fuel leak or fumes are detected, do not start the engine. Ensure all crew leave the boat and have a qualified person repair the fault as soon as possible.
Warning	Controls installed with the motor must have a start-in-gear protection device. It is the owner's responsibility to ensure this is so, should the engine or its controls be repaired/replaced.
Caution	So as to avoid high-speed moving parts, never run a motor with the cover removed.

6.2 Handling Characteristics

Information This craft is primarily intended to be supported by a combination of buoyancy and planing forces

Caution	This craft may be entirely clear of the water for short periods of time in normal operation (i.e. become airborne)

Information	Maximum engine power:	22 kW	30 hp
Information	Maximum speed:	25 knots	46 km/h

Information Periodic inspection of the propeller for excessive wear or damage is recommended in order to maintain peak performance and to maximise the longevity of the engine.

Information Ensure all crew are informed about the craft's behaviour.

Information Before conducting any rapid acceleration or high-speed manoeuvres, passengers must be warned to sit and hold-on.

Information The helmsman may have to take sharp avoiding action at any time. Passengers should, therefore, be seated and holding-on when underway.

Caution	Seaways are infinitely variable and all craft can meet conditions that will challenge the boats handling characteristics and/or the helmsman's ability. Proceed with a margin for error at all times. Avoid making sharp turns at speed, particularly in a short seaway.
Caution	It is strongly recommended that helmsmen receive adequate training in boat handling before setting to sea for the first time.
Caution	Be aware that factors such as altitude, temperature, load, and bottom growth may affect performance.

6.3 Visibility from the Main Steering Position

Information Operator vision from the helm can be obstructed by high trim angles of the craft and other factors caused by one or more of the following conditions:

- Propulsion engine trim angles
- Loading and load distribution
- Speed
- Rapid acceleration
- Transition from displacement to planing mode
- Sea conditions
- Rain and spray
- Darkness and fog
- Persons or movable gear in operator's field of vision

The international regulations for preventing collisions at sea (COLREG's) and the rules of the road require that a proper lookout be maintained at all times and observance of right of way. Make certain no other vessels are in the path before proceeding.

6.4 Anchoring, Mooring & Towing

Information — It is the owners / operators responsibility to ensure that the mooring lines, towing lines, anchor chains, and anchors are adequate for the vessel's intended use. Owners should also consider what action will be necessary when securing a tow line on board.

Caution	The breaking strength of lines / chains should not exceed 80% of the breaking strength of the strong point to which it is attached.
Caution	Always tow or be towed at slow speed. Never exceed the hull speed of a displacement craft when towing or being towed.
Caution	A tow line shall always be made fast in a way that it can be released when under load.

Information — When at anchor, it is damaging to leave the full load of the boat resting on the windlass. It is recommended that the chain be tied onto a local strong point.

6.5 Filling With Fuel

Caution	Never smoke when refuelling, or inspecting or working with the fuel system.

Information — For locations of filler caps, see: 3.2.3

Use the following procedure for filling tanks:

- Remove portable tank(s) from the craft for filling ashore.
- Open the filler cap & start filling the tank.
- Check the contents of the tank by monitoring the tank level indicator
- Don't fill the tank to its maximum: allow for expansion
- Close deck fittings tightly, but don't over-tighten since this will damage the rubber o-rings
- (make an entry in ship's log)

Caution	Fuel is considered chemical waste. Keep an absorbing cloth close by when filling tanks.

7 MAINTENANCE

Regular inspection and maintenance is an essential activity to ensure the boat's longevity and the crew's safety.

This section includes a generic table which details typical inspection and maintenance intervals. This is not specific to your craft and some sections will not apply.

The necessary frequency of service or maintenance depends upon the environment in which the boat operates. The intervals listed in this section should be viewed as maximums.

Caution	Modifications that may affect the safety characteristics of the craft should be assessed, executed and documented by competent people.
Caution	Any change in the disposition of the masses aboard may significantly affect the stability, trim and performance of the boat

KEY: **X - Activity required** **Y - Activity required by qualified individual**

		INTERVAL				
Item	**Required Maintenance/Service**	**Before Every Use**	**After First 20 Hours**	**Every 25* Or 50 Hours**	**Every 50* Or 100 Hours**	**Every 6 mnth or Annual**
Miscellaneous						
Bilge Area	Clean & limber holes free					X
Bilge Blowers	Hose connections tight			X		X
Bilge drain plug	Installed and tight	X				
Zinc anodes	Check and replace	As needed				
Hull	Check for loose, damaged or missing parts	Whenever out of the water and always after striking an object				
Controls						
Steering	Check for proper operation					Y
Throttle	Lubricate. Include all shift linkage and pivot points		X		X	X
Engine						
Alarm	Check	X				
Cooling System	Check for leaks with engine running	X				
Crank vent system	Clean		X		X	
Drive belts	Check for wear	X				
Flame Arrestor	Clean		X		X	
Fuel Filter	Replace				X	
Mounts (Fasteners)	Tighten		X			X
Oil and Filter	Replace				X	X
Oil Level	Check	X				
Propeller	Inspect for damage	Always after striking object				
Fuel System						
Connections & Lines	Check for leaks & wear	X	X	X		
Tanks	Check for leaks & tightness of connections	X	X	X		
Exterior						
Topside & Supplies	Check for loose, damaged or missing parts					X

7.1 Maintenance & Storage of Tubes

For details of the tube arrangement, see: 3.2.4

Caution	The tubes are made of a material that will deteriorate when stored in strong direct sunlight for prolonged period.

Always store the boat inside, away from harmful ultra-violet rays.

UV protection waxes are recommended to prolong the life of the tubes and to preserve their colour.

Caution	Certain liquids, such as (battery) acids, oil and petrol can be corrosive to the tube material.

Rinse-off, immediately, any liquid other than water that comes into contact with the tubes.

7.2 Winter Storage

Your boat and the systems and fittings on board can be damaged if they are not properly prepared for the winter.

You should refer to the advice given in the various handbooks supplied with this manual.

In addition to this you should, for example, consider the following:

- Ensure the engine cooling water has the correct proportion of anti-freeze
- Check and protect all the systems on the boat
- Remove all water from the craft and protect it from rain
- Ensure deck drains are clear
- Check the sacrificial anodes and replace as necessary

8 ENVIRONMENTAL AWARENESS

The previous sections of this manual provide information on how to protect the boat and its crew from the environment. This section gives information on how the environment may be protected from the boat and its crew.

The environment should be understood as including one's neighbours as well as the world of plants and animals.

In many regions of the world, there are strictly enforced regulations regarding environmental protection. It is the responsibility of the owner/operator to be aware of applicable regulations and to ensure compliance with them.

8.1 Leakage of Petrochemicals

	Warning	Any oil must be treated as chemical waste.

ALWAYS: Investigate the source of any oil leaks as soon as possible.

Dispose of recovered spilt oil correctly.

Have oil-absorbing cloths or rolls on board.

NEVER: Dispose overboard of any oil, paint or other chemical that is potentially harmful to the environment. Sanctions are in place in most parts of the world for those who disregard this rule!

8.2 Black & Grey Water

	Warning	The discharge of effluent into navigable waters is forbidden by law in many areas. If such discharge causes a film or sheen upon or a discoloration of the surface of the water or causes a sludge or emulsion beneath the surface of the water, violators may be subject to a penalty. It is the responsibility of the boat user to ensure that they are aware of local legislation regarding discharge

8.3 Household Waste

	Warning	When at sea for periods longer than space allows onboard storage of waste, only jettison organic waste.

ALWAYS Retain any household waste until it can be properly disposed of ashore.

8.4 Noise

NEVER Make excessive noise. Most people take to the water for relaxation which is ruined by noise.
Run the engine or generator unnecessarily.

8.5 Wash / Waves

ALWAYS Adapt your speed to the water in which you are navigating. Consider the comfort and safety of other (particularly small) boats around you.

	Warning	Be aware that in some areas speed restrictions are in place to avoid erosion of banks/coastline.