OWNER'S MANUAL

LEOPARD 46

THREE CABIN VERSION (110V)

ZA-RAC A1010 J607

ROBERTSON AND CAINE (PTY) LTD
CAPE TOWN SOUTH AFRICA

INDEX

INDEX (Cont.)

1. INTRODUCTION

This owner's manual introduces you to the special features of your yacht. Read this owner's manual carefully before you go to sea and refer to it frequently during your ownership. This manual and the equipment manuals provided will help you to operate and maintain the yacht safely. Please keep the manuals safely in a place that is easily accessible.

ABOUT YOUR OWNER'S MANUAL

This owner's manual includes descriptions of the yachts various systems and general information on the operation and maintenance of the yacht. Please note that the information supplied in this manual only summarizes the more detailed information in the equipment manuals. Robertson & Caine (Pty) Ltd retain the right to make changes in products manufactured and or used by us at any time without prior notice and without occurring any further obligation to make the same or similar changes on products previously manufactured or sold. Constant efforts are made to improve the Quality and performance of our products so some details included in this manual may differ slightly from your vessel. All Drawings included in this manual are schematic representations only. All dimensions and positions indicated must be verified on the actual vessel. If you have any questions please consult your sales agent or broker

EQUIPMENT MANUALS

Certain equipment and components purchased from the original equipment manufacturer (OEM) have been installed in your yacht. These include the engines, batteries, hatches, electronic equipment, stove, microwave, etc. Where applicable the operation and maintenance manuals provided by the OEM's have been included in the Owners manual pack. Most OEM supplied equipment has its own limited warranties and the warranty registration cards are also provided with your Owners manual pack.

MAKE SURE THAT THESE MANUALS ARE TRANSFERRED TO SUBSEQUENT OWNERS.

While all the information it contains is important, items of special importance to you are shown in CAPITALS.

If your experience in cruising or yacht ownership is limited you are strongly advised to take instruction from a professional, registered institution.

This owner's manual is written in conformance with the

European Recreation Craft Directive 94/25/EC as amended by Directive 2003/44/EC

and the notified body is the

European Certification Bureau Netherlands B.V.

Address: Juliana weg 224A 1131 NW Volendam
Telephone: + 31 (0) 299 323 123 or 320 477
Fax: + 31 (0) 299 323 023
e-mail: info@ecb.nl
Internet: www.ecb.nl

2. ISSUE SHEET

CRAFT IDENTIFICATION NUMBER: **ZA-RAC A1010 J607**

THIS DOCUMENT IS ISSUED BY ROBERTSON AND CAINE (PTY) LTD OF CAPE TOWN, SOUTH AFRICA.

DATE: 09 October 2006 QUALITY ASSURANCE MANAGER

RECEIVED:

DATE FIRST OWNER

SUBSEQUENT ISSUES ON CHANGE OF OWNERSHIP

SUPPLIED BY RECEIVED BY

2

SELLER BUYER

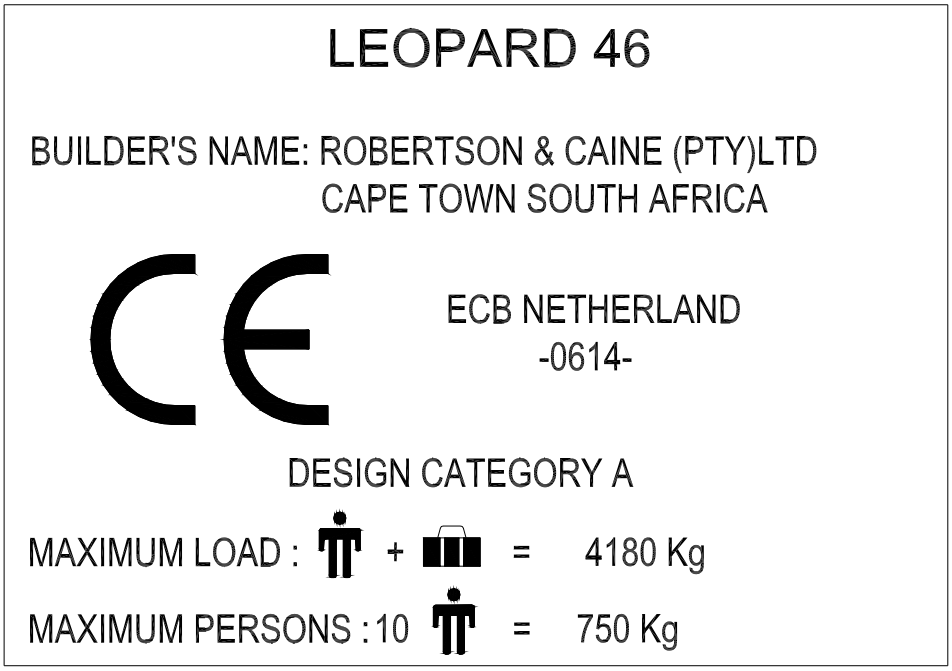
DATE DATE

3

SELLER BUYER

DATE DATE

3. COPY OF BUILDER'S PLATE



The maximum load of 4180kg specified on the Builder's Plate excludes the weight of fresh water and fuel onboard. Fresh water and fuel have a combined weight of 1840kg.

4. List of ISO Standards Applicable

ISO 7840	Small Craft – Fire Resistant Fuel Hoses
ISO 8099-1/2/3	Small Craft - Waste water retention and treatment systems Parts 1,2,3
EN/ISO 8665	Small craft - Marine propulsion engines and systems – Power measurements and declarations
ISO 8666	Small craft - Principal data
EN 28846	Small craft - Electrical devices -Protection against ignition of surrounding flammable gases
EN 28848	Small craft - Remote steering systems
EN 28849	Small craft - Electrically operated bilge-pumps
ISO 9093 – 1	Small craft - Seacocks and through-hull fittings metallic
ISO 9093-2	Small craft - Seacocks and through-hull fittings non metallic
ISO 9094-1	Small craft - Fire Protection
EN/ISO 9097	Small craft - Electric fans
EN/ISO 10087	Hull identification - Coding system
ISO 10088	Small craft - Permanently installed fuel systems and Fixed fuel tanks
ISO 10133	Small craft - Electrical systems - Extra-low-voltage D.C. Installations
ISO 10239	Small craft - Liquefied petroleum gas (LPG) systems
EN/ISO 10240	Owner's manual
ISO 11591	Small craft engine driven field of vision from helm position
ISO 11812	Small craft - Cockpit and cockpit drainage
ISO 12215-1	Small craft – Hull construction – Scantlings – Part 1: Materials thermosetting resins, glass fibre reinforcement, reference laminate
ISO 12215-4	Small craft – Hull construction – Scantlings – Part 4: Workshop and construction
ISO 12216	Small craft – Windows, portlights, hatches, deadlights and doors – Strength and tightness requirements
ISO 12217-2	Small craft – Stability and buoyancy – Methods of assessment and categorisation – Part 2: Sailing boats
ISO 13297	Small craft - Electrical systems. Alternating current installations
ISO 14945	Small craft – Builder's plate
ISO 14946	Small craft - Maximum load capacity
ISO 15083	Small craft - Bilge pumping systems
ISO 15084	Small craft - Anchoring, mooring and towing - Strong points
ISO 15085	Guard-rails, lifelines and handrails
ISO 16147	Small craft – Inboard Diesel Engines – engine mounted fuel & electrical components.

5. Certificate of Conformity

It is hereby certified that, to the best of our capacity, and as determined by our Quality Control System, this yacht is built in accordance with the prescribed Technical Construction details and in accordance with the ISO Standards listed in Section 5 of this manual.

_____

Rob Brennan
Quality Assurance Manager
For Robertson and Caine (Pty) Ltd
Date: 09 October 2006

DECLARATION OF CONFORMITY

Recreational Craft • Directive 94/25/EC as amended by directive 2003/44/EC

MANUFACTURER'S NAME: Robertson and Caine International Yachts

ADDRESS: Beach Road and Railway Streets, Woodstock

POST CODE: 7915 CITY: Cape Town

COUNTRY: (code) ZA Print: South Africa

MODULE USED: (check) A [ ] Aa [ ] B+C [X] B+D [ ] B+F [ ] G [ ] H [ ]

IF THE DECLARATION IS MADE BY AN AUTHORISED REPRESENTATIVE

AUTHORISED REPRESENTATIVE ESTABLISHED IN EEA TERRITORY:

ADDRESS:

POST CODE: CITY:

COUNTRY: (code) Print:

IF INTERVENTION OF A NOTIFIED BODY

NAME: European Certification Bureau Nederland IDENTIFICATION NUMBER: 0614

ADDRESS: Julianaweg 224A

POST CODE: 1131 NW CITY: Volendam

COUNTRY: (code) NL Print: Holland

EC TYPE-EXAMINATION CERTIFICATE NUMBER (if issued): , DATE (day / month / year)

DESCRIPTION OF CRAFT

CRAFT IDENTIFICATION NUMBER: ZA-RACA10101J607

BRAND NAME OF CRAFT: Leopard

TYPE OR NUMBER:	:	46
DESIGN CATEGORY	:	A
TYPE OF CRAFT	:	Sailing Catamaran (01)
TYPE OF HULL*	:	Multihull (02)
DECK*	:	Fully Decked (01)
CONSTRUCTION MATERIAL*	:	GRP (02)
PROPULSION*	:	Diesel Engine (03)
TYPE OF ENGINE*	:	Volvo D2-55 (02)
MAXIMUM RECOMMENDED ENGINE POWER (kW)	:	41kW @ 3000 RPM
HULL LENGTH AND BEAM	:	14.13m / 7.57m
DRAUGHT	:	1.25m Lightship

I declare at my own and sole responsibility that the craft mentioned above complies with all applicable essential requirements in the way specified and is in conformity with the type for which the above mentioned EC type examination certificate has been issued.

Name: R BRENNAN

(identification of the person empowered to sign on behalf of the manufacturer or his authorised representative)

Signature and title: (Q.A MANAGER)

(or an equivalent marking)

Date (yr/mon/day): 2006-10-09

Type of craft
01 sailboat
02 inflatable
03 other (specify): _____
01

Type of hull:
01 monohull
02 multihull
03 other (specify): _____
02

Construction material:
01 aluminium, aluminium alloys
02 plastic, fibre reinforced plastic
03 steel, steel alloys
04 wood
05 other (specify): _____
02

Propulsion
01 sails
02 petrol engine
03 diesel engine
04 electrical motor
05 oars
06 other (specify): _____
01 / 03

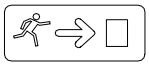
Type of engine:
01 outboard
02 inboard
03 z or sterndrive
04 other (specify): _____
02

Deck
01 decked
02 partly decked
03 open
01

Essential requirements (reference to relevant articles in Annex 1 of the Directive)	Harmonised standards used	ISO-standards used	Other normative document used	See the technical file
General requirements (2)				
Craft Identification Number – CIN (2.1)		EN/ISO 10087		
Builder's Plate (2.2)		ISO 14945		
Protection from falling overboard and means of reboarding (2.3)		ISO 15085		
Visibility from the main steering position (2.4)		ISO 11591		
Owner's manual (2.5)		EN/ISO 10240		
Integrity and stuctural requirements (3)				
Structure (3.1)		ISO 12215		
Stability and freeboard (3.2)		ISO 12217-1		
Buoyancy and floatation (3.3)		ISO 12217-2		
Openings in hull, deck and superstructure (3.4)		ISO 9093-1		
Flooding (3.5)		ISO 11812		
Manufacturer's maximum recommended load (3.6)		ISO 14946		
Liferaft stowage (3.7)			RSG Guidelinds	
Escape (3.8)		ISO 9094		
Anchoring, mooring and towing (3.9)		ISO 15084		
Handling characteristics (4)		ISO 8665		
Engines and engine spaces (5.1)		ISO 4589		
Inboard engine (5.1.1)		ISO 9094-1		
Ventilation (5.1.2)		ISO 16147		
Exposed parts (5.1.3)			RSG Guidelines	
Outboard engine starting (5.1.4)		N/A		
Fuel system (5.2)				
General – fuel system (5.2.1)		ISO 10088		
Fuel tanks (5.2.2)		ISO 10088		
Electrical systems (5.3)		ISO 13297/10133		
Steering systems (5.4)				
General – steering system (5.4.1)		ISO 28848		
Emergency arrangements (5.4.2)			RSG Guidelines	
Gas systems (5.5)		ISO 10239		
Fire protection (5.6)				
General – fire protection (5.6.1)		ISO 9094-1		
Fire-fighting equipment (5.6.2)		ISO 9094-1		
Navigation lights (5.7)			COLREGS	
Discharge prevention (5.8)		ISO 8099		

6. WARNING SYMBOLS ON BOARD

The following warning symbols will be found on board.

	BEWARE CAPSIZE
	WARNING
	ELECTRICAL SHOCK HAZARD
	FIRE HAZARD
	READ MANUAL
	ESCAPE ROUTE
	NO SMOKING
	110V AC - HIGH VOLTAGE DANGER
	ESCAPE HATCH WARNING SIGN
	HARD TOP WARNING SIGN

⚠ WARNING

DURING SAILING OR AT ANCHOR IN ROUGH SEAS ENSURE THAT THE COMPANIONWAY DOOR BARREL BOLT IS IN THE LOCKED POSITION WHEN THE DOOR IS OPEN. SERIOUS INJURY COULD RESULT IF THIS IS NOT DONE

7. Boating Safety

The yacht owner or skipper is responsible for the safety of the passengers and crew, as well as other boaters. As you read this manual and the original equipment manufactures manuals provided, the following warning symbols will be found to alert you to possible safety hazards.

⚠ DANGER

Danger calls attention to an immediate hazard or unsafe condition that could result in severe injury or even death.

⚠ WARNING

Warning identifies hazards or conditions that could result in personal injury or damage to equipment and machinery.

⚠ CAUTION

Caution indicates potential hazards or unsafe practices that may result in minor injuries or damage to machinery.

The Safely Labels shown on drawing L46 STD-FA-0059-0 can be found in the locations indicated on the drawing.

Safety recommendations

Yachting safety and the safety of your passengers and crew are your responsibility. You should fully understand and become familiar with the operation procedures, safety procedures and safety precautions in this owner's manual and the OEM equipment manuals supplied with the boat.

Keep your yacht and its equipment in a safe operating condition. Inspect the hull, engines, safety equipment, mast, rigging and sails on a regular basis – ensure all defective, damaged or expired equipment is repaired or replaced.

⚠ WARNING

Federal law requires that:

- The operator of a vessel is responsible for the maintenance and safe conduct of the vessel and the safety of passengers
- The completion of state registration or federal documents and the provision of, and management of safety equipment.

The yacht owner or skipper must ensure that all specified lifesaving and fire extinguishing equipment is on board. This equipment must meet the requirements of the regulatory body in the area of operation of the yacht. The equipment must be noticeable, accessible and in a safe operating condition. Passengers and crew must be made aware of the location and operation of this equipment.

Safe Operation
Be aware of the weather. Monitor changing weather conditions, strong winds and electrical storms, Check local weather reports before departing.

File a float plan before departure.

Keep updated charts of the area to be sailed onboard the yacht.

Operate the yacht with due care and courtesy to others.

Understand and obey the rules of the road. Colregs 1972.

Always maintain complete control of the yacht.

Do not overload or improbably load the yacht.

Instruct one other crew member or passenger on the operation of the yacht in case you are incapacitated.

The owner or skipper is required by law to render assistance to any individual or vessel in distress as long as his vessel is not endangered in the process.

⚠ WARNING

NEVER OPERATE THE VESSEL WHILST UNDER THE INFLUENCE OF ALCOHOL OR DRUGS. DRUGS OR ALCOHOL DECREASE YOUR REACTION TIME, IMPAIR JUDGEMENT AND INHIBIT YOUR ABILITY TO SAFELY OPERATE YOUR VESSEL. OPERATION OF THE VESSEL WHILST UNDER THE INFLUENCE OF ALCOHOL OR DRUGS ABOVE THE LOCAL LIMIT CARRIES SIGNIFICANT PENALTIES.

⚠ WARNING

Handholds
HANDHOLD'S ARE PROVIDED FOR YOUR SAFETY. FAILURE TO USE HANDHOLDS COULD RESULT IN INJURY OR FALLING OVERBOARD. IN ROUGH WEATHER ENSURE THAT ALL CREW WORKING ON DECK ARE EQUIPPED WITH PERSONAL FLOTATION DEVICES (PFD'S) AND THAT THEY ARE SECURELY ATTACHED TO THE BOAT WITH APPROVED SAFETY HARNESSES AND LIFE LINES.

Hardtop Bimini

THIS VESSEL IS FITTED WITH A HARDTOP
THE HARDTOP IS TO BE USED ONLY FOR ACCESS TO THE MAINSAIL
NO DIVING, JUMPING FROM OR SUNBATHING ON THE HARDTOP SHOULD BE ALLOWED.
THE OWNER / SKIPPER SHOULD ENSURE THAT ANY CREW WORKING ON THE HARDTOP ARE SECURELY ATTACHED TO THE BOAT WITH APPROVED SAFETY HARNESSES AND LIFE LINES.

Boating Safety courses
The information contained in this manual does not contain all you need to know regarding the safe operation of the vessel in all conditions. It is strongly recommended that you obtain further instruction before taking command of the vessel.

The following lists are some of the courses recommended:

- Navigation
- Seamanship and Boat Handling
- Rules of the Road, International and Inland
- Weather
- Safety at Sea
- Survival in Bad Weather
- Respect for others on the water
- First Aid
- Radio Communication
- Distress Signals
- Pollution Control

Further information can be obtained from the US Coast Guard, American Boat and Yacht Council (ABYC), Red Cross, Yacht Clubs and other Federal or State Bodies.

The US Coast Guard offers many pamphlets in safety and other information not covered in this book. Call the US Coast Guard toll-free hotline 1-800-368-5647 for more information.

Seaworthiness and Safety Inspections
The US Coast Guard and many other state boating officials offer free inspections of your yacht to the required safety standards. You may voluntarily consent to these inspections and are allowed time to make any corrections without prosecution. Contact your local state authority or US Coast Guard for details at http://www/uscgboating.org

Accident reports
The operator, skipper or owner of any recreational craft is required to file a boating accident report (BAR) if the boat is involved in an accident that results in:

1) Loss of life
2) Personal Injury that requires medical treatment beyond first aid
3) Damage to the vessel and / or other vessel or property of $2000 or more
4) Complete loss of the vessel

The report must be submitted to the local authority in the state where the accident occurred. The formal report must be submitted within 48hrs of the accident.

For more information regarding accident reporting please call the US Coast Guard Infoline at 1-800-368-5647.

For yachts operating in other countries please contact the regulatory body concerned for details of their requirements.

Communication Equipment
Your vessel is equipped with the latest Raymarine Ray 240 VHF Radio with digital selective calling (DSC). A nine digit maritime mobile service identity (MMSI) number is required to operate the DSC equipment. This MMSI number can be requested from the Federal Communications Commission (FCC) at www.fcc.gov or from BoatUS at www.boatus.com or Maritel at www.maritelusa.com.

Once obtained, you must programme the MMSI number into your Ray 240 as described in the Ray 240 VHF Radio Owner's Handbook.

You do not need an FCC ship radio station licence / operator licence if travelling in US waters. You will need a licence to operate the radio outside of US waters on an international voyage.

If your vessel is registered in another country you will need to consult the regulatory authorities of that county regarding license and operational requirements.

Radio Listening Watch
All vessels carrying VHF radio equipment must maintain a radio watch on channel 16 (156.800 MHz) whenever the radio is not being used to communicate. Be sure that only qualified persons use the radio. Never transmit false distress messages. Never use profanity on the air.

⚠ WARNING

IT IS UNLAWFUL TO INTENTIONALLY TRANSMIT A FALSE DISTRESS ALERT OR TO UNINTENTIONALLY TRANSMIT A FALSE DISTRESS ALERT WITHOUT TAKING STEPS TO CANCEL THAT ALERT.

Distress Call
To send a DSC distress call slide up the cover on the back of the handset labelled DISTRESS and press and hold the distress key for 5 seconds. After the 5 second countdown the distress call is automatically sent on channel 70 and a loud alert will be heard. The radio will automatically monitor for acknowledgement. The distress call is re-transmitted at 3 – 4 minute intervals until either an acknowledgement is received or the DSC mode is manually exited by pressing the 16/9 key. Whilst awaiting acknowledgement on DSC channel 70 you can press the PTT button to communicate with other vessels on VHF channel 16. When acknowledgement is received on DSC channel 70 the radio automatically switches to channel 16, press PTT to talk to the acknowledging station.

To send a VHF distress call:
1) Make sure the radio is on
2) Select channel 16
3) Press and hold the transmit button
5) Clearly say "Mayday, Mayday, Mayday"
6) Give vessel call sign and / or name
7) Give position and / or location of the vessel
8) Describe nature of emergency
9) Indicate number of people on board
10) Indicate intended action or requirement
11) Release transmit button
12) Wait 10 – 20 seconds, if there is no response repeat "Mayday" call.

For other operational and maintenance information refer to the Ray 240 owner's handbook and operating chart supplied with your yacht.

EPRIB
It is strongly recommended that all vessels should be equipped with a satellite EPIRB. EPIRB's (406 MHz) are designed to quickly and reliably alert rescue personnel, indicate an accurate distress position and guide rescue units to the distress scene, even when all other communications fail.

When activated an EPIRB transmits a distress signal via the satellite to the responsible US Coast Guard or international rescue co-ordination centre. The EPIRB also transmits an immediate GPS position to the rescue co-ordination centre (RCC).

Mount the EPIRB to float free according to the manufacturer's instructions. EPIRB registration is required.

Life Jackets
All recreational craft must carry one wearable coast guard approved Type I, II or III personal flotation device (PFD's) for each person on board the vessel. Wearable PFD's must be:

- readily accessible
- be in good and serviceable condition
- be the appropriate size for the intended user.

You must also have aboard at least one throwable Type IV PFD.
The Type IV PFD can be thrown to the person in the water and held by them until rescue. The most common Type IV PFD's are buoyant, floating cushions, ring buoys or horse shoe buoys.

Visual Distress Signals
All vessels used on coastal waters and the high seas must be equipped with USCG approved visual distress signals.

Pyrotechnic devices include

- Red flares, hand held or aerial
- Orange smoke, hand held of floating
- Red meteor or parachute flares
- White hand held flares

The type and quality of flares required must be established according to the regulations applicable to the area of operation of the vessel, or the requirement of the country of registration of the vessel.

ALL PYROTECHNIC DEVICES SHOULD BE STORED IN A WELL MARKED WATERPROOF CONTAINER KEPT IN A DRY LOCATION

Pyrotechnic devices having a date showing the useful service life must be within the specified usage date indicated. All expired pyrotechnic devices must be replaced.

Non-pyrotechnic devices include

- An orange distress flag which must be a minimum of 3 x 3 feet with a black square and ball on an orange background
- Electric distress light which automatically flashes the international distress signal SOS (...- - -...)
- Code flags N (November) & C (Charlie) flown N over C
- US flag flown upside down
- Dye markers

IT IS THE OWNER OR SKIPPER'S RESPONSIBILITY TO ENSURE THAT PASSENGERS AND CREW ARE AWARE OF THE LOCATION OF ALL SAFETY EQUIPMENT AND ARE INSTRUCTED IN THE CORRECT METHODS OF USAGE.

Audible distress signals

US Coast Guard Regulations require at least one audible horn or whistle which is audible for at least one half mile

Typical audible devices include:

- Power operated horn
- Mouth operated horn
- Whistle
- Bell

Navigation Lights

Recreational vessels are required to display navigation lights between sunset and sunrise and at other periods of reduced visibility (fog, heavy rain, etc).

Power driven vessels
A yacht under engine power is considered a power driven vessel even with the sails up.

Power driven vessels must display:

- Mast head light – white light visible in an arc 225° forward.
- Side lights – red light on port bow, green light on starboard bow
- Stern light – white light visible from astern

Sailing vessels not under engine power
Your vessel is equipped with the following lights which must be in operation at night and during restricted visibility:

- Stern light – white light visible from astern
- Side lights combined – red light on port bow / green light on starboard bow

Anchored Vessels
At night all vessels at anchor must display anchor lights – white around mast head light.
During daylight all vessels at anchor must display black ball shape where best it can be seen.

Navigation in Fog
EXERCISE EXTREME CAUTION WHEN UNDERWAY IN FOG.

- Maintain a vigilant lookout
- Reduce speed.
- All passengers and crew to wear PFD's
- Sound fog horn, bell or whistle one long blast at 2 minute intervals

If approaching fog take a fix to establish accurate position before entering fog.

If at anchor during fog sound fog horn, bell or whistle.

- 5 short blasts at one minute intervals
- Ensure that navigation lights are on at all times when in fog.
- Hoist radar reflector minimum 2 feet above deck to ensure you are visible to other vessels radar scanners.

STABILITY DATA
For the boat Leopard 46

Minimum operating mass	=	10980	kg	=	10.98	tonnes
Loaded displacement mass	=	17000	kg	=	17.00	tonnes

Sails set	Wind speed advised for each sail combination		
	Velocity in Knots	**Beaufort Scale**	**Velocity in Km/hr**
Main sail + full genoa	0 – 15 Knots	Force 4 Moderate Breeze	0 - 28
First reef in main sail + full genoa	15 – 20 Knots	Force 5 Fresh Breeze	28 – 37
First reef in main sail + 3 rolls on genoa	20 – 25 Knots	Force 6 Strong Breeze	38 – 48
Second reef in main sail + 3 rolls on genoa	25 – 30 Knots	Force 7 Moderate Gale	49 – 61
Second reef in main sail + 6 rolls on genoa	30 – 35 Knots	Force 8 Fresh Gale	62 – 74
Storm jib only	Above 35 Knots	Force 9 Strong Gale	75 →

NB: The above list of sail combinations may be varied as appropriate to the rig of the boat. **Refer to Reefing Drawing L46-STD-FA-0083-0**

If excessive sail is carried, THIS BOAT MAY CAPSIZE

The wind strengths tabulated above include a margin for the effect of gusts.

In violent winds or confused or breaking seas, additional caution should be exercised.

In the event of a severe gust, FREE SHEETS.

If wind is close hauled, LUFF UP.

If wind is abeam, FREE SHEETS

If wind is abaft the beam, BEAR AWAY

DANGER

SPECIAL CARE SHOULD BE TAKEN WHEN TURNING FROM A FOLLOWING WIND ONTO A BEAM REACH, BECAUSE BOTH THE APPARENT WIND SPEED AND HEELING EFFECT WILL INCREASE. SUCH TURNS SHOULD NOT BE MADE RAPIDLY, AND CONSIDERATION SHOULD BE GIVEN TO A REDUCTION IN SAIL BEFORE SUCH A MANOEUVRE.

WARNING

7.1 PREVENTION OF CAPSIZE

Multi-hulls may be capsized if incorrectly handled, the following precautions apply:

1. The helmsman must at all times be aware that the boat could be vulnerable to capsize in roll or pitch, and operate the boat accordingly.

2. Exercise care when altering course from a following to a beam sea especially in breaking seas.

3. It is the owner's / operator's responsibility to ensure that mooring lines, towing lines, anchor chains and anchors are adequate for the vessel's intended use.

CAUTION

7.2 ANCHORING, MOORING AND TOWING refer drawing L46-STD-FA-0070-0

(a) The breaking strength of lines / chains shall not exceed 80% of the theoretical breaking strength of the respective strong point.

(b) The owner / operator shall make himself acquainted with the securing of the towline onboard on the designated strong points.

(c) Always tow or be towed at slow speed.

(d) When making tow line fast, avoid tying knots or loops that cannot be released under load.

WARNING

A QUALIFIED OPERATOR MUST BE IN CONTROL OF THE BOAT AT ALL TIMES

ALWAYS OPERATE THE BOAT WITHIN SAFE MANOEUVRING SPEED LIMITS

HANDLING DOCK LINES refer drawing L46-STD-FA-0070-0

(a) Dock lines secure the boat in its berth and can be used to assist in manoeuvring the boat closer to the berth.

(b) NEVER OVERLOAD THE MOORING CLEATS BY POWERING IN FORWARD OR REVERSE WITH THE DOCK LINES FASTENED TO THE CLEAT. THIS MAY CAUSE DAMAGE OR BREAKAGE OF THE CLEAT AND RISK PERSONEL INJURY TO PASSENGERS AND CREW.

(c) BE AWARE OF DOCK LINES TRAILING IN THE WATER WHICH MAY FOUL THE PROPELLERS.

(d) Keep fenders in place until clear of the Jetty to prevent damage if the boat is pushed towards the jetty by the wind or tide.

⚠CAUTION

7.3 VISIBILITY FROM HELM STATION refer drawing L46-STD-FA-0066-0

a) 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 variable conditions:

- Load and load distribution;
- Speed;
- Rapid acceleration;
- Transition from displacement to planning mode;
- Sea conditions;
- Rain and spray;
- Darkness and fog;
- Interior lights;
- Position of tops and curtains;
- Persons or movable gear in the operator's field of vision.
- Sail position & trim

b) The International Regulations for Preventing Collisions at Sea (COLREGS) and the rules of the road require that a proper lookout be maintained at all times and observance of right of way. Observance of these rules is essential.

⚠CAUTION

The field of vision from the helm station is limited. Avoid collisions. When using this helm station, maintain a lookout forward and astern as required by COLREGS and rules of the road

⚠ DANGER

UNAUTHORISED MODIFICATIONS

DO NOT MAKE MODIFICATIONS TO THE STANDING RIGGING, RUNNING RIGGING, MAST OR SAILS WITHOUT FIRST CONSULTING WITH THE DESIGN / TECHNICAL DEPARTMENT AT ROBERTSON & CAINE (PTY) LTD.
THIS MUST BE DONE IN WRITING THROUGH THE OFFICES OF THE SALES AGENT OR BROKER FROM WHOM THE YACHT WAS PURCHASED.
FAILURE TO COMPLY WITH THE ABOVE COULD CAUSE SERIOUS DAMAGE TO THE VESSEL AS WELL AS INJURY OR LOSS OF LIFE TO THE CREW AND WILL IMMEDIATELY VOID ALL WARRANTY.

7.4 DAVIT OPERATION refer drawing L46 STD-FA-0098-0

The davits are used to raise and lower the Dingy or RIB. They are designed to take the load of a 3.8m RIB with Outboard Motor fitted.
When storing the RIB and during sailing the RIB must be securely lashed to the Davits and Transom Pad eyes to prevent movement & chafe. For short periods the Outboard may be left attached to the RIB. For longer trips it is recommended that the outboard be removed and safely stored inside the yacht.
The drain bung **must** be removed from the RIB to prevent water build up in the RIB During storage

⚠ WARNING

THE DAVITS CAN BE DAMAGED IF EXCESSIVE LOADS ARE APPLIED.
TO PREVENT POSSIBLE INJURY TO CREW ENSURE THAT ALL LINES ARE SECURELY TIED OFF TO LIMIT SLIPPAGE DURING LIFTING & LOWERING.
NEVER ATTEMPT TO LIFT THE RIB WITH THE MOTOR RUNNING OR WITH PEOPLE ON BOARD.
ENSURE THE AREA DIRECTLY BELOW THE RIB IS CLEAR OF SWIMMERS BEFORE ATTEMPTING TO LIFT OR LOWER THE RIB

The following weights have been applied as a guide.

Dingy / RIB	
Max length	3.8 M
Weight	100Kg
Fuel & Tank	50Kg
Motor	30HP Max
Motor Weight	85Kg
Total Weight	235Kg

DANGER

7.5 CARBON MONOXIDE

Carbon monoxide can accumulate in interior spaces and exterior areas. Carbon monoxide accumulation is affected by a multitude of variables (e.g., boat geometry, hatch, window and door openings, ventilation openings, proximity to other structures, swim platforms, canvas enclosures, location of exhaust outlets, vessel attitude, wind direction, boat speed, boat system maintenance, etc.)

DEFINITIONS

Carbon Monoxide – A gas formed by the combination of one atom of carbon and one atom of oxygen. Chemists refer to it as CO for its chemical formula, C for carbon and O for oxygen.

COHb (carboxyhemoglobin) – The molecule formed when CO, instead of oxygen, combines with blood.

Enclosed Accommodation Compartment – One contiguous space that contains the following:

a. designated sleeping accommodations,
b. a galley area with sink; and
c. a head compartment.

NOTE: A locker intended for gear storage and open passenger cockpits, with or without canvas enclosures, are not considered to be enclosed accommodation compartment(s).

PPM – Parts per million

PROPERTIES AND CHARACTERISTICS OF CARBON MONOXIDE

Carbon monoxide (CO) is a colourless, odourless and tasteless gas that weighs about the same as air. It cannot be expected to rise or fall like some other gases because it will distribute itself throughout the space. Do not rely on the sense of smell or sight of other gases to detect CO as it diffuses in the air much more rapidly than easily detectible vapours, (i.e., visible and aromatic vapours).

WHAT MAKES CARBON MONOXIDE
Carbon monoxide is produced any time material containing carbon burns, such as gasoline, natural gas, oil, propane, coal or wood. Common sources of CO are internal combustion engines and open flame appliances such as

- Cooking ranges
- Central heating plants
- Space heaters
- Water heaters
- Fireplaces, and
- Charcoal grills

The carbon monoxide component of diesel exhaust is extremely low relative to the carbon monoxide level found in gasoline engine exhaust.

HOW IS A PERSON AFFECTED BY CARBON MONOXIDE

Carbon monoxide is absorbed by the lungs and reacts with blood haemoglobin to form carboxyhemoglobin, which reduces the oxygen carrying capacity of the blood. The result is a lack of oxygen for the tissues with the subsequent tissue death and, if exposure is prolonged, death of the individual. Altitude, certain health related problems and age will increase the effects of CO. Persons who smoke or are exposed to high concentrations of cigarette smoke, consume alcohol or have lung disorders or heart problems are particularly susceptible to an increase in the effects from CO. However, all occupants' health should be considered. Physical exertion accelerates the rate at which the blood absorbs CO.

Carbon monoxide in high concentrations can be fatal in a matter of minutes. Lower concentrations must not be ignored because the effects of exposure to CO are cumulative and can be just as lethal.

SYMPTOMS OF CO POISONING – The sequence of symptoms listed generally reflects the order of occurrence in most people; however, there are many variables that affect this order of symptom manifestation. One or more of the following symptoms can signal the adverse effect of CO accumulation:

1. Watering and itchy eyes,
2. Flushed appearance,
3. Throbbing temples,
4. Inattentiveness,
5. Inability to think coherently
6. Loss of physical coordination
7. Ringing in the ears,
8. Tightness across the chest,
9. Headache,
10. Drowsiness,
11. Incoherence,
12. Slurred speech,
13. Nausea,
14. Dizziness,
15. Fatigue,
16. Vomiting,
17. Collapse,
18. Convulsions.

EMERGENCY TREATMENT OF CO POISONING – CO toxicity is a life-threatening emergency that requires immediate action. The following is a list of things that should be done if CO poisoning is suspected. Proceed with caution. The victim may be in an area of high CO concentration.

- Evaluate the situation and ventilate the area if possible
- Evacuate the area and move affected person(s) to a fresh air environment
- Observe the victim(s)
- Administer oxygen, if available
- Contact medical help. If the victim is not breathing, perform rescue breathing or approved cardiopulmonary resuscitation (CPR), as appropriate, until medical help arrives. Prompt action can make the difference between life and death
- Investigate source of CO and take corrective action.

MARINE CO DETECTION SYSTEMS
Even with the best of boat design and construction, and scrupulous attention to inspection, operation and maintenance of boat systems, hazardous levels of CO may, under certain conditions, be present in interior spaces and exterior areas. Vigilant observation of passengers for CO sickness symptoms should be supplemented by a marine CO detection device in the accommodation space. Detection devices should meet the requirements of ABYC A-24, Carbon Monoxide Detection Systems on Boats.

NOTE: There are currently no known CO detectors available for permanent installation in exterior areas.

STATIONARY OPERATION
A boat operator should be aware that dangerous concentrations of CO can accumulate when propulsion engines and/or an auxiliary generator is operated while the boat is stationary, especially when rafted or moored in a confined area such as boathouses, proximity to seawalls, or proximity to other boats.

Refer drawing L46 STD-FA-0053-0 (PAGE 1 OF 4)

THE EFFECT OF SEA WALLS AND OTHER CONFINED SPACES
This figure illustrates the effects of running engine or auxiliary generator in confined areas.

Keep engine room hatches and doors closed when operating engines, including the generator set.

Pay attention to prevailing conditions and provide for ventilation to induce fresh air and minimize exhaust re-entry. Orient boat to enable the maximum dissipation of CO. Be aware that cockpit and deck drains can be a source of CO ingress into boats, especially boats with cockpit or decks enclosed with canvas boat structures.

When the propulsion engine or generator is running, CO is produced and may remain in the vicinity of the exhaust outlet:

- Do not occupy aft lounging area(s) or swim platform
- Do not swim under or around swim platform
- Do not swim in the vicinity of the exhaust outlet.

Refer drawing L46 STD-FA-0053-0 (PAGE 2 OF 4)

THE EFFECT OF BOATS MOORED ALONG SIDE
Boats moored close together can affect each other.

Underway Operation

Do no sit on, occupy or hang on any stern appendages (e.g. swim platforms, boarding ladders, etc.) while underway. Do not body surf, commonly known as "teak surfing" or "dragging", etc. in the wake of the boat. Do not tow persons in close proximity to the stern of the boat.

Refer drawing L46 STD-FA-0053-0 (PAGE 3 OF 4)

ACCUMULATION OF EXHAUST GASES AT THE SWIM PLATFORM
Since carbon monoxide production is greater when engines are cold versus when they are warm, a boat operator should minimize the time spent on getting underway.

In order to minimize CO build-up, do not warm up or run propulsion engine(s) for extended periods while the vessel is stationary.

A boat operator should be aware that carbon monoxide is emitted from any boat's exhaust. Operation, mooring and anchoring in an area where other boats' engines or generators are running may put your boat in an atmosphere containing CO, even if your boat's engine(s) is(are) not running. Boat operators need to be aware of the effect of their boat on other boats in the area. Of prime concern is the operation of an auxiliary generator where boats are moored along side each other. Be aware of the effect your exhaust may have on other boats and be aware that the operation of other boats' equipment may affect the carbon monoxide concentration on your boat.

Refer drawing L46 STD-FA-0053-0 (PAGE 4 OF 4)

DANGEROUS ACTIVITY AREA

Backdrafting (station wagon effect)

Backdrafting is caused by air movement over or around a boat creating a low pressure or suction area around the stern that can increase CO level on the boat. Backdrafting can be affected by relative wind direction, boat speed and boat trim angle. Under certain speed and operating conditions, the low pressure area may form in other regions and permit carbon monoxide to enter the hull through openings that are not on the back of the boat.

Other factors during boat operation which may affect carbon monoxide concentration include:

- Adding or removing canvas may raise or lower CO levels.
- Opening and closing ports, hatches and windows may raise or lower CO levels on board a boat. When airflow is moving forward inside the boat, CO may be entering the boat.
- Operating a boat at slow speeds with a following wind should be avoided. Consider changing direction, adjusting speed, or both.
- Be aware that cockpit and deck drains can be a source of CO ingress into boats, especially boats with cockpit or decks enclosed with canvas or permanent boat structures.

Air conditioning – lack of system maintenance may cause CO to be brought into the air-conditioned spaces by the air conditioner. Be sure that the air handling ducts and plenums are sealed from the engine room(s).

Ventilation of Occupied Spaces – Occupied spaces need to be ventilated to introduce fresh air into spaces. Ventilation methods (e.g. windows, hatches, doors and blowers) used to accomplish this may, under certain conditions, bring hazardous levels of CO into the occupied spaces. Be aware of all prevailing conditions when using these ventilation methods.

⚠ WARNING

Portable Generator Sets – Do not use this equipment on boats. Gasoline powered portable generator sets produce CO. These sets discharge their exhaust products in locations which can lead to an increase in the accumulation of carbon monoxide in the occupied space.

⚠ CAUTION

It is of vital importance that the owner / skipper is familiar with the layout of the vessel and that crew and passengers are aware of the location of all safety equipment.

The following drawings are provided for reference

L46-STD-FA-0067-0	Sail & Rigging Plan
L46-STD-FA-0066-0	Side Elevation
L46-STD-FA-0061-0	Deck Arrangement - Lockers
L46-STD-FA-0065-0	Seacock, Valve and Drain Layout
L46-STD-FA-0095-0	Systems Layout
L46-STD-FA-0062-0	Working Deck
L46-STD-FA-0098-0	Davit Securing

8. LOAD CALCULATION

The following weights have been used in the design and stability calculations, and are to be considered as the maximum when ocean sailing.

The manufacturer's maximum recommended load of 4180kg excludes the weight of fresh water and fuel onboard. The fresh water and fuel have a combined weight of 1840kg.

A maximum total load of 6020kg has been used for assessing stability and buoyancy comprising:

- Crew mass (at 75kg per person)	750 kg
- Provisions and personal effects	1350 kg
- Stores and spare gear	1100 kg
- Optional additional equipment	780 kg
- Inflatable liferaft	60 kg
- Dinghy	140 kg
MANUFACTURER'S MAX RECOMMENDED LOAD	**4180 kg**
- Spare fuel, fresh water and other spare fluids to maximum tank capacities	400 kg
- Fuel	660 kg
- Water	780 kg
MAXIMUM TOTAL LOAD	**6020 kg**

This assessment has been made based on the following:

- The boat in light craft condition has a mass of 10980kg.
- The basic equipment for safe operation is in place.
- Radar, radio and navigation equipment is in place.
- All standard equipment is aboard.

This boat has been given design category A OCEAN: with a crew limit of 10 people in accordance with ISO 12217-2. Boats in this category are considered to be designed for extended voyages where conditions may exceed wind force Beaufort force 8 and significant wave heights of 4m and above but excluding abnormal conditions, and vessel largely self-sufficient. Subject to:

- The crew having suitable skill and experience.
- Satisfactory construction and maintenance of the boat and equipment.

USERS OF THIS BOAT ARE ADVISED THAT:

- All crew should receive suitable training.
- The boat should not carry more than the Manufacturer's Maximum Recommended Load.
- Bilge water should be kept to a minimum.
- Stability is reduced by any weight added high up.
- In rough water, hatches, lockers, Portlights, windows and doorways should be closed to minimize the risk of water ingress.
- Stability may be reduced when towing or lifting heavy weights using the davits
- The air tanks / buoyancy tanks in the bow should not be punctured**.**
- Breaking waves are a serious stability hazard.
- Portlights should be closed when the boat is in open seas.

8.1 SPECIFICATIONS

LEOPARD 46 – CATAMARAN SAILING BOAT

Length Overall:	14.13	m	46'4"	ft in
Length Waterline:	13.60	m	44'7"	ft in
Beam Maximum:	7.57	m	24'10"	ft in
Draft (Lightship):	1.250	m	4'5"	ft in
Displacement (Lightship):	10980	kg	24206	lbs
Load Carrying Capacity:	6020	kg	13271	lbs
Height above DWL	21.57	m	70'9"	ft in
I Measurement:	15.82	m	51'11"	ft in
P Measurement:	17.5	m	57'5"	ft in
J Measurement:	5.07	m	16'7"	ft in
E Measurement:	6.67	m	21'11"	ft in
Mainsail Area:	89	m^2	958	ft^2
Jib Area (100% Fore triangle):	40	m^2	430	ft^2
Furling Genoa Area:	59	m^2	635	ft^2
Genneker Area:	155	m^2	1668	ft^2
Storm jib Area:	10.6	m^2	114	ft^2
Fresh Water Capacity:	780	ltr	206	US gal
Fuel Capacity:	600	ltr	158	US gal

Electrical system :

DC	12v	
AC	110v	60hz

Starter Battery Capacity (each):	95	Ah	(2 batteries)	AGM
House Batteries (total):	540	Ah	(3 batteries)	AGM

Inboard engines:	Volvo D2-55			
Max. Power (at 3000rpm):	41	kW	55	Hp
Gearbox:	130S Sail Drive			
Ratio:	2.19:1			
Propeller Type	3-Blade Fixed Props			
Propeller Size	17"dia x 15" pitch		432mm dia X 381mm pitch	

Battery Charger	Trace Inverter 110v/2.0kW/100A
Air Conditioners	Cruisair 44,000 BTU total capacity
Watermaker (if specified):	Spectra Newport 400 (12v), 63Ltr /17USgal per hr
Generator	Northernlights 9kW 60Hz 120 / 240v

9. ECOLOGICAL / OPERATIONAL ASPECTS

AS OUR ENVIRONMENT IS VERY FRAGILE WE MUST PLEDGE OURSELVES IN WHATEVER WE DO TO PROTECT IT FOR THE FUTURE.

9.1 ENVIRONMENT PROTECTION

The following are some general points:

1. Do not use excessive speed when under power; minimize noise and exhaust pollution.
2. Prevent all spillage of oil or fuel into the sea. Always check the bilge water prior to pumping it overboard.
3. Toilets must not be pumped out into the sea within 12 nautical miles of the shore.
4. Always use ecologically sensitive consumables and cleaning materials.
5. Never throw any waste products into the sea.
6. Use ecologically sensitive paints and dispose of excess and waste in accordance with local regulations.

9.2 MAINTENANCE

You should ensure that your yacht is maintained to a high standard for your safety and for protection of the environment.

1. Carry out the recommended maintenance tasks as specified in the manufacturer's handbooks supplied with the boat.
2. Always use the manufacturer's recommended consumables (oils, etc.) and spares supplied by the manufacturer.
3. When equipment is not in use, protect it from deterioration.

9.3 OPERATIONAL

Always be aware of the danger of fire and flood and be prepared to take the necessary action.

9.4 FLOODING

1. Keep HATCHES and PORTLIGHTS closed at sea.
2. Keep the bilges dry and check them regularly for water and oil.
3. Keep all bilge pumps and suction areas clean and serviceable.

9.5 FIRE

1. NEVER HAVE UNCONTROLLED FLAMMABLE PRODUCTS ON BOARD.
2. ALWAYS HAVE FIRE EXTINGUISHERS SERVICED AND AVAILABLE.
3. ENSURE THAT ALL ESCAPE ROUTES ARE ACCESSIBLE.
4. The boat owner / operator shall:
   - Have fire-fighting equipment checked at intervals indicated on the equipment.
   - Replace portable fire fighting equipment, if expired or discharged, by devices of identical or greater fire-fighting capacity.
   - Have fixed systems refilled or replaced when expired or discharged.
5. Keep the bilges clean and check for fuel and gas vapours or fuel leaks at regular intervals.
6. When replacing parts of the fire-fighting installation only matching components shall be used, bearing the same designation or being equivalent in their technical and fire resistant capabilities.
7. Do not fit free hanging curtains or other fabrics in the vicinity of or above cookers or other open flame devices.
8. Do not stow combustible material in the engine spaces. If non-combustible materials are to be stowed in the engine space they must be secured against falling into machinery and shall cause no obstruction to access to the engines or engine spaces.
9. NEVER:
   - Obstruct passageways to exits and hatches.
   - Obstruct safety controls; e.g. fuel valves, gas valves and switches of the electrical system.
   - Obstruct portable fire extinguishers stowed in lockers.
   - Leave the craft unattended when cooking and / or heating appliances are in use.
   - Use gas lights in the craft.
   - Modify any of the craft's systems (especially electrical, fuel and gas) or allow unqualified personnel to modify any of the craft's systems.
   - Fill any fuel tank or replace gas bottles when machinery is running or when cooking or heating appliances are in use.
   - Smoke while handling fuel or gas.

⚠ WARNING

As the yacht owner or skipper you are responsible for ensuring that the boat is equipped with the required number of fire extinguishers, and any other safety equipment as determined by the regulatory body controlling the area in which the YACHT operates.

⚠ DANGER

A fire aboard your yacht is serious. Explosion is possible. Develop a fire response plan. Ensure a crew member is familiar with the operation of all fire extinguishers and safety equipment.

10. FIRE FIGHTING

IT IS THE OWNER'S RESPONSIBILITY (OR IF ABSENT, THE PERSON WHO IS DEPUTISED, SUCH AS THE SKIPPER) TO ENSURE THAT EVERYONE ON BOARD KNOWS THE LOCATION OF THE FIRE FIGHTING EQUIPMENT AND THAT THE ESCAPE ROUTES ARE ACCESSIBLE.

IT IS THE OWNER'S RESPONSIBILITY TO ENSURE THAT THE FIRE FIGHTING EQUIPMENT IS REGULARLY MAINTAINED AND OPERATIONAL AT ALL TIMES.

The fire extinguishers, fire blanket and the escape hatches are shown on the drawing **L46-STD-FA-0060-0.**

The fire extinguishers supplied are SABS Approved type 8A34B Dry Powder.

IT IS THE OWNER'S RESPONSIBILITY TO ENSURE THAT THESE ARE REPLACED BY THE TYPE OF FIRE EXTINGUISHERS APPROVED BY THE LOCAL AUTHORITY IN THE AREA OF OPERATION OF THE VESSEL. THIS MUST BE DONE BEFORE THE VESSEL CAN BE USED.

Fire extinguishers are dry powder and may be used on any fire. They are operated by:

1. Breaking the seal and removing the safety clip.
2. Directing the extinguisher at the base of the fire.
3. Squeezing the trigger.
4. The discharge range is 4 metres and the time 8 seconds.

In the event of a fire in the engine room the emergency fuel shut off valves **MUST** be closed and the engines and blowers must be immediately shut down. If open, the engine compartment deck hatches must also be immediately closed.

THE EMERGENCY FUEL SHUT OFF VALVES ARE SITUATED ON TOP OF THE FUEL TANKS WHICH ARE BENEATH THE PORT AND STARBOARD AFT CABIN BUNKS.

A fire in the engine room may be extinguished from outside the port and starboard Engine Compartments via the fire ports located at the base of the Aft Transom steps above the engine room hatches. Do not open the deck hatches to the engines when extinguishing a fire as this will allow oxygen into the engine compartment and could cause the fire to flare up again.

Once the fire is extinguished keep the engine compartment closed for at least 15 minutes to allow cool down. Always have a back-up portable fire extinguisher ready when opening the engine compartment after a fire has been extinguished to prevent any possible flare-up.

⚠ WARNING

11. LIFERAFT STOWAGE

The Liferaft may be stowed in the Centre Transom Liferaft Locker.
(Refer to drawing L46 STD-FA-0060-00).
During Offshore Sailing, Extended Sea passages or in conditions where heavy seas / Breaking swells are likely to be experienced the Liferaft must be securely strapped down to the u-bolts provided and the leader line secured to the vessel to prevent possible loss or damage. In severe weather conditions it is recommended that the Liferaft be removed from the locker and securely stowed under the cockpit Table. This will prevent possible damage to the Liferaft and / or Loss of the Liferaft due to Heavy Sea Conditions.

⚠ WARNING

Ensure that the firing lanyard is not obstructed or trapped under the liferaft.

⚠ WARNING

IT IS THE OWNER'S RESPONSIBILITY TO ENSURE THAT AN ACCREDITED AGENT OF THE LIFE RAFT MANUFACTURER SERVICES ANY LIFERAFT WITHIN THE TIME ALLOWED BY THE MANUFACTURER OR THE NATIONAL AUTHORITY.

INSTRUCTIONS FOR LAUNCHING

Follow the instructions printed on the canister.

Important!
Keep all crew and guests calm. Do not leave the vessel in a panic.
Ensure all crew and guests put on lifejackets.
If possible, take extra warm clothing, food, water, sunglasses and portable VHF
Do not board the liferaft until the last possible moment

AFTER BOARDING

Carefully follow the instructions written in the survival leaflet contained in the liferaft.

⚠ WARNING

It is the Owners or skippers responsibility to ensure that all guests and crew are familiar with the operation of the liferaft and lifejackets.
Federal law requires the owner or skipper provide and maintain safety equipment. Consult the US Coast Guard or other regulatory body to ensure that your yacht complies with the regulations governing the area of operation.
There must be at least one approved lifejacket for each person onboard.

12. GAS SYSTEM OPERATION

The gas cylinders are situated in a self-draining locker on the starboard side of the cockpit, near the transom walk through. A gas line links the tanks to the stove and a solenoid valve shuts of the gas in the locker as shown in the drawing **L46-STD-FA-0076-0.**

The "Gas Valve" breaker situated at the DC switch panel activates the solenoid. To use the stove, switch on the breaker. An orange pilot light will indicate that the system is on.

The pressure gauge is to check for leaks and is situated in the gas locker.

IT SHOULD BE NOTED THAT GAS SYSTEMS ARE A POTENTIAL HAZARD UNLESS OPERATED PROPERLY.

The following should be adhered to:

1. Test the LPG system for leakage regularly. Check all connections for leakage by:
   - Observing the pressure gauge for pressure drop with all appliances valves closed, and cylinder valve opened, and then closed.
   - Manual leak testing.
   - Testing with soapy water or detergent solution (with appliance-burner valves closed and cylinder and systems valves open).
2. If leakage is present, close the cylinder valve and have the system repaired before further use. A competent person should make system repairs.
3. CLOSE THE MANUAL VALVES WHEN THE GAS IS NOT IN USE.
4. IN AN EMERGENCY, CLOSE THE MANUAL VALVES ON THE BOTTLES. DO NOT RELY ON THE SOLENOID VALVE.
5. Make sure the valves on the stove are closed before opening the manual valves and the solenoid valve.
6. NEVER USE A FLAME TO FIND A LEAK.
7. Ammonia can corrode copper. Do not use a solvent or a liquid containing ammonia on the copper pipes or a leak may occur at a joint.
8. WHEN A GAS APPLIANCE IS IN USE IT BURNS UP OXYGEN AND GIVES OFF OTHER GASES SUCH AS CARBON MONOXIDE. THERE MUST BE ADEQUATE VENTILATION WHEN GAS-BURNING APPLIANCES ARE USED.
9. Keep the valve closed on empty cylinders. Empty cylinders must be left in the locker or on deck.
10. DO NOT STOW ANYTHING ELSE IN THE GAS CYLINDER LOCKER.
11. Propane gas is to be used and may be used between – 35 and + 50 C.
12. NEVER LEAVE GAS APPLIANCES IN OPERATION OR GAS CYLINDER MASTER VALVES OPEN WHEN NO ONE IS ON BOARD.
13. DO NOT SMOKE WHEN CHANGING BOTTLES.
14. GAS CYLINDERS SHOULD BE CHECKED ANNUALLY AND SHOULD BE CHANGED IF DAMAGED OR CORRODED.
15. THE GAS REGULATOR IS PRE-SET AND SHOULD NOT BE TAMPERED WITH. A QUALIFIED GAS TECHNICIAN SHOULD CHECK IT ANNUALLY.

13. BILGE PUMP OPERATION.

The bilge pump system is shown on the accompanying drawing **L46 STD-FA-0096-0**

There are six pumps:

- One manual bilge pump in each keel sump
- One electrical bilge pump in each keel sump
- One electrical bilge pump in each engine room

The manual pumps are operated from the passageway at the base of the stairways alongside the toilet compartments. The pump handles are stowed next to the stairways.

The electric bilge pumps are wired directly to the house batteries via float switches and will operate whenever there is sufficient fluid in the sumps. When operating, a warning light will come on at the helmstation and DC panel.

The electric bilge pumps in the keel sumps may be operated from the DC switch panel, in which case the warning lights will not come on.

Care should be taken to ensure that the bilges are oil and fuel free to avoid pollution. The area around the bilge pump intakes should be kept clean and free of loose material and debris that could get sucked into the pump.
The proper operation of the bilge pumps is vital and failure to maintain them in full operating condition could jeopardise the safety of the vessel in an emergency

The bilge pumps are designed to exhaust standing water. The owner / skipper should be aware that the capacities of bilge pumps may not be sufficient to cope with rapid influx of water.

Regular inspection and maintenance of bilge pumps is recommended. Rubber components should be replaced if worn or at least every 3 years regardless of condition.

14. TOILET OPERATION

Refer to schematic drawing **L46 STD-FA-0071-0.**

The toilet system is arranged so that the toilets are pumped into a holding tank.

If the holding tank discharge seacock (positioned under the aft step of the corridor steps) is open, the tank gravity drains overboard. If this valve is closed, waste is stored in the holding tank.

⚠ WARNING

The toilet must not be cleaned with concentrated cleaners or cleaners with high concentrations of aromatics such as pine scented cleaners and degreasers. These can cause the pumps seal to swell and may contribute to premature leaking.

⚠ WARNING

THERE SHALL BE NO DISCHARGE OF WASTE INTO THE SEA WITHIN 12 NAUTICAL MILES OF THE SHORE.

The holding tank can be emptied by pumping overboard (**NOT WITHIN 12NM LIMIT**) or by using a dockside pump-out connected to the deck pump-out waste fitting.

The capacity of the tank is 85 litres each side. The flushing is 2 litres per flush, which gives 42 flushes per side. Indicator lights will show on the control board when the tank is full.

A small amount of residual water remains in all marine holding tanks. It is good practice to rinse the tanks after the contents have been flushed. This can be accomplished by adding water to the toilet bowl and pouring 8 ounces (250ml) of Secure Holding Tank Deodorant and Cleaner to the bowl. Flush the entire contents into the holding tank and continue flushing until the discharge from the holding tank is clear.

⚠ WARNING

Do not use chlorine based cleaners, Caustic cleaners or chemicals, such as drain cleaning products, as these may damage the Holding Tank seals and hoses.

In areas subject to freezing, ensure that holding tank and hoses are flushed clear and drained before storage. The holding tanks can be flushed and filled with non-toxic anti-freeze.

15. FRESH WATER SYSTEM OPERATION

Refer to schematic drawing **L46-STD-FA-0073-0.**

Two tanks (2 x 390Lltr capacity each) are situated in the starboard foredeck locker and can be filled directly through filler cap situated on each tank. A separate valve controls each tank and is marked according to which tank it controls. All valves, pumps & switches are on the Water Pump Board situated on the Mast bulkhead at the back of the Saloon seat.

1. To Use Water:

   1.1. Turn on the "Fresh Water Pump" breaker at the DC switch panel. Open the faucet. The pump will start running and only stop once the faucet is closed and the system is pressurised, which could take approximately a minute for the first time.

   1.2. If the pump keeps running after the faucet is closed, the following problems may exist:
   - A tank has run dry.
   - A leak has developed in the system, i.e., another faucet could be open.

   1.3 When the pump is running the indicator light on the DC panel will be on. The light will automatically fade and switch off once the pump stops running.

2. To switch from an empty tank to a full one:

   2.1. Leave the pump running.

   2.2. Close the valve of the empty tank.

   2.3. Open the valve of full tank. It should take approx 15 seconds for there to be a steady flow of water.

   2.4. Close the faucet. The pump will run until adequate pressure has been restored (1-2 minutes) and then switch off.

   2.5. If the pump fails to shut off repeat steps 2.3 and 2.4.

16. STEERING

Refer drawing **L46-STD-FA-0077-0.**

Steering is by wheel, with cables linked to the steering tie bar, which is connected to the tiller arms.

The steering stop pads prevent the rudders being over-rotated.

In the event of the steering system failing, an emergency tiller may be fitted on to the head of the starboard rudder stock. This can be accessed through a deck plate that is situated on the starboard transom steps. In heavy seas a block and tackle may be rigged on to the emergency tiller.

⚠ DANGER

IN THE EVENT OF THE STEERING SYSTEM FAILING, AN EMERGENCY TILLER MAY BE FITTED ON TO THE HEAD OF THE STARBOARD RUDDER STOCK. THIS CAN BE ACCESSED THROUGH A DECK PLATE THAT IS SITUATED ON THE STARBOARD TRANSOM STEPS. IN HEAVY SEAS A BLOCK AND TACKLE MAY BE RIGGED ON TO THE EMERGENCY TILLER.

THE EMERGENCY TILLER IS LOCATED CLIPPED TO THE INSIDE OF THE LIFERAFT LOCKER LID AT THE TRANSOM.

17. ENGINE ROOM

Your yacht is equipped with two 4 cylinder 55Hp marine diesel engines.

⚠ WARNING

Carefully read the engine operator's manual before starting the engines. Follow the manufactures recommended inspection and maintenance guidelines found in the Owners manuals provided with the yacht.

⚠ WARNING

Never operate the engines if insufficient or no cooling water is seen to be discharged from the seawater outlet pipe. Severe damage could be caused if the engines are run with insufficient cooling water.

The engine room layout is shown in the drawing **L46-STD-FA-0057-0.**
The engine is operated by the controls at the helmsman's position.

17.1 ENGINE VENTILATION

Engine room ventilation as shown on the drawing **L46-STD-FA-0066-0**.
Before an engine is started the blower should be operated for about 5 minutes. If a smell of diesel still persists at the exhaust vent, the source of the smell should be investigated in engine room.

⚠ DANGER

Carbon Monoxide is a highly poisonous gas formed by the combination of Carbon and Oxygen, commonly referred to as CO. CO is a colourless, odourless and tasteless gas that can not be detected without using sophisticated equipment. Diesel fuel exhaust gasses produce CO, and precautions should be taken to protect against CO poisoning. ENSURE THAT THE ENGINE ROOMS HAVE BEEN VENTED BEFORE ENTERING.

17.2 ENGINE FUEL

The engine fuel system is shown on the drawing **L46-STD-FA-0075-0**
Each engine is supplied from a dedicated fuel tank. There is fuel transfer from the Starboard tank to the Port tank. **(Refer to Sect 17.5 for details of Fuel Transfer)**
The fuel/water separator should be checked regularly particularly after fuelling, heavy seas etc. In the event of water being found in the fuel/water separator the fuel tank should be allowed to settle and water drawn off at the tank drain.

IN THE EVENT OF A FIRE IN THE ENGINE ROOMS, THE FUEL SHUT OFF VALVES ON THE FUEL TANKS MUST BE CLOSED. THE FUEL TANKS ARE POSITIONED UNDER THE PORT AND STARBOARD AFT CABIN BUNKS AS SHOWN ON THE DRAWING.

17.3 ENGINE EXHAUST

The engine exhaust system is shown on the drawing **L46-STD-FA-0068-0**.
It passes through a water trap before being discharged overboard.
Attention should be paid to the exhaust with respect to the condition and the load on the engine. Black smoke indicates an overload.

17.4 PROPELLERS

⚠CAUTION

The engine speed must be reduced before going from forward to reverse or vice versa.

PROPELLERS MUST BE INSPECTED ON DELIVERY COMPLETION.

The propellers should be checked regularly. The anodes should be checked at least every month to ensure that they are firmly secured. During this check the propeller retaining nuts should be tightened. Anodes must be replaced if excessively corroded. Failure to do this will result in the propellers and shaft corroding.

17.5 GENSET

The genset is located in the Port side Foredeck Locker and the controls are situated in the Interior Nav Station electrical control panel board. The Genset is fed fuel from the Port Aft Fuel tank only. A Fuel transfer facility is available from the Starboard fuel tank to the Port Fuel tank and operates as follows.

1) Open the fuel valves on both tanks
2) Press the Fuel Transfer Button at the helm station
3) Hold the button in until sufficient fuel is transferred.
   NOTE : no fuel will be transferred unless the button is held in and the pump is running.

⚠ WARNING

MAKE SURE THAT THE PORT TANK IS NOT OVERFILLED. WATCH THE PORT TANK LEVEL DURING TRANSFER TO ENSURE THAT THE TANK IS NOT OVERFILLED. EXCESS FUEL WILL ESCAPE FROM THE BREATHER PIPE INTO THE SEA CAUSING POLLUTION AND A POTENTIAL FIRE RISK.

If transfer does not operate check the following

1) Check if the circuit breaker at the distribution panel located behind the locker in the Port aft cabin has not tripped.
2) Check that the toggle switch on the fuel pump located in the Starboard aft cabin under the bunk next to the fuel tank is in the on position.
3) Check that the fuse inside the pump housing has not blown.

⚠ WARNING

Carefully read the Genset Operator's Manual before starting. Follow the Manufacturer's Recommended Inspection and Maintenance Guidelines found in the Instruction Manual provided with the YACHT.

⚠CAUTION

Refer to the Safety Rules in the Operator's Manual before operating or servicing the genset.

18. ELECTRICAL SYSTEM – DC

The DC electrical system is 12v. The layout and controls are shown on the accompanying drawings.

The following precautions should be applied:

1. Always check the batteries and their state of charge before sailing.
2. Before sailing, check that the navigation lights are working and that spare bulbs are on board.
3. NEVER WORK ON ANY ELECTRICAL ITEM WHEN IT IS IN USE OR POWER TO IT IS SWITCHED ON.
4. NO ELECTRICAL ITEM OR CABLE SHOULD BE MODIFIED UNLESS BY A QUALIFIED MARINE ELECTRICIAN.
5. NEVER CHANGE THE CAPACITY OF A FUSE OR BREAKER.
6. NEVER INSTALL NEW EQUIPMENT, WHICH HAS A GREATER RATING THAN ITS PREDECESSOR DOES.
7. NEVER LEAVE THE VESSEL UNATTENDED WITH POWER ON, EXCEPT FOR THE BILGE PUMPS.

18.1 BATTERY OPERATION.

The engine batteries are situated in their respective engine rooms, the house batteries and the Genset Starter battery are situated in Port Foredeck locker. The house battery switches and Genset starter battery switch are located under the chart table in the Saloon area.
The house battery switch should be left on at all times while the yacht is occupied, AND SWITCHED OFF IN THE EVENT OF AN ELECTRICAL FIRE!
The engine battery switches are situated next to hanging lockers of the port and starboard aft cabins.

NEVER TOUCH THE POSITIVE (+) SWITCH WHILE THE ENGINES ARE RUNNING.

When leaving the yacht the house battery, genset and engine starter battery switches should be in the 'off' position.

18.2 WINDLASS OPERATION.

The windlass breaker is situated under the chart table, below the battery switches.

The windlass will only operate when the port engine is running.

To operate the windlass:

1. Start the port engine.
2. Check that the windlass breaker under the switch panel is on.
3. Switch on at the windlass remote control.
4. Press the “UP” or “DOWN” buttons as required.

19. ELECTRICAL SYSTEM AC

The AC electrical system is 110v 60Hz and is as shown on the layout and panel drawings.

The system represents a potential hazard and the following precautions must be applied:

1. The AC system is a double polarity and the wiring colour is brown.
2. NEVER WORK ON THE ELECTRICAL SYSTEM UNLESS POWER IS SWITCHED OFF. REMEMBER THIS IS A TWO-WIRE SYSTEM AND THAT FULL ISOLATION IS NECESSARY.
3. DO NOT MODIFY THE CRAFT'S ELECTRICAL SYSTEMS OR RELEVANT DRAWINGS. ONLY A COMPETENT MARINE ELECTRICAL TECHNICIAN SHOULD PERFORM INSTALLATIONS, ALTERATIONS AND MAINTENANCE. INSPECT THE SYSTEM AT LEAST BI-ANNUALLY.
4. DISCONNECT SHORE-POWER CONNECTIONS WHEN THE SYSTEM IS NOT IN USE.
5. NEVER INSTALL A REPLACEMENT ITEM OF HIGHER POWER THAN ITS PREDECESSOR.
6. USE WHERE POSSIBLE, DOUBLE INSULATED EQUIPMENT OR AS A MINIMUM, EQUIPMENT WITH AN EARTH.
7. CONNECT METAL PARTS OF ELECTRICAL EQUIPMENT WITH A YELLOW/GREEN EARTH WIRE.
8. SHUT OFF THE AC POWER BEFORE LEAVING THE YACHT.

20.1 SHORE CONNECTION

DO NOT ALLOW THE SHORE-POWER CABLE TO HANG IN THE WATER. AN ELECTRICAL FIELD CAN BE CAUSED WHICH CAN CAUSE INJURY OR DEATH TO NEARBY SWIMMERS.

To minimize shock and fire hazards:

- **Turn off the craft's shore-power connection switch before connecting to shore-power source.**
- **Connect shore-power cable to craft's inlet before connecting to shore-power source.**
- **Disconnect shore-power cable at shore-power source first.**
- **Close shore-power inlet tightly.**

Do not alter shore-power cable connectors. Use only compatible connectors

20. FRIDGE / FREEZER OPERATION

The freezer / refrigeration unit is an air-cooled, 12V DC system. The compressor units are located under the bunk in the port aft cabin and is accessed via the cut out in the bunk top.
The Fridge / Freezer unit in the galley is divided into two compartments. The Forward Compartment is the fridge compartment and the aft compartment is the freezer. The unit will freeze the holding plate from warm, but may take several hours depending on the ambient temperature and humidity.
The unit will automatically operate if the thermostat is on and 12 volts DC is available.

1. To cool the freezer:

    1.1. Check that there is DC power available.
    1.2. Check that the fridge / freezer breaker is on.
    1.3. Set the thermostat to the required setting.
    1.4. The unit will then operate automatically. Running time depends on ambient temperature and humidity.

2. To drain the Freezer box:

    2.1 The drain plug is situated in the base of the freezer box.
    2.2 Remove the plug and drain the box.
    2.3 Make sure the drain is not blocked

21. AIR-CONDITIONING

The air-conditioning diagrammatic is shown on the drawing **L46 STD-PA-006-0.**
The air-conditioning can be run off either Shore Power or the Generator.
It is recommended that you study the Cruisair Operator's Manual before attempting to operate the air-conditioning system.

⚠CAUTION

The air intake grills should not be blocked as this could cause damage to the air conditioning unit.

1. Operating the Air-conditioning through the Genset

   1.1 Open all Aircon seacocks
   1.2 Switch Genset circuit breaker to on position
   1.3 Start Genset allow to run for 2 minutes minimum.
   1.4 Switch Transfer circuit breaker to on position
   1.5 Switch on selected Aircon circuit breaker

   NOTE: If more than one unit is required do not switch them all on at once. The initial start up load could cause the genset to trip. Allow 1-2 minutes between switching on each circuit breaker. This will allow the Genset to take up the start up loading.

   1.6 Select required temperature at the Control panel

2. Operating the Air-conditioning through both the Shore Power Cables

   2.1 Plug in Shore power cables
   2.2 Switch on Shore power circuit breaker
   2.3 Open all Aircon seacocks
   2.4 Switch on selected Aircon circuit breaker
   2.5 Select required temperature at the Control panel

3. Operating the Air-conditioning through Single Shore Power Cable

   3.1 Plug in the Shore power cable
   3.2 Switch on Shore power circuit breaker
   3.3 Switch on the Transfer Circuit breaker
   3.4 Open all Aircon seacocks
   3.5 Switch on selected Aircon circuit breaker
   3.6 Select required temperature at the Control panel

22. LAY-UP AND WINTERISATION

In the event of the vessel being laid up for any length of time (+/- 2 months or more) particularly in cold weather, the following must be done:

1. Remove the batteries for temperate storage.
2. Ensure all the water systems are drained.
3. Open up bilge covers and floorboards for surveilance.
4. Ensure antifreeze is in the engine cooling systems.
5. Check that all seacocks are closed.
6. Empty the fresh water tanks.
7. Leave torches, fire extinguishers and pump handles positioned for easy access.
8. Ensure that the vessel, and particularly the bilges, are checked regularly.

23. HULL LIFTING , TRANSPORT and SHIPPING

In the event of the hull being lifted, slings should be placed at the bulkheads and adjusted for length to ensure the vessel lifts horizontally.

The yacht may be docked on its keels but must be adequately supported in cradles fore and aft of the keels.

The weight of the vessel must be evenly distributed between chocks and the keels.

For Lifting and transportation the yacht should be supported as shown in drawings
L46 STD-FA-0056-0 Vessel Lifting Diagram
L46 STD-FA-0078-0 Vessel support on Land or Ship
L46 STD-FA-0054-0 Vessel Road Transport
L46 STD-FA-0068-0 Shipping Detail

Professional Riggers and Haulers must be used when lifting or transporting the vessel

DO NOT SUPPORT THE YACHT ON THE BRIDGEDECK ALONE

24. GENERAL CLEANING AND MAINTENANCE

The intention of the section is to indicate areas that should be inspected regularly to ensure the efficient and safe operation of the vessel.
In all cases the instructions given in the supplied equipment manuals must be followed in order to maintain the warranty / guarantee of the specific item.

- The Vessel is manufactured in accordance with the European Recreational Craft Directive 94/25/EC as amended by directive 2003/44/EC and is CE Certified in design category A.

- For technical details and operating instructions refer to the relevant sections of this Owners Manual and the specific equipment instruction manual

CLEANING

The following is a summary of the cleaning methods and materials recommended by or prohibited for use by Robertson & Caine. We recommend the use of 3M™ Marine's Reconditioning and Maintenance Products. These products are specifically designed for fiberglass boats used in the marine environment.
The use of the following recommended 3M™ marine products will help maintain your boat to the highest standards.

- 3M™ Marine Multi-Purpose Boat soap
- 3M™ Marine Protective Liquid Wax
- 3M™ Marine Ultra Performance Paste Wax
- 3M™ Marine Clean & Shine Wax
- 3M™ Marine Metal Restorer and Polish
- 3M™ Marine Outdoor Vinyl Cleaner,
- Conditioner & Protector
- 3M™ Marine Aluminium Restorer & polish
- 3M™ Marine Mildew Block

A. INTERIOR AND EXTERIOR GRP SURFACES

To maintain the factory new appearance of the boat all fibreglass surfaces should be cleaned regularly. Normal accumulations of surface dirt should be removed by simply rinsing with fresh water. The exterior deck surfaces should be rinsed down with fresh water after every trip to prevent the build up of crystallized salts. To remove dirt, grease and oil use 3M™ Marine Multi Purpose Boat Soap. Following the manufacturer's directions for mix ratios and application instructions.

Exterior fibreglass surfaces should be waxed twice a year with 3M™ Marine Protective Liquid Wax or 3M™ Marine Ultra Performance Paste Wax to protect against Ultra Violet degradation (chalking) and to maintain a deep shine on the exposed surfaces. Apply according to the manufacturers instructions recommended for each product.

To maintain and enhance the shine between wax applications apply 3M™ Marine Clean and Shine Wax after each washing, this product can be simply sprayed on and then wiped off.

B. ACRYLIC PORTLIGHTS, WINDOWS & HATCHES

1. First rinse off with fresh water and then wash all Portlights, windows and hatches with 3M™ Marine Multi Purpose Boat Soap, use a clean soft cloth and apply only light pressure. Rinse with clean fresh water and dry by blotting with a slightly damp cloth or chamois.

2. Never use window cleaning sprays, scouring materials or solvents such as Acetone, Benzene or Lacquer Thinners on acrylic materials

3. If masking tape is put on to acrylic material it must be removed as soon as practicable as the glue could cause dulling of the acrylic surface.

4. Acrylic materials can be polished to a high grade finish and slight scratches removed. We recommend the use of McGuire's Mirror Glaze No. 17. Polishing should be done by hand as excess heat generated from machine polishing could cause distortion of the acrylic material and subsequent water leaks.

5. We recommend the fitment of External Sun shades to the Coachroof Side windows, this will help to reduce the build up of heat within the vessel and prevent deterioration of the Acrylic Window seals from the effects of Ultra Violet (UV) Rays.

C. VINYL, UPHOLSTERY FABRICS AND CARPETING

1. All interior vinyl, upholstered panels and carpeting should be regularly cleaned. Any spills should be cleaned immediately to prevent possible permanent staining. The carpets should be regularly vacuumed to remove dirt before it becomes trodden in to the material.

2. Regular cleaning with 3M™ Marine Multi Purpose Boat Soap diluted as per the manufacturer's instructions is recommended. To remove stubborn marks and stains moderate scrubbing with Scotch Brite™ No.63 Cleansing Sponge will loosen the mark or stain. This must be tested on a sample of material before commencing to use in visible areas. To restore and protect vinyl apply a coat of 3M™ Marine Outdoor Vinyl Cleaner, Conditioner and Protector. This will build up a barrier against normal dirt and stains and will retard UV damage.

⚠CAUTION

THE FOLLOWING MATERIALS MUST NEVER BE USED ON ANY VINYL, UPHOLSTERED PANEL, CARPETING or FIBREGLASS SURFACE:

- **Household bleach or any cleaning agent containing bleach.**
- **Household cleaners containing ammonia**
- **Alkaline cleaners**
- **Washing soda**
- **Caustic Soda**
- **Abrasive cleaners**
- **Hydrogen peroxide**
- **Acetone**
- **Acetate thinners**
- **Scouring pads**

D. ELECTRICAL SYSTEMS

The batteries, terminals and cables should be inspected on a regular basis for signs of damage, corrosion, cracks and electrolyte leakage. Battery terminals should be kept clean, tightly connected, greased and protected from accidental short circuiting. Refer to separate instructions in the Owners manuals including wiring diagrams.

E. PLUMBING SYSTEMS

1. All pumps and float switches should be checked frequently to ensure proper operation. This is an especially important regular maintenance item since the proper functioning of a pump could save the vessel from serious damage in the future.
2. Inspect all hoses for chafing and damage. Ensure that all hose clamps are tight. Check that all pump impellers are clean and free of obstructions.
3. Inspect electrical wiring for corrosion and ensure that float switches move freely and are operational
4. Make sure that the manual bilge pump handles are available and securely located in the mounting brackets provided.

F. WINCH MAINTENANCE

Follow the maintenance instructions specified by the winch manufacturer. The winch should be cleaned and lightly greased annually.

G. DECK HARDWARE AND STAINLESS STEEL

1. Check all fittings regularly to make sure that all screws are tight.
2. Occasionally lubricate moving parts such as blocks, turnbuckles, locking cleats, snatch blocks and track slides.
3. Inspect Mooring cleats and fairleads for secureness and tighten as necessary. If cleats or fairleads are damaged or worn they should be replaced.
4. Damaged or missing cotter pins in turnbuckles or shackles should be replaced.
5. The majority of hardware and fittings installed on the boat are made of stainless steel. To maintain the original shine and help prevent corrosion regular rinsing with fresh water and washing with 3M™ Marine Multi Purpose Boat Soap is necessary.
6. In cases of surface rust, oxidation and tarnishing of the metal surface the use of 3M™ Marine Metal Restorer and polish will restore the original luster and protect against future surface defects.
7. Never use coarse abrasives like sandpaper or steel wool as these may actually cause rust and corrosion.
8. Never clean with acids, cleaning materials containing bleaches or ammonia and leave any stainless steel in contact with iron, steel or other metals which can cause surface contamination.

H. RIGGING

1. Rigging is subject to Fatigue and wear and must be carefully inspected and maintained. A regular inspection for Wear, discoloration, loose wires and chafing should be conducted. The frequency should be determined by the usage of the vessel.
2. Always rinse the rigging with fresh water after sailing. Salt deposits can create corrosion pitting, cracking & general deterioration.
3. Clean rigging with CHLORINE free water soluble detergent and non abrasive cleaning equipment.
4. Inspect rigging for stains; Rust stains can indicate areas of stress corrosion or cracking. Remove stains with Synthetic or brass pads, never use steel wool.
5. Inspect for broken wires and replace as necessary.
6. Do not mix Stainless steel and Galvanised metals on cables, fittings, AND PINS etc. Mixing dissimilar metals will cause rapid deterioration due to the effects of electrolysis.
7. If rigging is removed for any reason it must be stored in a dry place never in plastic bags or plastic wrapping.

I. ELECTROLYSIS AND GALVANIC PROTECTION

1. Salt water allows electric current to flow from anodic to cathodic materials. The relative position of two metals on the Galvanic table determines which material (the Anode) will lose material and which will remain largely unchanged (the Cathode).
2. The rate of wear is determined by the distance the two metals are apart on the galvanic table. For this reason sacrificial Zinc anodes are fitted to the propeller shaft of each engine to attract any stray electrical current away from the Bronze propellers and Stainless Steel propeller shafts.
3. The rate of electrolysis and therefore the speed at which the sacrificial anodes deteriorate varies greatly and is affected by amongst other things the quality of the water, the amount of galvanic protection on boats berthed in the immediate vicinity of the vessel.
4. Any work being done i.e. welding on surrounding boats will greatly increase the risk of electrolysis.
5. The risk of galvanic corrosion is greatly increased if any surrounding boats are connected to shore power and they have any neutral or ground faults in their electrical wiring systems.
6. Your vessel is protected to the highest standards and as long as the sacrificial anodes are inspected regularly (minimum every 3 months) and replaced as required no problems should be experienced.

J. ENGINES

1. Refer to the Lubrication and servicing instructions in the engine manufactures operating manual.
2. A regular visual inspection of all engine fittings, pipes and wiring must be carried out. Any signs of wear, Chafing or loose parts must be corrected.
3. Also check the tightness and wear on all engine belts and replace if necessary.

K. ROUTINE MAINTENANCE

1. Routine maintenance should include items based on how frequently the vessel is used i.e. (Engine hours) and on calendar dates i.e. (EXPIRY dates of Flares and servicing of fire extinguishers).
2. Other items to be checked on a regular basis include Oil level, Oil & Fuel Filters.
3. The operation of seacocks and valves should be inspected to ensure free and easy operation in case of emergency.
4. The gas system pipes and fittings should also be regularly checked for wear and tightness.
5. It is recommended that the checklists for routine maintenance found in the Owners Manual be used as a basis for a regular routine maintenance plan and include them as part of the ships log.

L. SAILS

1. Check all sails regularly for chafe and wear especially where they can contact deck fittings or rigging, at reef points, batten sleeves and the foot of the head sail.
2. Sail batten pockets should be inspected regularly especially where they can chafe against the shrouds
3. Sails should be protected when they are not in use from the effects of Ultra Violet radiation.
4. Mildew can be prevented by hand washing the sails with mild soapy water and drying before storage.
5. Regular inspection of running rigging, halyards, sheets and reef lines for chafe and damage is recommended.
6. Replace any damaged or chafed lines as required.

M. ANTI-FOULING

1. The vessel has been painted with Petit Trinidad anti fouling in accordance with the manufacturers recommended application procedures.
2. The anti fouling should be checked on a regular basis and repaired or recoated as required depending on usage, storage and possible damage.
3. The use and compatibility of a different type of anti fouling paint over the existing coating should be checked with the manufacturer prior to application.
4. The anti fouling must be applied in accordance with the manufactures instructions and no guarantees can be given by Robertson & Caine
5. Under no circumstances must the hull be sanded, ground or have any form of abrasive preparation which could void the anti osmosis guarantee.

N. STORAGE AND WINTERIZATION

1. If the vessel is to be taken from the water and stored for any extended period then the following must be applied
2. The vessel must be lifted and supported as indicated in the relevant section of the owners manual and shown on the lifting, transport and storage drawings
3. The sails should be removed, cleaned, dried, correctly folded and stored in a dry well ventilated area.
4. Disconnect and remove batteries.
5. All cushions and mattresses should be removed and stored in a clean dry area. If this is not possible then they should be stored vertically on the boat to allow adequate air flow around the cushion and prevent mildew
6. If the vessel is to be stored in areas subject to Ice and snow then tenting or shrink wrapping the deck will prevent ice build up from damaging the hatches and portlights
7. In cold areas ensure that the engine coolant water is drained or contains anti freeze.

25. WARRANTIES

Robertson and Caine (Pty) Ltd ("R&C") hereby undertakes the following to the first retail Owner and to subsequent owners of the vessel approved in writing by R&C ("the Owner") in relation to the Vessel:

1. The Vessel shall be constructed in accordance with good manufacturing practice.

2. The Vessel shall be constructed from materials of the highest quality reasonably available to R&C.

3. Whilst R&C take the utmost care to ensure that equipment not manufactured by R&C fitted to or supplied with the Vessel is of the highest quality reasonably available to R&C and reasonably suitable for its purpose, R&C gives no warranty or undertakings In relation to the quality, manufacture and/or suitability of such equipment, parts or components not manufactured by R&C not that such equipment, parts or components shall fit for their intended purpose and R&C shall have no liability (including liability for consequential losses) arising from any defect in such equipment, parts or components.

4. R&C shall on request provide contact details of the manufacturers of the equipment, parts or components referred to in Clause 3 above to allow the Owner to procure the assignment by manufacturers to the Owner of any warranties or guarantees relating to the equipment, parts or components referred to in Clause 3 above.

5. The Vessel shall be free from any gel-coat osmotic blistering defect on underwater surfaces of the hull of the Vessel, provided always that such defect arises and is detected within 6 (six) years of delivery of the Vessel to the first owner ("Date at Launch") and provided that R&C is given notice of such defect in writing within 14 (fourteen) days of such defect being detected and provided that repairs or alterations to the Vessels are not conducted by any person not approved in advance in writing by R&C.

6. R&C shall at its expense and within a reasonable period of time repair any defects in the Vessel arising from defective raw material utilised by R&C or from faulty workmanship on the part of R&C, provided that such defect arises and is detected within 12 (twelve) months of the Date of Launch and provided that R&C is given notice of such defect in writing within 14 (fourteen) days of such defect being detected.

7. Any claim under this undertaking shall be directed first at to the dealer as agent of R&C utilising the R&C standard claim form available from the dealer for that purpose.

8. R&C shall in its sole discretion be entitled to repair or make good any defect covered under this warranty itself or to employ or appoint any other person, company or firm to do so on its behalf.

9. In the event that R&C repairs any defect covered under this warranty, the Owner shall be liable to procure at its own expense the transport of the Vessel to and from R&C's premises or to and from the premises nominated by R&C for the repair.

10. Exclusions:

This warranty does not extend to any defects, faults, deterioration or damage arising:

10.1 from fault or neglect on the part of the Owner or of third parties;

10.2 from any repairs, alterations or modifications effected by the Owner or by third parties not authorised in writing by R&C;

10.3 due to inexpert or misuse of the Vessel, accident, act of god, abuse, neglect, normal wear and tear and/or improper maintenance;

10.4 in relation to splits, discolouration or cracks in the gelcoat on the Vessel;

10.5 from disorders in the hull, rudder, or deck of the Vessel including but not limited to blistering arising from the use of improper sanding or cleaning of the gelcoat or from use of any covers;

10.6 from deterioration of antifouling, varnishes, paints, acrylon, naugahyde, vinyl's, headliners, chrome, anodised coatings, keel coatings, sails, cushions or running rigging;

10.7 from failure on the part of the Owner to perform reasonable and necessary maintenance of the Vessel, including, but not limited to, periodic rebedding of chain plates, stanchion bases, hatches, ports, window frames, and winches;

10.8 from the non-observance on the part of the Owner of maintenance recommendations made by R&C;

10.9 from non-compliance with the prevailing standards and practice of prudent Vessel maintenance on the part of the Owner;

10.10 from the failure to take reasonable measures necessary to protect and preserve the Vessel on the part of the Owner;

10.11 From participation of the Vessel in a competitive sporting event.

11. Save to the extent recorded herein, R&C shall not be liable to the Owner In any manner whatsoever for any defect in the Vessel, whether latent or patent.

12. This undertaking shall be of no force or effect in the event that:

12.1 the Owner or any third party effects any repairs to the Vessel not consented to in writing by R&C;

12.2 Any structural damage is suffered by the Vessel arising from any cause whatsoever other than a defect covered under this Warranty.

DATE:	OWNER:
VESSEL TYPE / SPECIFICATION:	HULL NUMBER:
DATE OF LAUNCH:	DEALER'S STAMP:

TEAR OFF THIS PORTION

DATE:	OWNER:
PHYSICAL ADDRESS::	DATE OF PURCHASE:
	CONTACT TELEPHONE:
VESSEL TYPE / SPECIFICATION:	HULL NUMBER:
DATE OF LAUNCH:	DEALER'S STAMP:

Owner to ensure that tear off portion is completed and returned to: The Quality Assurance Manager, Robertson and Caine (Pty) Ltd., P.O. Box 43341, Woodstock. 7915. South Africa; within 14 days of final commissioning and acceptance of vessel.

STANDARD CLAIM FORM

This form is for the use of Owner's of Robertson & Caine Vessels as described in the Robertson & Caine Standard Warranty and should be completed and forwarded to the Owner's selling Dealer at the address stipulated below.

Use the space provided and attached additional pages if necessary utilising one form for each claim. Any claim should be accompanied by a survey by a duly qualified third party approved of by Robertson & Caine (Pty) Ltd and be attached to this claim form together with a written estimated cost of repair and photographs of the damage.

Submission of this claim form shall not be construed as admission of any liability in relation to such claim by Robertson and Caine (Pty) Ltd.

OWNER & VESSEL DETAILS

OWNER:		
ADDRESS:		
PHONE:	FAX:	EMAIL:
NAME OF VESSEL:		
MODEL:	YEAR:	DATE OF PURCHASE:
HULL IDENTIFICATION NUMBER:		
DATE OF CLAIM:	ESTIMATED COST OF REPAIR:	
DESCRIPTION OF CLAIM:		

DEALER DETAILS:

CONTACT PERSON:
DELAER'S NAME:
ADDRESS:

26. OEM Warranties Contacts and Details

Atwood Water Heater	Atwood Mobile Products
	4750 Haiwatha Drive
	Rockford, Il 61103-1298
Tel:	815 877 5700
Fax:	815 877 7469
Website:	www.atwoodmobile.com
Bose Marine Speaker System	Bose Corporation
	The Mountain
	Framingham, MA 01701-9168
Tel:	1-800-367-4008
Website:	www.bose.com
Clarion AM/FM Marine CD Player	Clarion Corporation of America
	Attn: Customer Service Manager
	661 W. Redondo Beach Blvd
	Gardena, CA.90247-4201
Tel:	1-800-GO-CLARION
	(310 327 9100
Website:	www.clarion.com
Cruisair Air Conditioners	Taylor Made Environmental
	P O Box 15299
	VA 23227-0699
	USA
Tel:	804-746-1313
Fax:	804-746-7248
e-mail:	sales@tmenviro-va.com
Website:	www.tmenviro.com
Force 10	Force 10 Marine Company
	23080 Hamilton Road
	Richmond, BC Canada V6V 1C9
Tel:	(604) 522 0233
Fax:	(604) 522 9608
Hella	Hella Westfälische Metall Industrie KG
	Hueck & Co.
	4780 Lippstadt
Jabsco Toilets & Electric Drain Pumps	1 Kondelin Road
	Cape Ann Industrial Park
	Gloucester, MA 01930
	USA
Tel:	+1 978 281 0440
Fax:	+1 978 283 2619
Website:	www.jabsco.com

Lewmar	Lewmar USA
	351 New Whitfield Street
	Guilford
	CT 06437
	USA
Tel:	+1 (203) 458 6200 ext 100
Fax:	+1 (203) 453 5669
e-mail:	info@usa.lewmar.com
Morse	Teleflex Morse Pte Ltd
	30 Pioneer Road
	Singapore
	628502
Tel:	(65) 686 13644
Fax:	(65) 686 13662
e-mail:	tfxmorse@signet.com.sg
Plastimo Liferaft and Compass	Plastimo
	15, rue Ingénieur Verriére
	B.P. 435 – 56325 LORIENT (FRANCE)
Tel:	(33) 02 97 87 36 36
Fax:	(33) 02 97 87 36 28
Quantum Sails	49 Voortrekker Road
	Maitland
	Cape Town 7420
	South Africa
Tel:	+27 21 593 1620
Website:	www.quantumsails.co.za
Racor	Parker Hannifin Corporation
	Racor Division
	P O Box 3208
	3400 Finch Road
	Modesto, CA 95353 USA
Tel:	209/521-7860
	800/344-3286
Raymarine Instruments	Raymarine Ltd
	22 Cotton Road
	Nashua
	New Hampshire 03063-4219
	USA
Tel:	+1 603.881.5200
Fax:	+1 603.864.4756
Website:	www.raymarine.com
Rule 2000 Pumps	Rule Industries INC
	Cape Ann Industrial Park
	Gloucester, MA 01930
Rule Customer Service	(978) 281-0440

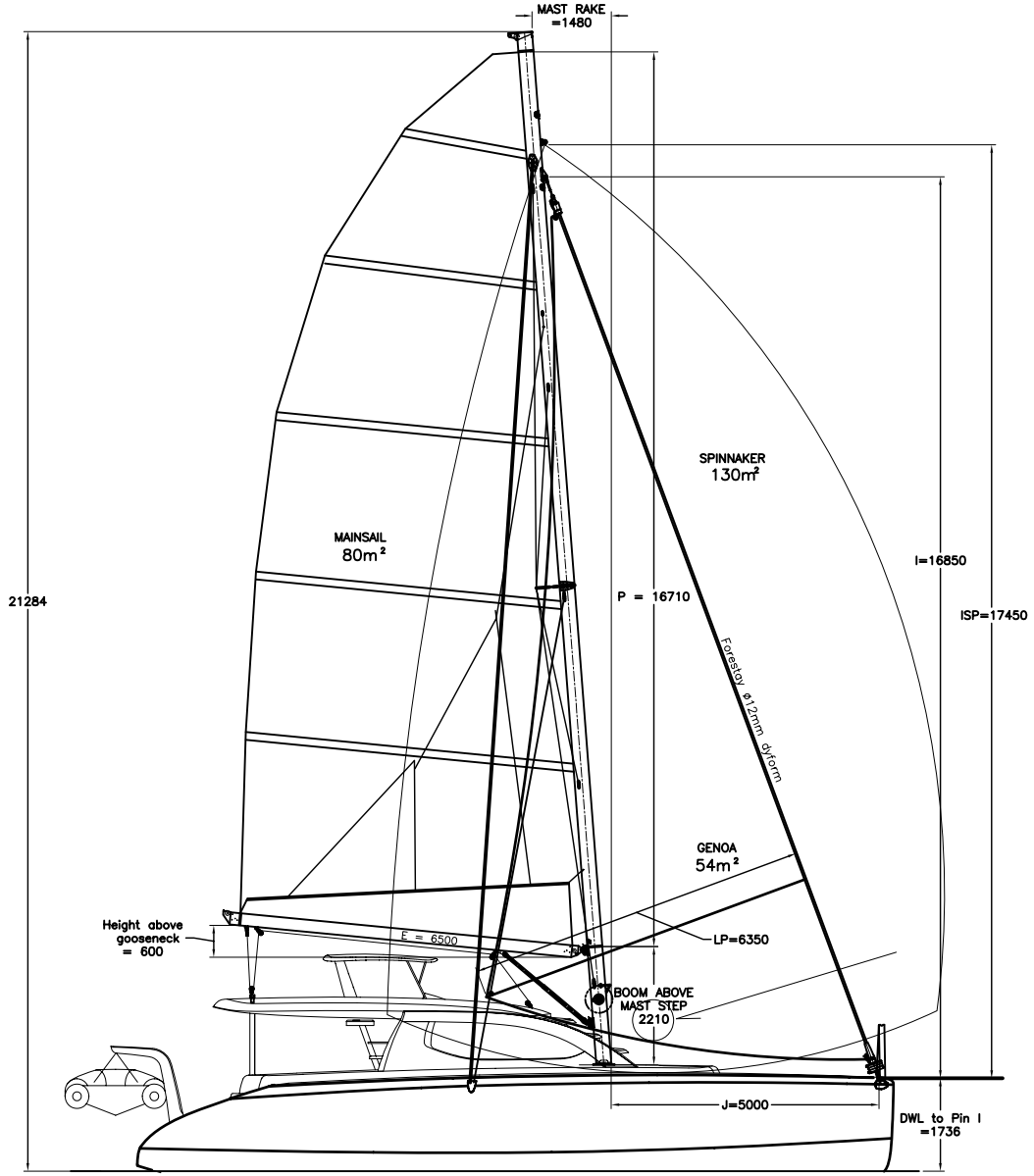
Sea Frost	372 Rt. 4
	Barrington, NH 03825
	USA
Tel:	(603) 868 5720
Fax:	(603) 868 1040
Website	www.seafrost.com
Sparcraft Masts	22 Bolt Avenue
	Montague Gardens
	Cape Town
	South Africa
Tel:	+27 21 555 3470
Website:	www.sparcraftmasts.com
Spinlock Ltd	41 Birmingham Road
	Cowes
	Isle of Wight
	PO31 7BH
Tel:	+44 1983 295555
Fax:	+44 1983 255542
Website:	www.spinlock.co.uk
Tacktick Ltd	22 North Street
	Emsworth
	Hampshire PO1O 7 DG
	England
Tel:	+44 1243 379311
Fax:	+44 1243 379199
Website:	www.tacktick.com
Vetus Den Ouden	Fokkerstraat 571
	3125 BD Schiedam
	Holland
Tel:	+31 1043 77700
Website:	www.vetus.com
Victron Centaur Battery Charger	Victron Energy B.V.
	De Paal 35
	1351 JG ALMERE
	The Netherlands
Tel:	+31 36 535 97 00
Fax:	+31 36 535 97 40
e-mail:	sales@victronenergy.com
Volvo Penta	Volvo Penta of the Americas Inc.
	1300 Volvo Penta Drive
	Chesapeake, VA 23320
Tel:	(757) 436-5100
Fax:	(757) 436-5153
Website:	www.volvopenta.com

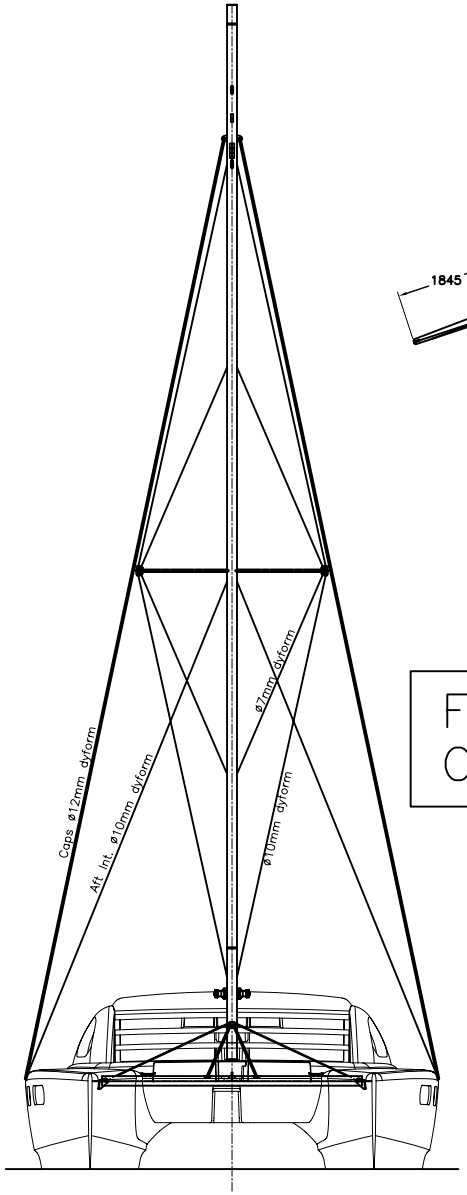
Whale Gusher 10 MK3 Pump	Munster Simms Engineering Ltd
	Old Belfast Road
	Bangor, Co. Down.
	N. Ireland BT19 1LT.
Tel:	028 91 270531
Fax:	028 91 466421
Website	www.whalepumps.com
Northern Lights Generator	Northern Lights Lugger
	4420 14th Ave NW
	Seattle, WA USA 98107
Tel:	1-800-762-0165
Website:	www.northern-lights.com
Zinc Saver II	Professional Mariner, LLC
	P O Box 968
	Rye, NH 03870
Tel:	(603) 433 4440
Fax:	(603) 433 4442

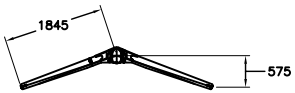
The details of the OEM suppliers listed above are a guide only. Roberson and Caine (Pty) Ltd do not accept any responsibility for omissions, errors or changes.

27. INDEX OF DRAWINGS

	DRAWING NO.	DRAWING TITLE
1.	L46-STD-FA-0067-0	L46 Sail Plan & Rigging Plan
2.	L46-STD-FA-0066-0	L46 Side Elevation
3.	L46 STD-FA-0083-0	L46 Reefing Diagram
4.	L46 STD FA-0070-0	L46 Mooring Lines Arrangement
5.	L46-STD-FA-0061-0	L46 Deck Arrangement - Lockers
6.	L46 STD-FA-0063-0	L46 Deck Arrangement – Hardware (2 Pages)
7.	L46 STD-FA-0086-0	L46 Deck Arrangement – Stainless Steel
8.	L46 STD-FA-0062-0	L46 Working Deck
9.	L46 STD-FA-0084-0	L46 Hatch & Portlight Arrangement
10.	L46-STD-FA-0060-0	L46 Fire Prevention & Safety
11.	L46 STD-FA-0095-0	L46 Systems Layout
12.	L46 STD-FA-0065-0	L46 Seacock, Valve & Drain Layout
13.	L46 STD-FA-0074-0	L46 Fresh Water Plumbing Board
14.	L46 STD-FA-0073-0	L46 Fresh Water System
15.	L46 STD-FA-0071-0	L46 Toilet Schematic Manual or Electric (2 Pages)
16.	L46 STD-FA-0096-0	L46 Bilge System Schematic
17.	L46 STD-FA-0076-0	L46 Gas System Schematic
18.	L46 STD-PA-0006	L46 Air-conditioning Installation (2 Pages)
19.	L46 STD FA-0057-0	L46 Engine Room Layout
20.	L46 STD-FA-0066-0	L46 Engine Ventilation
21.	L46 STD-FA-0075-0	L46 Fuel System Schematic
22.	L46 STD-FA-0068-0	L46 Engine Exhaust System
23.	L46 STD-FA-0087-0	L46 Genset Schematic
24.	L46 STD-FA-0053-0	L46 Carbon Monoxide Warning (4 pages)
25.	L46 STD-FA-0077-0	L46 Rudder & Steering System
26.	L46 STD-FA-0098-0	L46 Davit Securing
27.	L46 STD-FA-0059-0	L46 Warning Labels Layout (3 Pages)
28.	L46 STD-FA-0068-0	L46 Shipping Detail
29.	L46 STD FA-0056-0	L46 Vessel Lifting Diagram
30.	L46 STD-FA-0078-0	L46 Vessel Support on Land or Ship (2 Pages)
31.	L46 STD FA-0054-0	L46 Vessel Road Transport (2 pages)
32.		Equipment / Looms Layout
33.		Lights / Outlets Layout
34.		AC Schematic
35.		AC Panel Layout
36.		Terminal Strip Layout
37.		Small Circuit Diagram & Mast Terminal Strip
38.		L46 DC Panel Layout
39.		DC Schematic







FOR L46 002
ONWARDS

NOTES:
1. MAST SECTION: SPARCRAFT NG105
2. CROSSBEAM SECTION: S830

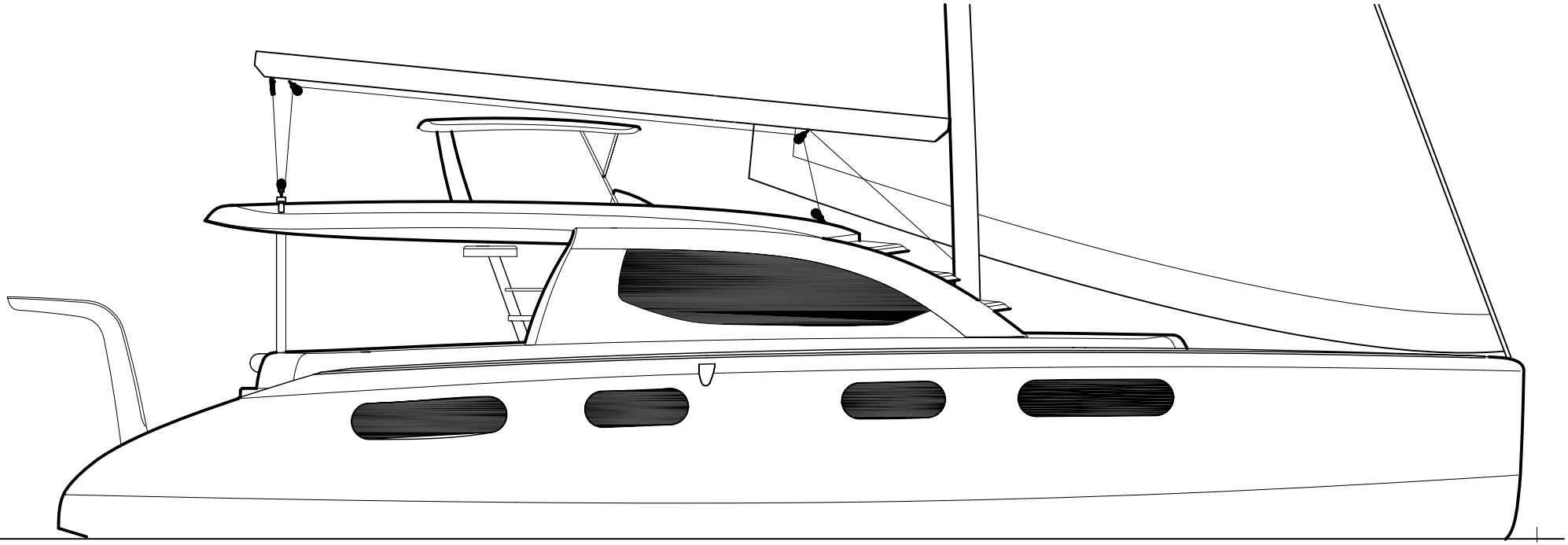
ALT:	DATE/SIGN	MODIFICATION:
A	13/06/06	RAISE BOOM

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 SAIL & RIGGING PLAN

SCALE:	DRAWN BY: ARK	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0067-0	DATE: 21/06/2006	A4
FILE NAME: L46 Sail & Rigging Plan		PAGE 01 of 01	



NOTES:

ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 SIDE ELEVATION

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0066-0	DATE: 26/06/2006	A4
FILE NAME: L46 Side Elevation		PAGE 01 of 01	

CAUTION - ATTENTION - WICHTIG

For your safety, please respect the graph below for sail reduction

Pour votre sécurité, respectez les consignes de réduction de voilure indequées ci–dessous

Zu Ihrer Sichereit, bitte beachten Sie das folgende Diagram zur Reduzierung der Segel

Roll Jib 3 Turns More – 3 Tours de Plus dans le foc – *3 Weitere Rollen im Fock*

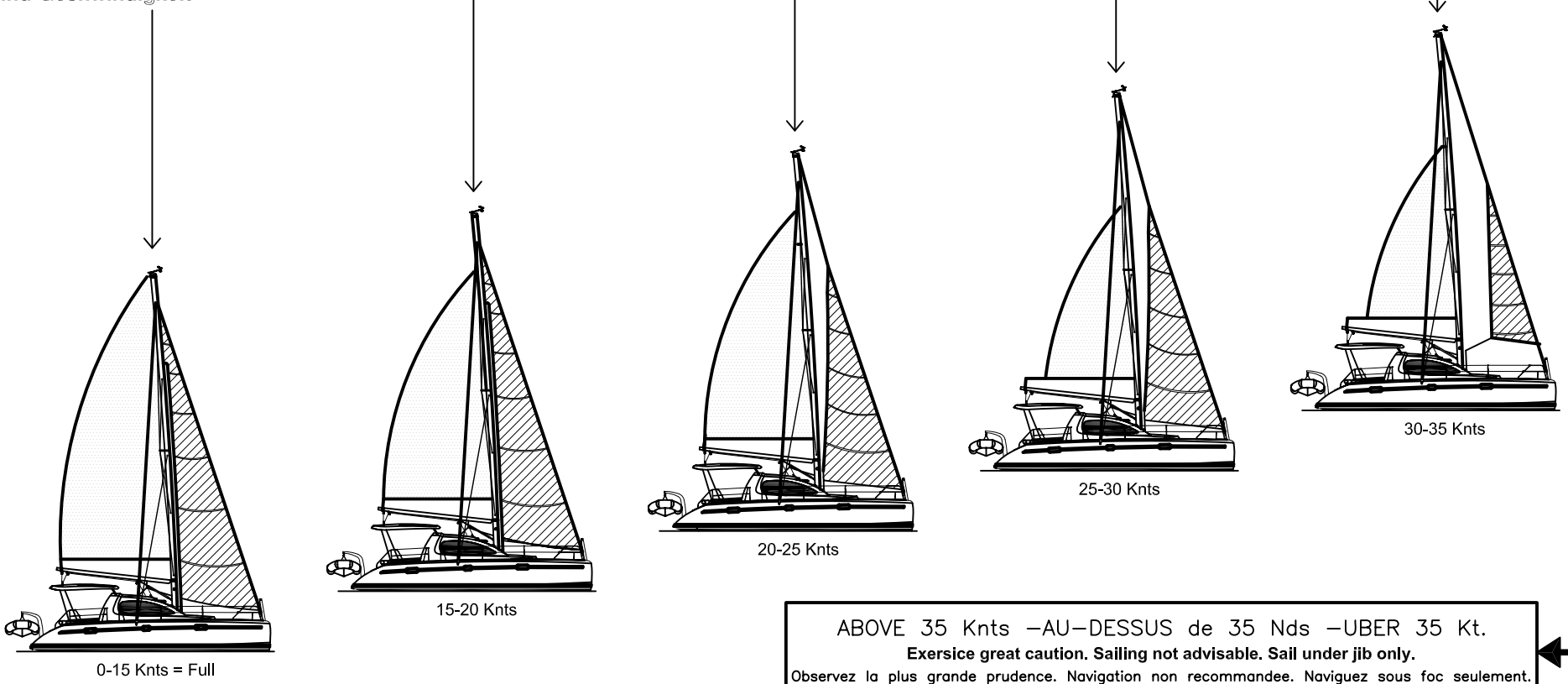
Reef #2 in Mainsail – Ris #2 Gd'Voile – *Reff #2 im Segel*

Roll Jib 3 Turns – 3 Tours dans le Foc – *3 Rollen im Fock*

Reef #1 in Mainsail – Ris #1 Gd'Voile – *Reff #1*

Vitesse Vent Réel
True Wind Speed
Wahre Wind-Geshwindigkeit

15 20 25 30



ABOVE 35 Knts –AU–DESSUS de 35 Nds –UBER 35 Kt.

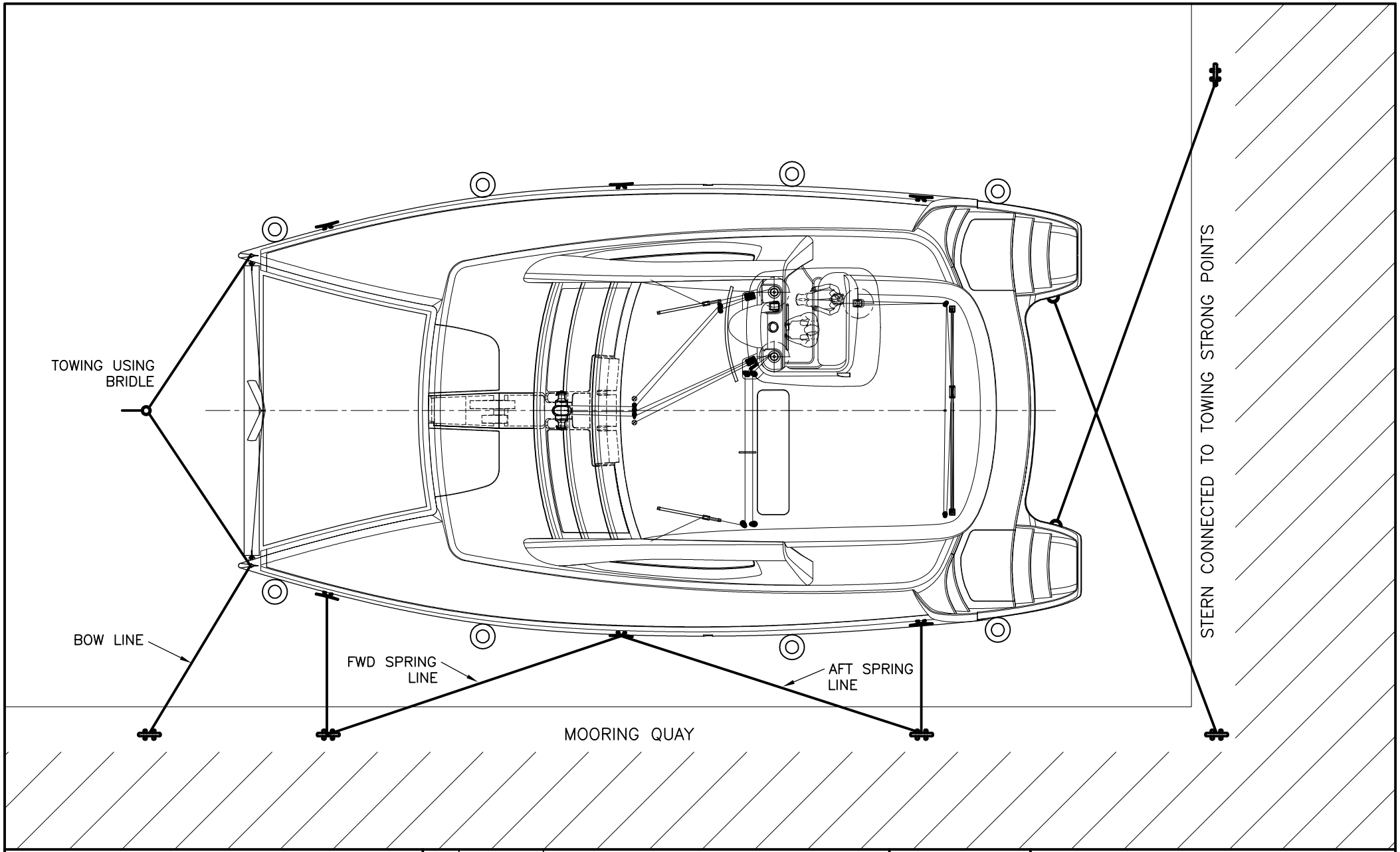
Exersice great caution. Sailing not advisable. Sail under jib only.

Observez la plus grande prudence. Navigation non recommandee. Naviguez sous foc seulement.

Ausserst vorsichtig sein. Navigieren nicht oatsam. Nur mit der Fock segeln.

ROBERTSON & CAINE
CUSTOM YACHT PROJECTS

TITLE: REEFING DIAGRAM
DWG. NO: L46 STD-FA-0083-0
DRAWN BY: ARO
FILENAME: L40 Wind Graph
DATE: 04/07/06
PAGE: 01 OF 01



NOTES:

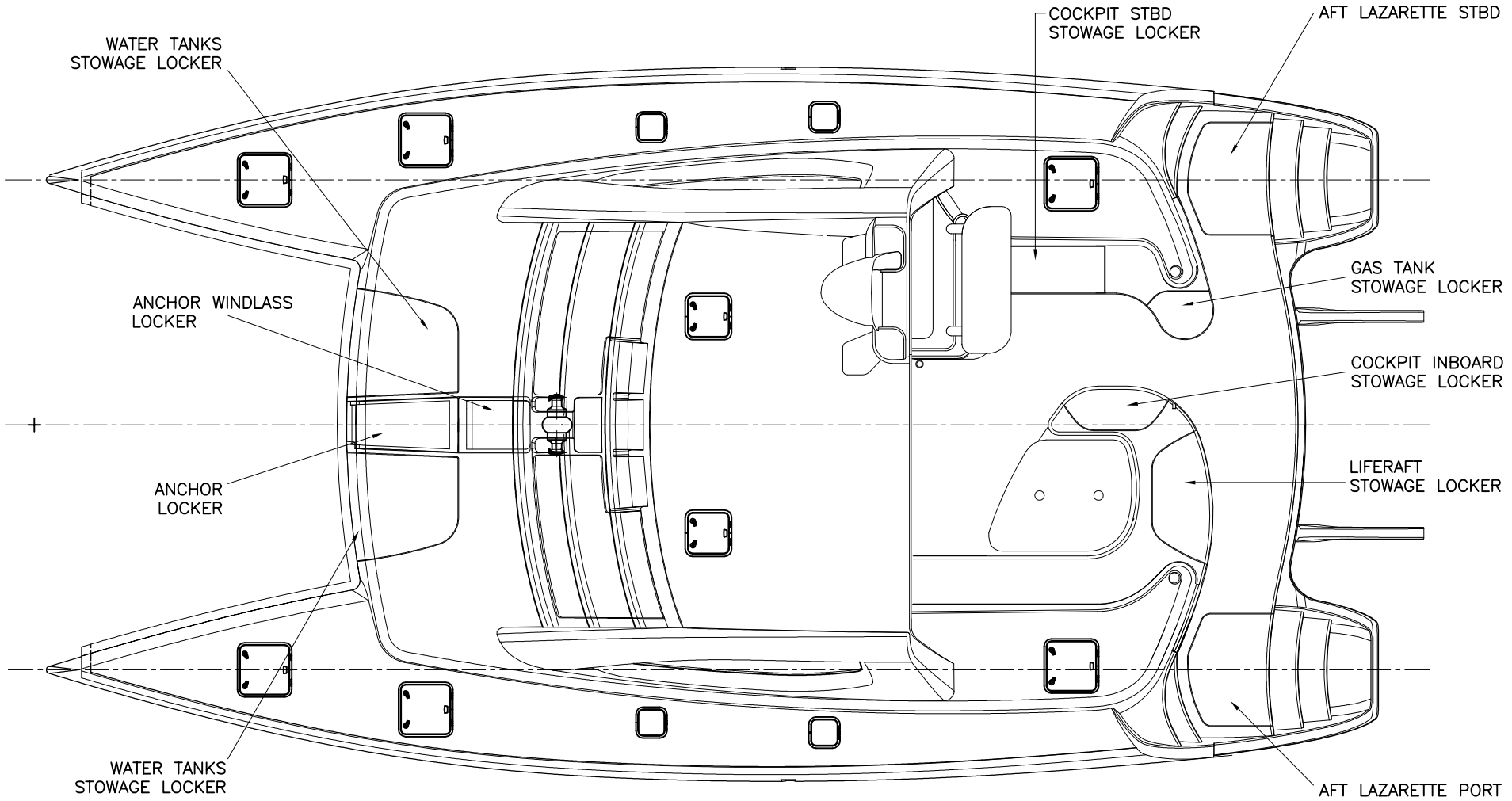
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 MOORING LINES ARRANGEMENT

SCALE:	DRAWN BY: ARO	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0070-0	DATE: 21/06/2006	A4
FILE NAME: L46 Mooring Lines Arrangement		PAGE 01 of 01	



NOTES:

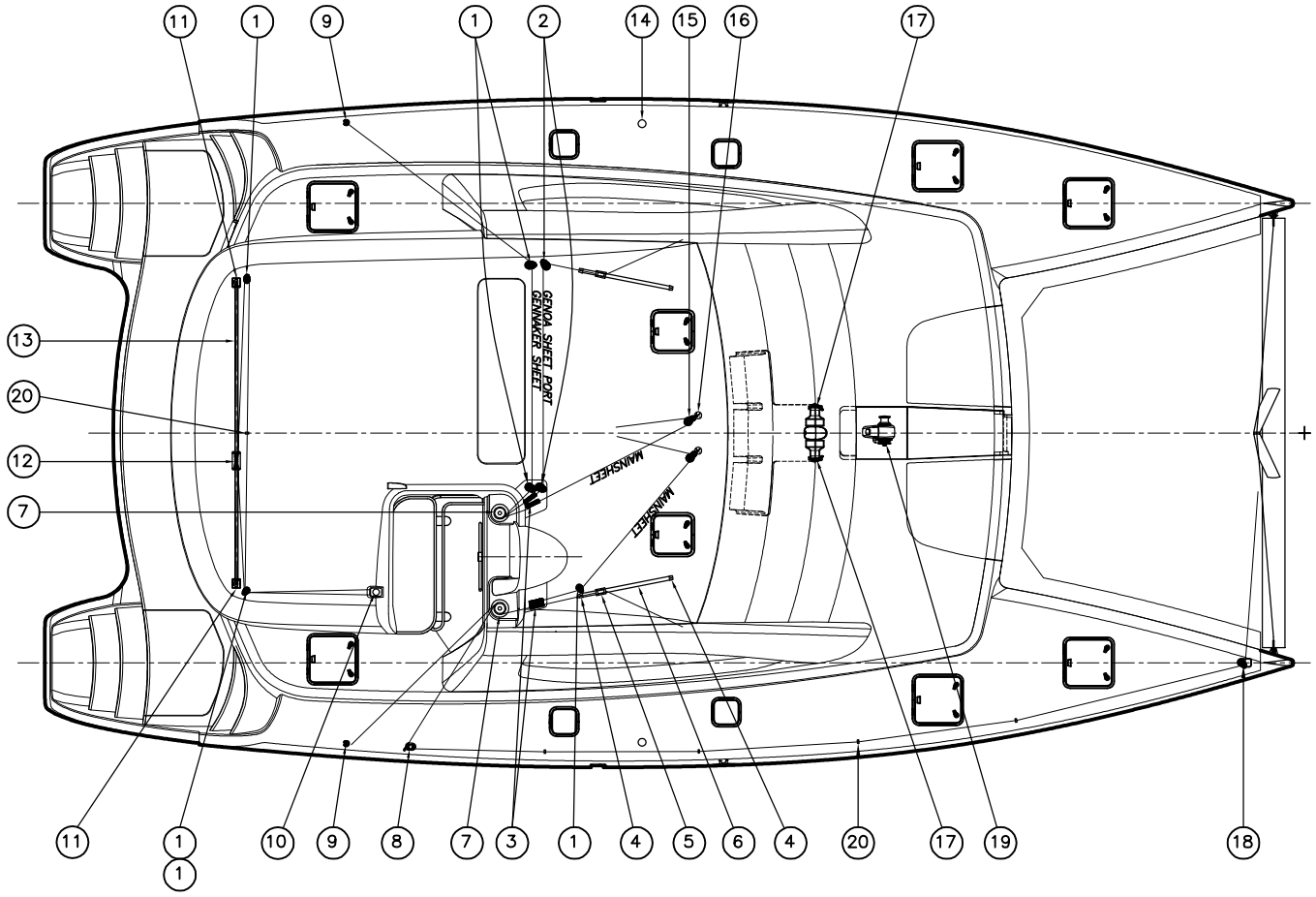
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 DECK ARRANGEMENT – LOCKERS

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0061-0	DATE: 21/06/2006	A4
FILE NAME: L46 Deck Arrangement		PAGE 01 of 01	



ITEM	QTY	DESCRIPTION	RCI STOCK CODE
1	6	Footblock 72mm	BLK LW29927261
2	2	Footblock 90mm	JMR SL XAS0612/2
3	4	Jammer Spinlock XCS08141/1 Single	JMR SL XCS08141
4	4	Genoa Track Ends	TRKENDS LW2040
5	2	Genoa Car	GENCAR LW2700
6	2	Genoa Track 1.0m	TRK1.0LW2410
7	2	Primary Winch	WNCH54CST LW
8	1	Footblock c/w Jammer JK/50	JK/50
9	2	Folding Padeye	PADEYE RF2429
10	2	Line Driver	LN DRVR 240010
11	2	Control Line Endstop	ENDSTP LW3030
12	1	Traveller Car	TRVLRCAR LW3400
13	1	Main Track 3.6m	TRK3.6 LW2236
14	2	Deck Filler Amiot Waste #67013	DCK FLL AM WSTG
15	5	Block 90mm Single	BLK LW29929001
16	2	Standup Base	BLKBS LW 8310
17	2	Mast Winch	WNCH46CST LW
18	1	Footblock 60mm	BLK LW29926061
19	1	Windlass Quick	WND QKHC1012D
20	5	Bullseye Fairlead	BLEYE RF59
21	2	Block 90mm Double	DCK FLL AM WSTG

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

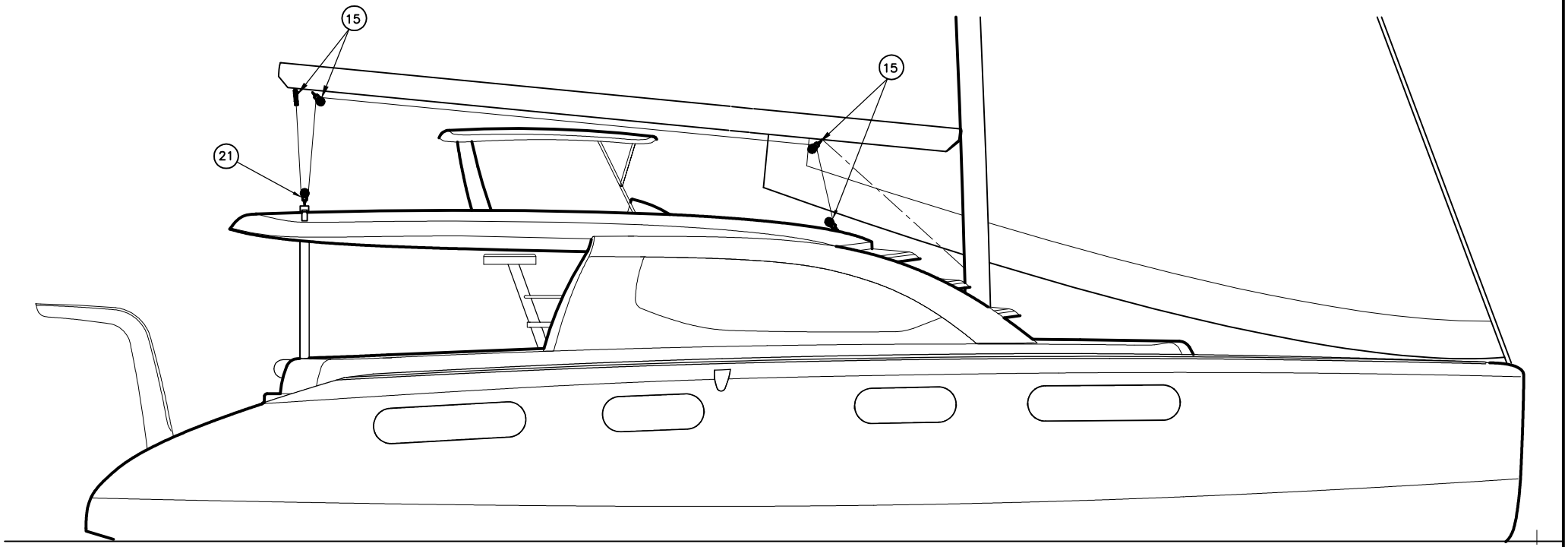
ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 DECK ARRANGEMENT – HARDWARE

SCALE:	DRAWN BY: ARO	APPROVED BY:	
NTS	DWG. NO: L46 STD–FA–0063–0	DATE: 22/06/2006	A4

FILE NAME: L46 Deck Equipment Layout



NOTES:

ALT:	DATE/SIGN	MODIFICATION:

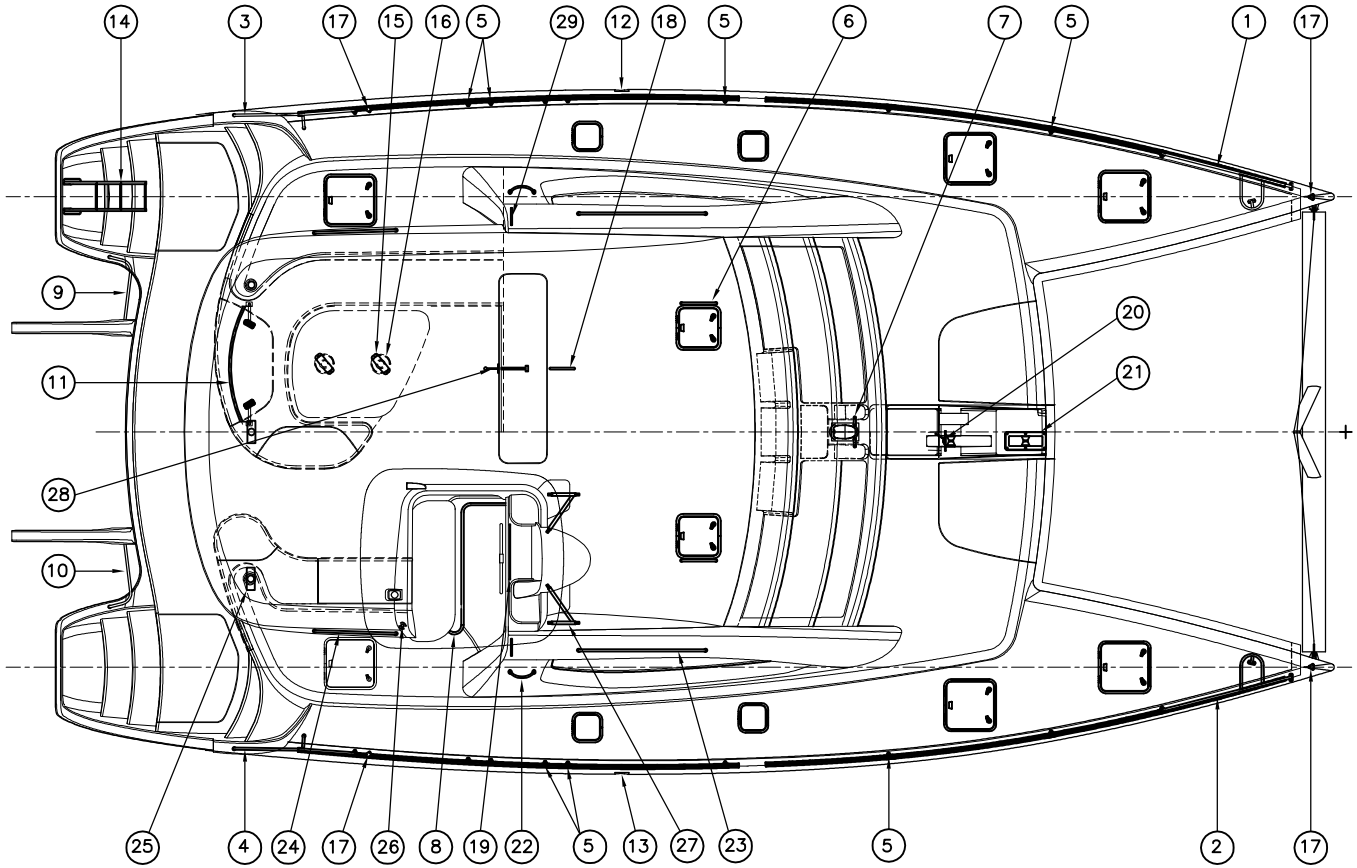
ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 DECK ARRANGEMENT– HARDWARE

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0063-0	DATE: 22/06/2006	A4

FILE NAME: L46 Deck Equipment Layout



ITEM	QTY	DESCRIPTION	RCI STOCK CODE
1	1	Pullpit Port	PLLPT L40P
2	1	Pullpit Stbd	PLLPT L40S
3	1	Pushpit Outer Port	PSHPT OUTR L40P
4	1	Pushpit Outer Stbd	PSHPT OUTR L40S
5	16	Stanchion Base	STNCH BSS/S L40
6	2	Hatch Guard Low Profile Size 10	GRD CRFHTCH L40
7	2	Gooseneck	GSNCK MSTWR L40
8	1	Helm Seat Frame	HLMST FRM L46
9	1	Pushpit Inner Port	PSHPT INNR L40P
10	1	Pushpit Inner Stbd	PSHPT INNR L40S
11	1	Cockpit Backrest	BCKRST L46 CKPT
12	1	Chainplate Port	CHPLT MN L46P
13	1	Chainplate Stbd	CHPLT MN L46S
14	1	Swim Ladder	S/LDDR SS L46
15	2	Cockpit Table Leg	CKPTTBL LGS L40
16	2	Cockpit Table Backing Plate	BK PLT CPTBL
17	4	Folding Padeye Wichard	PADEYE WD6505
18	1	Chafe Bar	CRF CHF BR L40
19	1	Helmstation Fiddle	FDDL HLM L46
20	1	Chain Stopper Assembly	CHN STPPR L40
21	1	Anchor Roller Assembly	ANCHR RLLR L40Z
22	2	Coachfoof Grab Handle	GRBHNDL CRF L38
23	2	Coachfoof Handrail	HNDRL CRF L46
24	2	Hardtop Handrail	HNDRL HTP L46
25	1	Bimini Hardtop Aft Support Set	BMNI HTASP L46
26	1	Bimini Hardtop Helm Support	BMNI HTHSPT L46
27	1	Hardtop Fwd Support Tubes Set	HTSPF L46FB
28	1	Handle Hardtop Vent	HNDL HTPVNT L46
29	2	Chafe Bar Genoa	ANTCHF GEN L46

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

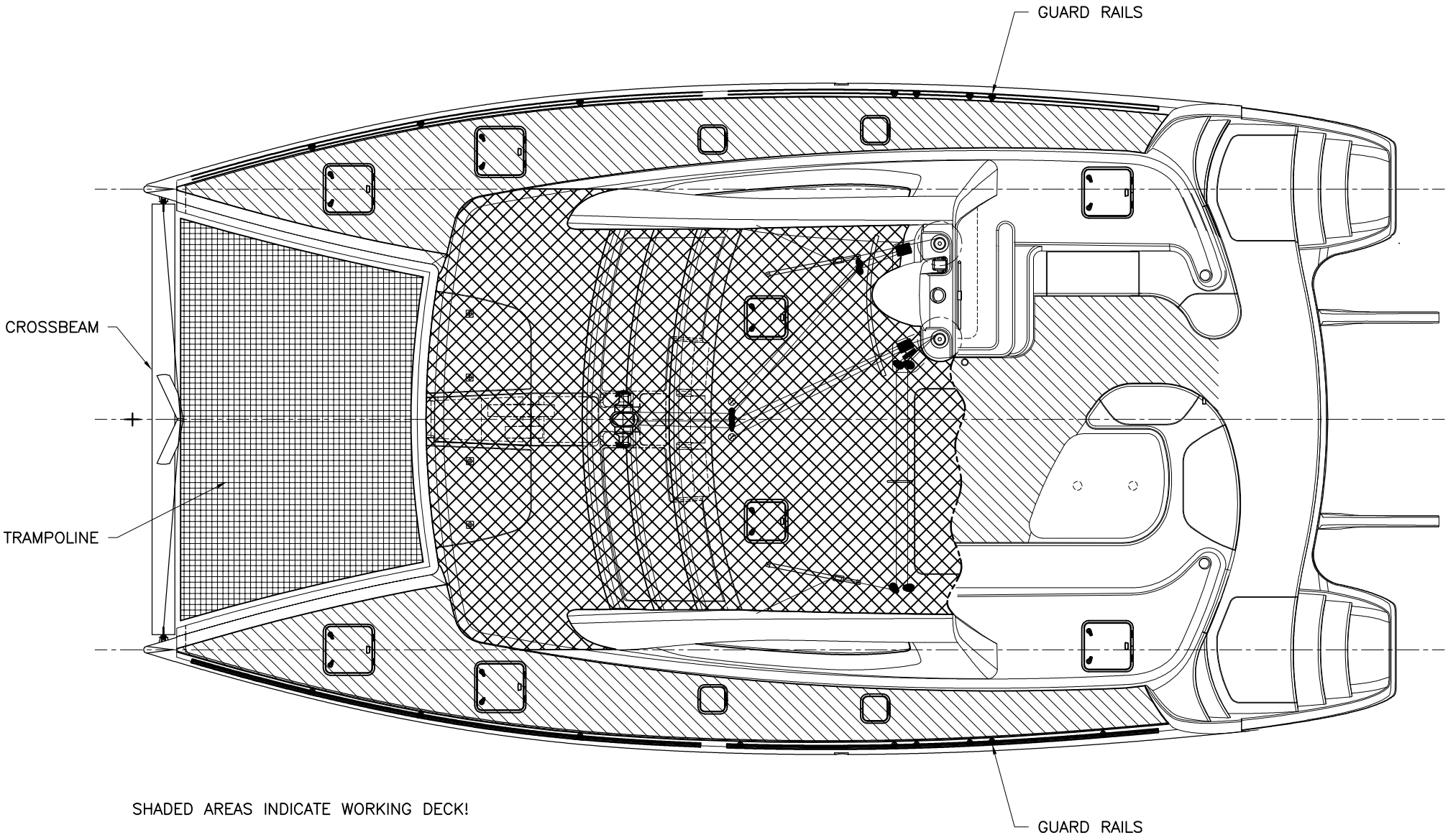
ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 DECK ARRANGEMENT – STAINLESS STEEL

SCALE:	DRAWN BY: ARO	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0086-0	DATE: 22/06/2006	A4

FILE NAME: L46 Deck Equipment Layout



SHADED AREAS INDICATE WORKING DECK!

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

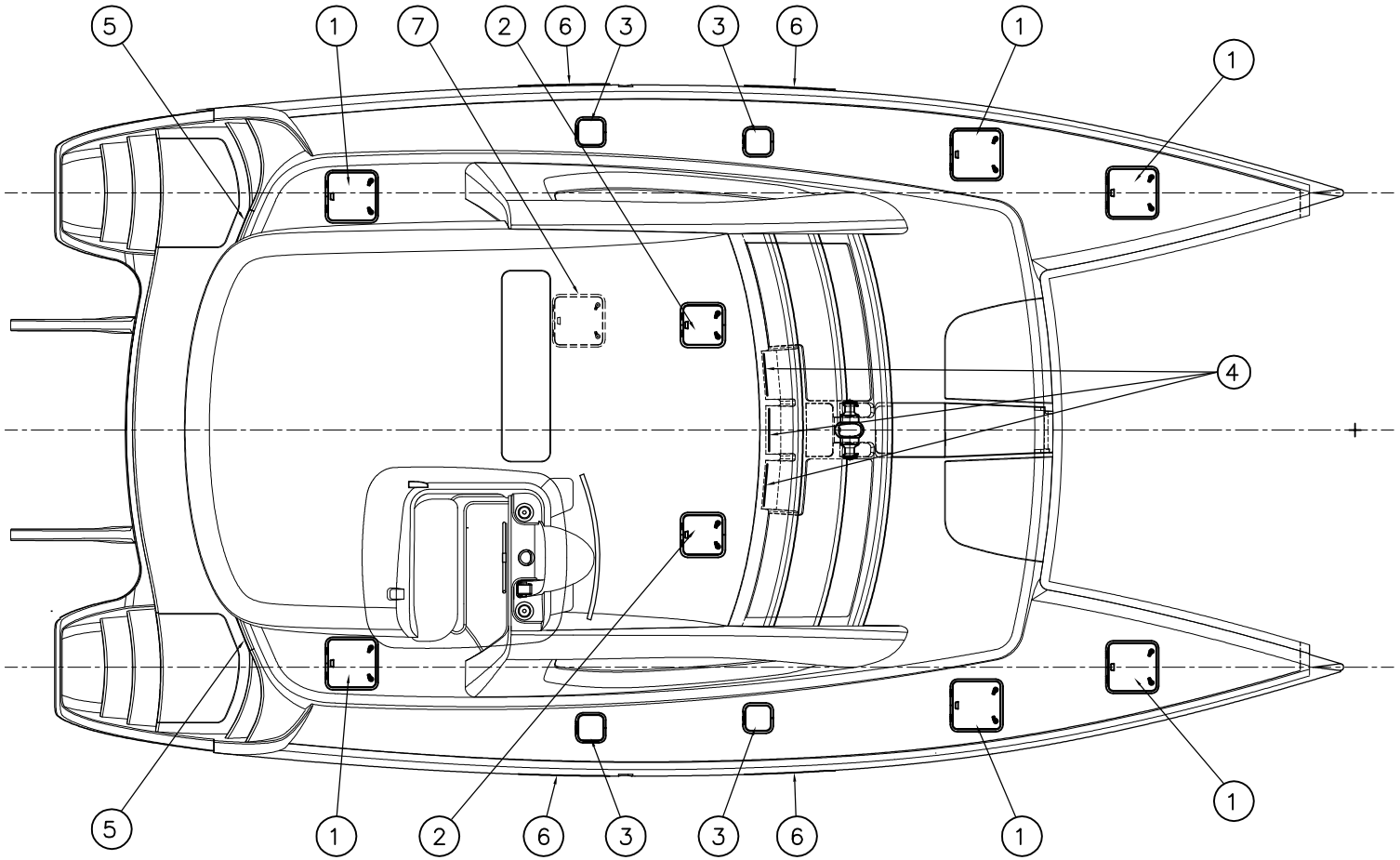
ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 WORKING DECK

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0062-0	DATE: 21/06/2006	A4
FILE NAME: L46 Working Deck		PAGE 01 of 01	

ITEM	QTY	DESCRIPTION	LOCATION	RCI STOCK CODE
1	6	Lewmar Medium Profile Size 60	Foredeck / Cabins	HTCH LW39960020
2	2	Lewmar Low Profile Size 40	Saloon / Hardtop	HTCH LW39940020
3	4	Lewmar Low Profile Size 10	Hatch Heads	HTCH LW39910030
4	3	Lewmar Hatch Size 41	Hatch under Louvres	HTCH LW39940030
5	2	Lewmar Portlight Size 1	Transom Portlight	PTLT LW 1
6	4	Lewmar Atlantic Size 32	Hull Portlight Heads	PTLT LW ATL 32
7	1	Escape Hatch 60	Saloon	HTCH LWOCN60ES



NOTES:

ALT:	DATE/SIGN	MODIFICATION:

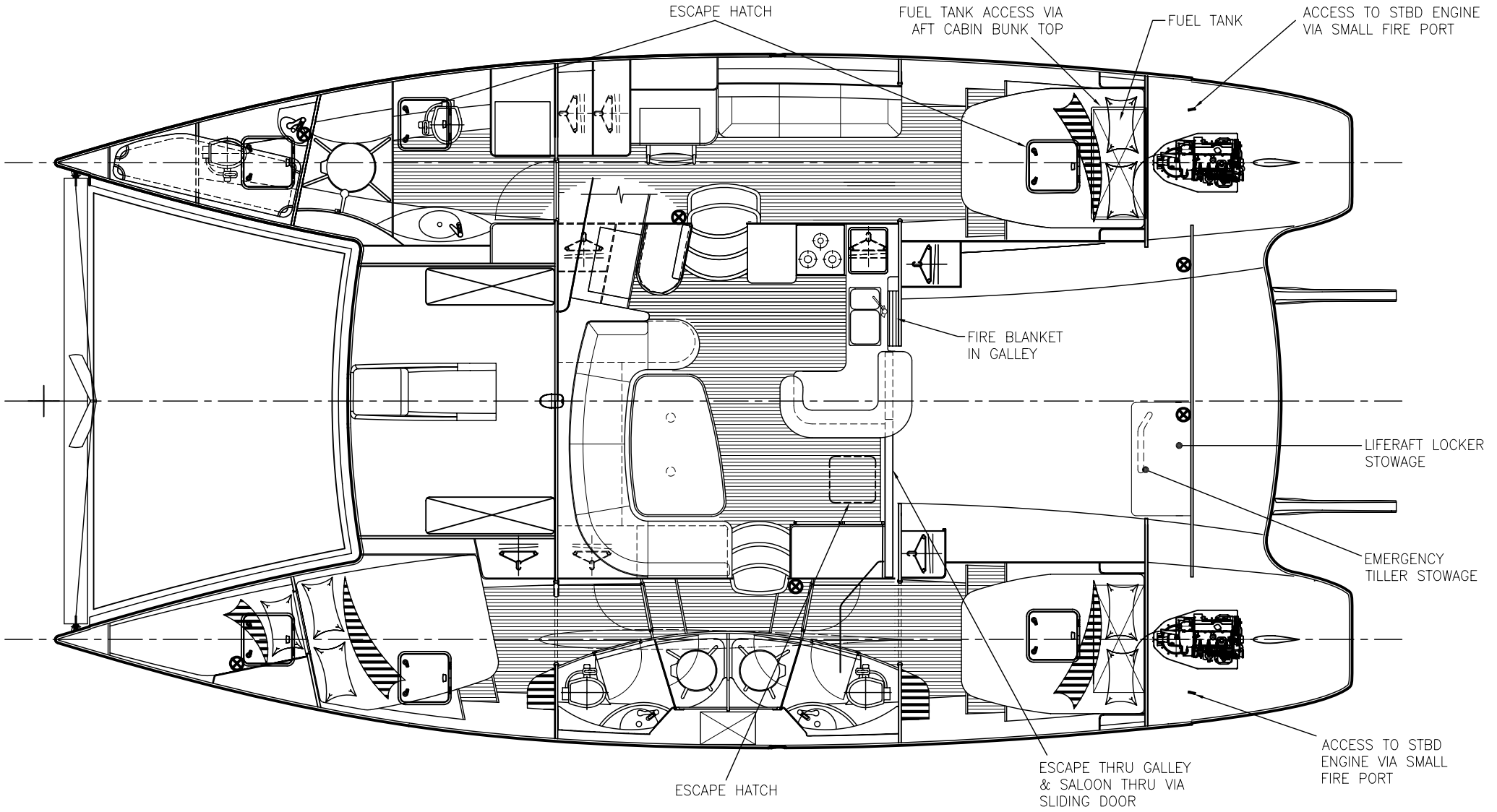
ROBERTSON and CAINE International Yachts.
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 HATCH & PORTLIGHT ARRANGEMENT

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0084-0	DATE: 22/06/2006	A4
FILE NAME: L46 STD Deck Equipment Layout		PAGE 01 of 01	

⊗ FIRE EXTINGUISHERS – 8A 34 B; DRY POWDER TYPE; MONO AMONIUM PHOSPHATE BASE
DISCHARGE RANGE: 3–4m
DISCHARGE TIME: 8secs



NOTES:

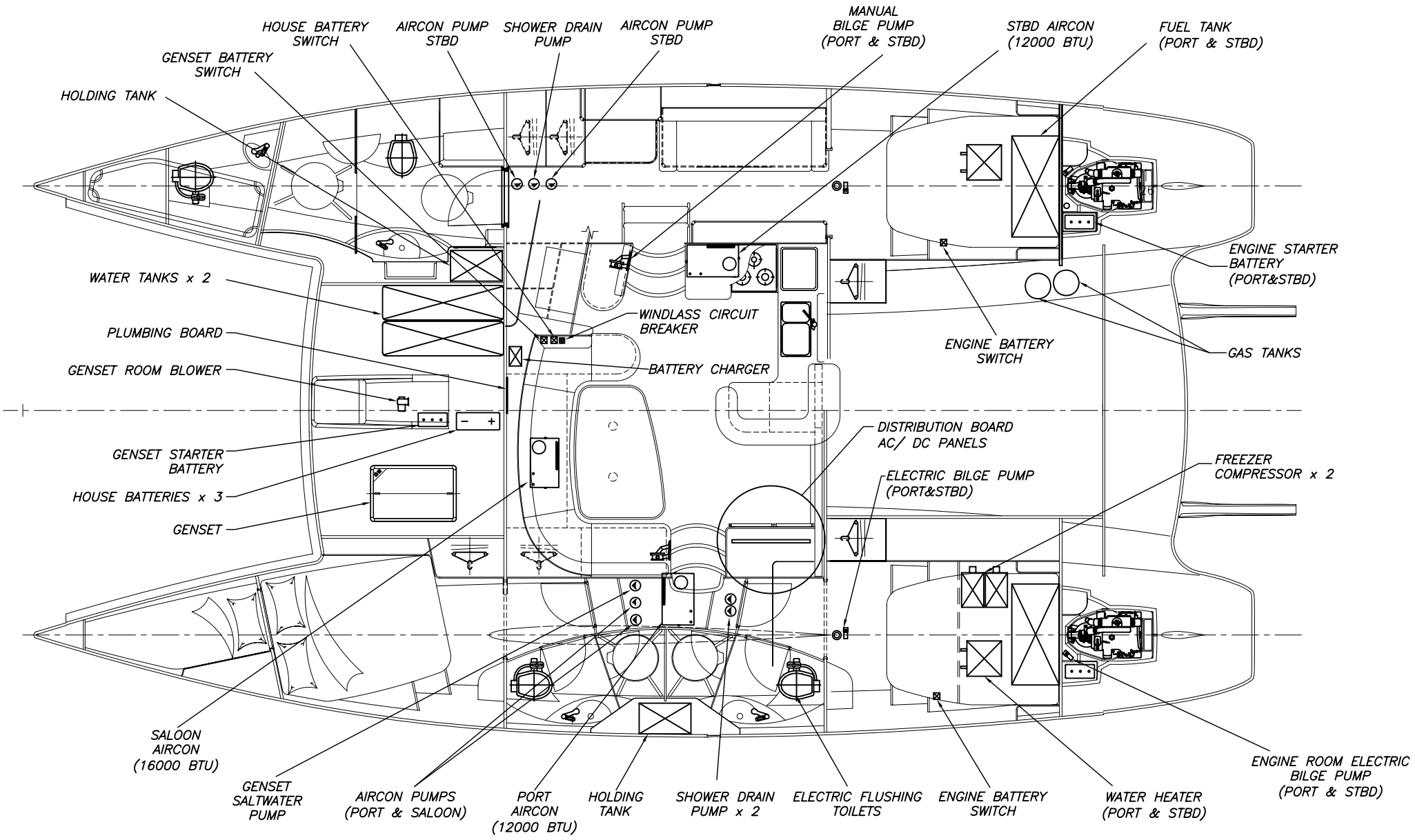
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 OV FIRE PREVENTION & SAFETY

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD–FA–0060–0	DATE: 21/06/2006	A4
FILE NAME: L46 OV Fire Prevention & Safety		PAGE 01 of 01	



NOTES:

ALT:	DATE/SIGN	MODIFICATION:

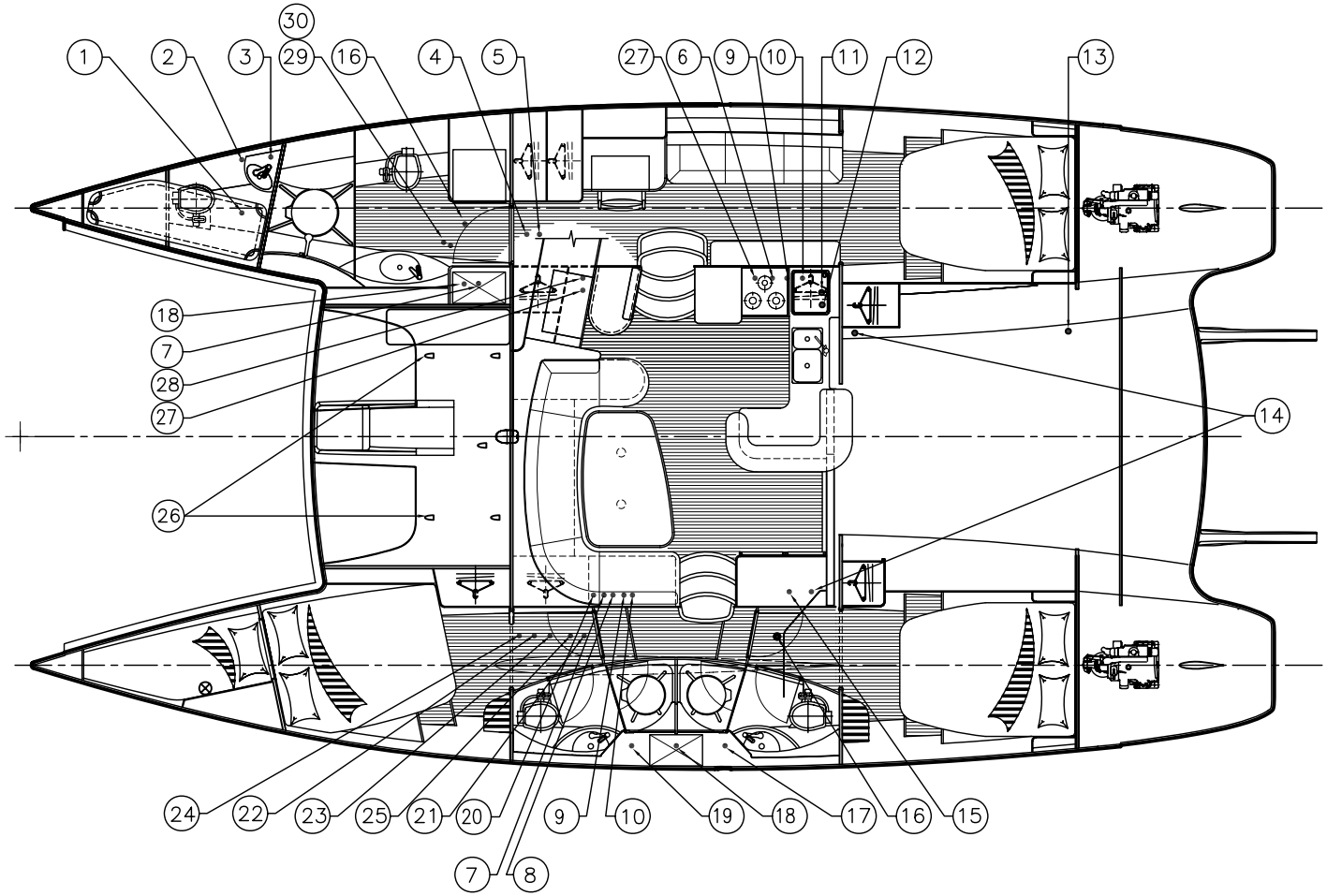
ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46

L46 0V SYSTEMS LAYOUT

SCALE:	DRAWN BY: ARO	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0114-0	DATE: 18/06/2006	A4
FILE NAME: L46 0V Systems Layout		PAGE 01 of 01	



ITEM	DESCRIPTION
1	Toilet Salt Water In – Forepeak Head
2	Basin Disharge
3	Toilet Disharge
4	Salt Water In – Aircon Stbd
5	Toilet Salt Water In – Stbd Heads
6	Salt Water Discharge – Aircon Stbd
7	Shower Water Discharge – Fwd Head
8	Shower Water Discharge – Aft Head
9	Electric Bilge Discharge
10	Manual Bilge Discharge
11	Drying Rack Drain
12	Sink Drain
13	Gas Bottle Locker Drain
14	Cockpit Drain
15	Fridge/Freezer Drain
16	Holding Tank Discharge
17	Basin Discharge – Port Aft Head
18	Holding Tank Breather
19	Basin Discharge – Port Fwd Head
20	Salt Water Discharge – Aircon Port
21	Toilet Salt Water In – Port Heads
22	Salt Water In – Aircon Port
23	Salt Water In – Aircon Saloon
24	Salt Water Discharge – Genset
25	Salt Water In – Genset
26	Foredeck Locker Drains
27	Aircon Condensate Drain
28	Salt Water Discharge – Aircon Saloon
29	Depth Transducer
30	Log Tranducer

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

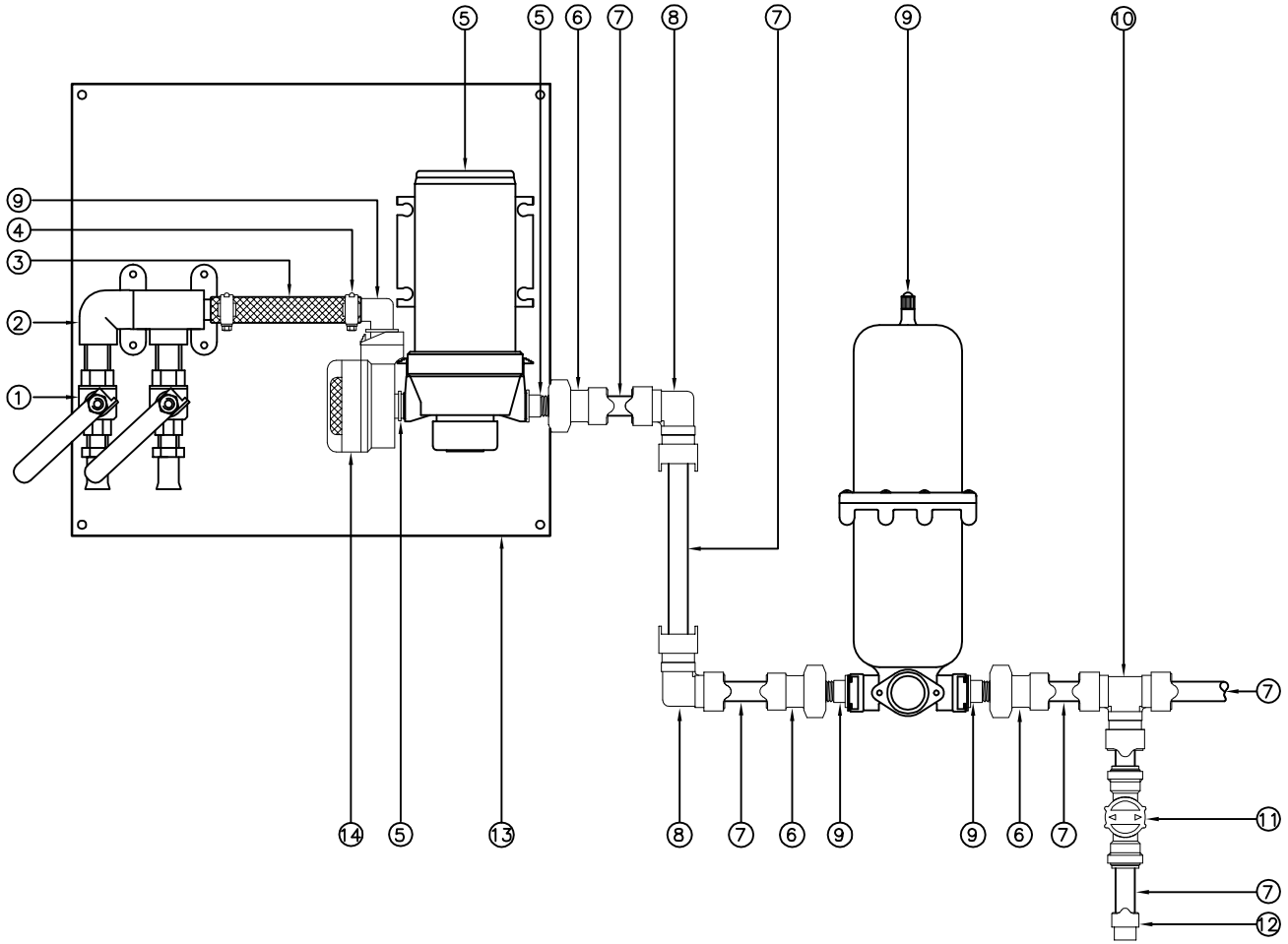
ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 OV SEACOCK, VALVE & DRAIN LAYOUT

SCALE:	DRAWN BY: ARO	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0065-0	DATE: 26/06/2006	A4

FILE NAME: L46 OV Seacock, Valve & Drain Layout



No.	PART	DESCRIPTION	UoM	QTY	STOCK CODE
1	BALL VALVE	BALL VALVE BRONZE 1/2IN FPT	EA	2	VLV BLL BZS13F
2	MANIFOLD	WATERPUMP MANIFOLD TYPE 1 S/S	EA	1	WTRPMP MNFLD 1
3	PVC HOSE	HOSE PVC REINFORCED 15mm	EA	3m	HSPVC 15
4	HOSE CLAMP	HOSE CLAMP S/S GSS8 14-27mm	EA	2	HSCLMPSS08
5	PUMP	JABSCO PAR-MAX3 3.5GPM 12V #31600-0092	BOX	1	PMP JBSC 31600
		ADAPTOR PORTS	PKT	1	PMP JBSC 31600
		PORTS EP .50 HB	PKT	1	PMP JBSC 31600
6	ADAPTOR	WHALE HP ADAPTOR #WX1514 1/2" BSPx15	EA	3	HP ADPTR 1514
7	PIPE	WHALE HP PIPE #WS7152 15MM BLU	M	1m	HP PIPE 15 BLUE
8	ELBOW	WHALE HP ELBOW #WX1503 15mm	EA	2	HP ELB 1503
9	ACCUMILATOR TANK	ACCUMILATOR TANK 1Lt JABSCO #30573-0000	BOX	1	ACMLTR TNK 1
		ADAPTOR PORTS	PKT	1	ACMLTR TNK 1
		PORTS EP .50 HB/ .50 HB EL	PKT	1	ACMLTR TNK 1
10	TEE PIECE	WHALE HP TEE #WX1502 15mm	EA	2	HP TEE 1502
11	VALVE	VALVE EMERGENCY SHUT OFF 15mm JOHN GUEST #15 ESOT	EA	1	VLV JG 15 ESOT
12	END STOPPER	WHALE HP END STOP #WX1546B 15mm	EA	1	HP END WX1546B
13	PLUMBING BOARD	12mm UPGRADED PLY WOOD	EA	1	NON STOCK
14	PUMPGUARD	WATER PUMP STRIANER	EA	1	NON STOCK

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE Custom Yacht Projects
P.O.Box 1115 Woodstock 7915
Telephone: (021) 447 3179
Fax: (021) 447 3924

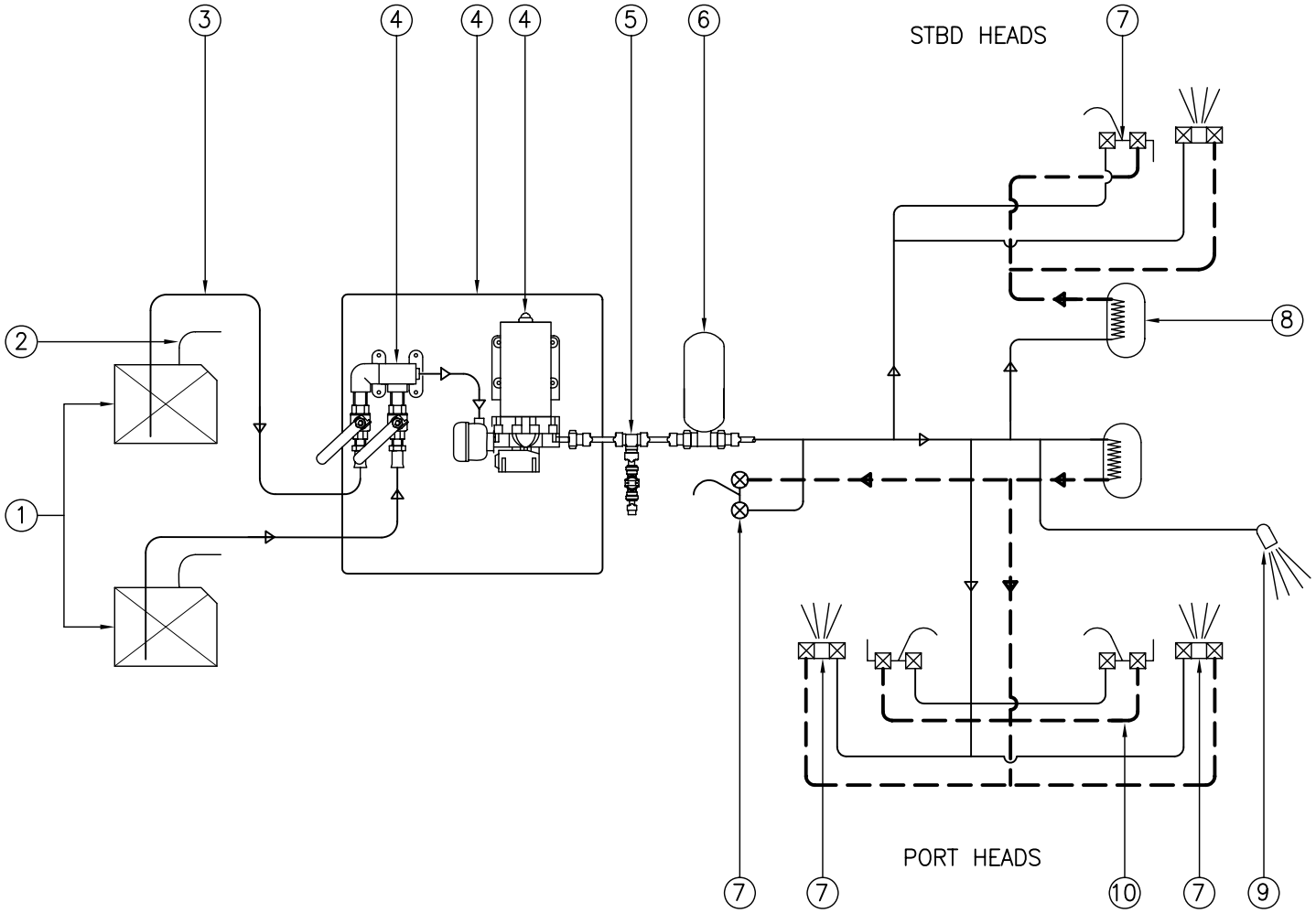
ROBERTSON & CAINE
CUSTOM YACHT PROJECTS

TITLE: L46

L46 FRESH WATER PLUMBING BOARD

SCALE:	DRAWN BY: G.C	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0107-0	DATE: 25/05/2006	A4
FILE NAME: L46 FRESH WATER PLUMBING BOARD		PAGE 1 of 1	

COLD WATER SUPPLY
HOT WATER SUPPLY



No.	DESCRIPTION	UOM	QTY
1	WATER TANK PLASTIC RIGID 390lt VETUS	EA	2
	TIE DOWN STRAPS WATER TANK L45	EA	4
	SELF TAPPER PAN HD 3.5x12mm S/STEEL	EA	5
	WATERTANK SUCTION PIPE S/S C/W GASKET	EA	2
	WATER TANK INSTALLATION KIT VETUS	EA	2
	U-BOLT M8x60mm S/S	EA	8
2	HOSE PVC REINFORCED 15mm	M	10m
	HOSE CLAMP S/STEEL GSS8 14-27mm	EA	52
3	WHALE HP PIPE 15mm BLUE	M	18m
	WHALE HP ADAPTOR	EA	16
	WHALE HP ADAPTOR	EA	3
	WHALE HP TEE	EA	12
	WHALE HP ELBOW	EA	7
4	WATER PUMP SUB-ASSEMBLY L43	EA	1
	INSET MALE ADAPTOR 15x1/2" S/STEEL	EA	4
	BALL VALVE BRONZE 1/2"FPT ABI S/STEEL HANDLE	EA	4
	WATERPUMP MANIIFOLD TYPE 1 S/STEEL ELECTRO POLISHED	EA	1
	PUMP JABSCO SENSOR PAR- MAX3 3.5GPM 12V #31600-0092	EA	1
	MNTB W/PMP L45 MOUNTING BOARD WATER PUMP L45	EA	1
	SELF TAPPER PAN HD 5.5x25mm S/STEEL	EA	6
	SELF TAPPER PAN HD 3.5x12mm S/STEEL	EA	4
5	BLEEDING VALVE JOHN GUEST	EA	1
	WHALE HP TEE	EA	1
	WHALE END STOP	EA	1
6	ACCUMILATOR TANK 1LT JABSCO #30573-0000	EA	1
	SELF TAPPER PAN HD 5.5x25mm S/STEEL	EA	4
	ACCUMILATOR TANK BRACKET L45 GRP	EA	1
7	FAUCET BARKA BASIN MIXER #MM6700	EA	5
8	HOT WTR CYL FORCE10 23LT 120V #40601 (6GAL)	EA	2
	SELF TAPPER PAN HD 3.5x12mm S/STEEL	EA	4
	WHALE HP HEATER CONNECTOR	EA	2
9	TRANSOM SHOWER COLD SSI (5/Pk)	EA	1
	SELF TAPPER CSK POZI 4.2x16mm S/STEEL	EA	4
10	WHALE HP PIPE 15mm RED	M	18m
	WHALE HP ADAPTOR BSPx15mm	EA	1
	WHALE HP ADAPTOR 1/2"FPTx 15mm	EA	1
	WHALE HP TEE 15mm	EA	1
	WHALE HP ELBOW 15mm	EA	1
11	FAUCET WHALE BASIN MIXER FAUCET/SHOWER HEAD	EA	4

NOTES:

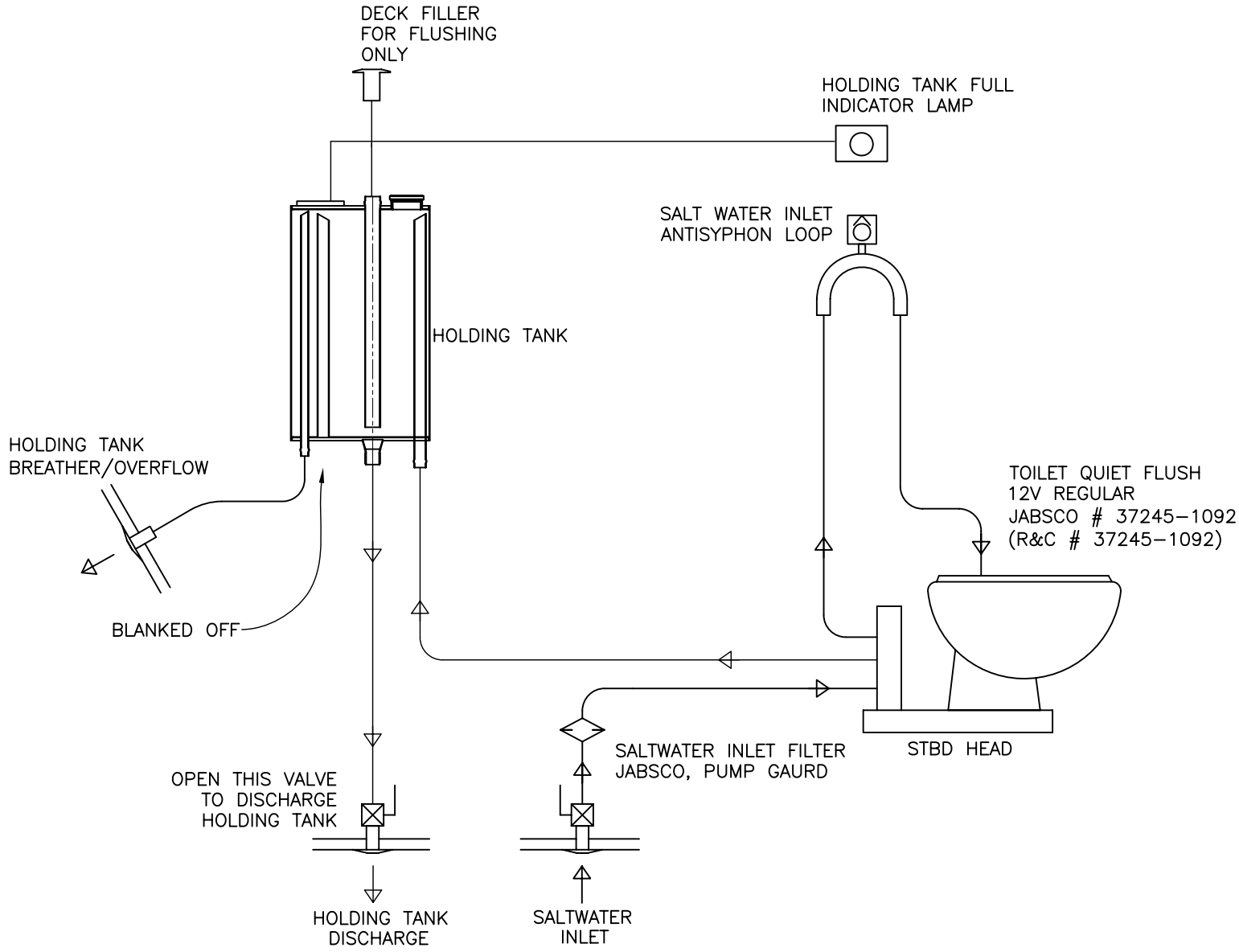
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE Custom yacht projects
P.O.Box 1115 Woodstock 7915
Telephone: (021) 447 3179
Fax: (021) 447 3924

ROBERTSON & CAINE
CUSTOM YACHT PROJECTS

TITLE: L46
L46 OV FRESH WATER SYSTEM

SCALE:	DRAWN BY: G.C	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0110-0	DATE: 10/01/2006	A4
FILE NAME: L46 OV FRESH WATER SYSTEM		PAGE 1 of 1	



NOTES:

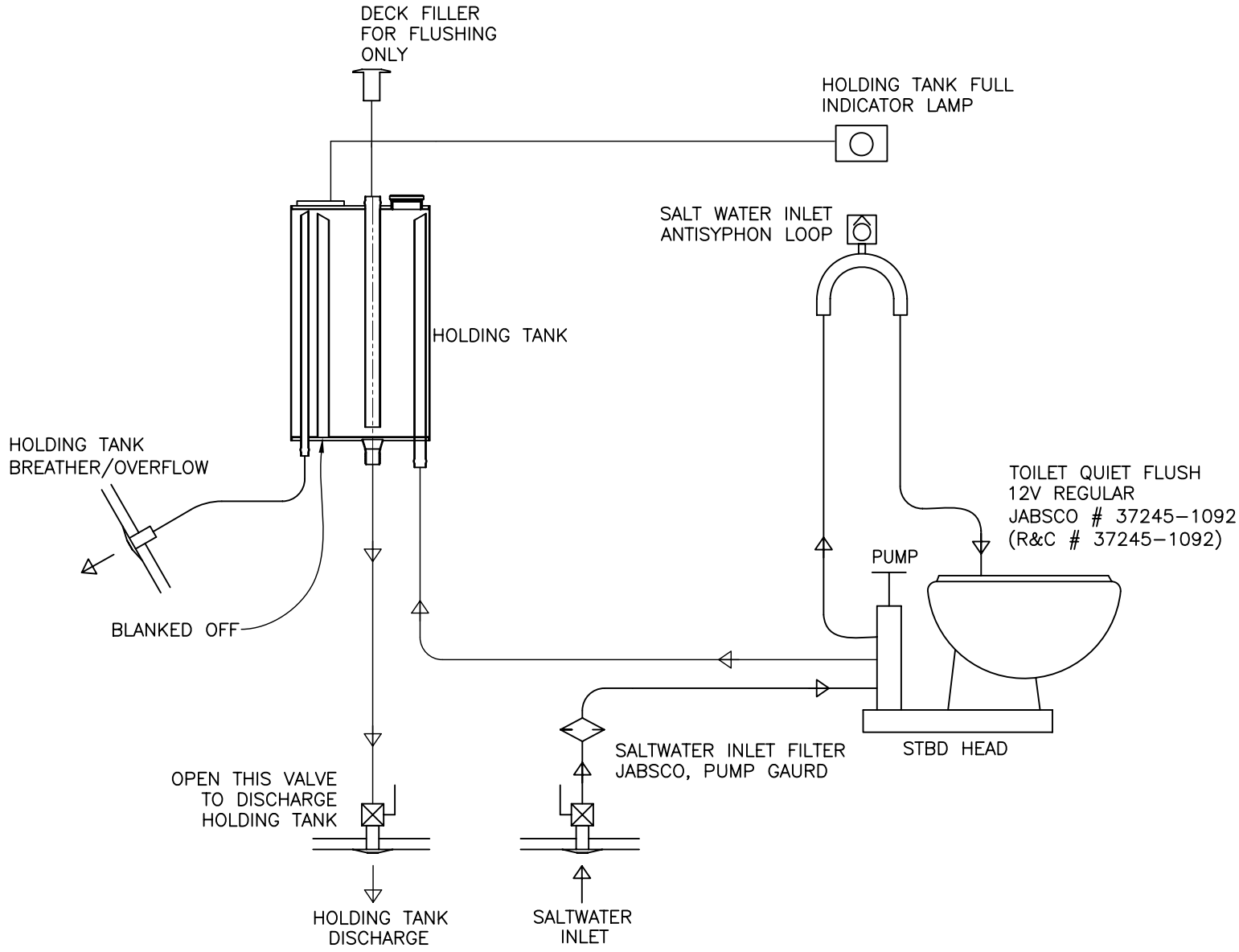
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 OV TOILET SCHEMATIC ELECTRICAL

SCALE:	DRAWN BY: ARO	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0112-0	DATE: 27/06/2006	A4
FILE NAME: L46 OV Toilet Schematic		PAGE 01 of 02	



NOTES:

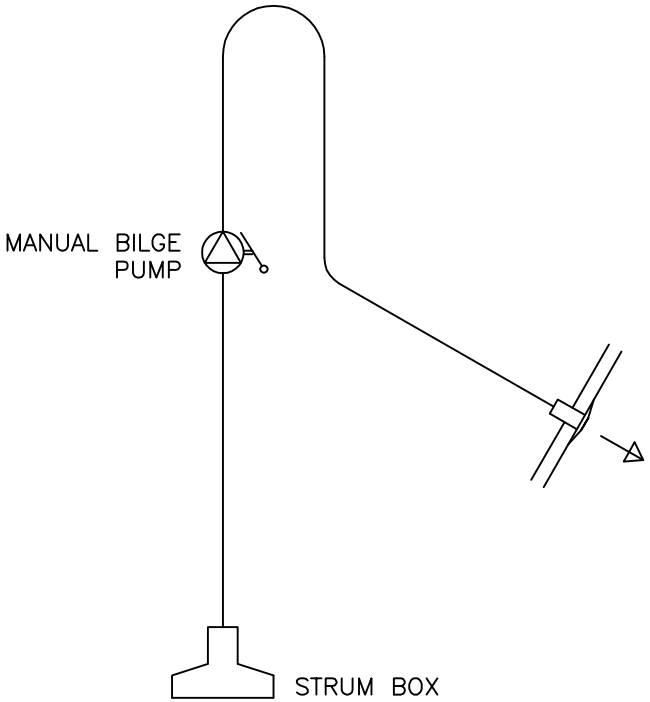
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

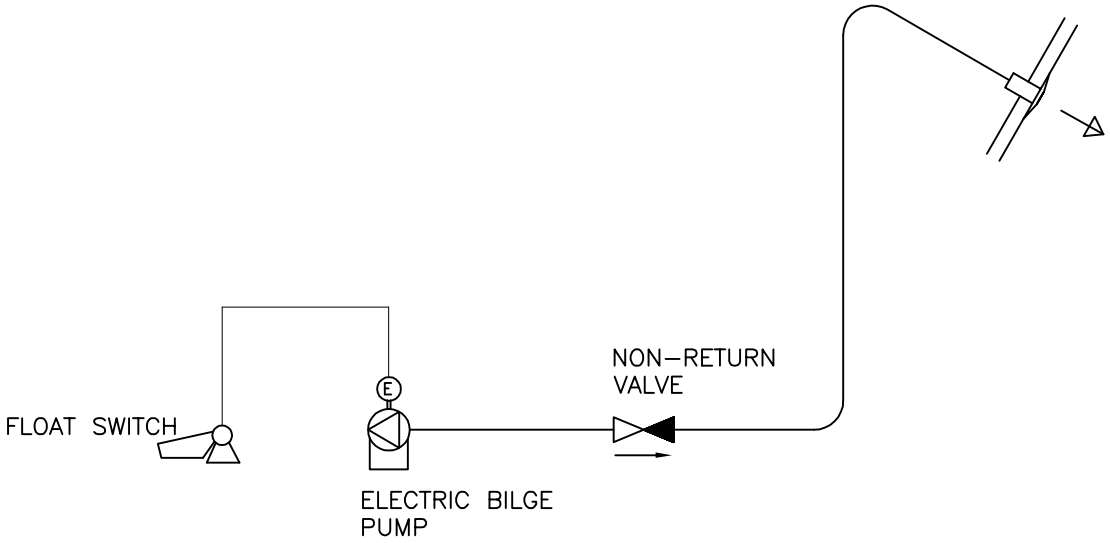
ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 OV TOILET SCHEMATIC MANUAL

SCALE:	DRAWN BY: ARO	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0113-0	DATE: 27/06/2006	A4
FILE NAME: L46 OV Toilet Schematic		PAGE 02 of 02	



MANUAL BILGE PUMP SYSTEM
(PORT & STBD)



ELECTRIC BILGE PUMP– IN ENGINE
ROOM & KEEL SUMP (PORT & STBD)

NOTES:

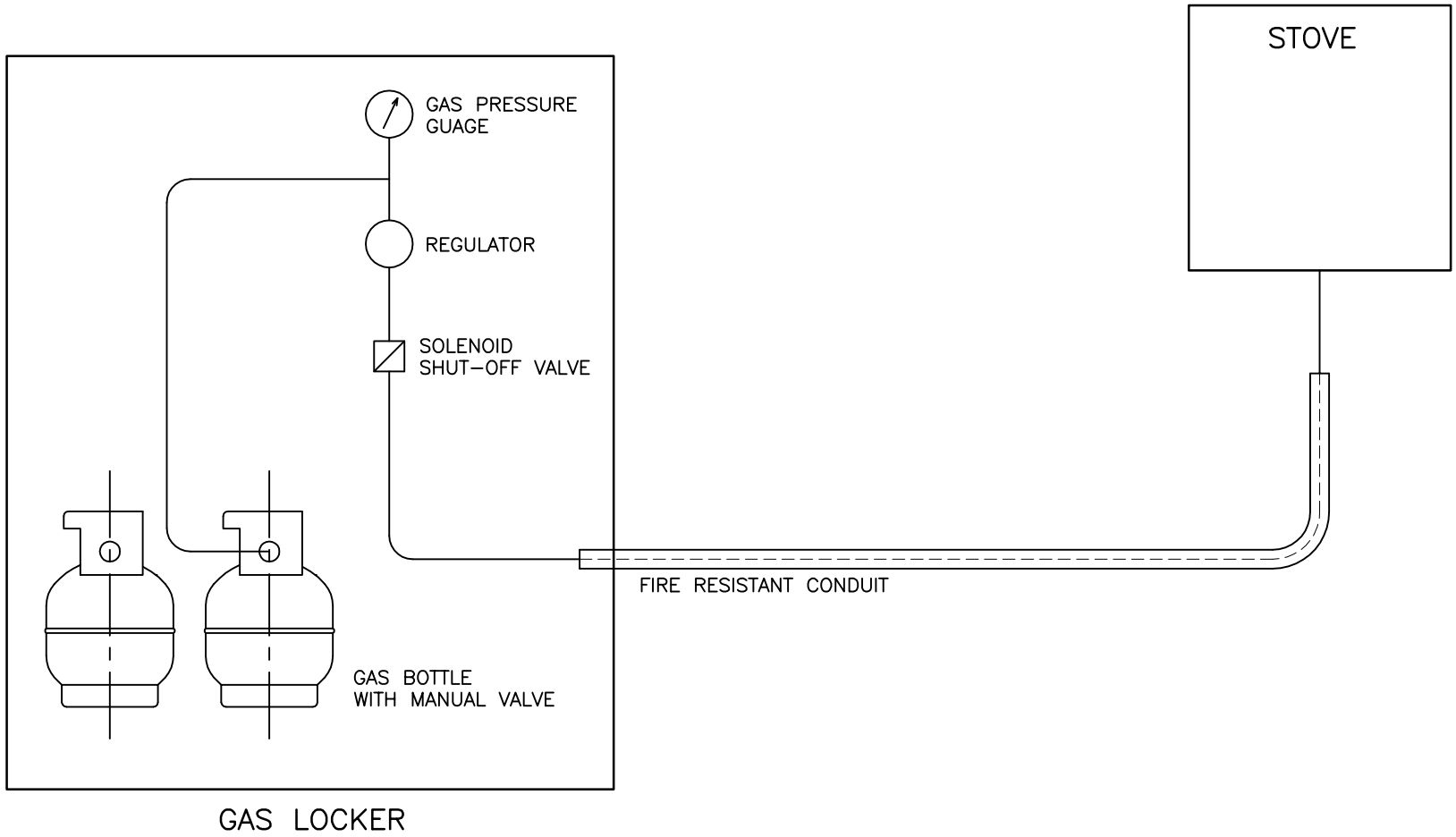
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE international Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 BILGE SYSTEM SCHEMATIC

SCALE:	DRAWN BY: ARO	APPROVED BY:	
NTS	DWG. NO: L46 STD–FA–0096–0	DATE: 21/06/2006	A4
FILE NAME: L46 Bilge System Schematic		PAGE 01 of 01	



NOTES:

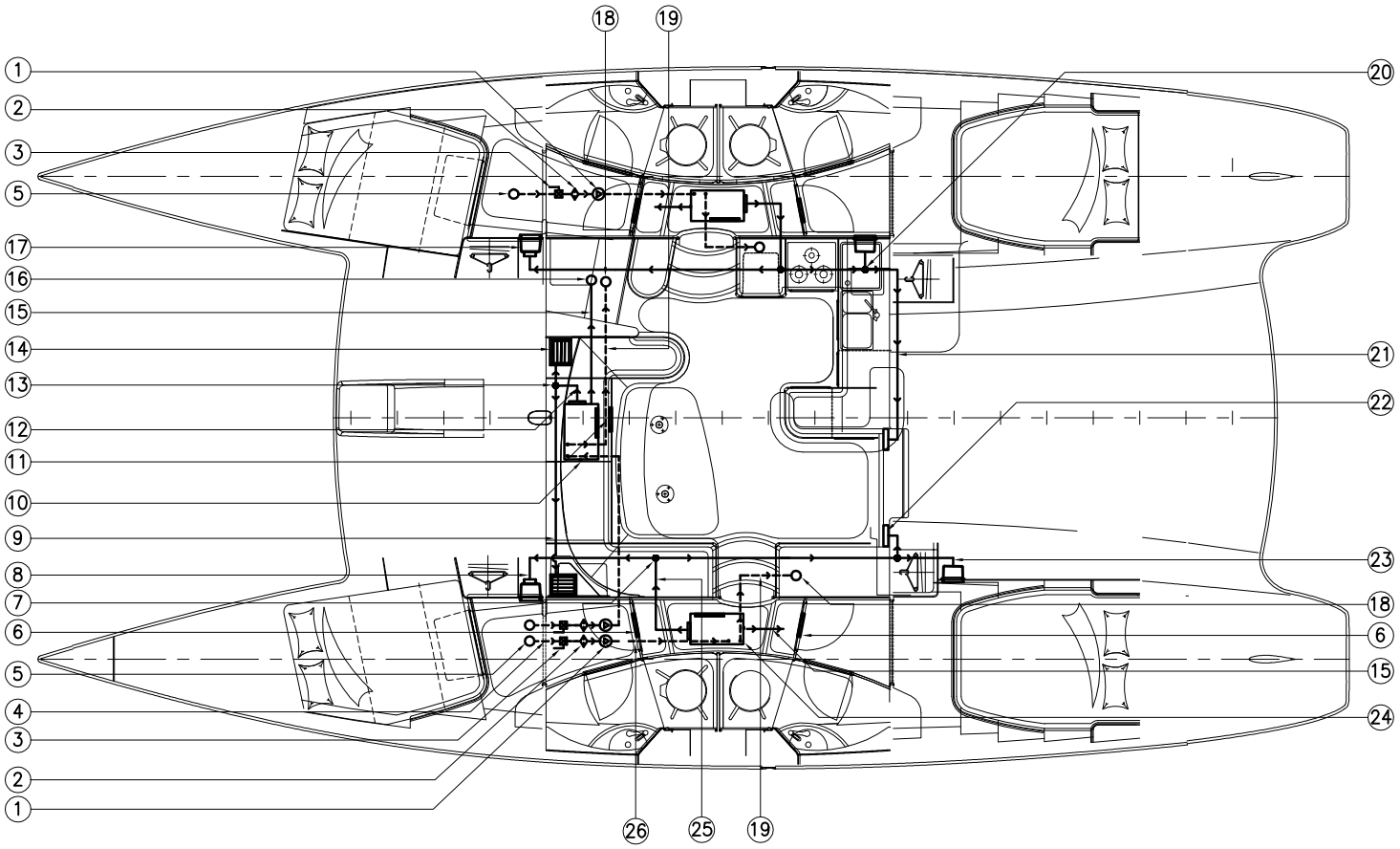
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 GAS SYSTEM SCHEMATIC

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD–FA–0076–0	DATE: 27/06/2006	A4
FILE NAME: L46 Gas System Schematic		PAGE 01 of 01	



No.	DESCRIPTION	UOM	QTY	STOCK CODE
1	SEAWATER PUMP 115V 50/60HZ CRUISAIR #PMA500	EA	3	CR PMA500
	ADAPTOR 25MMHOSE-3/4"MALE THRD	EA	3	ADPTR 25HS3/4BS
	SOCKET MA2 1/2" PVC FEMALE THREADED	EA	3	SCKT PVC FT 1/2
	INSERT MALE ADAPTER 15MM NYLON	EA	3	INSMLADPT15
2	WATER STRAINER INLINE 1" GROCO	EA	3	WTRSTR WSB1000
	INSERT MALE ADAPTER 25MM NYLON	EA	6	INSMLADPT25
3	BALL VALVE BRONZE 25MM FPT ENOL BASIC	EA	3	VLV BLL BZ 25F
	INSERT MALE ELBOW 25MM	EA	3	INSMLELB25
4	HOSE PVC REINFORCED 25MM	M	3	HSPVC25
5	SKN FTNG INTAKE STRAINER 1" BRASS MAESTRINI #0050	EA	3	SKN FTNG STR1
	ELBOW BRASS MALE/FEMALE 1" THREADED (VETUS #ELBMF1)	EA	3	ELB BS MF1
6	CABIN RA 14X 6 CHERRY RETURN AIR GRILL WITHOUT DAMPER	EA	4	MS RAC146SP
7	HOSE T 6IN INLET - 5,5 OUTLETS	EA	2	MS HT655
8	5IN X 25FT GK-M HOSE INSULATED DUCTING TO FWD CABIN	EA	1	MS DV-GKM5
9	6IN X 25FT GK-M HOSE INSULATED TO SALOON OUTLETS	EA	1	MS DV-GKM6
10	SALOON AIRCON UNIT 50/60HZ 16,000BTU CRUISAIR	EA	1	CR SXR16
11	SALOON RA 16x9 CHERRY RETURN AIR GRILL WITHOUT DAMPER	EA	1	MS RAC169SP
12	HOSE T 7IN INLET - 6,6 OUTLETS	EA	1	MS HT766
13	7IN X 25FT GK-M HOSE INSULATED FROM AIRCON UNIT	EA	1	MS DV-GKM7
14	FWD SALOON 10X8 CHERRY 4 WAY SUPPLY GRILL	EA	2	MS VHC108SP
	10X8 TRANSITION BOX	EA	2	MS TB108
	6IN OVAL HOSE RING	EA	2	MS HR60
15	CONDENSATE DISCHARGE HOSE PVC REINFORCED 15MM	M	10	HSPVC15
16	CONDENSATE DISCHARGE ELBOW	EA	1	ELB E39621
	SKIN FITTING SCOOP 1"BSP	EA	1	SKN FTNG E39646
17	CABIN SUPPLY AIR GRILL 10X8 WITH DAMPER	EA	4	MS VMLC108SP
	10X8 TRANSITION BOX	EA	4	MS TB108
	5IN OVAL HOSE RING	EA	4	MS HR50
18	COOLING WATER DISCHARGE SKIN FITTING NYLON 16MM INS	EA	3	SKN FTNG NY 16I
	INSERT FEMALE ELBOW 15MM NYLON	EA	3	INSFMELB15
19	COOLING WATER DISCHARGE HOSE PVC REINFORCED 15MM	M	10	HSPVC15
20	HOSE Y 5IN INLET - 5,3 OUTLETS	EA	2	MS HY553
21	DURA-VENT 3IN X 25FT GK-M HOSE	EA	1	MS DV-GKM3
22	CABIN DIVERTER GRILL 8x4 WITHOUT DAMPER	EA	2	MS VHC84SP
	8X4 TRANSITION BOX	EA	2	MS TB84
	HOSE RING, ROUND 3IN	EA	2	MS HR3
23	5IN X 25FT GK-M HOSE INSULATED DUCTING TO AFT CABIN	EA	2	MS DV-GKM5
24	CABIN AIRCON UNIT 50/60HZ 12,000BTU CRUISAIR	EA	2	CR SXR12
25	6IN X 25FT GK-M HOSE INSULATED FROM AIRCON UNIT	EA	1	MS DV-GKM6
26	COOLING WATER HOSE PVC REINFORCED 15MM FROM PUMP	M	10	HSPVC15

NOTES:

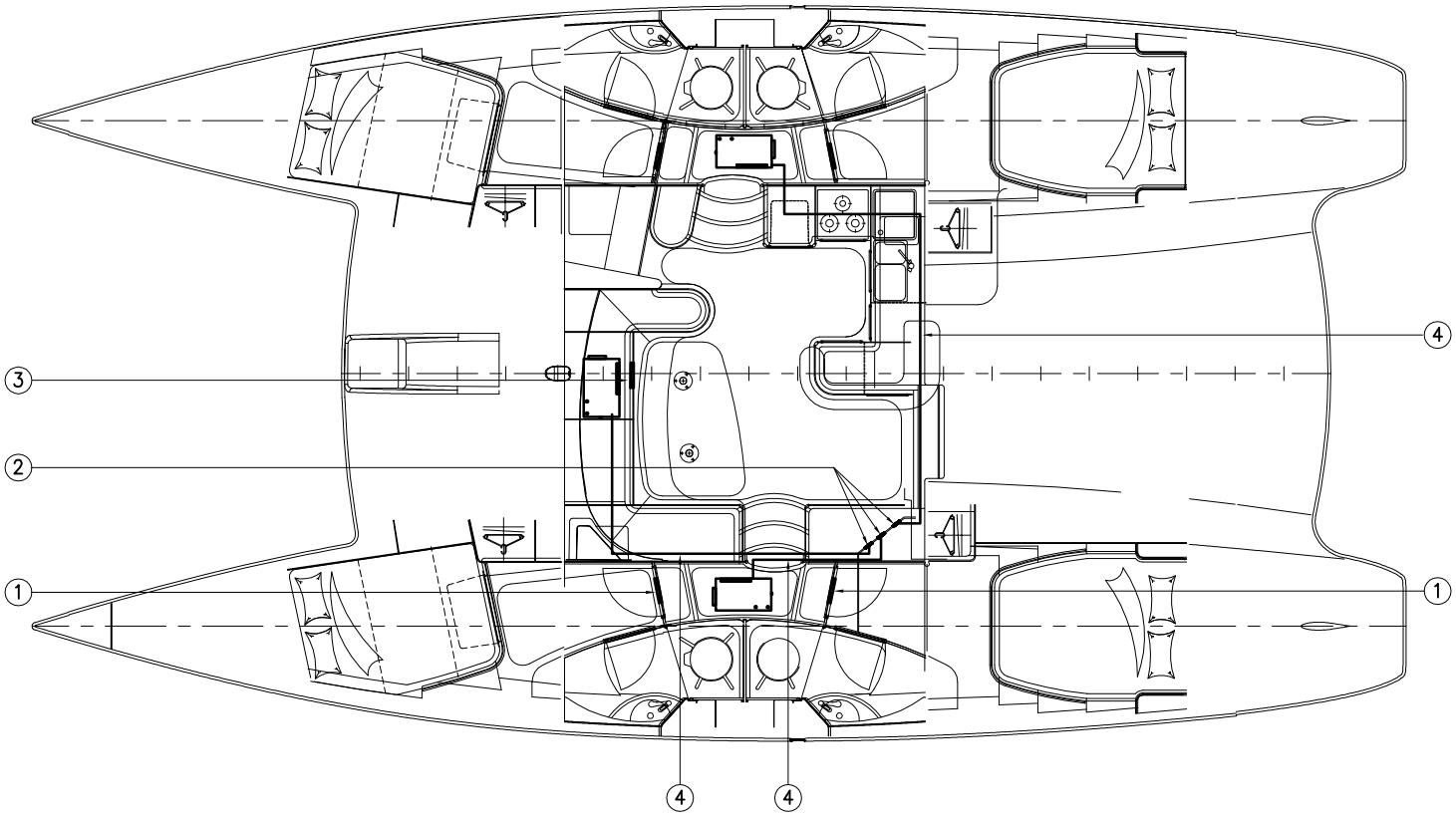
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE Custom Yacht projects
P.O.Box 1115 Woodstock 7915
Telephone: (021) 447 3179
Fax: (021) 447 3924

ROBERTSON & CAINE
CUSTOM YACHT PROJECTS

TITLE: L46
AIRCON INSTALLATION

SCALE:	DRAWN BY: G.C	APPROVED BY:	
NTS	DWG. NO: L46 STD-PA-0006	DATE: 12/01/2006	A4
FILE NAME: L46 AIRCON INSTALLATION		PAGE 1 of 2	



No.	DESCRIPTION	UOM	QTY	STOCK CODE
1	CABIN RA 14X 6 CHERRY RETURN AIR GRILL WITHOUT DAMPER	EA	4	MS RAC146SP
2	AIRCON DISPLAYS SMXIR BLACK 3/4 DOOR	EA	3	CR SMXIRB
3	SALOON RA 16x9 CHERRY RETURN AIR GRILL WITHOUT DAMPER	EA	1	MS RAC169SP
4	INTERCONNECTING CABLE (MULTI MARINE TO SUPPLY)			

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE Custom yacht projects
P.O.Box 1115 Woodstock 7915
Telephone: (021) 447 3179
Fax: (021) 447 3924

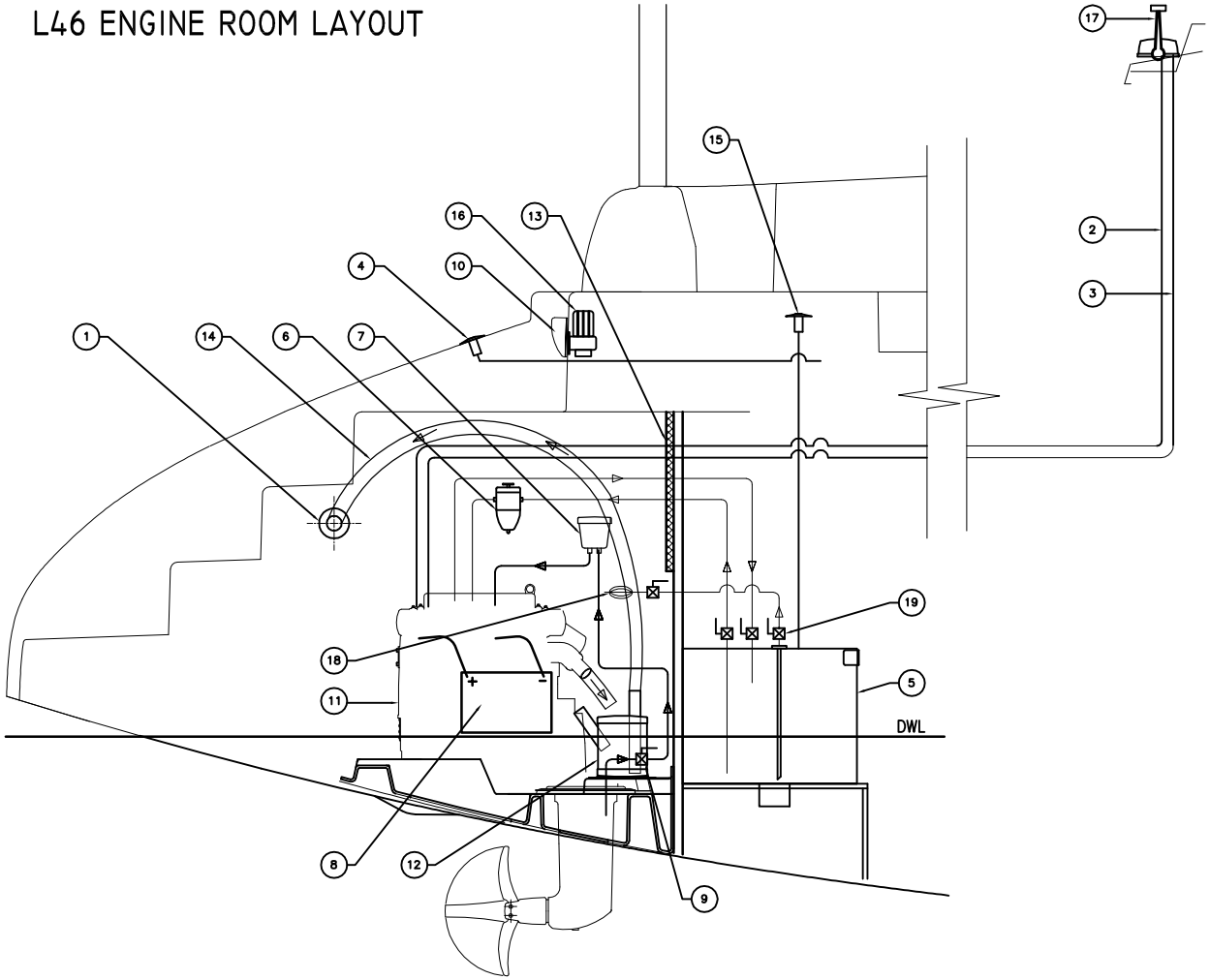
ROBERTSON & CAINE
CUSTOM YACHT PROJECTS

TITLE: L46
AIRCON INSTALLATION

SCALE:	DRAWN BY: G.C	APPROVED BY:	
NTS	DWG. NO: L46 STD-PA-0006	DATE: 12/01/2006	A4

FILE NAME: L46 AIRCON INSTALLATION

L46 ENGINE ROOM LAYOUT



No.	DESCRIPTION	UOM	QTY	STOCK CODE
1	EXHAUST OUTLET SKIN FITTING SKIN FITTING S/S	EA	2	EXST SKN L38
2	GEAR SHIFT CABLE MORSE CONTROL CABLE 33C	M	2	MRS CBL
3	THROTTLE CABLE MORSE CONTROL CABLE 33C	M	2	MRS CBL
4	FUEL TANK BREATHER SKIN FITTING NYLON 16MM INS	EA	2	SKN FTNG NY 161
5	FUEL TANK- 350lt (92.4 gal) ALUM 200LT L40	EA	2	TNK FL L40
6	RACOR FUEL FILTER , FUEL FLTR/WTR SEPTR RACOR	EA	2	SLND VLV TR8.2
7	WATER FILTER, WATER STRAINER VETUS FTR330/25	EA	2	WTRSTR VTS3325
8	ENGINE BATTERY, BATTERY GEL-TECH 12V 95AH	EA	2	BAT GEL 12V 95A
9	SALT WATER SHUT-OFF VALVE, BALL VALVE BRONZE 1 IN FPT	EA	2	VLV BLL BZS25F
10	VENTILATOR COWL	EA	2	SKN FTNG BZ 25
11	ENGINE, VOLVO PENTA MD 2040-MS 25SR	EA	2	COOKERF10 60351
12	EXHAUST WATER TRAP, CENTEK WATER TRAP	EA	2	CENTEK WATER TRAP
13	INSULATED ENGINE ROOM, SOUND SEAL	EA	2	SND SEAL
14	EXHAUST HOSE, HOSE EXHAUST VETUS 45MM x 5M	EA	2	VETUS
15	FUEL DECK FILLER	EA	2	AMIOT #67012
16	ENGINE ROOM BLOWER 12V, PLASTIMO #16274	EA	2	BLWR PL 12
17	MT-3 MORSE CONTROL, MORSE CONTROL TWIN LEVER MT-3	EA	2	MRS LVR TWINMT3
18	PUMP BULB INLINE, PUMP BULB INLINE 8MM / 5/16" HOSE	EA	2	TEMPO #180140(-371955)
19	BALL VALVE BRONZE 3/8IN FPT,ABI #1761BR WITH S/S HANDLE	EA	8	VLV BLL BZS10F

NOTES:

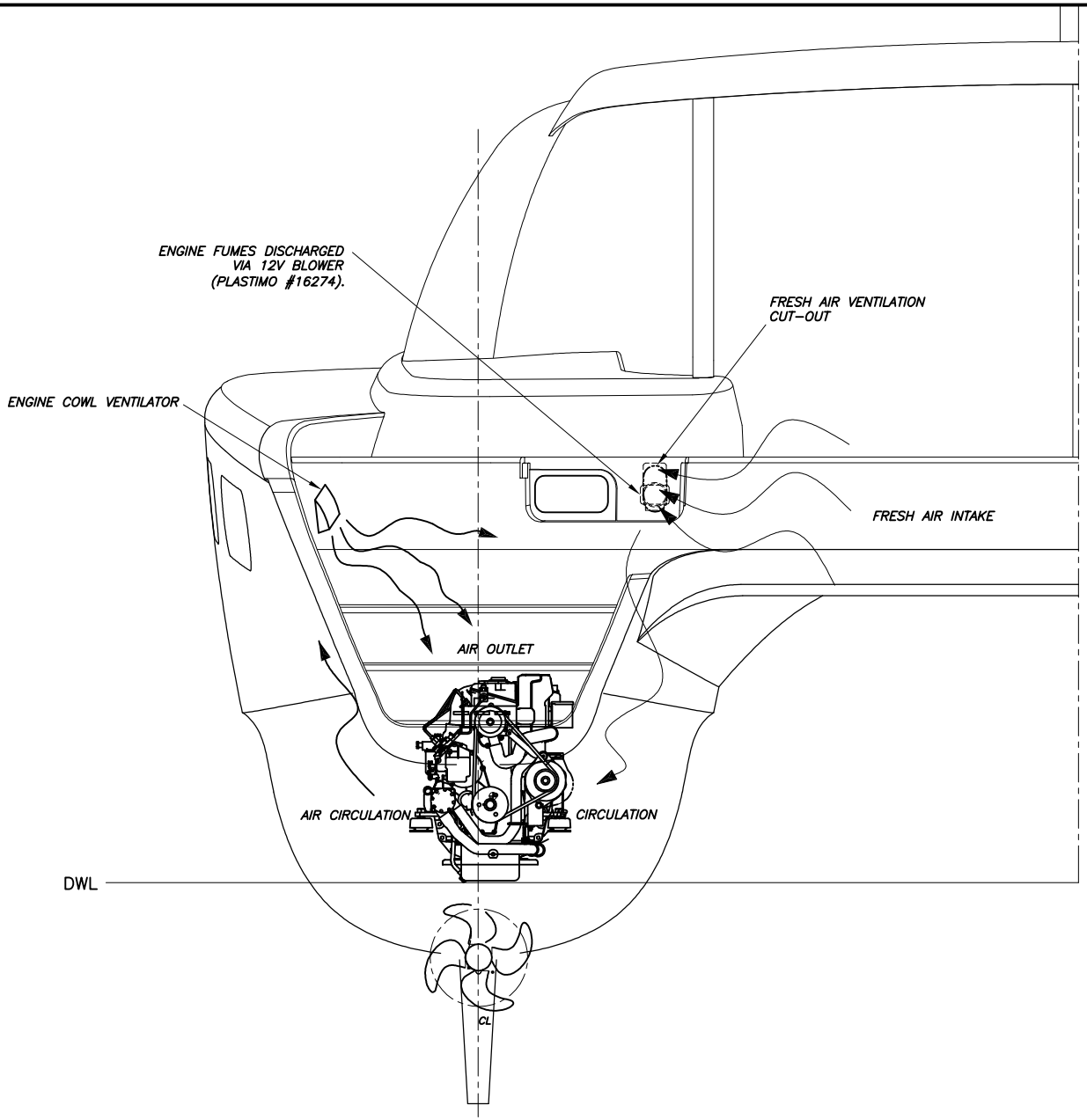
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 ENGINE ROOM LAYOUT

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0057-0	DATE: 20/06/2006	A4
FILE NAME: L46 Engine Room Layout		PAGE 01 of 01	



PORT ENGINE VENTALTION SHOWN
STBD ENGINE VENTILATION MIRROR IMAGE

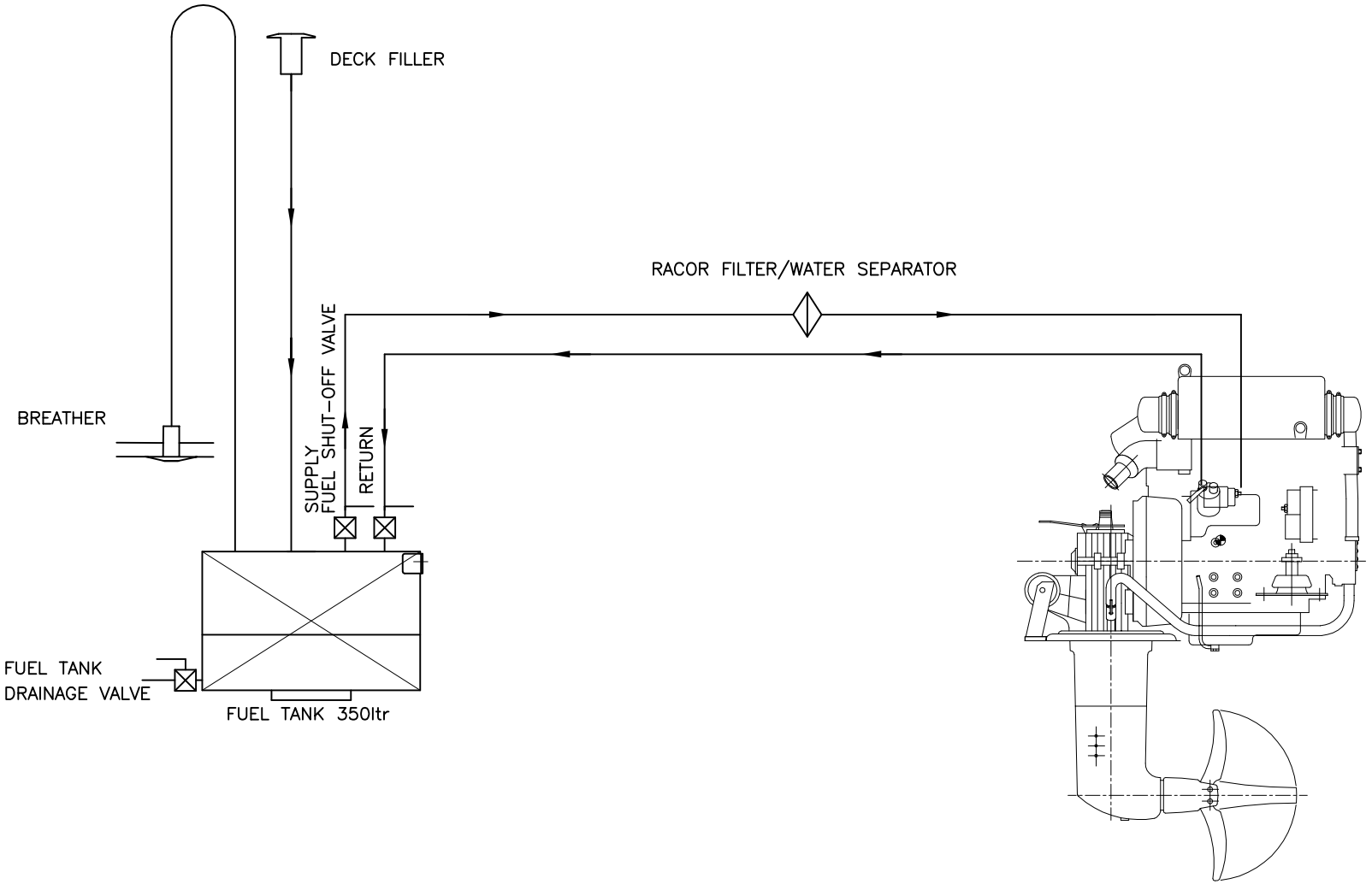
NOTES:

ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46			
L46 ENGINE VENTILATION			
SCALE: 1:20	DRAWN BY: A. S	APPROVED BY:	
	DWG. NO: L46 STD-FA-0066-0	DATE: 26/06/2006	A4
FILE NAME: L46 Engine Ventilation		PAGE 01 of 01	



NOTES:

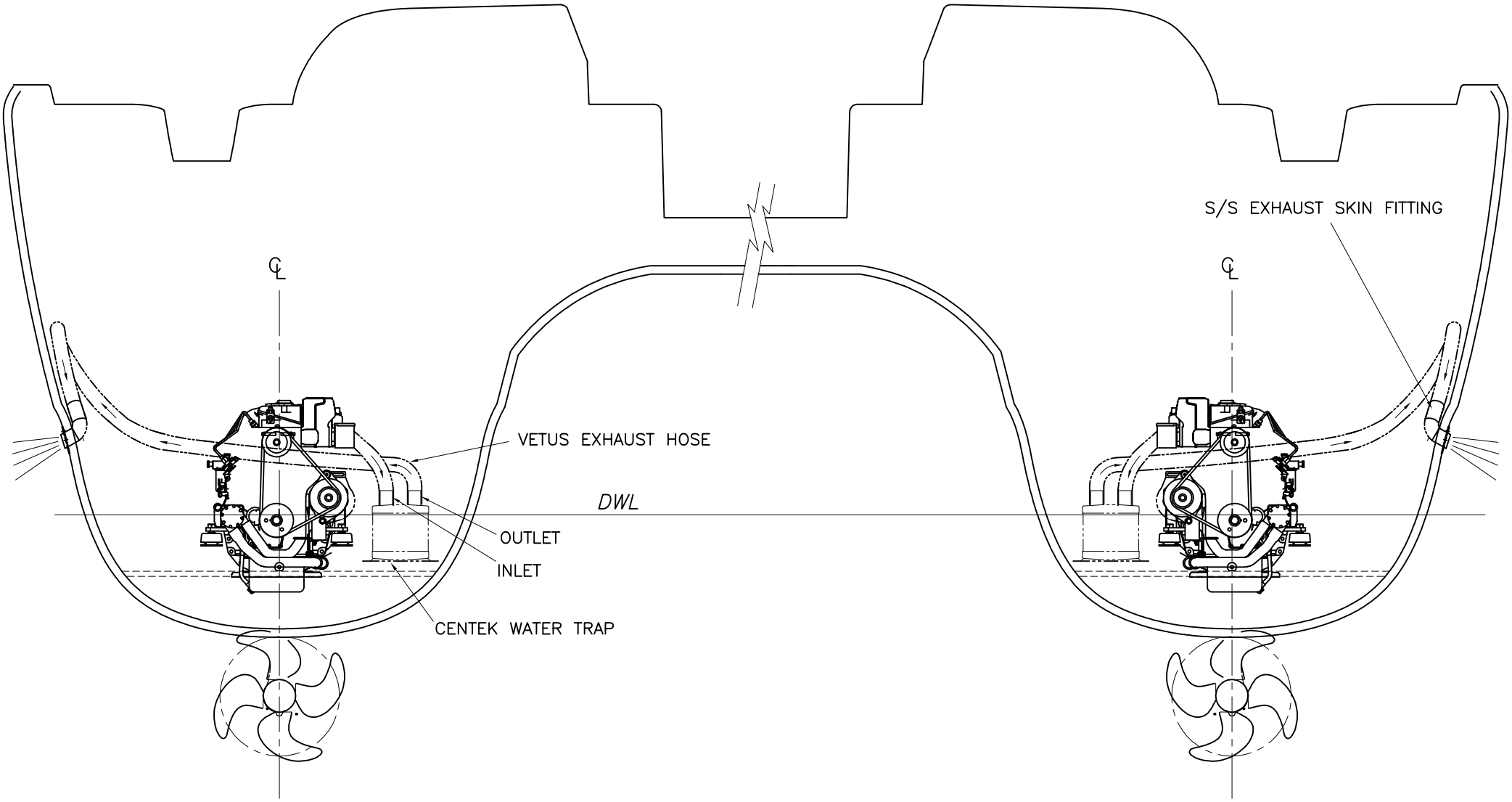
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
FUEL SYSTEM SCHEMATIC

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0075-0	DATE: 27/06/2006	A4
FILE NAME: L46 Fuel System Schematic		PAGE 01 of 01	



NOTES:

ALT:	DATE/SIGN	MODIFICATION:

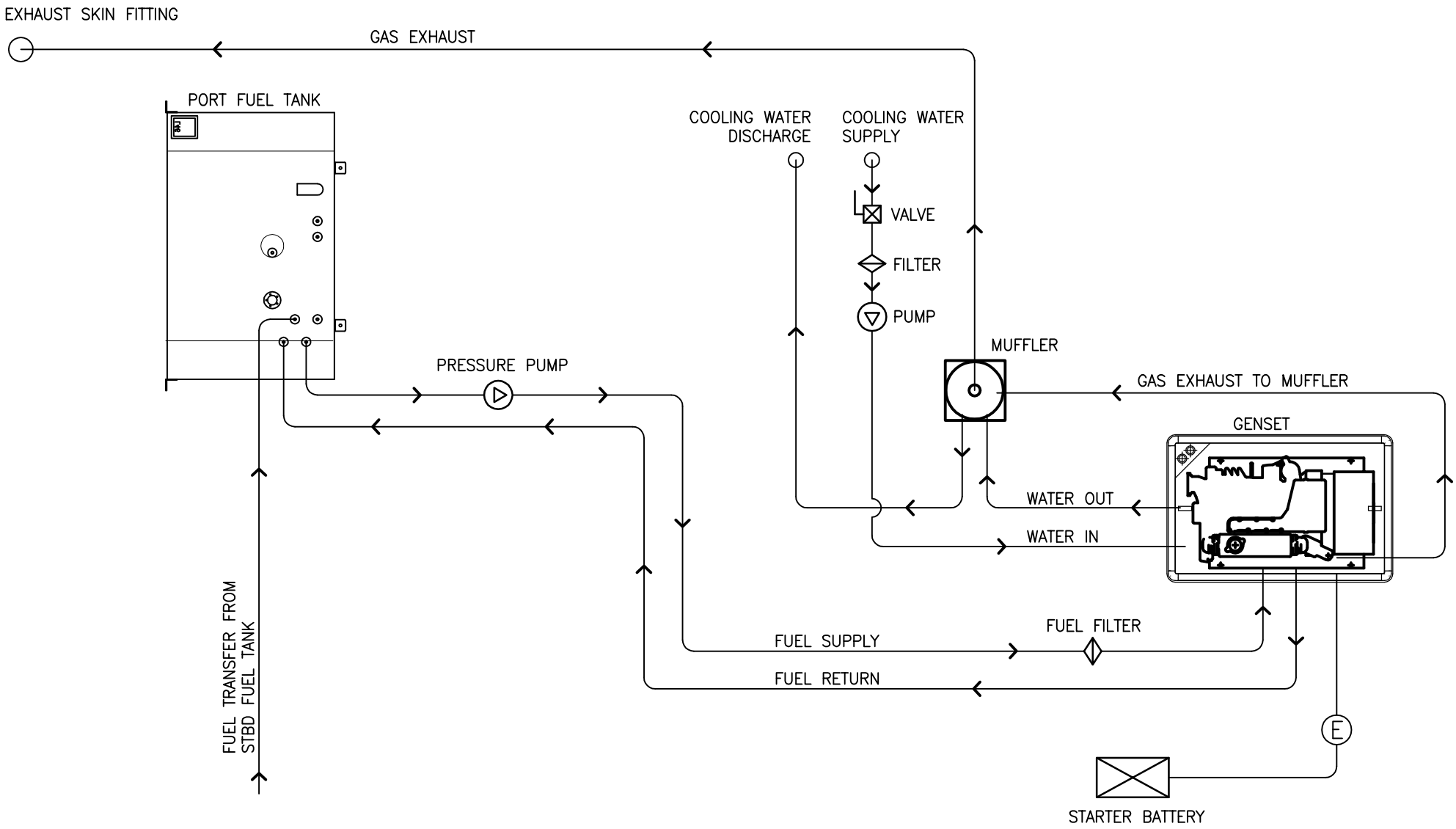
ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46 STD

L46 ENGINE EXHAUST SYSTEM

SCALE:	DRAWN BY: ARO	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0068-0	DATE: 27/06/06	A3
FILE NAME: L46 Engine Exhaust System		PAGE 01 of 01	



NOTES:

ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts.
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

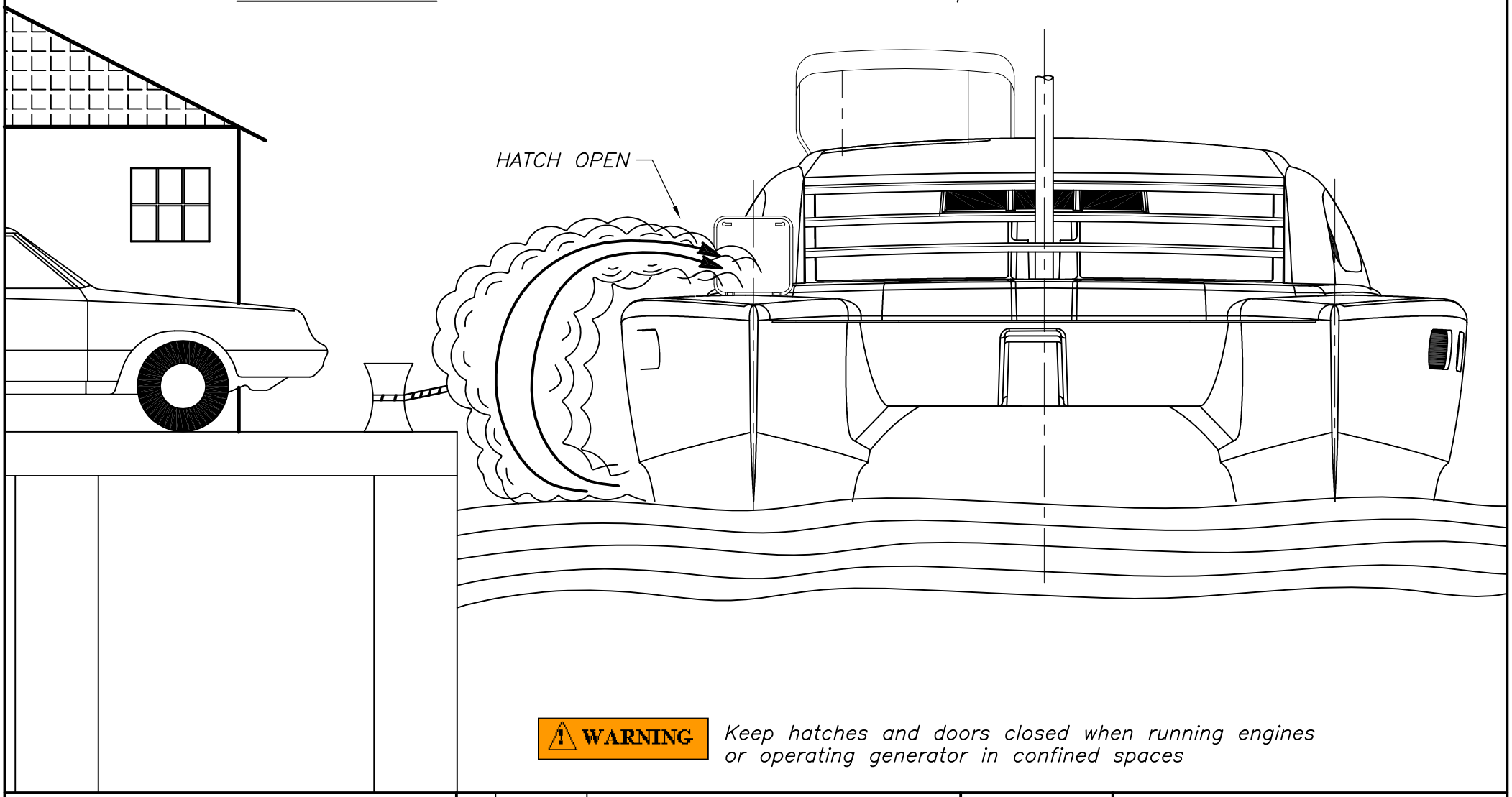
ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 GENSET SCHEMATIC

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0087-0	DATE: 27/06/2006	A4

FILE NAME: L46 Genset Schematic

CARBON MONOXIDE *The Effects of sea walls and other confined spaces*



⚠ WARNING *Keep hatches and doors closed when running engines or operating generator in confined spaces*

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

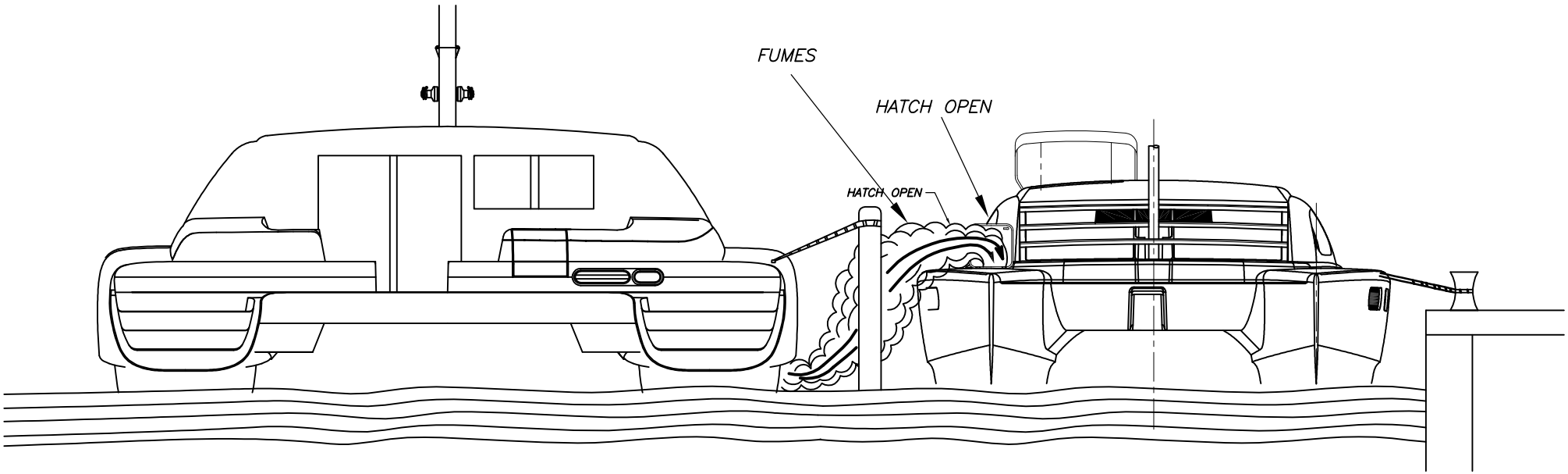
ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 CARBON MONOXIDE WARNING

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0053-0	DATE: 19/06/2006	A4

FILE NAME: L46 Carbon Monoxide Expulsion

CARBON MONOXIDE The Effects of Boats moored along side



WARNING Boats moored together can affect each other

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

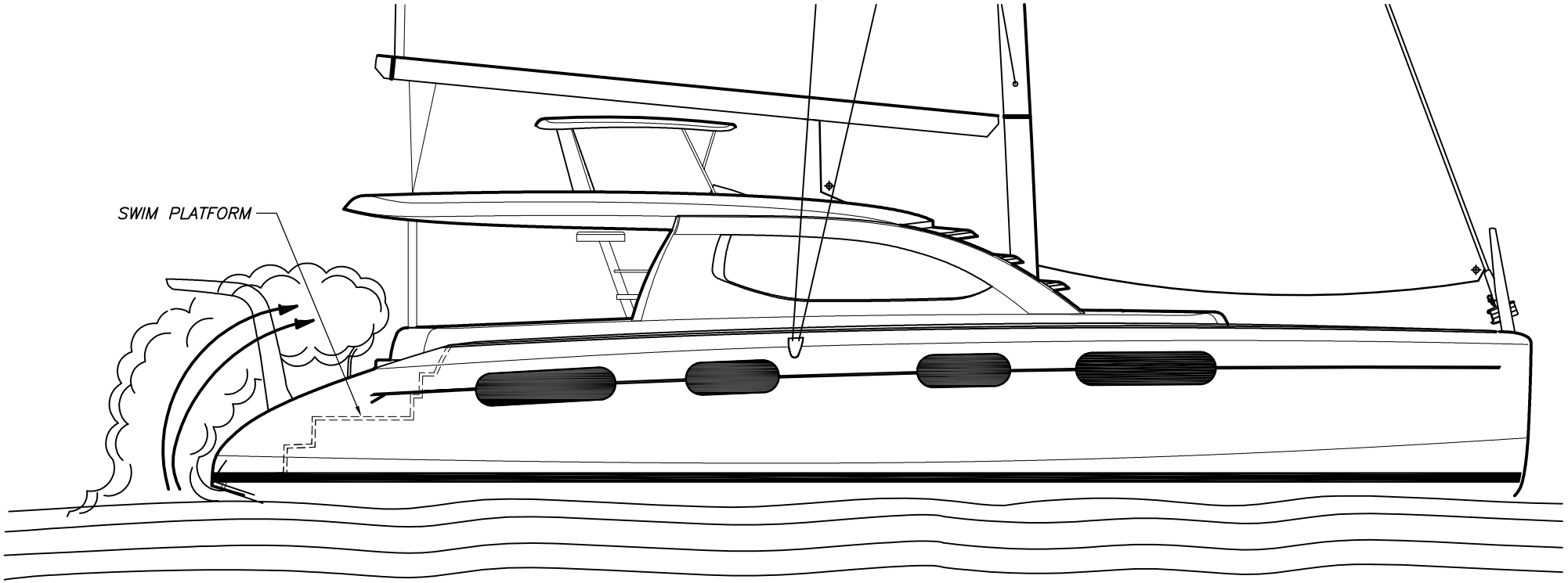
ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 CARBON MONOXIDE WARNING

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0053-0	DATE: 19/06/2006	A4

FILE NAME: L46 Carbon Monoxide Expulsion

CARBON MONOXIDE Accumulation of Exhaust Gases at the Swim Platform



⚠ WARNING *Airflow at Transom under certain conditions my enter cockpit area*

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

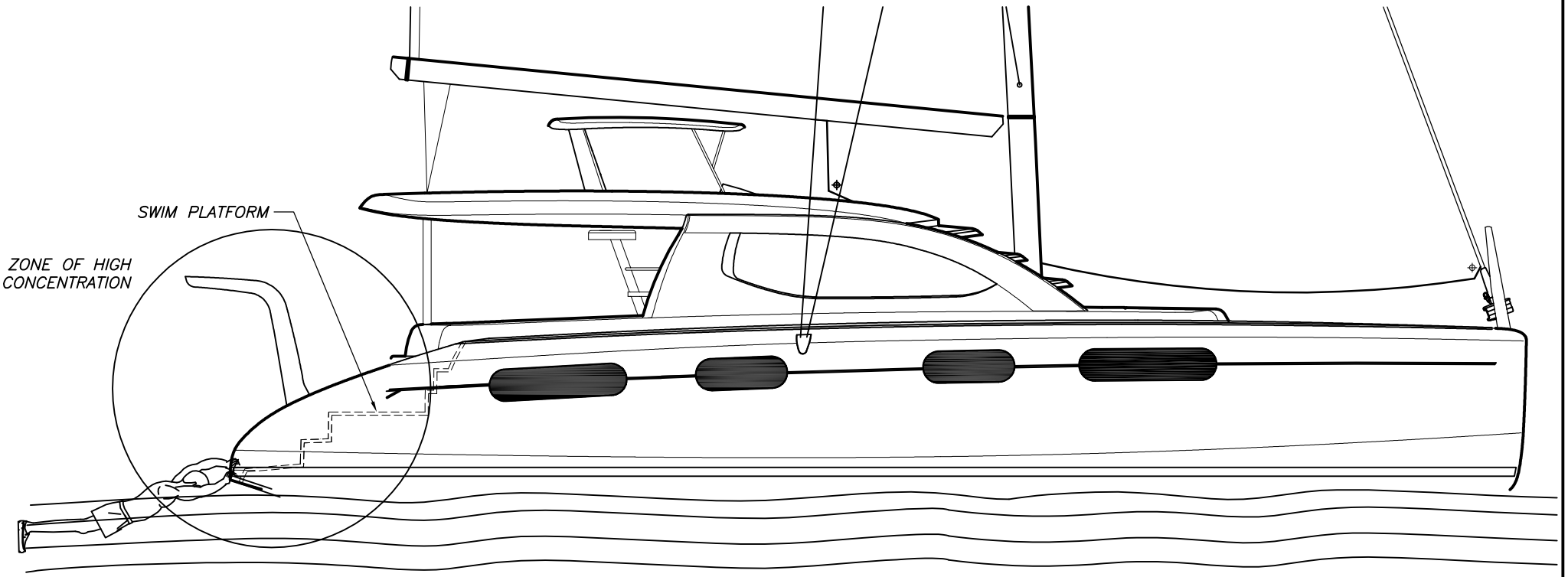
ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 CARBON MONOXIDE WARNING

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0053-0	DATE: 19/06/2006	A4

FILE NAME: L46 Carbon Monoxide Expulsion

CARBON MONOXIDE Dangerous Activity Area



⚠ WARNING *Do not tow people from transom when under power*

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

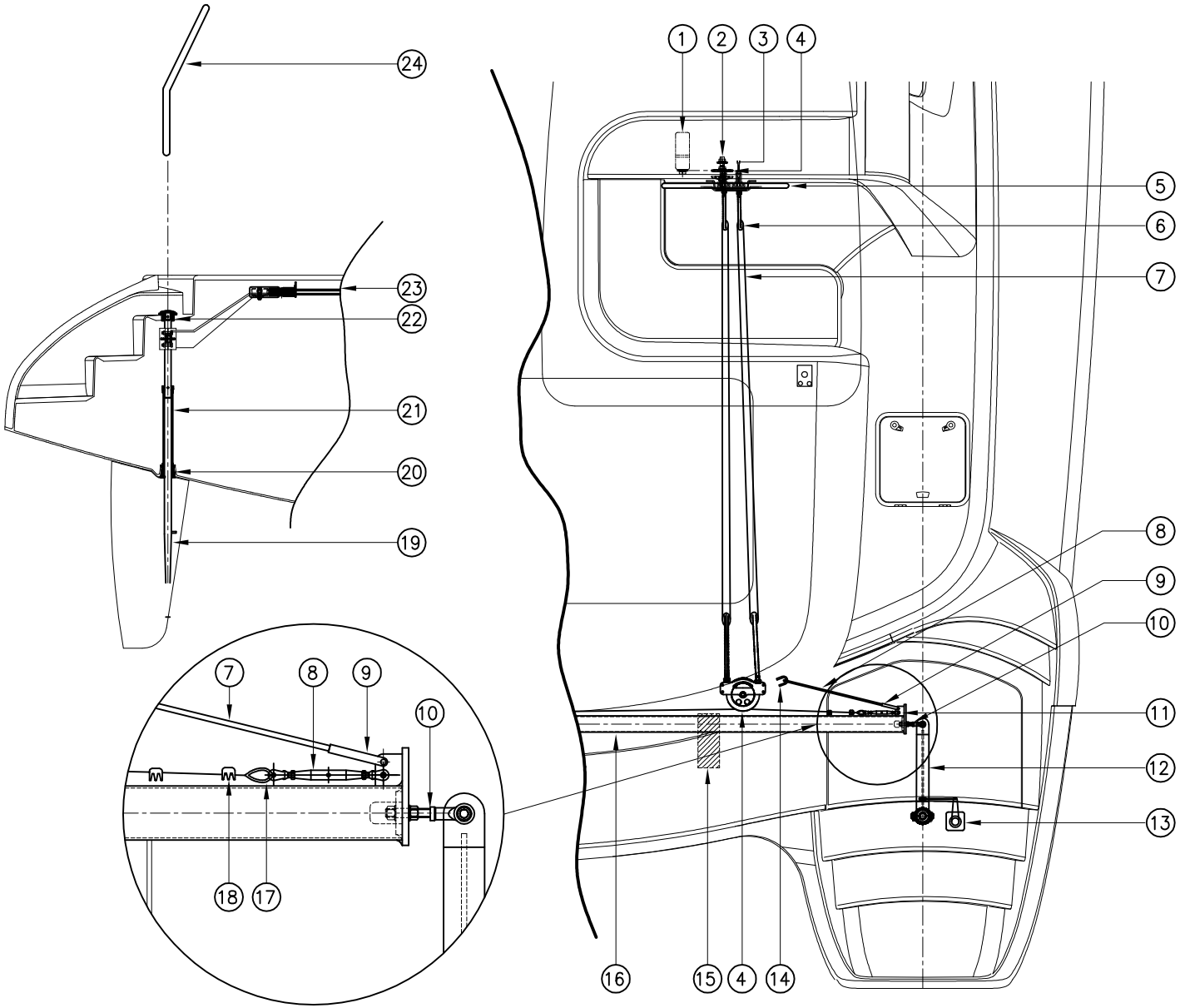
ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 CARBON MONOXIDE WARNING

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0053-0	DATE: 19/06/2006	A4

FILE NAME: L46 Carbon Monoxide Expulsion



No.	DESCRIPTION	UOM	QTY	STOCK CODE
1	AUTO PILOT ROT DRIVE TYPE 2 (PVT BOAT) 12V	EA	1	AHPLT DRR0212PB
2	B/HEAD STEERER W/EXT. SHAFT 15T SPROCKET + BRAKE	EA	1	ED 420T-2-15
3	UPRIGHT CONDUIT IDLER EDSON	EA	4	ED 888-6
	BOLT HEX M8x75mm S/STEEL	EA	16	BTH08x75S
	NUT NYLOC M10 S/STEEL	EA	16	NTN10S
	WASHER FLAT M10 S/STEEL	EA	16	WSF10S
	WASHER PENNY M10x2mm S/STEEL	EA	4	WSP10S
4	ROLLER CHAIN 5/8" 1.2m S/STEEL MANEX	EA	1	RLR CHN 5/8" 1.2
	CHAIN MASTER LINK SET 5/8"	EA	2	CHN MSTRLNK 5/8
5	DISHED DESTROYER WHEEL 32" EDSON	EA	1	ED 647-32-5
	NUT 19UNF WHITLOCK AFHT10 MANEX	EA	6	NTH19S AFHT10
6	CONDIUT END FITTINGS EDSON	EA	4	ED 854-250
7	STEERING CONDUIT (LENGHT = 8ft) EDSON	EA	1	ED 853-L45
8	STEERING STOP STROPS L46	PR	1	STRNG STPSTRL45
9	SHACKLE S/S BOW 6.4mm	EA	2	SHCKL SB6.4
10	ROSE JOINT PIN 16mm MANEX	EA	2	RSJNTPN 16
	ROSE JOINT WHITLOCK AFHT10 MANEX	EA	1	RSJNT AFHT10
	THREADED ROD 316 S/STEEL 5/8" UNF 125mm LONG	EA	1	THRDRD 5/8x125
11	TURNBUCKLE FORK-FORK 10mm KINGSNAPS	EA	2	TRNBCKL KFF10
12	TILLER AL ANODISED L46	EA	2	
	BOLT HEX M10x40mm S/STEEL	EA	8	BTH10x45S
	NUT NYLOC M10 S/STEEL	EA	8	NTN10S
	WASHER FLAT M10 S/STEEL	EA	16	WSF10S
	BOLT HEX M12x100mm S/STEEL	EA	2	BTH12x100S
	WASHER FLAT M12 S/STEEL	EA	4	WSF12S
	NUT NYLOC M12 S/STEEL	EA	2	NTN12S
13	BRACKET RUDDR REF UNIT GRP L45	EA	1	BRKT RDREF L45
14	U-BOLT M8x60mm S/STEEL	EA	2	U-BLT08x60S
15	TIE BAR RUBBING PAD HDPE L45 250x100x04mm	EA	3	TBR PD L45
16	TILLER TIE BAR ANODISED L46	EA	1	
17	THIMBLE S/STEEL 6mm	EA	2	THMBL S6
18	WIRE ROPE CLAMP S/STEEL 6mm	EA	4	WRRPCLMP S6
19	RUDDER STOCK + BLADE ASSEMBLY L46	EA	2	
20	RUDDER BEARING LOWER L46 JP3 #10.14.05	EA	2	RD BGLW L46
21	RUDDER TUBE AL. L46 W/LIPSEAL	ASB	2	RD TUBE ALU L46
22	RUDDER BEARING UPPER L40	EA	2	RD GPUP L40
	BOLT HEX M12x50mm S/STEEL	EA	4	BTH12x50S
	WASHER FLAT M12 S/STEEL	EA	4	WSF12S
	NUT NYLOC M12 S/STEEL	EA	4	NTN12S
	WASHER PENNY M12x2.5mm S/STEEL	EA	4	WSP12S
	RUDDER BEARING UPPER COVER L40	EA	2	RD BGUPCVRL40
23	STEERING WIRES 6mm7x19 L46 C/W SWAGE CABLE ENDS	SET	1	STRNG WR L46
24	EMERGENCY TILLER S/STEEL L40	EA	1	EMGY TLR L40

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

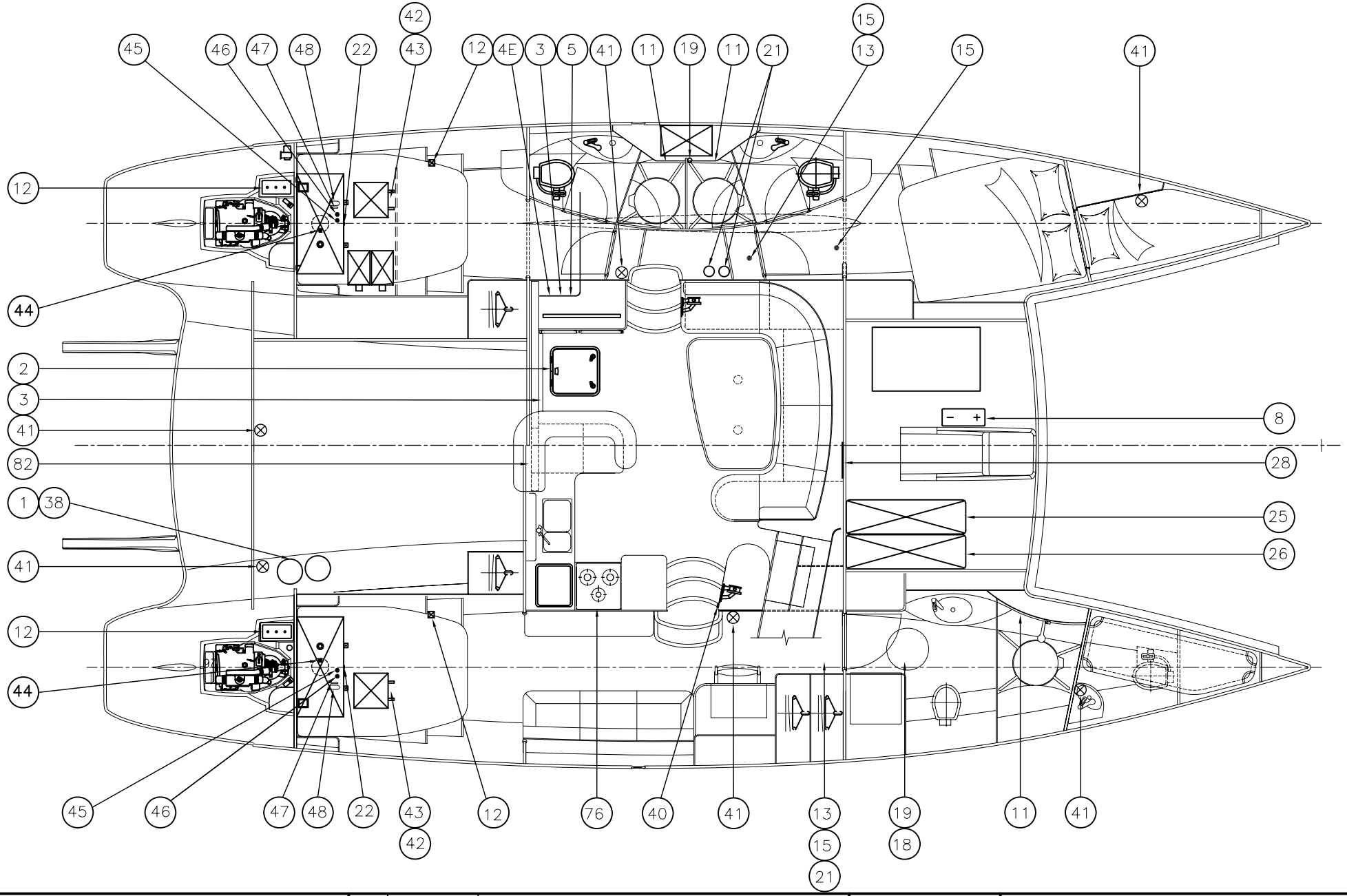
ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
RUDDER & STEERING SYSTEM

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0077-0	DATE: 27/06/2006	A4

FILE NAME: L46 Steering Assembly



NOTES:

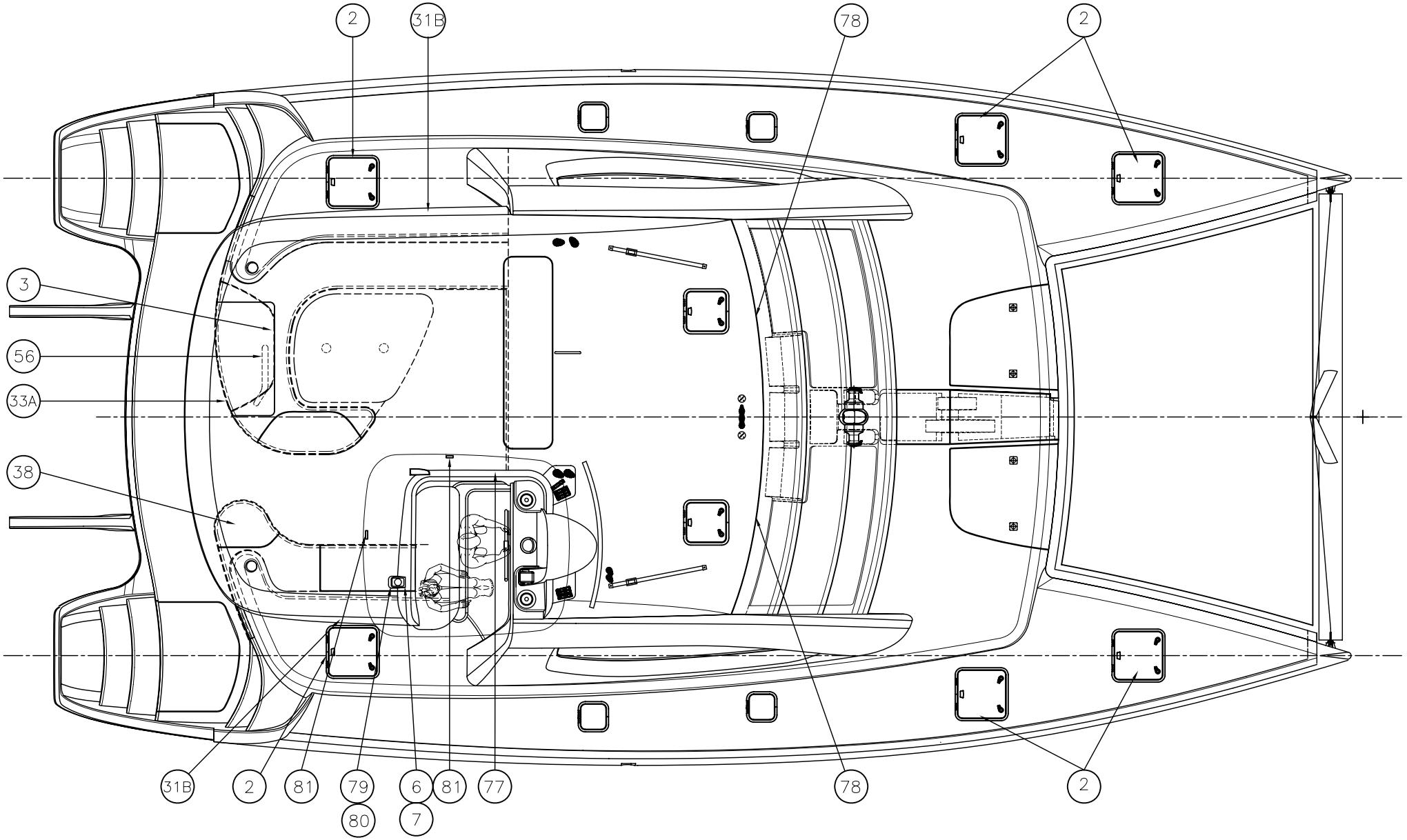
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 OV WARNING LABELS

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L40 STD-FA-0059-0	DATE: 21/06/2006	A4
FILE NAME: L46 OV Labels Layout		PAGE 01 of 03	



NOTES:

ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE "International Yachts"
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 OV WARNING LABELS LAYOUT

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0059-0	DATE: 21/06/2006	A4
FILE NAME: L46 OV Labels Layout		PAGE 02 of 03	

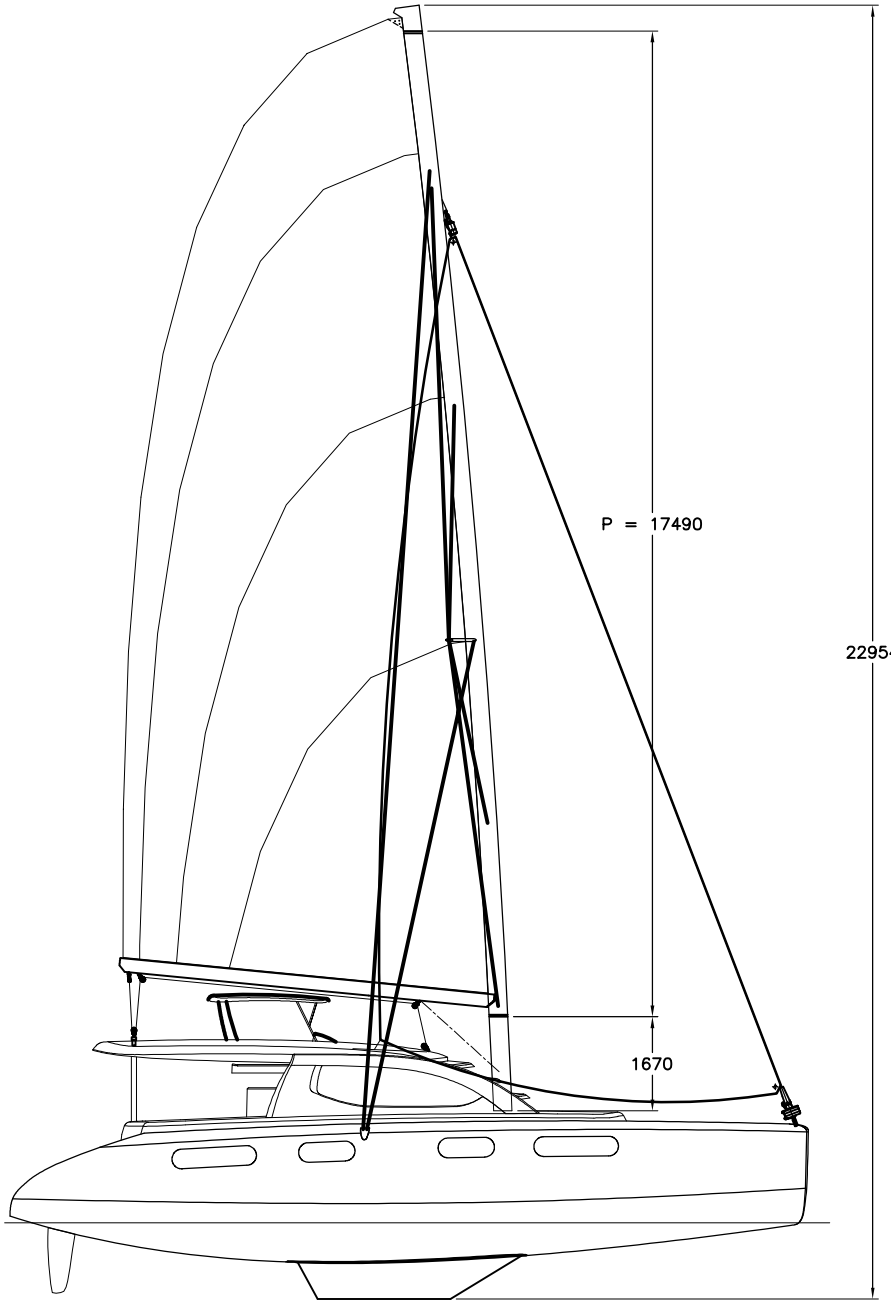
LABEL NO:	ENGLISH	FRENCH
1	NO SMOKING	INTERDIT DE FUMER
2	ESCAPE ROUTE	ISSUE DE SECOURS
3	BEWARE CAPSIZE	FRENCH
	ELECTRICAL SHOCK HAZARD	RISQUE DE CHOC ELECTRIQUE
	WARNING	ATTENTION
	READ MANUAL	LIRE LE MANUEL
4E	L46 BUILDER'S GUILD PLATE	N/A
5	110V AC HIGH VOLTAGE DANGER	DANGER: 110 VOLTS
6	TRAVELLER TO STBD	CHARIOT GV TRIBORD
7	TRAVELLER TO PORT	CHARIOT GV BABORD
8	HOUSE BATTERY	BATTERIE SERVICE
11	SHOWER DRAIN	VIDANGE DOUCHE
12	ENGINE STARTER BATTERY	BATTERIE DEMARRAGE MOTEUR
13	TOILET SALTWATER FILTER	FILTRE PRISE D'EAU TOILETTE
15	TOILET SALTWATER IN	PRISE D'EAU TOILETTE
18	DEPTH SOUNDER TRANSDUCER	CAPTEUR DE SONDEUR
19	HOLDING TANK DISCHARGE	VIDANGE CUVE EAUX NOIRES
21	SHOWER DRAIN FILTER	FILTRE VIDANGE DOUCHE
22	FUEL TANK DRAIN	VIDANGE RESERVOIR CARBURANT
25	PORT WATER TANK	RESERVOIR D'EAU BABORD
26	STBD WATER TANK	RESERVOIR D'EAU TRIBORD
28	FRESH WATER FILTER	FILTRE D'EAU
31B	NO DIVING OR JUMPING FROM HARD TOP	NE PAS PLONGER NI SAUTER DU HARD TOP
33A	SHORE POWER INLET	ALIMENTATION 110/220 VOLTS
	VOLTAGE 110V	110 VOLTS
	CURRENT 30AMP	INTENSITE 30 AMP
	DO NOT ALTER SHORE POWER CONNECTIONS	NE PAS MODIFIER LES CONNECTIONS
38	GAS BOTTLE STOWAGE LOCKER	COMPARTIMENT GAZ
40	BILGE PUMP HANDLE	LEVIER DE POMPE
41	FIRE EXTINGUISHER	EXTINCTEUR
42	WATER HEATER IN	ENTREE CHAUFFE-EAU
43	WATER HEATER OUT	SORTIE CHAUFFE-EAU
44	MANUAL PUMP	POMPE MANUELLE
45	FUEL RETURN	RETOUR GAS OIL
46	FUEL SUPPLY	ARRIVEE GAS OIL
47	BREATHER	EVENT
48	FILLER	REMPLISSAGE
56	EMERGENCY TILLER STOWED IN COCKPIT SEAT LOCKER	LA BARRE DE SECOURS EST RANGEE SOUS LA BANQUETTE DE COCKPIT
76	GAS WARNING LABEL (STOVE)	ÉTIQUETTE D'AVERTISSEMENT DE GAZ (FOURNEAU)
77	WARNING! EXTREME DANGER OF HEAD OR BODILY INJURY IF ACCESSING THE HARDTOP	AVERTISSEMENT ! DANGER EXTRÊME DES DOMMAGES PRINCIPAUX OU CORPORELS SI ACCÉDANT AU HARDTOP
78	HARDTOP ACCESS TO MAINSAIL ONLY	HARDTOP. ACCESS À LA VOILE SEULEMENT
79	LINE DRIVER	CONDUCTEUR DE CORDE
80	SET TO LOCK – LINE DRIVER	PLACEZ À LA SERRURE – CONDUCTEUR DE CORDE
81	NO STEP	AUCUNE ÉTAPE
82	WARNING! ENSURE BARREL BOLT IS LOCKED IN POSITION WHEN DOOR IS OPEN	AVERTISSEMENT ! ASSUREZ LE BOULON DE BARIL EST FERMÉ À CLEF EN POSITION QUAND LA PORTE EST OUVERTE

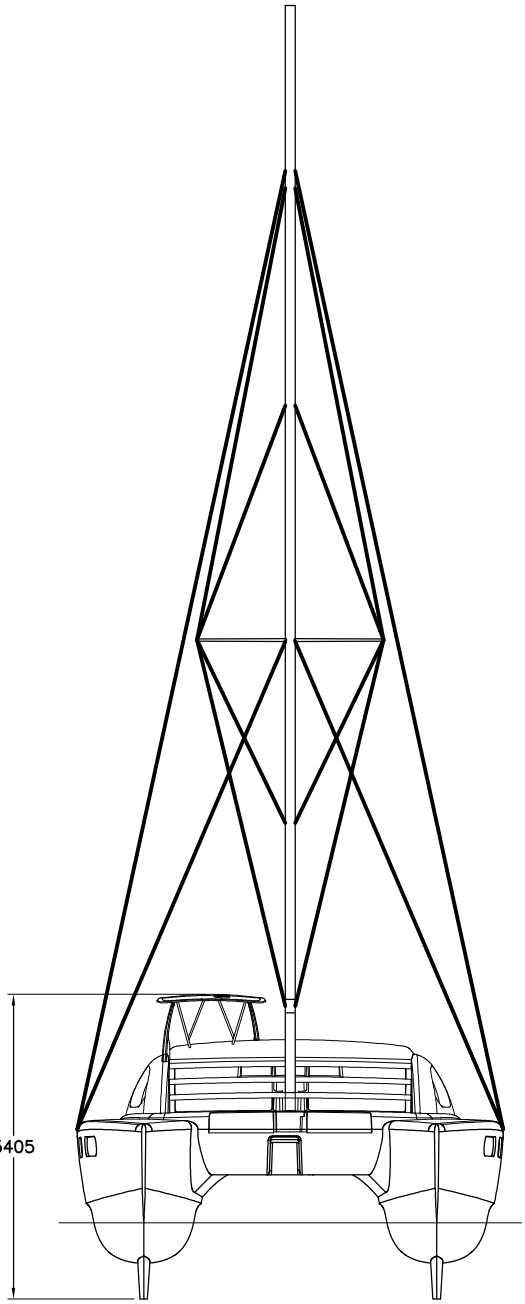
ROBERTSON and CAINE International Yachts
P.O.Box 1115 Woodstock 7915
Telephone: (021) 447 5666
Fax: (021) 447 5741

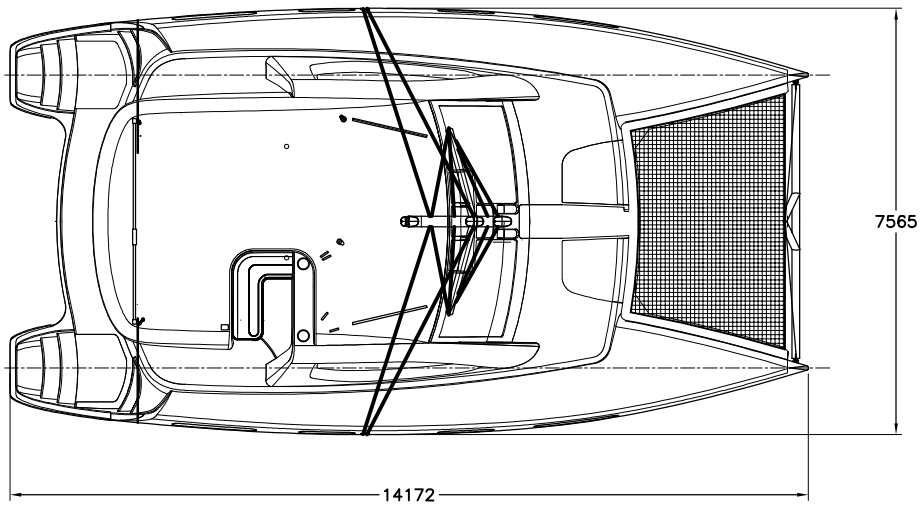
ROBERTSON & CAINE
CUSTOM YACHT PROJECTS

TITLE: L46 STD
L46 OV LABELS LAYOUT

SCALE: NTS | DRAWN BY: ARO | APPROVED BY:
DWG. NO: L46 STD-FA-0059-0 | DATE: 20/07/04 | A4
FILE NAME: L46 OV Labels Layout







ALT:	DATE/SIGN	MODIFICATION:

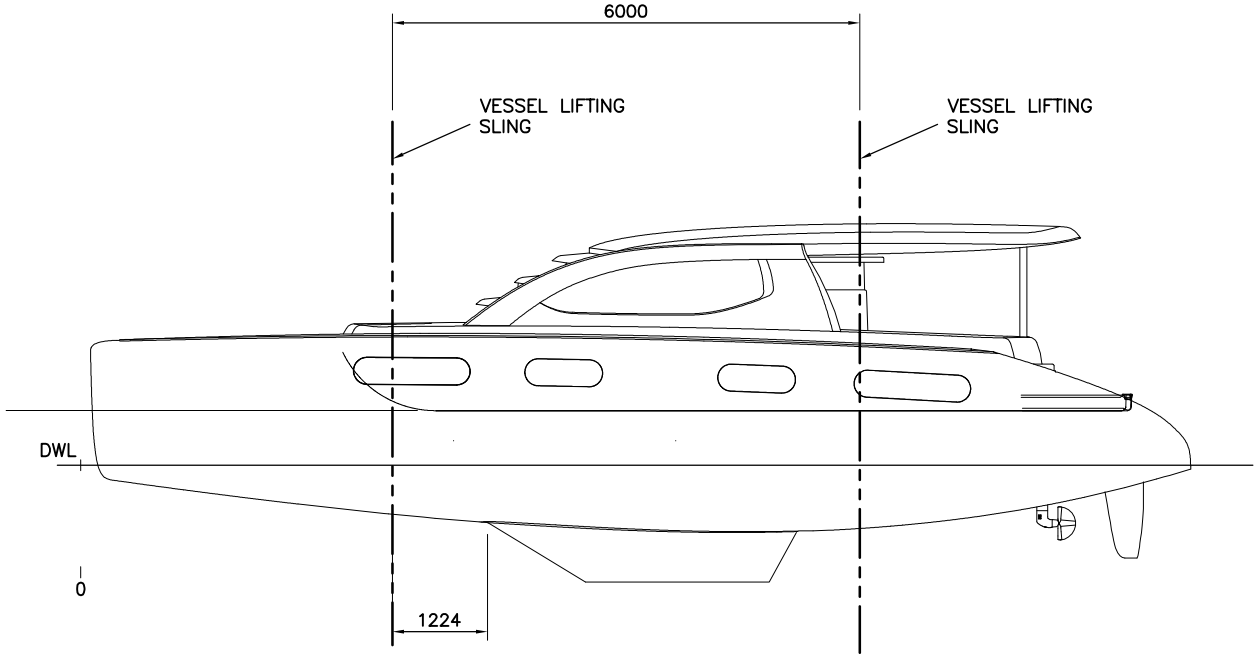
ROBERTSON and CAINE International Yachts.
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

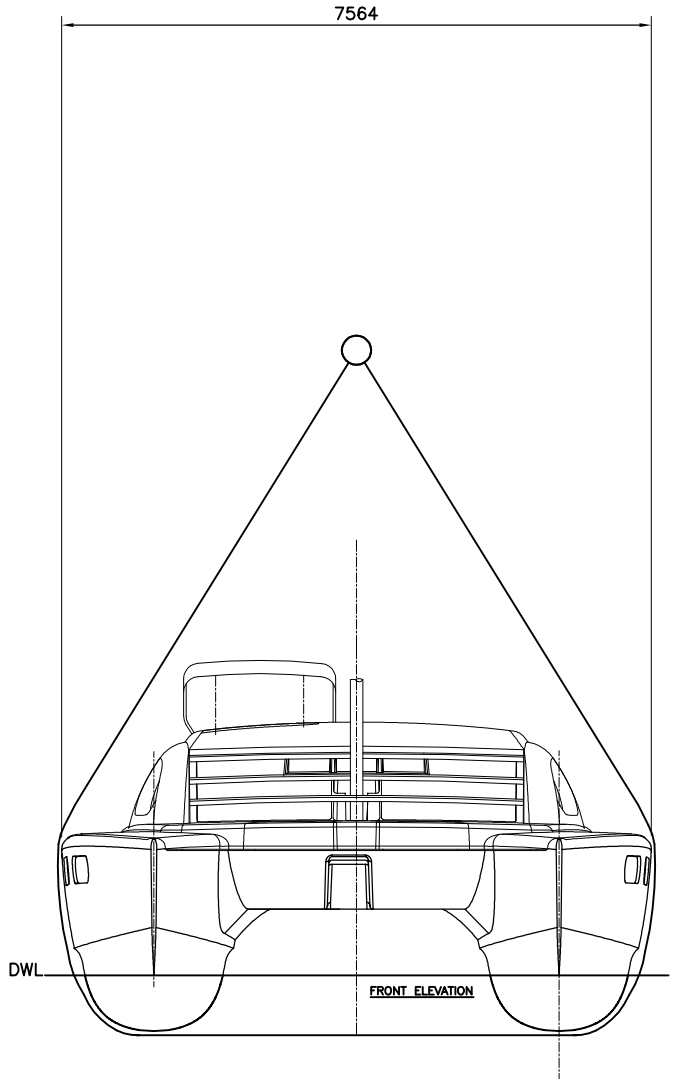
ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46 STD

L46 SHIPPING DETAIL

SCALE:	DRAWN BY: A.S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0068-0	DATE: 26/06/06	A4
FILE NAME: L46 Shipping Detail		PAGE 01 of 01	





NOTES:
1. THIS DRAWING IS INTENDED TO SHOW SLING POSITIONING ONLY. PROFESSIONAL RIGGERS MUST BE CONSULTED FOR LIFTING VESSEL.
2. THIS DIAGRAM AND INSTRUCTION IS INTENDED AS ADVICE AND INFORMATION ONLY AND ROBERTSON & CAINE (PTY) LTD, ITS MEMBERS AND/OR ITS STAFF SHALL NOT BE LIABLE FOR ANY DAMAGE TO THE VESSEL AND/OR OTHER LOSS ARISING FROM RELIANCE THEREON OR OTHERWISE.

L46 VESSEL LIFTING DIAGRAM

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

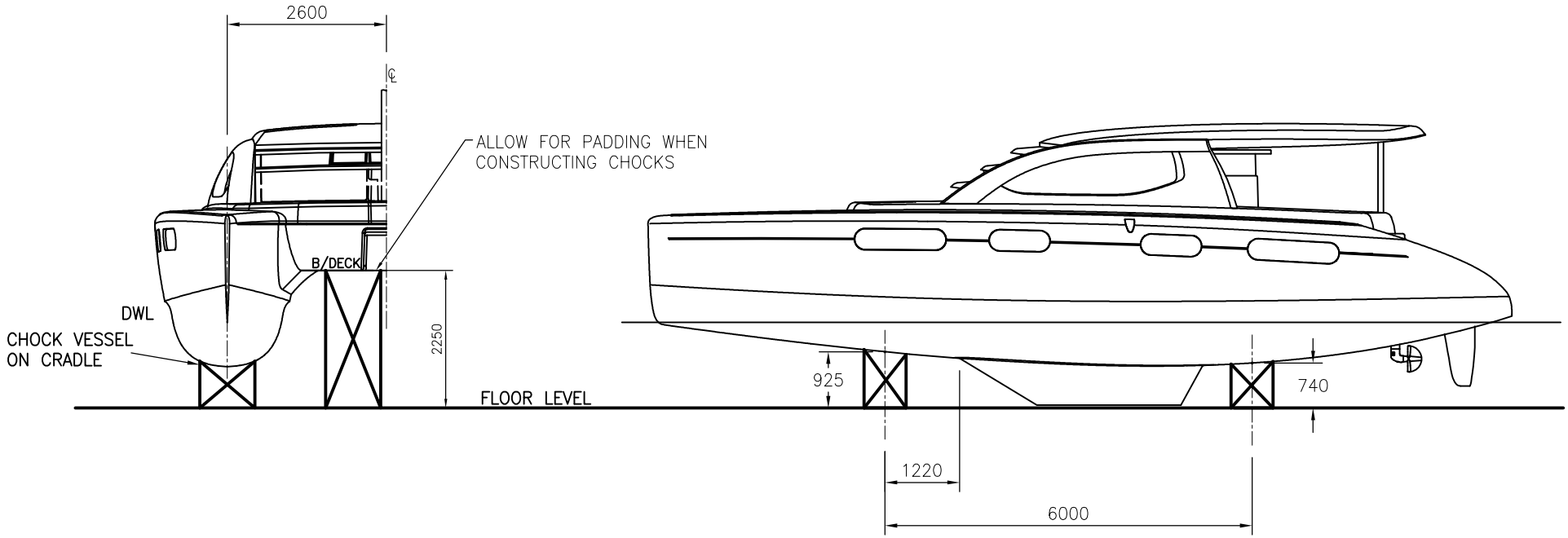
ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 VESSEL LIFTING DIAGRAM

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0056-0	DATE: 19/06/2006	A4

FILE NAME: L46 Vessel Lifting Diagram



NOTES:
1. ON LAND, THE VESSEL MUST BE SUPPORTED USING CRADLES POSITIONED UNDER THE HULLS AS SHOWN.
2. WEIGHT OF VESSEL TO BE EVENLY DISTRIBUTED BETWEEN CHOCKS AND KEEL.
3. PROFESSIONAL RIGGERS TO BE USED WHEN POSITIONING BOAT ON LAND. THIS DRAWING SHOULD ONLY BE USED AS A GUIDE.
4. THIS DIAGRAM AND INSTRUCTION IS INTENDED AS ADVICE AND INFORMATION ONLY AND ROBERTSON & CAINE (PTY) LTD, ITS MEMBERS AND/OR ITS STAFF SHALL NOT BE LIABLE FOR ANY DAMAGE TO THE VESSEL AND/OR OTHER LOSS ARISING FROM RELIANCE THEREON OR OTHERWISE.

L46 VESSEL SUPPORT
ON SHIP

NOTES:

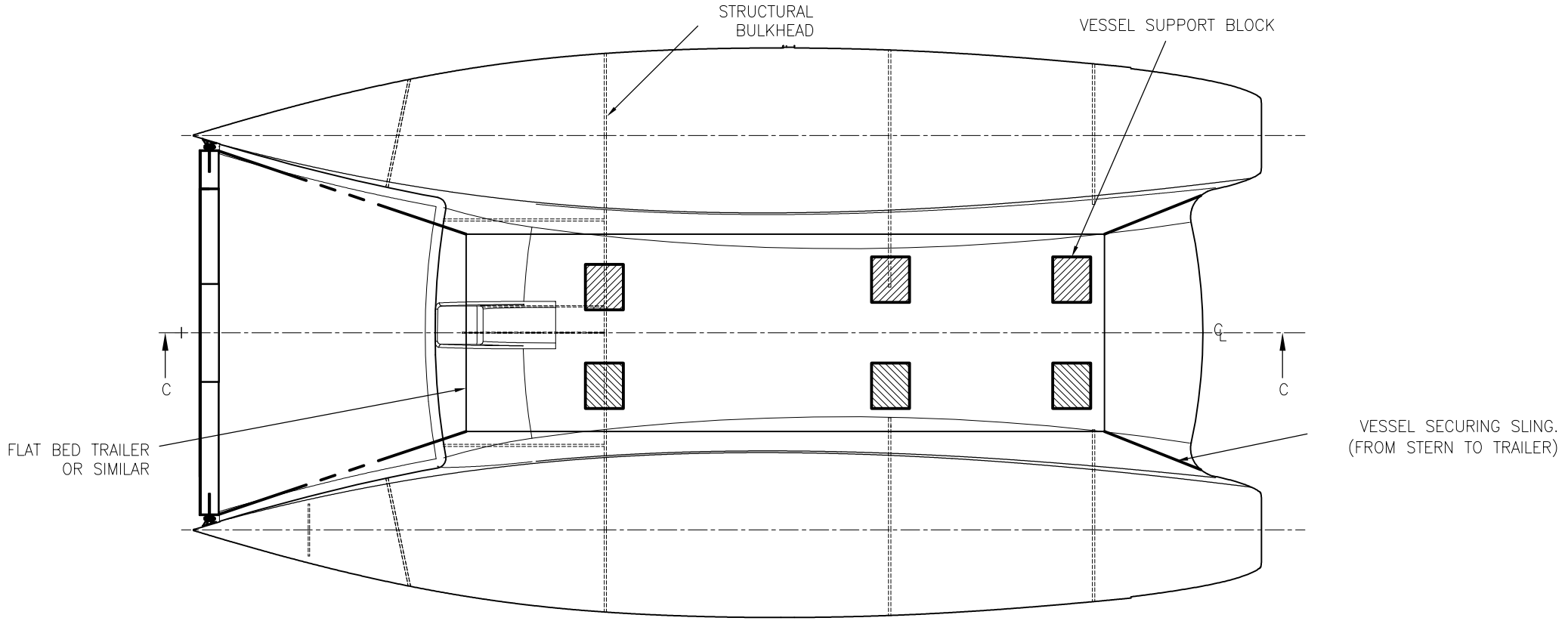
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON & CAINE
INTERNATIONAL YACHTS
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

TITLE: L46
L46 VESSEL SUPPORT ON LAND OR SHIP

SCALE:	DRAWN BY: A. S	APPROVED BY:	
1:100	DWG. NO: L46 STD-FA-0078-0	DATE: 27/06/2006	A4

FILE NAME: L46 Vessel Support On Land Or Ship



NOTES:
1. PROFESSIONAL BOAT HAULER TO BE USED. DRAWING INTENDED TO SHOW SUPPORT POSITIONING ONLY.
2. THIS DIAGRAM AND INSTRUCTION IS INTENDED AS ADVICE AND INFORMATION ONLY AND ROBERTSON & CAINE (PTY) LTD, ITS MEMBERS AND/OR ITS STAFF SHALL NOT BE LIABLE FOR ANY DAMAGE TO THE VESSEL AND/OR OTHER LOSS ARISING FROM RELIANCE THEREON OR OTHERWISE.

NOTES:

ALT:	DATE/SIGN	MODIFICATION:

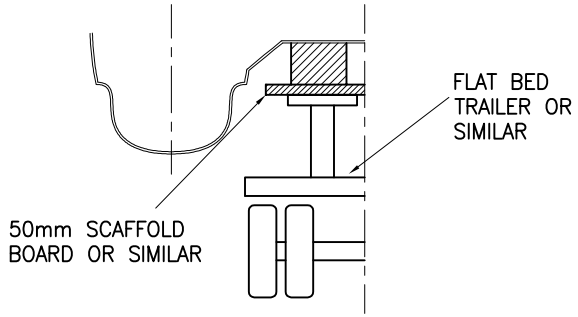
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

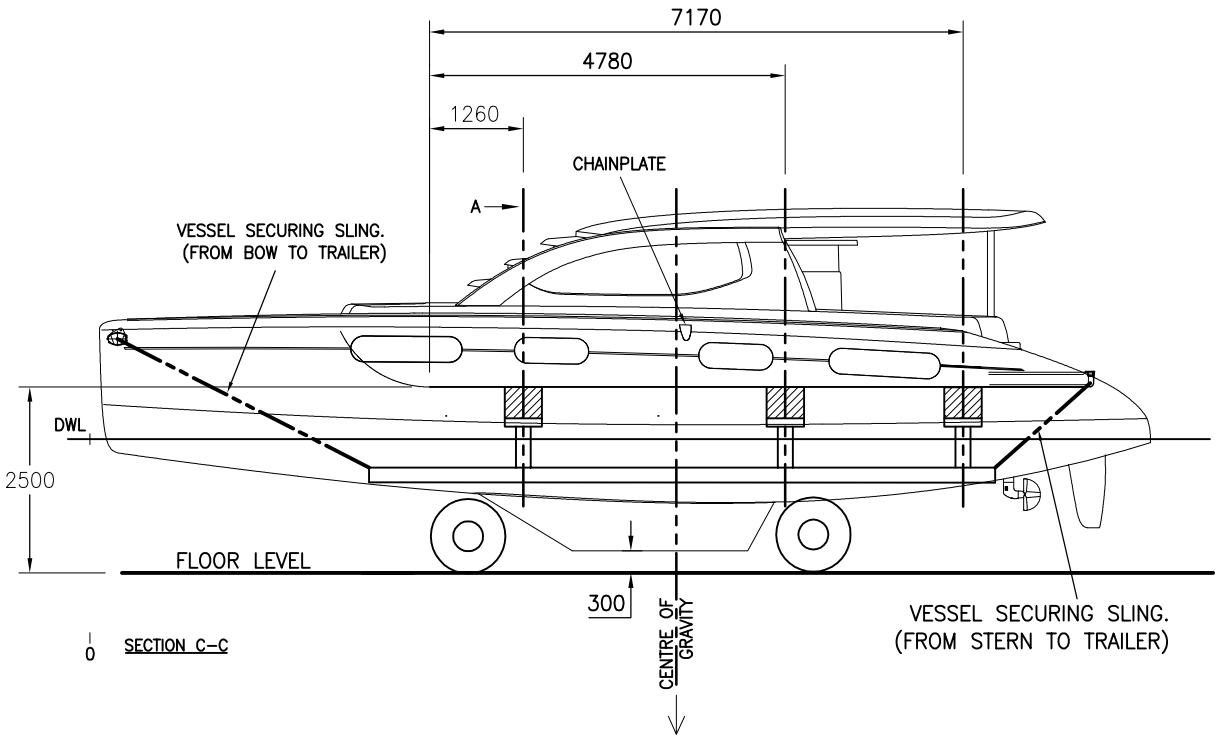
TITLE: L46
L46 VESSEL SUPPORT ON LAND OR SHIP

SCALE:	DRAWN BY: A. S	APPROVED BY:	
1:75	DWG. NO: L46 STD-FA-0078-0	DATE: 27/06/2006	A4

FILE NAME: L46 Vessel Support On Land Or Ship



SECTION A–A



NOTES:
1. PROFESSIONAL BOAT HAULER TO BE USED. DRAWING INTENDED TO SHOW SUPPORT POSITIONING ONLY.
2. THIS DIAGRAM AND INSTRUCTION IS INTENDED AS ADVICE AND INFORMATION ONLY AND ROBERTSON & CAINE (PTY) LTD, ITS MEMBERS AND/OR ITS STAFF SHALL NOT BE LIABLE FOR ANY DAMAGE TO THE VESSEL AND/OR OTHER LOSS ARISING FROM RELIANCE THEREON OR OTHERWISE.

L46 VESSEL ROAD TRANSPORT DIAGRAM

NOTES:

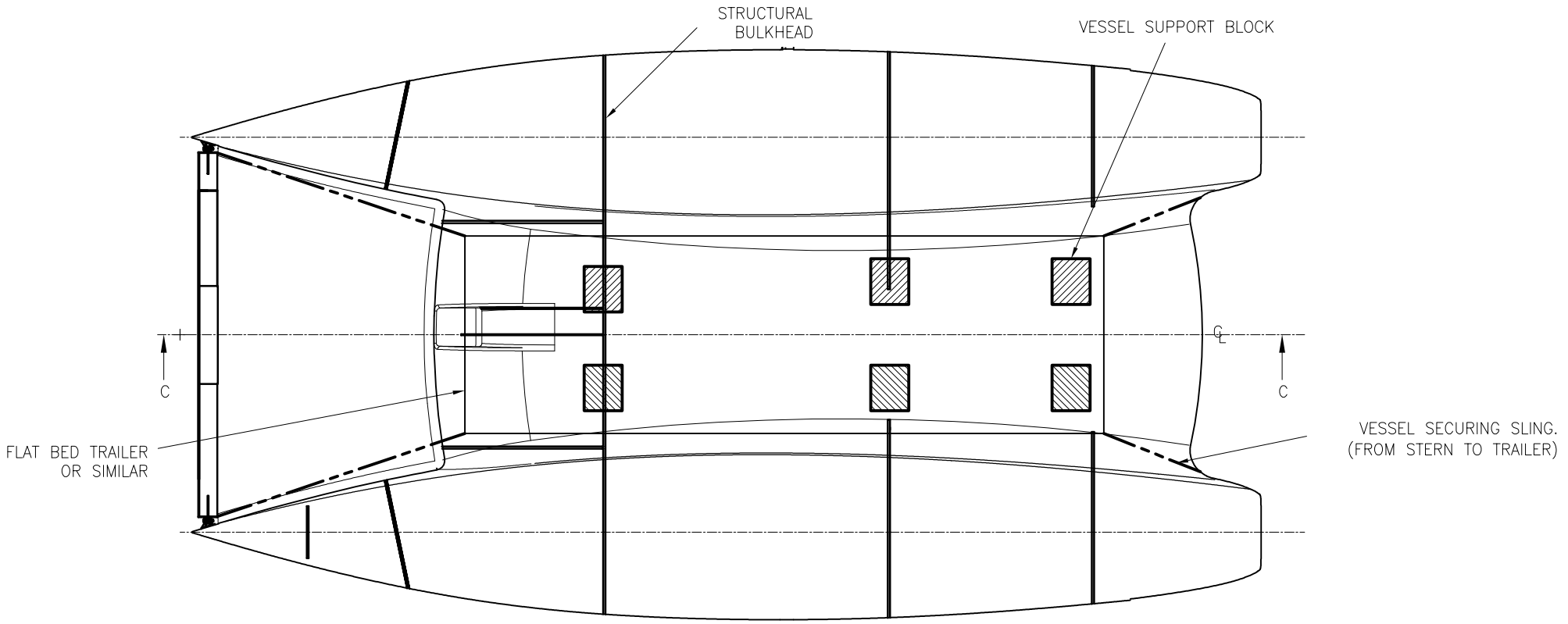
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE international Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 VESSEL ROAD TRANSPORT DIAGRAM

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD–FA–0054–0	DATE: 19/06/2006	A4
FILE NAME: L46 Vessel Road Transport Diagram		PAGE 01 of 02	



NOTES:
1. PROFESSIONAL BOAT HAULER TO BE USED. DRAWING INTENDED TO SHOW SUPPORT POSITIONING ONLY.
2. THIS DIAGRAM AND INSTRUCTION IS INTENDED AS ADVICE AND INFORMATION ONLY AND ROBERTSON & CAINE (PTY) LTD, ITS MEMBERS AND/OR ITS STAFF SHALL NOT BE LIABLE FOR ANY DAMAGE TO THE VESSEL AND/OR OTHER LOSS ARISING FROM RELIANCE THEREON OR OTHERWISE.

L46 VESSEL ROAD TRANSPORT DIAGRAM

NOTES:

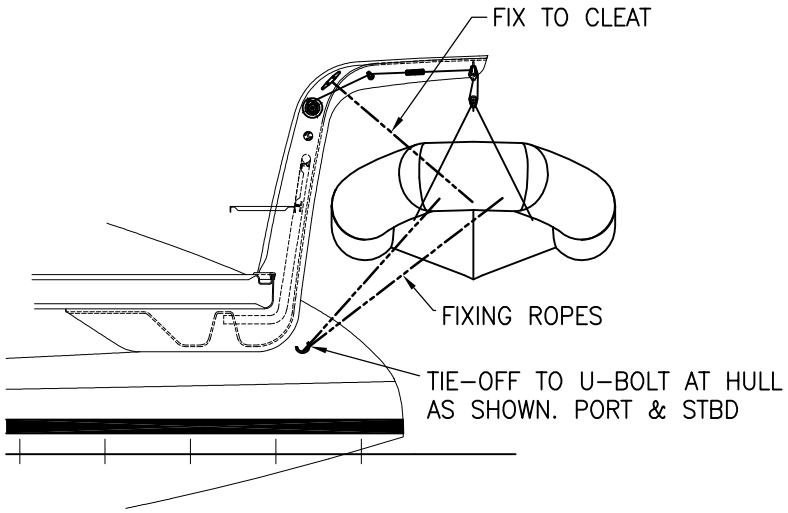
ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

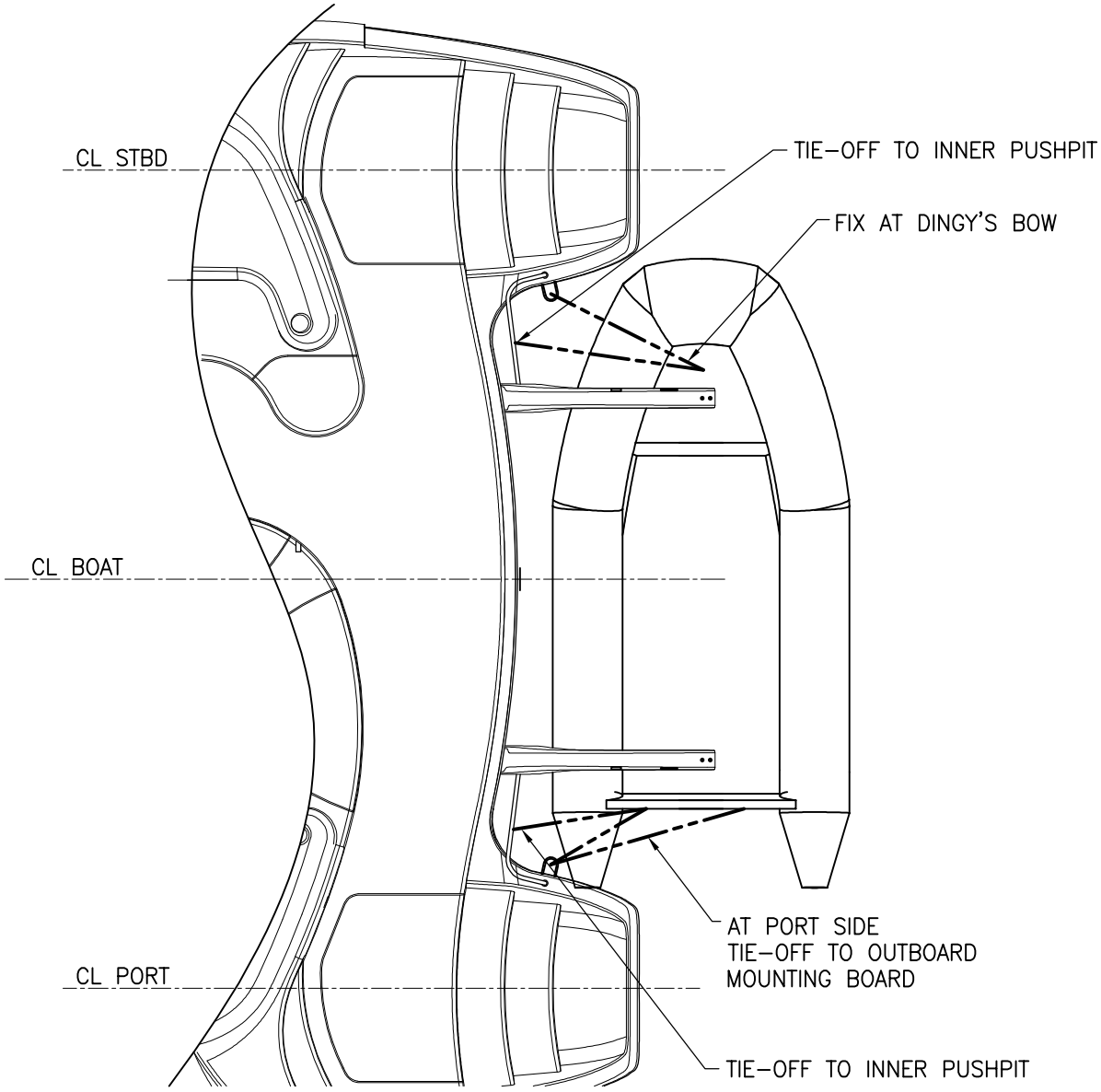
ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46
L46 VESSEL ROAD TRANSPORT DIAGRAM

SCALE:	DRAWN BY: A. S	APPROVED BY:	
NTS	DWG. NO: L46 STD-FA-0054-0	DATE: 19/06/2006	A4
FILE NAME: L46 Vessel Road Transport Diagram		PAGE 02 of 02	



ELEVATION



PLAN VIEW

ALT:	DATE/SIGN	MODIFICATION:

ROBERTSON and CAINE International Yachts
P.O.Box 43341 Woodstock 7915
Telephone: (021) 448 5666
Fax: (021) 448 5741

ROBERTSON & CAINE
INTERNATIONAL YACHTS

TITLE: L46 STD
L46 DAVIT SECURING

SCALE:	DRAWN BY: ARO	APPROVED BY:
NTS	DWG. NO: L46 STD–FA–0098–0	DATE: 26/06/06
FILE NAME: L46 Davitt Securing		PAGE 01 of 01