CAPE31 MANUAL

CAPE PERFORMANCE SAILING

Revision 1.0

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INTRODUCTION

The Cape31 is built by Cape Performance Sailing of Cape Town, South Africa.

This OWNER'S MANUAL contains information regarding the acceptance of the boat upon delivery, as well as the use, care, maintenance, and technical details of your new Cape31.

Upon delivery of the boat, there will be various owner's manuals supplied for specific equipment such as the engine, saildrive, winches, etc. They should read these before operating the boat. The information and procedures in those manuals take precedence over this OWNER'S MANUAL.

It is important that the owner and/or owner's representative read this manual carefully prior to commissioning the boat. Where a dealer is not directly involved with the acceptance of the vessel, the dealer's responsibilities outlined in this OWNER'S MANUAL become the responsibilities of the owner or his representative.

Regular care and maintenance are necessary for the operational safety of your Cape31, as well as to maintain its value.

This OWNER'S MANUAL should be considered a permanent part of this boat. It should stay with the boat when sold to provide the next owner with important operating, safety, and maintenance information.

ONE DESIGN ETHOS

The Cape31 is designed, built, and supplied with the intention of it being used for one design racing. The boat is intended for this use. Owners should be aware of the current class rules in effect at the time of sailing and it is recommended that the boat is maintained such that it continues to comply with the class rules.

Modifications to the boat outside of the class rules while not prohibited may prevent the boat from being successfully entered into one design competition in the future. Any modifications to the boat outside of those explicitly permitted by the class rules will result in voiding of the warranty.

CAPE31 TECHNICAL SPECIFICATIONS

MODEL:	Cape 31
ARCHITECT:	Mills Design Ltd
EC DESIGN CATEGORY:	RACING BOAT
Length Overall:	9.56 m
Length Waterline:	8.83 m
Max Beam:	3.10 m
Draft:	2.45 m
Displacement, light ship:	1,777.5kg – 1,807.5kg
Category:	CE RCD status: Racing WS Plan Review https://d7qh6ksdplczd.cloudfront.net/sailing/wp-content/uploads/2017/09/04153815/000131-0609-S-Cape-31-Certificate.pdf
I:	12.50 m
J:	3.60 m
P:	12.55 m
E:	4.50 m
STL:	5.92 m
Bowsprit:	Carbon
Mast:	Carbon
Boom:	Aluminium
Fuel Tank:	1 X 25 liter
Engine:	Yanmar 2YM15C-SD25 2-cylinder marine diesel
Installed Power:	Max output 10.0 kW (13.6 hp) @ 3,600 rpm
Max authorized power:	9.7kW (13.2 hp)
Engine Start Battery:	1 X 12Vdc AGM 95Ah

OWNER / DEALER RESPONSIBILITY AT TIME OF DELIVERY

BOAT INSPECTION

Upon delivery, it is the responsibility of the owner, dealer, or their representative, to inspect the boat and all items (mast, boom, keel, rudder, bow & stern pulpits etc.) for any damage incurred during shipping. Any damage should be noted and recorded. Cape Performance Sailing must be notified before we can assist in making your claim.

LOOSE GEAR FORM & INSPECTION

Certain items are detached from the boat for transport or cannot be fitted in the yard. These items include the mast, boom, or keel. They also include small gear such as winch handles, running rigging items etc. Collectively they are referred to as Loose Equipment, and they are listed on the Loose Equipment List. The Loose Equipment List must be checked against the equipment shipped with the boat upon arrival. The Loose Equipment List, indicating any shortage, damage, or discrepancies must be returned to Cape Performance Sailing within seven days of delivery.

Neither Cape Performance Sailing, nor The Sales Agent will honor any claims of equipment shortages unless the original Loose Equipment List has been completed and returned within seven business days of delivery to the owner.

WARRANTIES

Warranty Forms from the various manufacturers of parts used in the Cape 31 must be filled out by the owner and mailed to the manufacturers as their warranties dictate. Note that Cape Performance Sailing warrants these parts to be properly installed. All warranty claims should be forwarded directly to the manufacturer as instructed by their individual warranty procedures. The Cape Performance Sailing warranty follows on pages 47 - 48

LOOSE EQUIPMENT, COMMISSIONING & MANUFACTURER WARRANTY FORMS

All manuals and warranty forms are included as part of Loose Equipment with the boat. Cape Performance Sailing reserves the right to change, modify, upgrade, or discontinue any part of the Specification on future boats without prior notice.

OWNERSHIP DOCUMENTS

Cape Performance Sailing issue a Manufacturer’s Statement of Origin, and a Builder’s Certificate. These original documents are signed by the builder and provide proof of ownership of your boat. They should be carefully maintained in a secure place for the life of the boat and should be passed on to each subsequent owner at the time of sale.

CAPE31 DELIVERY INSPECTION CHECK LIST

HIN: _____
DATE:_____
ENGINE SERIAL No:_____
SAILDRIVE. SERIAL No:_____
INSPECTED BY: _____
P. O, COMPLIANCE: YES / NO?
P.O. DISCREPANCIES:_____

A: HULL EXTERIOR
SURFACE FINISH _____
THRU HULLS _____
CHAINPLATES _____
TRANSOM _____
EXHAUST PORT _____
BILGE EXHAUSTS _____

B: KEEL
FAIR & FINISH _____
BULB JOINT _____
LEAD/TRAIL EDGE _____
ALIGNMENT _____

C: RUDDER
FAIR & FINISH _____
LEAD-TRAIL EDGE _____
BEARING FAIR _____
FUNCTION _____

D: SAILDRIVE / PROP
FAIRING PLATE _____
DRIVE LEG _____
PROP FUNCTION _____
ZINC _____

E: DECK & EQUIPMENT
FAIRLEADS _____
RUN LIGHTS FUNCTION YES / NO?
DECK EDGE _____
NON SKID FINISH _____
TOE RAILS _____
FWD STANCHIONS _____
FWD HATCH FUNCTION _____
MAST COLLAR _____
JIB TRACKS _____
HATCH SLIDE _____
PRIMARY WINCH _____
RUNNER WINCH _____
STANCHIONS _____
FOOT RAILS _____
TILLER _____
TILLER EXTENSION _____
RUDDER FUNCTION _____
TRAVELER _____
BACKSTAY ANCHORS _____
STERN PULPITS _____
CENTER STANCHION _____
AFT LIGHT FUNCTION YES / NO?

F: MECHANICAL
ENGINE PRE-TEST RUN_____
OIL LEVEL _____
COOLANT LEVEL _____
HOSES TIGHT / CLAMPED _____
WATER STRAINER _____
FUEL FILTER _____
THROTTLE CABLE _____
CLUTCH CABLE _____

ENGINE TEST RUN
CLEAR PROP AREA YES / NO?
WATER SOURCE _____
FOLLOW YANMAR PROCEDURE:
START _____
THROTTLE FUNCTION _____
CHECK EXHAUST FLOW _____
FWD / REVERSE DIRECTION _____
W-O-T TEST _____
ENGINE TEMP _____
OIL PRESSURE _____
RUN ANTIFREEZE _____
OTHER _____
STOP _____
CHECK LEAKS _____
CHECK LOOSE EQUIPMENT _____
ENGINE SPACE CLEAN _____
FUEL TANK & HOSE _____
FUEL FILLER _____
FUEL VENT _____

G: ELECTRICAL
BATTERY CHARGED YES / NO?
CABLE TERMINALS _____
BATTERY BOX SECURED _____
WIRING _____
BATTERY SWITCH _____
ELECTRIC PANEL _____

NAV LIGHTS _____
INTERIOR LIGHT _____
BILGE PUMPS _____
OTHER _____
ELECTRONICS _____
DC /USB PORT _____

H: PLUMBING
HOSES / CLAMPS SECURE _____
VENT HOSE _____
ELECTRIC BILGE PUMP RUN _____
MANUAL PUMP _____
PUMP DIRECTION FLOW YES / NO?
HOSES & CLAMPS_____
SPEED THRU HULL _____
REMOVE & CAP TRANSDUCER
BEFORE LAUNCH YES / NO?

I: INTERIOR STRUCTURE
STEM HEAD ATTACHMENT _____
AFT BULKHEAD FIT / FINISH _____
MAST STEP
ADJUST BOLTS TIGHT _____
AFT LONGITUDINALS _____

TRAVELLER BULKHEAD _____
BACKSTAY ANCHORS _____
CLEANLINESS AFT _____

J: OPTIONS
KELP CUTTER _____
FORWARD HATCH ROLLER _____
REELERS _____
UPGRADE ROPE PACK _____
EYE BOLTS _____
CONTINUOUS MAIN FINE TUNE ___
INSPECTION COMMENTS:

_____

_____

_____

_____

USE OTHER SIDE PAPER AS NECESSARY
END

LOOSE EQUIPMENT LIST

The following is a list of all the loose parts that are supplied from the factory with each new boat. These should be checked off on receipt of the boat and any discrepancies should be noted and the builder informed within seven days of receipt.

Hull
Shipping Cradles (Plywood or Aluminium)
Keel
Rudder
Rudder Locking Rings & Gaitor
Tiller
Tiller Extension
Sprit
Mast
Spreaders
Mast Head/Windex
Boom
Standing Rigging
Runners
Running Rigging
Stanchions
Guard Wires
Blocks
Bolts
Winch Handles
Throttle Handle
Manual Bilge Pump Handle
Manuals

The following are common options which could be included if ordered:

Yard Cradle
Splashes
Cradle Legs
Cradle Castors
Additional Running Rigging
Trailer Splashes
Covers
Fenders
Forward Hatch Roller
Reelers
Navigation / Electronic Equipment
Kelp Cutter Rod and Blade
Spares

PACKING AND UNPACKING

REMOVING THE BOAT FROM A CONTAINER

CAUTION: Please contact The Sales Agent or Cape Performance Sailing prior to the arrival and unpacking of your new boat. It is a delicate process, and local conditions and equipment can have a big impact on how to go about removing the hull from the container. To have the best chance of unpacking everything without damage, it is best to let us work with you to plan, prepare and unpack.

CAUTION: Please read and familiarize yourself with this manual including all assembly sections before starting to unpack or assemble the boat.

When opening the container first ensure that the security seal is intact.

The container should be placed on level ground, with a stretch of level ground in front of doors long enough for the hull to be completely removed from the container.

Once the doors are open check for signs of movement of the keel, boat and other parts. Make a note of any damage and take photos immediately. Make notes of any issues on the delivery inspection form.

Remove the straps from the keel and using a forklift or pallet jack remove the keel from the container. Store the keel safely on the chocks provided.

NOTE: The keel will have to be tilted to get out of the container opening. Ensure that the forks are sufficiently padded to allow this without damaging the paint.

Before pulling boat from container remove all tiedown straps, and wood chocks from the cradle wheels

Untie and remove the two halves of the mast and boom from the holes in the cradles. Someone will need to climb inside to untie these.

If a forklift is available, it can lift the aft cradle slightly with the forks through the hole of the mast. This will reduce the load on the castors allowing them to align with the direction of travel. It is recommended that a person is inside to help keep the boat straight in the container from the bow of the hull.

If not, the boat will have to be pushed from inside the container on the front cradle, as well as pulled from the aft cradle. Care must be taken as the boat begins to move as it will crab sideways while the castors rotate and align with the new direction of travel.

CAUTION: Be careful on hot and sunny days that anyone working inside the container is supervised and has access to water. Temperatures inside the packed container can get very high and exiting is not quick or easy to do.

Pull the boat until it is in line with the opening of the container. From here the boat can then be removed slowly, all the time making sure it stays completely level with the container floor.

CAUTION: there is verry little gap between the hull and the sides floor and roof of the container. Have multiple people watching around the hull to make sure that the boat is removed completely level, and the hull is not damaged. If in doubt stop assess the situation and confirm all is safe before continuing.

The best situation would be to have the edge of container level with a step so the boat can just be rolled out. If this is not possible, it is recommended to use dollies at same height as container floor to rest the cradle on.

Jacks can be used to support the cradle while the dollies are chocked to the correct height to keep the boat level.

Once the boat is safely out of the container the loose parts which have shipped inside it should be removed. These include the rudder, bowsprit and spreaders.

At this point it is best to empty all the other parts from the container and check them against the shipping inventory. The yard cradle should be assembled next ready for the boat to be lifted on.

The boat can then be levelled. This is done my removing the corner pieces of the two cradles. The corner pieces are attached by wooden straps either side of the cradle. These are fastened to the face of the cradle with chipboard screws. These have an S2 head. Use an electric drill/driver to remove these in a quick but not rushed manner. Having two or more people to do this is best.

CAUTION: The weight of the boat must be supported while the corner pieces of the cradles are removed. Take extreme care whilst working underneath the boat.

With the corner pieces removed the boat can be allowed to gently rotate level. From here the straps between the cradles can be removed. The boat can the be picked up with slings by a crane or transporter and the cradles can be removed.

The boat should then be transferred to the yard cradle.

Details of assembling the boat follow later in this manual.

Below are links to videos of an example unpacking process by 31North.
https://www.youtube.com/watch?v=y4dPJk8-GIs

PACKING THE BOAT INTO A CONTAINER

Packing the boat back into a container is essentially the above process in reverse.

The boat should be disassembled, and all parts checked and packed safely. The boat should also be washed down and cleaned to be completely free of salt. The environment inside the container during shipping can accelerate any corrosion and cause significant damage to parts and fittings if left with salt water inside.

With the hull supported on slings the shipping cradles can be slid into place, pay extra care to the front cradle to ensure it goes the correct way round to match the curvature in the hull. The cradles must then be strapped to each other to ensure they do not move fore/aft.

The hull can then be tipped over and the corner pieces of the cradles can be fitted. Take care that the correct corner piece is fitted to each cradle and that the surfaces line up.

CAUTION: The weight of the boat must be supported while the corner pieces of the cradles are being fitted. Take extreme care whilst working underneath the boat.

The container should be placed on level ground with a starch of level ground in front of it long enough for the boat to be lined up outside of the door.

Any loose parts to be shipped in the hull can then be loaded ensuring that they are well packed and padded.

Larger loose items such as the yard cradle (disassembled), standing rigging coil, sails, spares boxes etc. should be packed into the back of the container first, ensuring they cannot move or come loose and damage the hull whilst in transit.

The hull can then be offered up to the container and pushed in. The boat must be lifted up to the same level as the container floor, either on dollies or, preferably on a step which allows the hull to wheel straight in.

As with unloading several people should be watching all around the hull as it goes in making sure that it stays level and is not damaged. If in doubt, stop, assess the situation and confirm all is safe before continuing.

Push the boat into the container so that the cradle lines up with the first set of internal lacing eyes. These can then be used to attach the straps which hold the cradle in place. Wooden chocks should be screwed into the floor by the castors of both the front and rear cradles to lock them in place as well.

The rig can then be posted into the holes of the cradles and ties down. Making sure that it is safely padded from the cradle and itself.

Lastly the keel can be loaded into the front of the container. It will need to be tilted to get in through the door opening. It should sit on low sturdy chocks with firm padding. The keel can then be strapped into place, both around the bulb and the head of the fin.

Lastly do a final check that everything is in order within the container and will not come loose or move and damage other items. Check that any required documents are enclosed, and the boat is then ready for shipping.

NOTE: if you have any questions regarding the packing or shipping of your Cape31 please contact the builder for advice and parts.

NOTE: Many thanks to Erik Bjerring at CTYS for his help in compiling the guide to packing and unpacking the Cape31.

CAPE TOWN YACHT SERVICES

Erik Bjerring: 072 688 1444

ctyachtservices@gmail.com

TOOLS REQUIRED

Forklift and/or pallet jack rated to a minimum of 1500kg
Crane and lifting tackle rated to minimum 2500kg
Padding
Keel supports
Yard cradle
Padded mast supports
Sika 591 or similar flexible marine sealant
Caulking gun
Tefgel
Copper slip
Duralac
30mm socket and torque wrench capable of minimum 250Nm
Set of metric Allen wrenches 1.5mm – 10mm
Set of metric spanners and/or sockets 6mm – 13mm, 17mm, 19mm 24mm
Screwdrivers; SL5-7, PZ2, S2 (for shipping cradles)
Adjustable spanner
Vice grip
Nylon hammer
Pliers
Mousing line
Splicing kit; fids, whipping twine, needles, palm
Shroud tension gauge
Measuring tape

INSTALLING PARTS

KEEL

The Cape31 is designed to be transportable with the keel and rudder off. In that case, the keel will have to be installed by a boat yard.

Ensure that the keel is adequately supported before working near the keel.

CAUTION. The Cape31 keel should only be installed by experienced professional with the proper experience and equipment. If the keel should fall over it may cause severe injury or death.

1. Level the keel in a sturdy keel stand or fixture on firm level ground. The keel must be level in the fore and aft direction as well as athwartships.
2. The acceptable tolerance for keel alignment is +/- 5 mm between the rudder tip, centerline of the bulb, and centerline of the hull.
3. Ensure the keel socket in the hull is clean and free from road debris or built up dirt.
4. Apply a thin layer of “Turbo-gel” fine marine grease to the head of the keel.

5. Lower the hull onto the keel top of the keel. The keel has been pre-fit prior to delivery. Ensure that it fits properly and completely into the socket. DO NOT APPLY SEALANT ANYWHERE IN THE SOCKET OR ON THE KEEL HEAD.
6. A very light coat of Tefgel or copper slip should be used on the threads of the keel bolts.
7. The keel bolts are 20mm Stainless Steel. Apply lubricant to the threads before installing the bolts. Using a 30mm socket and a torque wrench, tighten each cap screw until just firm. Do not tighten one screw all the way and then the other. Tighten the bolts progressively, alternating between them.
8. If unsure of any part of this procedure get qualified professional assistance.
9. Check that the keel fits completely into the socket. Finish torquing the machine screws. Final Torque should be a minimum of 200Nm and a maximum of 220Nm, this is with the mass of the keel supported.

The joint between the top of the keel fin and the bottom of the hull should leave a 1mm gap, this shall be filled with a 3-5mm radius fillet. The material shall be flexible sealant like Sika 591 or 3M5200. Rigid catalyzed adhesives such as epoxy are not permitted.

The maintenance & repair of normal keel cracks at the joint between the keel fin and bulb is not a warrantable item.

The keel has been primed and faired with epoxy products. If there are any nicks or scratches on the keel, they should be filled and primed. You must not use epoxy primer over antifouling bottom paints. The primer will come off. If there is bottom paint on the boat, sand it off in the area to be primed.

If you are unfamiliar with epoxy and bottom paint systems, have the work performed by a qualified technician

RUDDER

Insert the rudder from the bottom of the boat so the stock runs through both bearings. Make sure that the bolts in the locking rings have Tefgel on the threads.

1. As the stock goes through the hull slide the gaiters and jubilee clips over the stock.
2. The blade shoulders should be 2mm clear of the hull surface, use an appropriate packer of a soft material to ensure this gap during fitment.
3. With the blade in the correct vertical position clamp the two locking rings around the top sleeve on the rudder stock. One on deck above the top bearing with the white ring between it and the top of the bearing The second one below deck against the bottom of the top bearing with the grey split ring between it and the surface of the bearing. Insure the rings are hard up against the body of the top bearing so that there is absolutely no vertical movement.
4. Ensure that the rudder blade can rotate without catching the hull surface. Adjust the vertical position of the stock if required and retighten the locking rings.
5. Place the ends of the gaiter over the top and bottom bearing housings and fasten the jubilee clips on the overlap to ensure a watertight seal.
6. Offer up the tiller to the top of the rudder stock ensuing that the bolt hole lines up. Push the tiller bolt through and tighten the dome nuts on each end firmly.

Rudder Bearing Maintenance:

- The maintenance on the Jeffa rudder system is very limited.
- The most important maintenance hint is: DO NOT PUT ANY GREASE BETWEEN THE ROLLERS.
- The second most important maintenance hint is: DO NOT PUT ANY ANTI-FOULING ON THE RUDDER SHAFT AND BEARING HOUSING.

Rudder Shaft:

- The rudder shaft is carbon fiber and not subject to corrosion.
- There might be signs of corrosion around the stainless steel bearing sleaves at the upper and lower bearing joints.
- This is a result of residue from the machining process and is not a problem.

Bottom Bearing:

- The bottom bearing doesn't need any maintenance except for a good hose down when the boat is taken out of the water.
- The main reason for this hose down is to remove the saltwater out of the bearing housing so it can't crystallize. If the shaft rotates irregularly, it could be that some rollers have developed a flat side.
- This will have been caused by a temporarily blocking of the rollers by dirty parts. In most cases this will have been caused by dirt falling in from above on open tube systems.

Top Bearing:

- The top bearing doesn't need any maintenance.
- Only if your boat is located on a sandy environment and the bearing is exposed (no deck cover present) one should yearly hose it down to wash away any sand and dust between the rollers and the housing.

Vertical Locking:

- It is recommended that the vertical locking rings either side of the top bearing, are removed and flushed with fresh water at least once a year to prevent corrosion. Always apply Tefgel to the threads of the bolts before re-assembling.

BOWSPRIT

1. Thread the tackline or an appropriate mousing line through the bowsprit and fasten it to the outboard end.
2. Thread the line through the fairlead on the side of the hull and through the conduit which runs into the forepeak.
3. Fasten the line off inside the hull, and/or thread through the fairleads on the deckhead back to the clutch above the main companionway.
4. Ensure that the hull surface where the bowsprit will sit is clean and free of any dust.
5. Make sure the two M16 bolts are to hand, offer up the sprit to the hull ensuring the pins bonded to the inboard end of the sprit line up with the holes in the stem of the hull.
6. With the pins located, insert the bolts to the aft end of the sprit arms. Fit the washers and nyloc nuts to the inboard end of the bolts.
7. Using a 10mm Allen key and a 24mm socket or wrench tighten the two M16 bolts to fasten the sprit in place. 120Nm.

8. Offer up the bobstay to the hole at the bottom of the stem and splice in place. Ensure to leave the primary line short enough that the lashing at the outboard end can pull it tight with enough range to allow for the splice to stretch as it beds in.
9. It is recommended to use a vertical pre-load of 50kg on the outboard end of the sprit when tensioning the bobstay.

STANCHIONS

The stanchions are test fitted in the factory. The pushpits and pull pits are labeled port and starboard, additionally the pushpits are labeled to indicate which way must face forward.

1. Insert the stanchions into their respective positions ensuring that each one goes all the way in. The round intermediate stanchions are interchangeable. Some variation in the round stanchions and their sockets is normal, find a combination of locations which offers a good snug fit for all. Ensure that the round stanchions are all rotated so that the bushes follow the direction of the guard wires.
2. Locating screws are provided in the loose parts box. These have not been fitted in the factory.
3. Remove the eye nuts on the end of the guard wires and pass the wires through the intermediate stanchions and any lower wire padding.
4. Screw the forward end of the top guard wires into the ends of the pullpits ensuring the stud goes all the way in and is tight.
5. Re attach the eye nuts to the other ends of the guard wires and to both ends of the lower wires. Ensure these are done up tightly.
6. Use the lacing lines attached to the eyes to tighten the guard wires. Ensure that the guard wires comply with all relevant rules regarding deflection.
7. The aft guard ropes are attached in a similar way, with lacing line through eyes spliced in one end. The other end uses a soft shackle to facilitate easy opening of the rear lines. It is recommended to attach the end with the soft shackle first and then tension up the lines using the lacing line at the other end.
8. Ensure lines are kept taught at all times when the boat is in use.
9. Lastly using a 4mm drill bit and a PZ2 screwdriver, drill through each stanchion socket below deck and screw in one screw per stanchion base to lock in each stanchion. These screws prevent the stanchions from rotating and/or pulling out. Take care not to over tighten these screws or strip the heads.

SPINNAKER HAMMOCK

Provision is made for the fitting of a spinnaker hammock to the port forward area of the hull. This is by way of four bonded rope padeyes. It is recommended that the hammock is attached to these using shock cord rather than a line. This removes shock loading from the padeyes in the event of a large mass landing on the hammock.

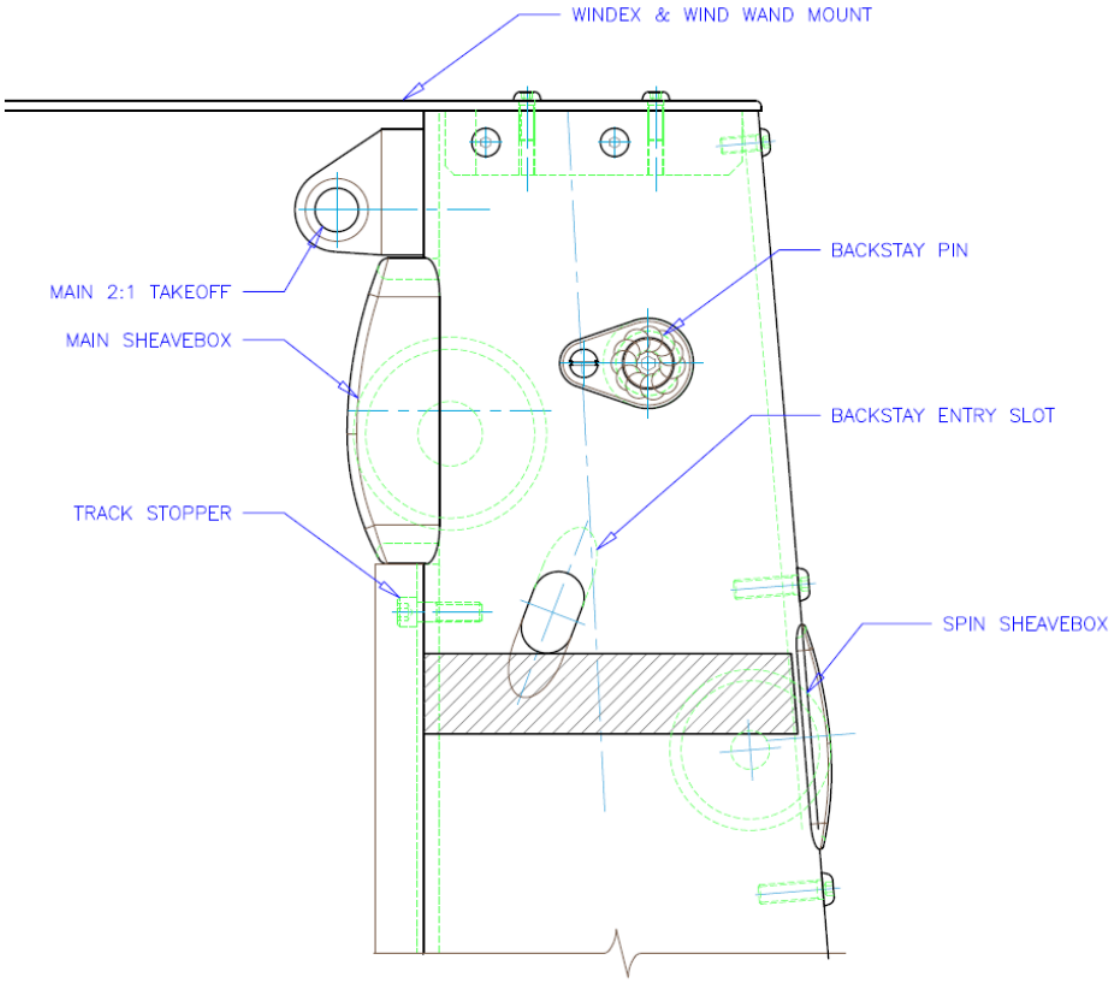
MAST AND BOOM

CAUTION: The mast should be assembled, dressed and stepped by a qualified experienced rigger, with the proper experience and equipment. The process of stepping and rigging the mast can cause injury or death if not done correctly.

DRESSING

The masthead has the facility for the main and spinnaker halyards. The sheaveboxes are easily removable for servicing and should be inspected at least every 12 months.

- To remove the main halyard sheavebox, remove the masthead top plate,
- Then the 2 nylock nuts on the 2:1 takeoff point.
- Then remove the track stopper and the sheavebox can then fit through the slot in the mast wall.
- To remove the spinnaker sheavebox, remove the 2 fasteners and the sheavebox can then fit through the slot in the mast wall.

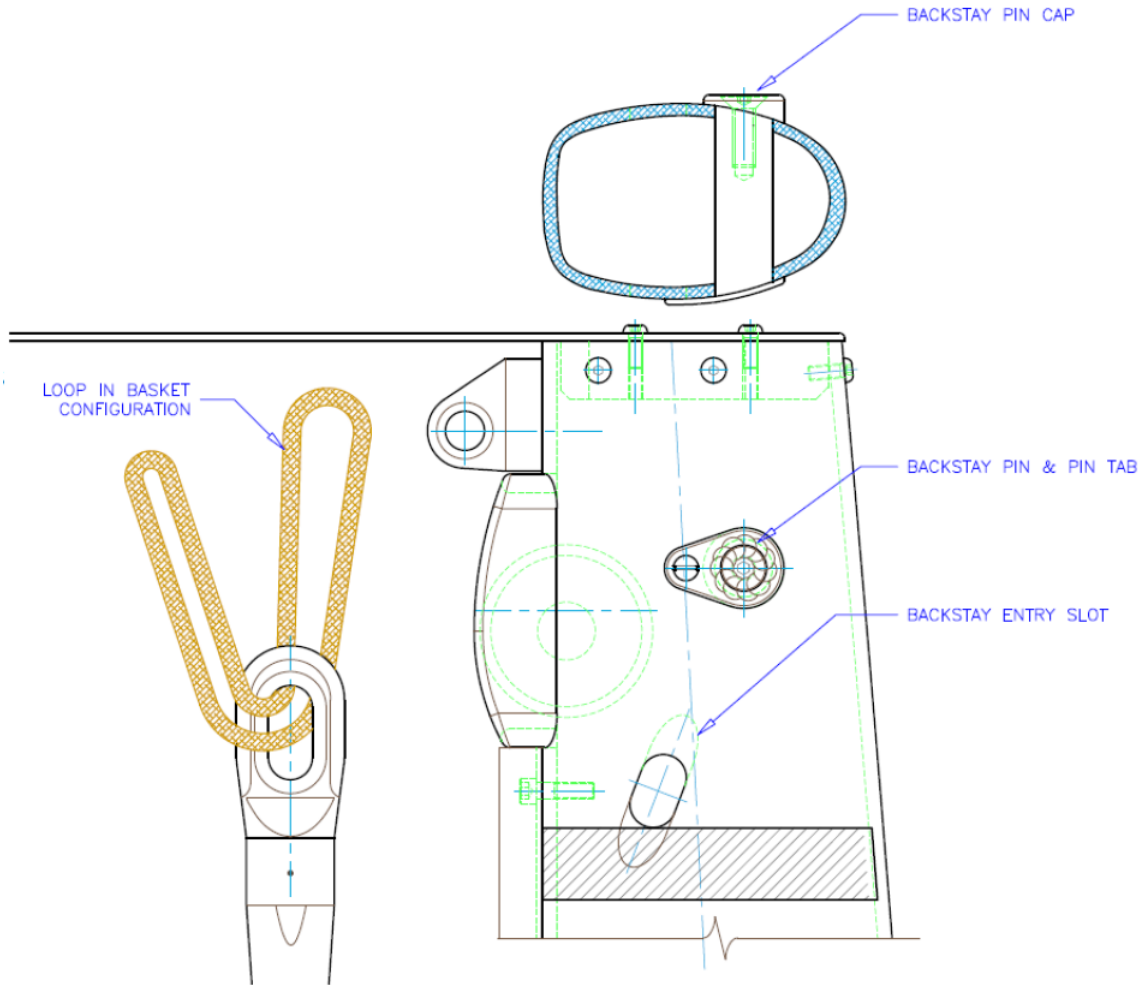


To fit the backstays:

- Insert the loop through the lashing eye in the backstay in a basket configuration.

- Pull both legs of the basket though the entry slots and align with the backstay pin.
- Insert the pin ensuring that the pin goes through both Port and Starboard loop legs.
- Fasten the backstay pin end caps in place ensuring that the fasteners screwed into the pin are dipped in blue Locktite prior to fastening.

CAUTION: It's critical that both pin end cap fasteners are in place for safe operation of the rig.



FITTING THE SPREADER BARS

- The mast is supplied with Spreader bars fitted. The spreader bars are factory fitted with sufficient tension on the wedges to ensure that the bar is not loose in the slot

CAUTION: Overtightening the wedges will damage the mast.

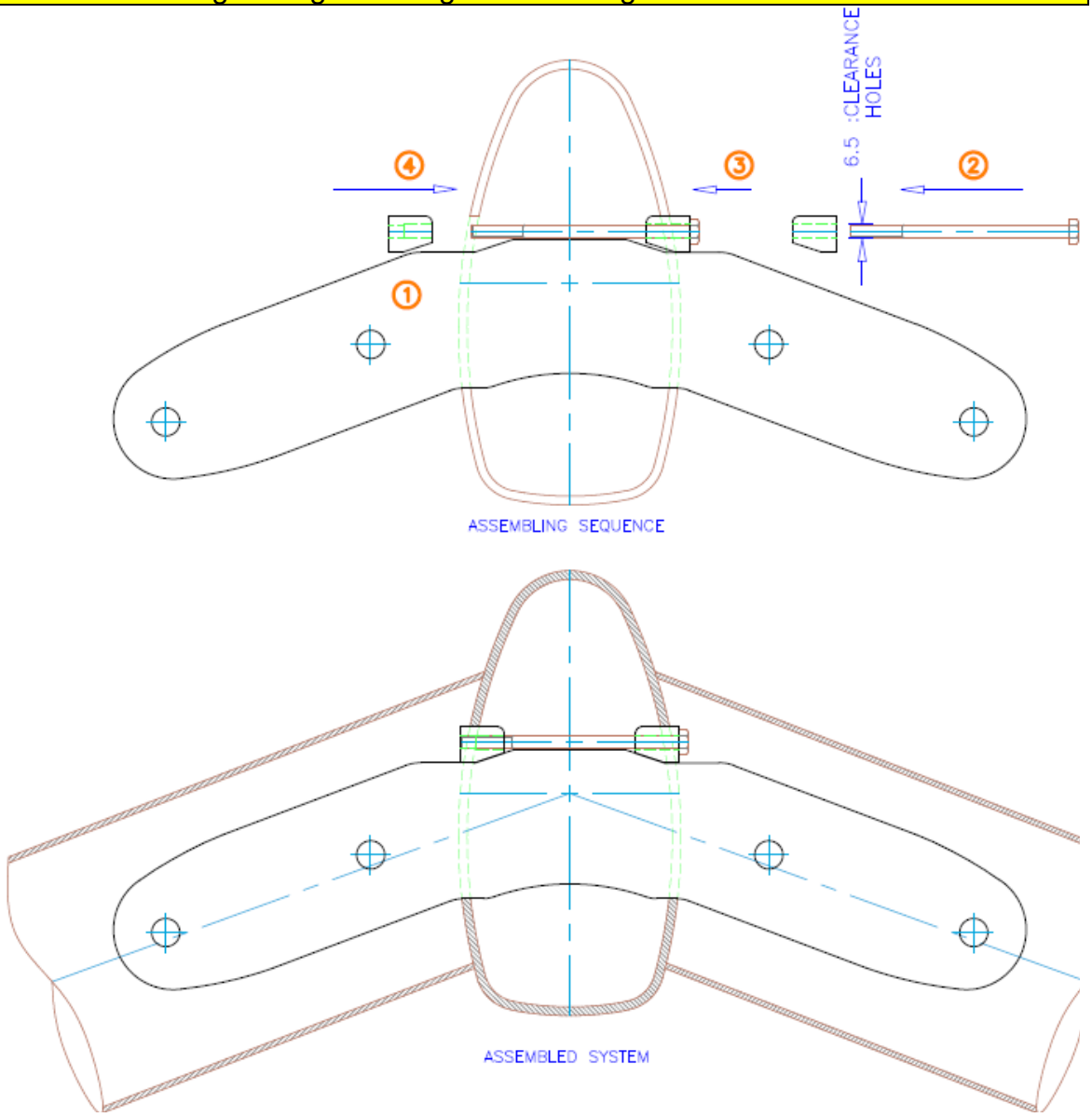
REATTACHING AFTER SERVICING

The following process should be observed when assembling the mast after a rig service.

- Slide the spreader bar (ref #1) through the spreader bar slot in the mast.

- Insert the supplied M6 bolt through the locking wedge with the clearance hole (ref #2).
- Insert the assembly in front of the bar (ref #3) and then insert the 2 and locking wedge, with the tapped hole, from the other side (ref #4).
- Tighten the wedges to remove any play in the spreader bar. Take care not to over tighten the bolt.
- Repeat the process for the second spreader bars.

CAUTION: Overtightening the wedges will damage the mast.



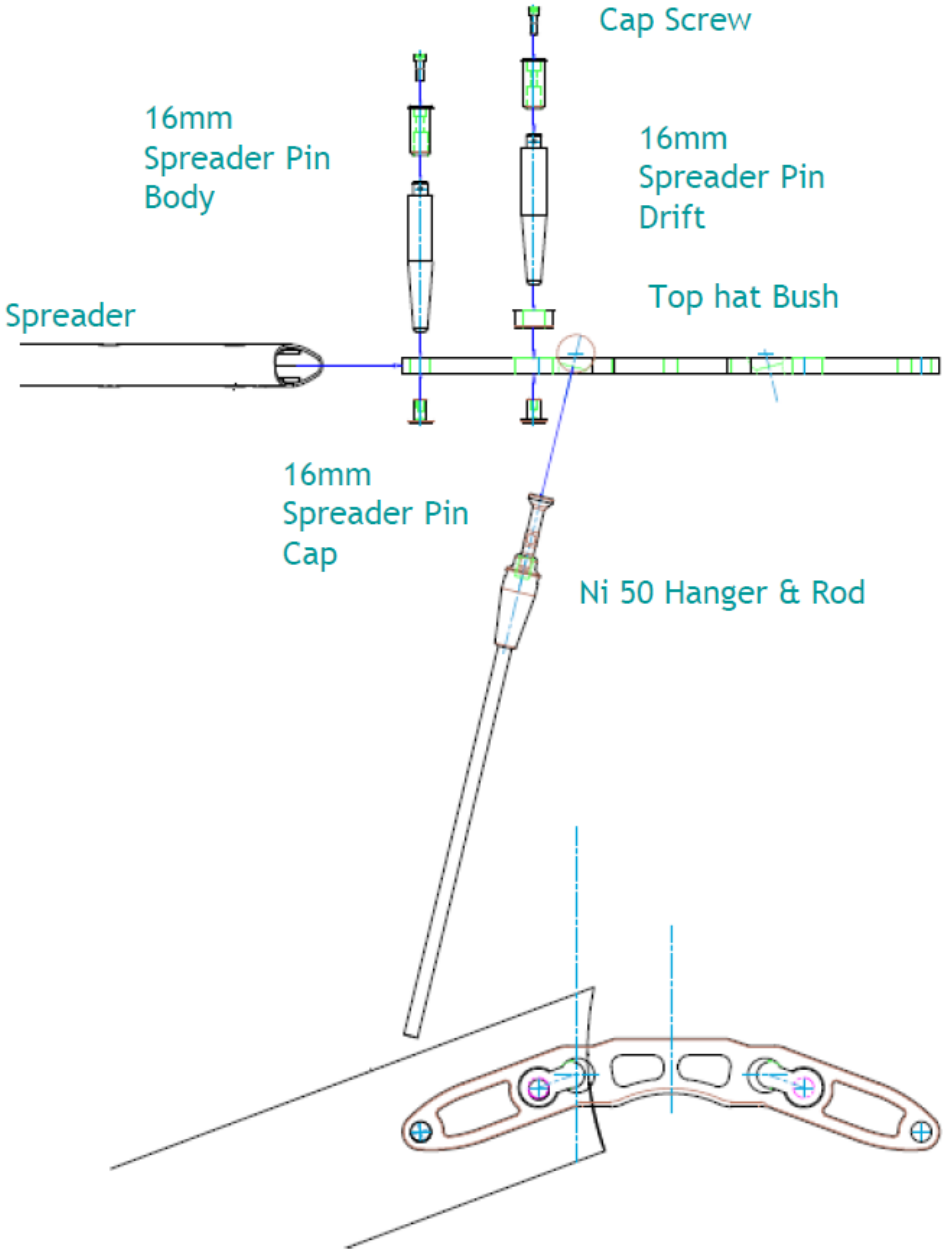
REMOVING THE SPREADER BARS

- Unscrew the M6 bolt and remove the locking mechanism from in front of the spreader bar.
- Remove the wedges and the bolt and remove the bar from the mast. Take care not to lose the bushes from the spreader pins.

FITTING THE DIAGONALS AND SPREADERS

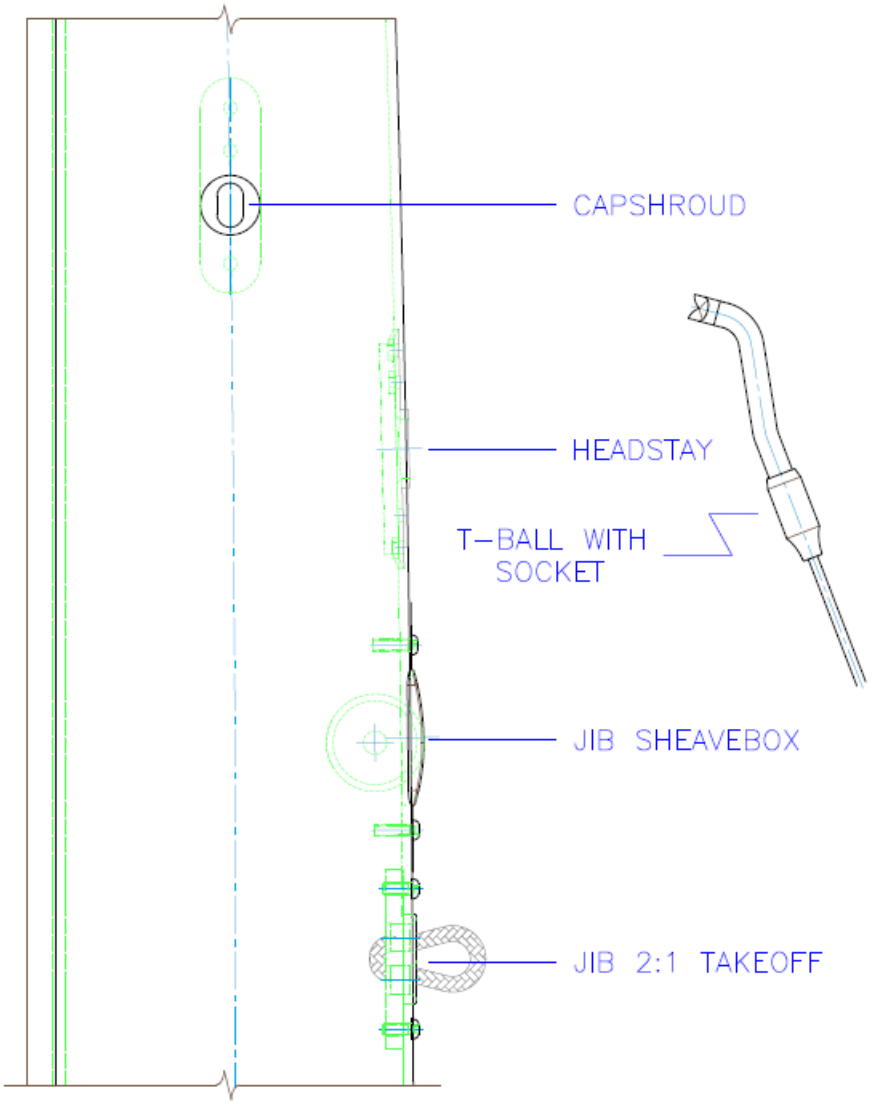
- Slide Ni 50 Rod hanger into slot and then across to locate it in the stemball seat as shown.
- Lubricate stemball seat using Tefgel.
- Slide top hat bush into the hole.
- Locate Spreader 1 on spreader bar.
- Locate 16mm spreader pin drift in the hole and place 16mm spreader pin body on top of the drift.
- Insert 16mm spreader pin body into hole from above by tapping with a hammer.
- Insert 16mm spreader pin cap into hole from the underneath.
- Fasten spreader pin body & cap with M6 Allen cap screws from the top.

NOTE: the same procedure applies to the D1 & D2



FITTING THE HOUNDS

- Apply a thin film of Tefgel to all T ball fittings before attaching to the mast.
- The headstay upper end is fitted with a socket & T ball fitting.
- Insert the T ball in line with the slot in the mast, rotate 90 and pull into the bottom of the slot. The lower end is a turnbuckle with a toggle.
- The capshroud upper end is fitted with a socket & T ball fitting.
- Insert the T ball in line with the slot in the mast, rotate 90 and pull into the bottom of the slot. The lower end terminates at the out board end of the lower spreader.
- The jib sheavebox is the same as that of the masthead spinnaker and the same procedure can be followed to remove and re install.



REMOVING THE STANDING RIGGING

The standing rigging & spreaders should be removed from the mast & inspected each time the rig is unstepped. To remove the standing rigging simply reverse the assembly processes explained above.

Ensure that all loose fittings including the shrouds are labelled and stored in a safe place for ease of assembly in the future. Any fittings coated with Tefgel should either be stored in a plastic bag to keep them free of dirt or else cleaned off and Tefgel applied when re assembling.

REMOVING THE SPREADERS

- To remove the spreaders, first ensure that all rigging has been disconnected.
- Remove Spreader Pin Caps by unscrewing the M6 Allen cap screws in the Upper Pin Body.
- Insert the Drift Pin into the hole in the Upper Pin Body from the underside of the Spreader Shell.
- Using a mallet, tap the Drift Pin until the Upper Pin Body has been knocked out of the top of the spreader.
- Carefully slide the spreader off the spreader bar and remove the Top Hat Bushes.

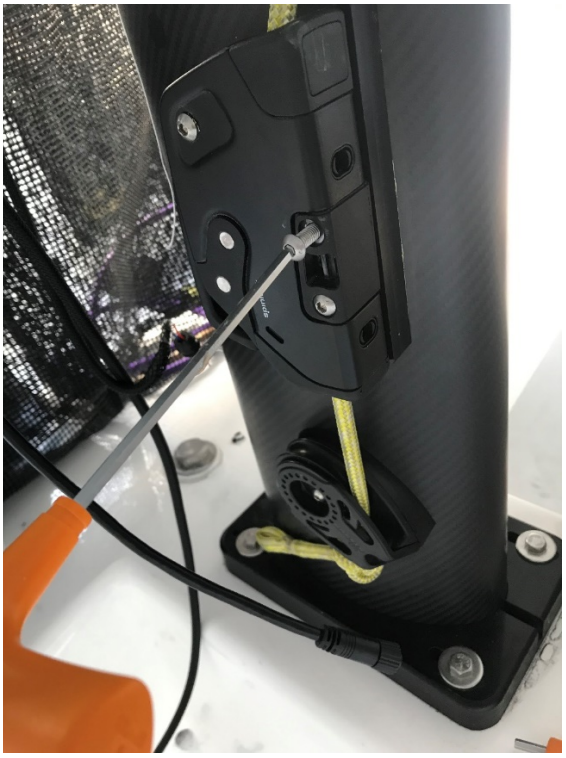
STEPPIING THE MAST

CAUTION: The mast should only be lifted into or out of the boat by a trained professional rigger using equipment which is safe and rated to cope with the loads involved.

The mast should be supported securely and kept in column when offered up to the hull. The mast should remain supported by the lifting tackle until all the standing rigging is attached and safely secured.

CAUTION: do not allow the mast to be unsupported by the standing rigging without external support as this could cause damage to the mast spar and the deck around the mast gate.

When the mast is lowered into the hull ensure that it seats correctly in the mast base and that the mast base is securely fastened to the hull in the desired position. Do not tension the rig or release the lifting tackle unless the mast is correctly seated.



NOTE: To place the mast in the boat, or to remove it, the main halyard clutch and cheek block must be removed. The mast will not fit through the gate in the deck with them attached.

CAUTION: The clutch and cheek block are mounted on custom pads which match the profile of the mast. Do not lose these or try to fit the clutch or block without them as this will cause significant damage to the rig.

If replacements are required, contact the builder.

See Appendix with tuning guide details from various sail makers. If in doubt, contact your sailmaker for the latest details of setup for your wardrobe.

North Sails https://www.northsails.com/es/blogs/north-sails-blog/cape-31-tuning-guide?gad_source=1

Doyle Sails https://www.doylesails.com/wp-content/uploads/2023/05/cape-31-tuning-guide67.pdf

Quantum Sails

NOTE: Whenever working on the mast it should be supported on padded stands with the track facing downwards. Care should be taken with the spreader tips so they do not come into contact with the ground.

Servicing:

- Monthly
  - Check all sheaves run freely and are well lubricated
  - Check for wear on shrouds and spreaders
  - Check for wear on strops and exits
- Annual
  - Check ALL fittings for wear
  - Check mast and spreaders for any damage from sailing or transport
  - Inspect and service all halyard clutches

NOTE: Any replacement fittings and fasteners should be seated with Duralac or equivalent between the fitting and the mast. Never use Loctite between the fasteners and the mast wall. Turnbuckles should be lubricated with Nickel paste.

Care:

Ensure the mast and boom are washed down regularly and all salt has been removed to prevent any corrosion.

It is strongly advised to repair any scratches to the paint of the mast as soon as possible after they occur. The mast is delivered with a finish of PPG Matt Clear D8115. Any paint repairs should be done by a qualified professional.
The Cape31 can be easily transported and the mast has been designed with this in mind. To maintain the good condition of your mast ensure that it is packaged and secured safely during transport. It is recommended that the standing rigging is completely removed for transport to ensure that it cannot damage anything or be damaged during transport.

BOOM

The boom comes fitted out ready to be attached to the mast by the gooseneck. There is a single bolt through the inboard end of the boom which attaches the spar to the gooseneck. Ensure that this bolt is fitted with its washers as supplied. A Small amount of Tefgel is suggested for the pin.

The vang cascade can then be fitted between the boom and the mast. Use the main halyard to support the outboard end of the boom for this.

Lastly the mainsheet can be run and attached to the fine tune and traveler car.

LIFTING AND SUPPORTING

CAUTION: The boat should only be lifted by a qualified experienced rigger. Care must be taken to ensure all lifting tackle is sufficiently rated for the mass to be lifted with an appropriate factor of safety and is in good working order.

CAUTION: The complete mass of the boat including any additional or loose gear on board can easily exceed two tonnes (2000kg) even though the complete boat itself is less than this figure.

LIFTING THE HULL

It is recommended to lift the boat using two slings around the bottom of the hull.

Ensure the slings are adequately padded from the hull, especially around the gunwale so that the paint surface is not damaged.

Bracing lines can be attached to the following points to stabilize the boat while being lifted and moved:

- Padeyes
- Bobstay hole
- Around bowsprit root (ensure line is padded to avoid chafing paint)

NOTE: Do not tie lines around the stanchions or guard wires.

NOTE: The hull as delivered from the factory weighs close to 1000kg.

LIFTING THE KEEL

If the keel is to be lifted separately from the hull it can be lifted either with slings around the bottom of the bulb or by way of the lifting bolt supplied with the boat.

NOTE: Ensure that the lifting bolt is fully threaded into the keel before lifting. Failure to do this can result in the bolt pulling out causing injury or death.

NOTE: the keel as delivered from the factory weighs 720kg.

CENTREPOINT LIFTING

The lifting bolt can also be used to lift the complete boat, using the following procedure.

1. Ensure that the keel is separately supported.
2. If fitted remove the AFT keel bolt
3. Screw in the lifting bolt into the aft keel bolt hole, fully tighten to a minimum torque of 200Nm and a maximum of 220Nm, check this with a calibrated torque wrench.
4. Ensure the aft companionway hatch is fully open.
5. Remove all loose equipment from the boat in order to reduce to total mass to be lifted to a minimum.

6. Using a shackle with a safe working load of at least 2500kg attach a suitable lifting strop to the lifting bolt through the open companionway.
7. Ensure bracing lines are fitted fore and aft.
8. Make sure that the area around the lift is clear and safe and that everyone involved is aware of the plan for the lift.

NOTE: Ensure that the lifting bolt is fully threaded into the keel before lifting. Failure to do this can result in the bolt pulling out causing injury or death.

NOTE: It is possible to leave the lifting bolt in permanently in lieu of the aft keel bolt. Care must just be taken to avoid injury to the crew as the head of the bolt sticks up opposite the bottom of the companionway stairs and could cause injury if a crew member were to slip down the stairs.

SUPPORTING THE BOAT OUT OF THE WATER

It is recommended that the boat is supported on the builder supplied support splashes when not in the water. These have been molded too the correct shape of the hull for their position and offer the best and safest support for the boat.

Ensure that the padding on the support splashes is clean and clear of debris and dust that could damage the hull surface when the boat is placed.

The supports should be spaced such that the centers are 4845mm apart.

The transom should be 2000mm from the center of the aft support. The boat should be checked visually as it is placed on the supports to ensure that it is level and sitting correctly fore/aft relative to the supports such that they match the curve of the hull.

NOTE: Padding on the supports can hold moisture against the hull surface and this can over prolonged periods of time cause damage to the hull. It is recommended to keep the supporting areas as dry as possible.

NOTE: If the boat is being left out of the water for a prolonged period of time with the keel still attached it is recommended that the keel is separately supported to reduce the load on the bolts.

ENGINE

Owners and crews should carefully read the Yanmar Engine Operation Manual that comes with your engine before running the engine for the first time. The Cape31 Owner's manual is not a substitute for complete familiarization with the Yanmar Engine Operation Manual. Before operating the engine for the first time and every day before use, check the cooling water, the engine oil, and the transmission fluid to be sure they are at the proper level. Engine oil and transmission fluids must meet the engine manufacturer's specifications.

STARTING AND OPERATION

Before starting the engine or engaging the propeller ensure that no one is near the engine or the propeller. Do not attempt to service the engine unless you are thoroughly familiar with its operation and dangers. Many of the moving parts are exposed and can pose a danger to anyone unfamiliar with their operation. If in doubt, leave engine service to a qualified technician.

The boat is shipped with all fluids drained from the engine. In the factory the engine was filled and tested by a certified Yanmar technician and Yanmar have a record of this test which can be accessed by any authorized agent worldwide.

Ensure only the best quality fluids are used.

Before the first start of the engine all fluids; coolant, oil, fuel, must be added as per the supplied engine manual. Follow the manual's instructions regarding grade/type of fluid and procedure for filling.

Check the full operation of the engine, sail drive and propeller before using the boat for the first time.

This manual does not supersede the Yanmar instructions for this engine. Refer to it and your local agent for more details. Only once the engine has been filled correctly should it be started for the first time.

SAIL DRIVE

The sail drive is a sealed unit and is full of transmission fluid. The sail drive unit should only be opened and serviced by a qualified Yanmar technician.

PROPELLER

Propeller sizes are determined by two numbers, which are stamped on the propeller. They are listed in sequence, for example 15" X 12" LSH. The first number is the diameter of the propeller and the second is the pitch. Pitch is the theoretical distance the propeller moves through the water with each complete revolution. The larger the number; the greater the theoretical movement.

The standard propeller is a GORI 15 X 12 LH

Under normal conditions the propeller will fold from the force of the water flowing over the blades as soon as the engine is put into neutral and/or shut down. However, to ensure that the prop has folded completely it is good practice to run the boat up to or near full speed under power, approximately 7.0kts. With the boat at speed, idle down the engine, and shut it off without delay. Then with engine off, and before the speed has bled off too much, place the transmission in reverse. The force of the fast-moving water past the blades will close the propeller tightly. Leaving the engine in reverse while under sail will keep the propeller from “wind milling” or turning from the force of the water.

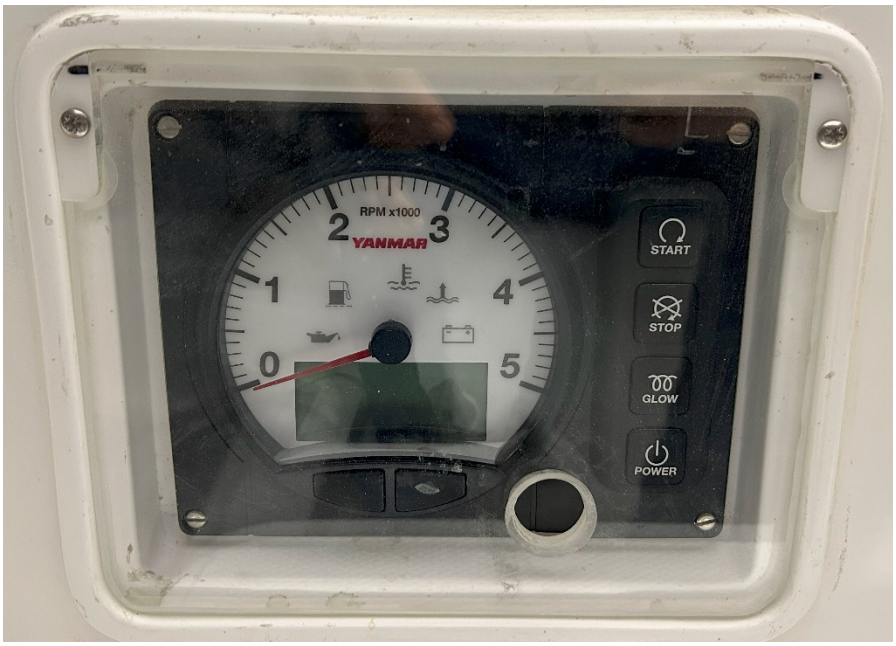
Your folding propeller has two blades connected to the hub by gears. It is possible that marine growth, foreign objects, or harsh use may cause the gears to bind and not function properly. If that happens, one or both blades might not open fully when the transmission is placed in forward gear. The result is an imbalance in the propeller that can cause severe vibration. This can be alarming! The first thing to do is to put the engine in neutral and stop the vibration. Check to see if a line or something else is fouled in the propeller. Clear it if it is.

Turn off the engine if there are swimmers in the water checking the propeller.

With the engine running at idle RPM in neutral, engage the transmission in REVERSE. Many times, reverse gear will force open the blades and correct the situation. If it does, the vibration will stop, and the boat will operate properly in reverse. Leave the transmission in reverse at low RPM until you are sure the vibration is gone, and the propeller is working correctly. Throttle right down to the lowest rpm, and quickly shift from reverse, through neutral without stopping, and into forward. The propeller will be fully extended, and the vibration should cease. If the vibration continues when you put the engine in forward, have the propeller checked by a qualified technician before using it again.

The propeller is fitted with a sacrificial anode. This should be checked at least every three months, and should be replaced if there is excessive degradation.

ENGINE INSTRUMENTATION



Engine Control panel mounted on companionway stairs

Tachometer:
The tachometer displays the number of revolutions per minute (RPM) the engine is turning. There is a designed operation RPM range for the engine. Read the Engine Owner's Manual and become familiar with the operating range of your engine and its operating characteristics. The tachometer is designed to aid the operator to assure the engine performs within that designed range. The tachometer can be used to better understand the performance of your engine and your Cape31. By monitoring your tachometer as you operate your boat, you will find RPM ranges that work better in certain sea and load conditions. Be alert, the tachometer operation may provide an early indication of difficulty before it becomes irreversible.

Temperature Alarm:
This monitors the operating temperature of your engine's cooling system. A sudden rise from normal should be investigated to determine if there is an obstruction in the cooling system.

Engine Alarms:
The engine is equipped with several audible engine alarms. Your engine owner's manual will familiarize you with these and their sometimes-distinctive sounds.

Warning: If an engine alarm sounds shut down the engine until the source of the alarm can be determined.

FUEL SYSTEM

General:
The fuel system and components on your Cape31 have been checked and the fuel tank has been tested. This inspection and testing assure that your fuel system did

not leak and was safe when the boat was completed. It is the purchaser's responsibility to maintain the fuel system in a safe manner. Make periodic inspections to determine the system is still safe and free from leaks. Special care should be taken when inspecting joints and connections to make sure they have not loosened with vibration.

If any fuel odor is detected, immediately shut off the engine and electrical devices until the source of the odor can be found and corrected. Have a fire extinguisher at the ready until the condition has been resolved.

Fuel Fill:
The fuel fill cap is located in the companionway, on the port side of the stairs, and is labeled "Diesel." The fill is opened by turning it counterclockwise and closed by turning the cap clockwise. Tighten the cap until it is snug, not so tight it cannot be removed at the next fuel stop, or so tight that the rubber o-ring is damaged, allowing water to enter the system.

Fuel vent:
This vent is located behind the engine on the inboard starboard side of the longitudinal frame. This vent allows air to escape from the tank and thus allows fuel to enter. Make sure this vent is kept free from debris.

Fueling:
Use only good quality diesel fuel from a reliable source.
Your Cape31 is equipped with a built-in 25 liter fuel tank. Before fueling, you should follow these procedures.

- Ensure the boat is securely moored.
- Ensure all switches are off and all cigarettes are extinguished.
- Know the location of the fire extinguishers in case of an emergency.
- Use only top-quality marine diesel fuel. Use of other fuels could cause fire, explosion, or severe engine damage.
- Place the nozzle firm against the side of the opening to prevent static discharge.
- Begin fueling.

- When the tank is full, stop fueling. Do not overfill and cause spills.
- Re-install the fuel cap.
- Check the area for fuel odors.

WARNING: If fuel odors are detected do not start the engine. Check to make sure there are no leaks or fuel system problems before starting the engine.

WARNING: Do not fill the fuel tank while the engine is running. Do not allow smoke or open flames within the fueling area.

System Maintenance:
Regularly inspect the fuel system components. All lines and fittings should be flexible and not corroded. If fittings or other components are found to be cracked, they should be replaced at once. If you use your boat infrequently or do not use it for an extended period of time, a fuel conditioner may be added to a full tank of fuel to prevent fuel deterioration and damage to the fuel system. Check your Engine Owner's Manual for fuel specification.

Filters & Priming:
The primary fuel filter is installed between the tank and the injection pump. It is a fuel/water separator type of filter and is designed to prevent water from entering your engine. The fuel filter element is a spin-off type element. At a minimum, this element should be replaced at the beginning of every boating season. Always carry a filter wrench and spare filter of the type supplied on your boat. There is a secondary filter attached to the engine. It has a filter element which should be inspected and serviced whenever the primary filter is inspected and serviced. Read the engine operation manual for service intervals and use of these filters.

Priming:
The Yanmar Diesel does not have a self-priming fuel pump. If the engine is allowed to run out of fuel, or if the fuel pick up is exposed at high angles of heel when motor sailing with limited fuel in the tank, the engine may 'suck air' into the fuel system and stop. The engine will not restart until it has been properly primed. There is a manual primer on the engine fuel filter. Before operating the engine, read the Engine Operation Manual concerning the operation of the fuel pump and filters. Familiarize yourself with the manual priming procedure. If the engine does not start immediately, check to see if fuel is getting to the engine. Do not continue to crank the starter. Both the starter and the fuel pump can be damaged.

ELECTRICAL SYSTEMS

The Cape31 operates on a 12-volt DC system, similar to an automobile. The battery is a no-maintenance flooded lead acid type.

DISTRIBUTION PANEL & BATTERY SWITCH

Behind the engine just below the deck head is the electrical panel. Located on it is the master battery switch, a volt meter, a USB charging port, the breaker switches and a working light

Front face of electrical panel

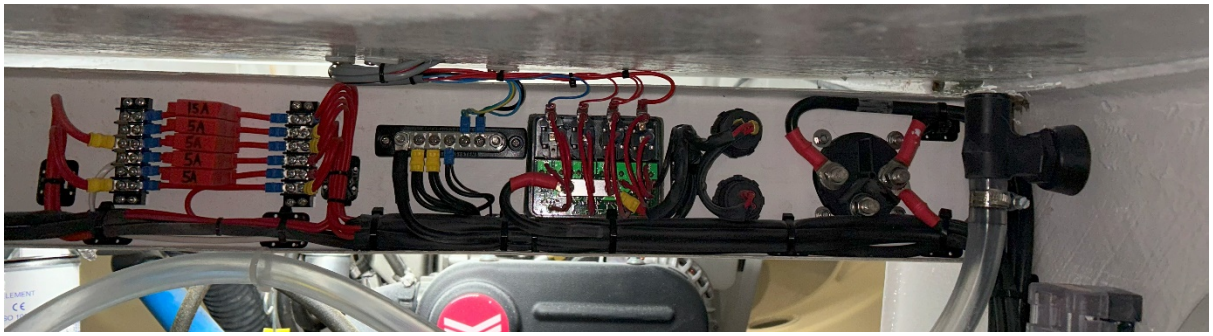
The breakers are for instruments, navigation lights, etc. The panel is accessed from the starboard side of the engine.

The voltmeter displays the voltage for the battery and charging system.

Additional electronic devices should only be installed by qualified technicians. Check that the requirement of any device you install does not exceed the rating of the circuit breaker being used.

MAINTENANCE

At the beginning and end of each season the exposed electrical components of the switch panel should be sprayed with a non-conductive rust/corrosion inhibiting spray. Running light connections should be covered with a non-water-soluble corrosion inhibiting spray.



Connections on reverse of electrical panel

BILGE PUMPS

The Cape31 is equipped with four 12-volt impeller electric bilge pumps. They are controlled by a switch at the top of the companionway stairs on the starboard side. The switch toggles the operation of the pumps between automatic and continuous operation.

There is also a manual bilge pump which is operated from the cockpit behind the starboard runner winch. The hose for this is loose and can be used manually to pick up water from all parts of the rear of the boat. Typically, this is stored coiled up behind the mainsheet bulkhead.

NOTE: Small particles of wood and fiberglass dust are a natural bi product of boat building. Even though every attempt is made to clean your boat thoroughly before it leaves the factory this dust finds its way into every possible space. When the boat is shipped to its destination the dust settles out and will mix with bilge water to create a mass that easily clogs bilge pump filters. It is a good idea to rinse your bilges when the boat is new and remove the water with a shop vacuum. This will go a long way toward keeping the installed bilge pumps clean and functioning.

SAFE OPERATION

These lists of Safety Equipment and Suggested Equipment are recommendations only. The safety of your Cape31 and its entire management are the sole responsibility of the owner or the person in command while the boat is underway. They must ensure that the boat is fully found, thoroughly seaworthy, and operated by a crew sufficient in number and experience to face bad weather and operate the boat safely. The ultimate decision on whether or not to put to sea is the sole and inescapable responsibility of the owner or the owner's representative in command.

PRE-SAILING CHECK LIST

Check the weather forecast. Avoid sea conditions that are beyond the experience of yourself and your crew.

Do you have the correct safety gear aboard and is it in good working order?

Make sure all fire extinguishers are in good working order.

Make sure there are enough provisions and potable water for the cruise.

Leave a float plan with someone who can notify authorities in the event you do not return in the allotted time.

Check the fuel and engine oil levels.

Do not overload the boat.

AFTER STARTING THE ENGINE

Upon initial start-up, follow the manufacturer's recommendations for engine break-in.

Check to be sure there is a sufficient water stream exiting the engine via the exhaust.

Check the gauges to determine if everything is nominal.

Check to make sure everything is secure and properly stowed away; remember the boat's movement is dynamic and anything that is loose will become a hazard at the worst possible time.

Make sure someone else on-board knows how to operate the boat in the event you are injured and unable to operate the boat.

WARNING: Never operate a boat under the influence of drugs or alcohol.

ROUTINE MAINTENANCE

EXTERIOR HULL AND DECK

Fiberglass:
When you are finished using the boat it is advisable to clean it as soon as possible. Dirt, debris and grime will come off easier while it is still wet. Use a brush and biodegradable boat cleanser. Stubborn areas may be cleaned with a non-abrasive cleaner. Harsh abrasives and chemical cleaners are not recommended as they can damage the gelcoat, shorten its life, and make it more susceptible to stains.

NOTE: Do not use any cleaners containing ammonia or with extremely high or low PH levels as this will affect the condition of gelcoat.

The hull should be waxed periodically, at least once a year, with a high-quality wax. This will keep it shiny looking and help prevent chalking and aging. The wax will also make it easier to keep clean by closing the pores that trap dirt.

Antifoul:
Boats supplied with antifoul applied should take note of the specific requirements of the antifoul system used.

Antifoul coatings are generally not as hard wearing as typical marine paints and can be damaged more easily. To keep hulls foul free the bottom should be dived regularly and any damage to the coating should be repaired with the same system by a qualified professional following the instructions of the appropriate system.

Stainless Steel Hardware:
The stainless steel hardware on your boat should be cleaned and washed after each use, especially in salt or polluted water. While it is “stainless” it is not “stain-proof”. If it is not cleaned, it can develop surface rust stains. It can be protected with a high quality automotive or boat wax. It can also be protected with a commercial metal cleaner and protectant.

Anodized Aluminum:
The aluminum should be maintained with a regular washing with soap and water. Otherwise, it can develop a surface corrosion, which can penetrate the anodizing and attack the aluminum underneath.

Perspex:
Do not use products with ammonia on Plexiglas items such as the engine panel door. It can mar the surface and reduce its transparency. A mild soap and water or non-ammonia cleaner will work well. In addition to ammonia, cleaners should not be used which contain solvents, acetone, or alcohol.

Deck Gear:
Most of the deck gear on your Cape31 including the blocks, shackles, and rope clutches does not need lubrication. It is good practice to thoroughly rinse these items with fresh water after each use, especially when exposed to salt water. Over

lubrication, or the use of improper lubricants can foul ball bearings and some moving parts.

Lubricants from “Team McLube” (www.mclubemarine.com) are recommended for use on deck hardware where applicable.

Winches:
Winches should be rinsed with fresh water after each sail, especially in saltwater. It is not necessary to remove the winch drum for routine rinsing. Routine service and maintenance instructions are provided with the winches. Read them carefully before using a winch. Most routine service on winches can be accomplished by following these instructions.

The Cape31 uses Harken winches as standard equipment. More detailed service information on these winches may be downloaded at www.harken.com. If you are not sure of what needs to be done for service or repair, or how to do it, have a qualified technician perform the service.

Winches should be cleaned and lubricated at least three times per year: at the start of the season, mid-season, or after heavy use, and at the end of the season. Boats with heavy usage and hard racing may require much more frequent maintenance.

CAUTION: The loads on winches can high. Care must always be exercised when operating any equipment under very high loads. If you are unfamiliar with operation maintenance or service of a winch or any piece of equipment or rigging contact a qualified technician or Cape Performance Sailing.

INTERIOR

After each sail where exposed to salt water the inside of the boat should be wiped down with fresh water to prevent any salt deposits.

It is good practice to thoroughly rinse all hardware items with fresh water after each use, especially when exposed to salt water.

Ensure that the engine area is left dry after each sail to prevent corrosion, particularly around the engine and sail drive mounts.

CAUTION: If a dehumidifier is used to help keep the boat dry it should be checked regularly to avoid any electrical issues.

RIG

It is recommended that the rig is serviced at least annually by a qualified rigger or after heavy use.

As a minimum the following items should be checked to ensure they are in good condition:

- Mast tube
- Mainsail track and feeder
- Rigging attachment points
- Spreader attachment points
- Spreader ends
- Standing rigging
- Aft running backstays and their connection loops
- Running rigging
- Halyard exit sheaves
- Main halyard clutch and block
- Mast head wiring
- Gooseneck
- Boom tube
- Boom outhaul tackle
- Boom vang attachments
- Mainsheet attachments

The aft running backstays and their connection loops are a highly strained part of the rigging setup on the boat. As such they have a limited working life. To ensure that they are always in good working order, and that the safety of the boat and its crew is maintained, it is important that they are replaced regularly and replaced as indicated below.

Two brands of running backstays are currently class legal and approved by the builder. They should be replaced as follows:

- BSI Every two years
- Amare Every four years
- Loops Every two years

NOTE: Replacement backstays must be supplied by a builder approved agent or directly from Cape Performance Sailing to maintain the warranty on the boat.

Rig loading whilst sailing is dynamic and can reach very high peaks in extreme and shock loading situations. The setup and tuning of the rig can have a significant impact on the maximum loadings the spars and rigging are exposed to. In order to maintain safe factors of safety for all components of the rig the following maximum loadings are recommended:

Headstay:

- The maximum working load on the headstay is 1800kg. Exceeding this load will over stress the rig and rigging and void the warranty.

Backstays:

- Upwind load; The backstays should not be tensioned beyond the point of exceeding the maximum headstay load of 1800kg.
- Downwind; The backstays should be eased for downwind sailing before hoisting the spinnaker.

ENGINE AND PROPELLER

Follow the engine manufacturer's recommendations for normal maintenance. Use a qualified technician to perform routine and seasonal maintenance on your engine unless you are fully qualified to do it yourself.

There is a zinc on the saildrive between the hub and the propeller. It is designed to protect the saildrive and propeller from galvanic corrosion. This zinc must be inspected every three months and changed at least annually, or when it shows excessive corrosion. Various conditions of water temperature, salinity, and other factors affect zincs differently. The zinc should be inspected each time the boat is hauled, or if a diver cleans the bottom.

The gap between the sail drive leg and the hull is sealed with soft foam and a thin surface layer of Sika 591. Do not replace this with any hard material as this will transfer vibration from the sail drive into the hull causing structural damage.

Rudder Bearing Maintenance – See Steering System

WINTERIZATION

General:
Boats that will be laid up for the winter or have less than normal use during winter months in cold climates must be properly winterized before there is any possibility of exposure to freezing temperatures. This includes boats that are afloat and used year-round. If there is a possibility of prolonged exposure to freezing temperatures, winterization procedures must be taken.

The Warranty on the Cape31 does not cover damage from exposure to sub-freezing temperatures.

Mast and Boom and Rigging:
If the mast is removed from the boat, it is advisable to remove all standing and running rigging. They should be inspected for wear, cleaned, dried, and properly coiled for storage. Take particular care to inspect all splices, rod terminals, and turnbuckles. If there are signs of wear and tear, or a question of the integrity of the rigging, take it to a qualified rigger for inspection and maintenance. The mast and boom should be thoroughly rinsed with fresh water.

Refer to the Attached rigging list for recommended size and type of replacement running rigging.

CAUTION: the mast and spreaders should be stored so that water will not collect and freeze inside. This can be a problem with spreaders stored “tip down”. Expanding ice can easily crack a spreader tip.

If the mast is to be left standing, remove the sails and any loose equipment. It is recommended to replace halyards with temporary messenger lines, and service the halyards as recommended. Release the pressure on any hydraulic cylinders and leave only enough pressure to remove slack from the system. Tie off halyards and control lines to prevent chafe and wear. Seal off the mast collar to prevent water from entering below.

Hull & Deck:
If the boat is hauled, the topsides and bottom should be cleaned and washed. Wax all smooth fiberglass surfaces except non-skid areas on the deck.

If the boat is hauled, all through hulls should be left open and drained to prevent freezing in the lines. See your boat yard for recommendations on winter storage afloat.

Be sure the hull is properly supported while the boat is hauled. Only a qualified professional should block and store the boat.

Bilges should be cleaned and dried. Take care to thoroughly drain all bilge hoses.

CAUTION: It is possible for water to enter the boat over time especially if there is prolonged bad weather. It is recommended that the boat is checked regularly for water and that it is dried out should any water enter the hull.

CAUTION: If a dehumidifier is used to help keep the boat dry it should be checked regularly to avoid any electrical issues.

Mechanical and Electrical:
Engine winterization procedures can be found in the Engine Owner’s Manual. Follow them carefully, or have a qualified technician perform the winterization. Do not forget to drain the seawater strainer and the muffler. There is a small petcock on the aft

lower side of the muffler. Turn it counterclockwise to open, allow all the water to drain, and close it by turning it clockwise. Do not leave the muffler drain petcock open.

Batteries should be fully charged before storage or winterization. Consult the manufacturer's instructions for prolonged storage. Batteries should be checked and slowly charged at least once a month during winter. If there is no provision for this, it is recommended that they be removed in stored in a place that is not exposed to freezing temperature.

CAUTION: Do not leave unattended batteries permanently charging.

It is a good idea to pump antifreeze through all the bilge and sump pumps before draining them as much as possible. Pour a small amount of antifreeze through all the drain systems.

RIGGING LIST

ITEM	Qty	DIAM.	LENGTH	
			CUT	FINISHED
Main Halyard	1	8	42,000	41,000
Spinnaker Halyard	1	8	36,000	35,000
Jib Halyard	1	8	43,000	41,500
2:1 Soft Shackle	1	4	0,210	
Runner Tail	2	8	8,000	7,000
Runner Loop Masthead	2			0,500
Runner Loop Bottom	4			0,400
Runner Loop 3.1	2			0,500
Runner Loop Flyblock	2			0,200
Spin Sheet Port	1	7	31,000	28,000
Spin Sheet Starboard	1	7	31,000	28,000
Spin Sheet Strop	1	5	1,000	0,400
Tack Line	1	8	18,000	15,000
Bobstay	1	8	3,000	2,000
Main Sheet	1	8	27,000	26,000
Main Sheet Fine Adj	1	6	8,500	8,000
Main Car Traveler	1	6	13,000	13,000
Jib Sheet	3	8	7,500	6,400
Barberhauler Primary	2	5	4,000	2,900
Barberhauler Secondary	2	4	2,000	1,020
Barberhauler Control	2	6	7,000	7,000
Vang 1st Fall	1	4	3,000	2,200
Vang 2nd Fall	1	4	3,000	1,900
Vang Control	1	6	10,000	10,000
Cunningham Primary	1	3	2,000	1,100
Cunningham Dogbone	1	3	1,500	0,920
Cunningham Soft Shackle	1	5	1,500	0,180
Cunningham Control	1	6	4,000	3,350
Soft Shackles	4	4		0,210
Soft Shackles	2	3		0,200
Aft Lifeline Top	1	3	3,500	2,940
Aft Lifeline Bottom	1	3	3,500	2,820

SPARES

The following is a list of common spares which may be required to keep your Cape31 in good working order. These are available from your local dealer.

Any parts not listed are available directly from Cape Performance Sailing.

HARKEN

Mast Base		
2	1988	57mm Fixed Mastbase Block
Jib Leads- 18:1 twined		
2	498	Cam-matic with Fast Release Fairlead
2	1203	50mm Thru Deck
2	343	Double Swivel Becket 29mm Block
2	342	Double Swivel 29mm Block
Main Traveler- 5:1		
1	R27.1.5M	Mid Range 27mm Captive Ball Low-beam Track w/Pinstop Holes
1	E2730	Single Sheave / Deadend Pair
1	T2705B.HL	Mid Range 27mm Hi-Load Captive Ball Loop Car
2	2644ASSY	40mm Carbo Cheek Block
2	2644ASSY	40mm Carbo Cheek Block
2	2146	T2 Single Block 29mm
2	2149	T2 Single block 40mm
2	498	Cam-matic with Fast Release Fairlead
Mainsheet Course- 6:1		
1	2152	T2 Single Block 57mm
3	2153	T2 Double Block 57mm
1	144	Ball Bearing Swivel Mainsheet Cam Base
1	2680	75mm Carbo Ratchamatic Block
Mainsheet Fine- 4:1		
1	2638	Double / Swivel
3	349	Stand-up / Fixed
2	496	Cam-matic with Fast Release Fairlead
Spinnaker Sheets		
2	2680	75mm Carbo Ratchmatic Block
6	3206	6mm Low Load Folding Padeye
2	3214	57mm Loop Block
2	3202	8"inch x 5mm soft loop
Winches		
2	35.2STP	Performa Self-tailing Winch

2	40.2STP	Performa Self-tailing Winch
Vang		
1	240	Swivel Base Cam Cleat
1	2656	40mm Carbo Fiddle Block with Becket
1	2655	40mm Carbo Fiddle Block
1	2149	40 Mm Single Soft Attach Block
1	2152	57mm Single Soft Attach Block
Runners		
6	3214	57mm Black Magic Single Loop Block
2	3202	8"Inch X 5mm Soft Loop
Cunningham		
2	2146	29mm Single Soft Attach
Fairleads		
2	AL-3826	Mid Range Jib Fairlead **(3280)**
6	AL-3819	Fairlead Single 12mm Hole **(3274)**
Drop Line		
2	2151	57mm Carbo T2 Loop
Mast		
1	2606ASSY	57mm Carbo Cheek Block
1	2146	29mm Carbo T2
1	2156	40mm Carbo Pivot Lead with Cam
Boom		
1	349	Stand-up / Fixed
1	498	Cam-matic with Fast Release Fairlead
1	6260	60mm Element
1	2600	57mm Carbo
1	2636	40mm Carbo
Jib Halyard		
1	2655	40mm Carbo Fiddle
1	2658	40mm Carbo Fiddle W/Cam
Carbo Race Foil		
1	7000.12M	Kit 0 Carbo Race Foil

SPINLOCK

Clutches		
4	XTS0610/C	Powerclutch Ceramic Jaws
Other		
1	EA/1600S	Silver Asymmetric Handle Tiller Extension
1	ATCU/1+	Flush Mount Throttle Control Unit

RONSTAN

Jib tracks		
2	RC7251	Series 25, T-Track
4	RC72581	Series 25, T-Track, End Cap
2	RC72504	Series 25, T-Track, Composite Slide, Pin, Plunger Stop

JEFA BEARINGS

Top		
1	5T076	
Bottom		
1	5BT100	

VETUS – ENGINE ANCILLARIES

Filters		
1	330VTEB	Fuel Filter
1	FTR140/19	Water Strainer
Exhaust		
1	WLOCKL50R	Water Trap
Fuel		
1	FTANK25	25l Fuel Tank

AQUA SIGNAL

Nav Lights		
1	38530010000	Series 34 Bow LED Nav Light
1	3852001000	Series 34 Stern LED Nav Light

DOMETIC

Morse Cables		
2	CCX63310	10’ Morse Cable

SEASTAR

Engine Control		
1	CH2100P	TX Mechanism

WHALE

Bilge Pump		
1	BP9013B	Manual Bilge Pump

OEM PARTS

Carbon Bowsprit Complete
Bowsprit End Fitting “Pig-nose”
Bowsprit Inboard Pins (pair)
Forestay Pin Complete (with washers)
Carbon Pullpit
Carbon Intermediate Stanchion
Carbon Pushpit
Carbon Stern Light Stanchion
Forward Hatch Stoppers
Forward Hatch Rails (available in black or white)
Forward Hatch
Tackline Machined Trumpets (pair)
Carbon Jib Adjuster Covers (pair)
Shroud Rigging Pins
Standing Rigging (complete set)
Forestay
Lower Shrouds
Upper Shrouds
Cap Shrouds
Mast Complete
Boom Complete
Mast Boot
Mast Chocks
Mast Collar
Tack Line Exit Flute
Plexiglass Engine Panel Door
Aft Hatch
Aft Hatch Acetal Runners
Aft Hatch Handle (available in black or white)
Aft Hatch Threshold (available in black or white)
Keel Complete
Keel Fin
Lifting Bolt
Keel Bolts (pair)
Keel Bolt Bushes (pair)
Keel Bolt Carbon Plate
Rudder Complete
Rudder locking rings (pair with bearing ring)
Carbon Tiller Arm
Runner Loop Dog-bones (set of four)

WARRANTY

In addition to the purchaser's statutory rights the following warranties shall apply:

Subject to the conditions set out below the builders warrant to the purchaser that the boat will:

- Be of satisfactory quality and reasonably fit for standard coastal racing.
- Correspond with the specification and any agreed variations, additions, or modifications.
- Be materially free from defects in materials and workmanship for a period of 12 months from delivery; and
- Comply with all material legislative requirements and regulations relating to the sale of the vessel in the country of South Africa for the purpose stated above.
- Comply with the class rules for racing the vessel current at the time of delivery in the Republic of South Africa.

The Purchaser's statutory rights and warranties set out above shall be subject to the following conditions:

- The builders shall have no liability for any defect or regulatory non-conformity in the vessel which arises directly as a result of the builders adherence to any part of the specification which is specified, supplied or developed by the purchaser or his agents.
- The builders shall be given the opportunity to repair or replace and defect or deficiency in workmanship, materials or equipment or any failure to conform with the specification. Such repair or replacement shall be carried ouot by the builders at their premises or, where that is not convenient to the parties, the builders shall pay the reasonable cost of having the work carried out elsewhere.
- The purchaser shall notify the builders in writing promptly on discovery of any alleged defect or deficiency and the builders or their agent shall have the right to inspect the vessel including the right to carry out sea trials to enable the builders or their agent to examine or assess the extent of the alleged defect or deficiency. The expense of any such trials shall be borne by the builders if the defect is shown to be one of workmanship or materials.

EQUIPMENT DEFECTS

The warranty for equipment produced by another supplier but installed by the Builder shall be in accordance with the warranty issued by the supplier.

The builder shall be responsible for faulty installation if said item was installed by the builder.

The builder shall not be liable for any proprietary and/or other articles supplied by sales agents, including but not limited to navigation equipment, electrical, or hardware.

LIMITATION OF WARRANTIES.

There are no warranties expressed or implied other than this warranty. All statutory or other warranties including warranties of merchantability or fitness for a particular purpose are specifically excluded. The warranty does not cover damage due to use of the product in applications for which it was not intended. The warranty does not cover damage due to use and handling that are contrary to operational instructions in any manuals delivered with the vessel or that are the result of inexperience or poor seamanship.

ENTIRE AGREEMENT

This Warranty is the sole Warranty given to you by the Builder. Authorized Dealers may offer additional warranties but are not authorized to make changes to this Warranty. Any questions about this Warranty should be directed to Cape Performance Sailing.

CAPE31 WARRANTY CLAIM PROCEDURES

PROCEDURE

1. The owner or his representative must have completed his responsibilities including returning the Inspection Check List.
2. Before any warranty work is performed, a Cape Performance Sailing Warranty Form (sample enclosed) must be completed and sent to Cape Performance Sailing by electronic mail. When the claim is approved, a Warranty Claim Number will be issued by Cape Performance Sailing.
3. All claims over $250.00 require two alternate quotes each with a detailed written estimate. Photographs showing the problem in question are helpful when appropriate.
4. The invoice from the repair facility, along with the approved Cape Performance Sailing Warranty Form, must be submitted to Cape Performance Sailing within 30 days of completion of the work.

Address correspondence to:
Cape Performance Sailing
Unit 6, Waterstone Park,
Capricorn Park,
Muizenberg,
7941
SOUTH AFRICA
davey@capeperformancesailing.com

VENDOR WARRANTY
Manufacturers such as Yanmar, Harken, etc. have their own warranty. Any claims for warranty service from these manufacturers should be submitted directly to them. Follow instructions provided by the respective Manufacturer to obtain service support. Cape Performance Sailing warrants that these parts were installed properly and in accordance with the instructions provided by the manufacturer.

CAPE PERFORMANCE SAILING

WARRANTY CLAIM FORM

BOAT MODEL: CAPE31

H.I.N: _____ DATE: _____

OWNER NAME: _____

ADDRESS : _____

_____

_____

TELEPHONE: _____

MOBILE: _____

E-MAIL: _____

DESCRIPTION OF PROBLEM:

_____

_____

_____

_____Use multiple pages as necessary.

REPAIR FACILITY:

_____ _____

_____ _____

CONTACT:

_____ _____

TEL: Continue on separate page if needed.

_____

E-MAIL: Please fill out the information and forward to your Dealer. Include any photographs or other supporting materials.

_____

REPAIR DESECRIPTION & ESTIMATE:

_____ WARRANTY CLAIM NUMBER:

_____ _____

WARRANTY CLAIM

_____ Date Open: ___ / ___ / _____

Date Closed: ___ / ___ / _____

NOTES