

RIGGING GUIDE

RS

Elite



Sail it. Live it. Love it.

CONTENTS

1.INTRODUCTION

2.COMMISSIONING

2.1Preparation

2.2Mast

2.3Boom and Vang

2.4Hoisting Sails

2.5Completion

3.MAINTENANCE

3.1.1Boat Care

3.2Keel and rudder care

3.3 Spar Care

3.4 Sail Care

4.WARRANTY

1. INTRODUCTION

Congratulations on the purchase of your new **RS Elite** and thank you for choosing an RS product. We are confident that you will have many hours of great sailing and racing in this truly excellent design.

The RS Elite is an exciting keelboat to sail and offers fantastic performance. This manual has been compiled to help you operate your RS Elite with safety and pleasure. It contains details of the craft; the equipment supplied or fitted, its systems and information on its safe operation and maintenance. Please read it carefully and be sure that you understand its contents before using your RS Elite.

If this is your first craft, or you are changing to a type of craft you are not familiar with, for your own safety and comfort, please ensure that you have adequate experience before assuming command of the craft. If you are unsure, your dealer or national sailing federation will be able to advise you of a local sailing school, or competent instructor.

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

For further information, spares and accessories, please contact your local dealer or:

LDC Racing Sailboats Trafalgar Close Chandlers Ford Eastleigh Hants SO53 4BW Tel. 023 8027 4500 Fax.
023 8027 4800 Email. rs@ldcracingsailboats.co.uk

2. COMMISSIONING

2.1 Preparation

Your RS Elite comes complete with all the components necessary to take the yacht sailing. In order to commission it, you will need the following tools:

Pliers or a shackle key.
17mm spanner.
13mm spanner.
PVC (electricians) tape.
Lubricant spray (RS Lube or similar).
Rig tension gauge.

You may require other tools later, should you wish to make any settings or tuning adjustments to the boat and rig.

DO NOT use a knife or other sharp object to cut through packaging containing parts – you may damage the contents.

Whilst your RS Elite has been carefully prepared, it is important that new owners should check shackles, knots and mast step bolts are tight. This is especially important when the boat is new, as travelling can loosen seemingly tight fittings and knots. It is also important to regularly check such items prior to sailing.

2.2 Mast

Rigging and Stepping the Mast

Your RS Elite mast will come almost ready to step with:

The halyards threaded.
The spreader deflection set.

- Shrouds and forestay wires all fitted. Therefore, all that is required is to fit the wind indicator to the top of the mast.

As with all boats, it is a good idea to tape up the spreader bolts and split rings along with any other sharp objects that could rip the spinnaker.

IMPORTANT

Leave the trailer hitched on to the back of the car to prevent the trailer from tipping up whilst walking around in the yacht.

Stepping the Mast

Before you step the mast, check that the main, jib, and spinnaker halyard ends are at the base of the mast, to enable the sails to be hoisted.

You can step the RS Elite mast with only two people. Be sure those helping have read and understood the instructions before starting.

Lift the mast on to the yacht so the foot is towards the bow.

Your helper should now stand at the very back of the cockpit and lift the head of the mast on to their shoulder. Both should now lift the mast back so the foot is above the mast step. The helper on the transom should be holding the mast at about the spreaders now.

Warning: the person at the rear of the cockpit requires reasonable strength:

Push the mast foot down towards the step, the helper on the transom may need to lift the mast slightly to enable the jib halyard cleat to clear the front foot rail.

Line the hole in the mast foot up with the hole in the step. Push the bolt through the mast foot and screw the nut on the end.

Walk back in the cockpit and help the second person raise the mast into the upright position in the mast gate.

Warning: Ensure the mast is raised in line fore and aft, as swaying off to the side can damage the mast foot.

While the helper is supporting the mast in the mast gate, go forward and connect the forestay onto the wire stop at the bow. Ensure that the forestay is tight enough to bring the mast into the mast gate.

Now the mast will stand by itself.

Elite Mast Strap

Important - the following guidelines will ensure the safety, longevity and performance of your RS Elite rig:

The Elite mast is designed to be “pre-bent” under rig tension, and the pre-bend locked in firmly with the webbing mast strap. This will ensure the mast does not invert (bend backwards in the lower section) under severe sailing loads, particularly from the spinnaker pole.

You are looking for at least 75mm pre-bend with a rig tension of 450-500 kgs measured on the main shroud. The mast should be snugged up against the shaped support in the front of the mast gate. (As in Fig 1)

The prebend is measured by pulling the main halyard tight from the gooseneck to the mast tip, and measuring, or estimating, the maximum offset from the tight halyard to the back of the mast – usually at about spreader height. This should be 75mm or 3 inches minimum.

The rig tension is measured with a rig tension gauge – the “Loos” variety is the best, attached to the shroud approx 1 metre up from the deck.

The lower shrouds restrict further prebend, and usually show around 100-150kgs tension with the mast snug at the front of the gate.

The webbing mast strap should now be used to hold the mast to the front of the gate: Ease the adjusting screw, wrap the strap around the mast and kingpost – under the deck – and shackle it up. Tension it up by hand and then with a spanner, ensuring it is as high as possible under the deck. It should feel tight and the mast solid in position. Make sure only the webbing is in contact with the spar, **NO** part of the shackles or buckles should be touching the spar. (As in Fig 2). Also make sure the webbing strap is tight up against the foredeck at all times, so not to interfere with the halyards. (As in Fig 3) The strap may be left like this all season, but you should maintain at least 150kgs of rig tension at all times, whilst the strap is fully tensioned. This is a sensible amount to leave on the boat in any case to avoid “slopping around” on an unsettled mooring.



Fig 1



Fig 2



Fig 3

13

HINT:

As the mast is effectively fixed at deck level, the adjustment of the shrouds becomes paramount: the more the shrouds are wound down, the more pre-bend as well as rake you will have. This will de-power the rig. The less the shrouds are wound down, the straighter the mast as well being less raked, and this will power up the rig.

The lower shrouds then become more of a “gust response” setting. The looser they are the more the rig will “work” in stronger breezes, and the tighter, the more “locked up” the rig will feel.

Important: Ease the forestay fully, letting the mast back so as to position the top, rear corner of the mastgate in line with the mid point of the mast, in other words where the mast is widest. If the main shrouds are “snugged” up as much as possible by hand, with the forestay like this you will have a good guideline mast rake.

Remove the lock nuts from the main and D1 shrouds.

Insert the main shroud through the rear hole. Refit the lock nut. Fit the shroud end into the bottle screw and tighten down to the desired measurement (see “important” above).

Insert the D1 shroud into the fwd hole. Refit the lock nut. Fit the shroud end into the bottle screw and tighten down a minimum of about 15mm.

Pull on the rig tension hard. Pulling as hard as is comfortable with one hand is a good guide.

Now you are ready to assess and correct your mast settings.

Important: The RS Elite mast is designed to be “prebent” with rig tension, and it is essential that to set it up correctly:

You are looking for a minimum of 75mm prebend with a rig tension of 500kgs measured on a main shroud. The prebend is measured by pulling the main halyard tight from the gooseneck to the mast tip, and measuring, or estimating, the maximum offset from the tight halyard to the back of the mast – usually at about spreader height. This should be 75mm or 3 inches minimum.

The rig tension is measured with a rig tension gauge – the “Loos” variety is the best, attached to the shroud approx 1 metre up from the deck.

The lower shrouds restrict the prebend, so if you need to add prebend, they need to be eased off, and if you need to reduce prebend, they may be tightened. Look for the lower shrouds to be at 150-200kgs tension with the right prebend and 500kgs on the main shrouds.

HINT

Check that you can get a little finger between the mast gate and the front of the mast with min 75mm prebend, and rig tension on. This will give you a good guideline mast rake.

N.B. The first time you apply rig tension, it is not irregular to hear some settlement noise from the rig and hull (creaks, groans, etc.!) so long as you stay within the parameters described previously. This noise is not problematic and will not continue in the long term.

2.3 The Boom and Vang

Shackle the bottom of the vang to the base of the mast.
Fit the inboard end of the boom to the gooseneck on the mast.
Shackle the top of the vang to the slider on the bottom of the boom.
Ensure that all the locating screws in the boom sliders are really tight.

It is easier to thread the mainsheet with the outboard end of the boom supported by the main halyard.

Feed the mainsheet through the centre-jamming cleat and through the ratchet block, ensuring it is threaded the correct way round.

Pass the main sheet through the forward block on the boom.
Then pass it down through the forward of the two aft blocks.
Through the block on the main traveller.

Up through the aft block on the boom, with the rope running from front to back.
Finally, tie it off on the becket of the block on the main traveller.

2.4 Hoisting Sails

Rigging the Spinnaker

Firstly the spinnaker needs to be threaded in the boat to form the spinnaker downhaul line too.

The tail end of the spinnaker halyard is located at the foot of the mast, emerging from a slot cut into the starboard side of the mast.

Thread the halyard through the block that is located just along side the mast step, just forward of the jib sheet blocks. Ensure it is threaded so it is running towards the back of the cockpit.

Thread the halyard through the block on the starboard side of the cockpit floor, about 0.3m back from the mast step bulkhead.

Then run the halyard through the cleat on the cockpit floor and through the block just behind it.
This is the point you will hoist the spinnaker from.

Take the end of the halyard of the top of the front foot rail and thread it through the block on the port side of the cockpit floor, at the end of the spinnaker sock.

Thread the spinnaker halyard up the spinnaker sock to the bow. This end will be the spinnaker downhaul.

Open the spinnaker chute cover by releasing the rope from the cleat the elastic will open it automatically.

Tie the head of the spinnaker to the end of the spinnaker halyard.

Tie the spinnaker sheets to the corresponding corner of the spinnaker.

Thread the spinnaker downhaul through the first lower patch on the spinnaker then tie it off to the second (higher) patch. Ensure that the downhaul line is in the middle of and not wrapped around the spinnaker sheets.

Pull the spinnaker into the sock from the block at the end of the spinnaker sock in the cockpit.

Pull the spinnaker chute cover over the spinnaker chute

HINT

When lowering the mast, it is useful to tie a piece of rope to the spinnaker halyard before you pull it out of the spinnaker sock, thus making it easier to thread the halyard next time.

Depending on suitable prevailing conditions, it would be worth hoisting the spinnaker and gibing it from side to side to check that it is rigged correctly. It will be very difficult to rectify mistakes on the water.

Hoisting the Mainsail

Only hoist the mainsail when you are ready to go sailing to prevent unnecessary flogging and prolong the life of your sail.

Unroll the mainsail in the boat and slide the clew slug in to boom. Feed the outhaul through the clew eye of the sail and hook the knot under the cut-out at the end of the boom.

Shackle the head of the sail to the halyard. Bear in mind it is a 2:1 halyard so check it is not twisted as this will result in the sail being very stiff to lower again.

Hoist the sail when you are ready to launch and fit the tack strap around the mast.

Thread the cunningham line through the lower clew cringle and tie the end around the gooseneck fitting.

Hoisting the jib.

Take the jib out of its bag and up on to the foredeck.

Clip the jib tack onto the hook attached to the jib cunningham.

Connect all the hanks on to the forestay, starting at the bottom of the jib and working your way to the top to avoid twisting the sail.

Tie the jib halyard to the head of the jib.

Hoist the jib and cleat it. Now pull some jib cunningham on to achieve the desired luff tension. It is a fine balance between halyard height and cunningham tension. The optimum is the jib lower to the deck with the correct luff tension.

3. MAINTENANCE

3.1 Boat Care.

The RS Elite is made using infused polyester, glass and cormatt sandwich laminate. The boat should be supported ashore on a recognised RS road trailer or moored safely and correctly on the water.

The RS Elite comes with two coats of antifouling paint already applied. It works well but will become fouled in still water, especially in the summer months. It can be easily removed by scrubbing the hull with a sponge or soft brush. Harsh scrubbing will damage the antifouling finish and reduce its effectiveness.

The RS Elite is designed to be self-draining through the bailers on either side of the cockpit. It is important that these are kept clear, especially if the yacht is on a mooring, as it will allow the rainwater to run out and not swamp it.

Keep your yacht drained.

Wash with fresh water.

Fresh water evaporates far more quickly than salt water; so if your RS Elite has been sailed in salt water wash it off thoroughly. The fittings will also work better if regularly washed.

Hull damage falls into three categories:

SERIOUS – large hole, split, crack or worse. Don't be too distressed! Get the remnants back to RS Racing – most problems can be repaired.

MEDIUM – small hole or split, gel crazing. If this occurs during an event, sailing can often be continued as long as leaking can be prevented by drying the area and applying strong adhesive tape.

CAUTION – if the damage is close to a heavily loaded point then a close examination should be made to ensure joints and laminate are fit for the prevailing conditions. Get the damage professionally repaired as soon as possible.

- **SMALL** – chips, scratching. This type of damage is not boat threatening, particularly as the boat is built using epoxy, and therefore allows virtually no water absorption into the laminate. The owner, using the correct RS gel coat, can repair this type of damage.

3.2 Keel and Rudder care.

The rudder is GRP with a foam core. It has two coats of antifouling on it so should be treated the same as the hull.

The rudderstock is solid stainless steel and should require no maintenance. The rudder bearings are a PTFE based plastic and do not require any maintenance. The tiller head is a solid aluminium “clamp”. The rudderstock will only drop clear of the boat if the clamp bolt is fully removed

Removal of the rudder assembly is recommended once a year to check the condition of the shaft and bearings. This will also help reduce the corrosion between the tiller head and shaft. Best done when the yacht is laid up for antifouling.

The Keel is a lead bulb cast around a stainless frame. The “stock” or shaft is a massive stainless box section “plugged” into the hull and held with the 2 keel bolts visible on the deck. Thus the GRP keel moulding is simply a fairing, bonded to the box section and around the bulb.

Important: the keel moulding or “fairing” is hollow above the bulb and fore and aft of the box section shaft. Thus damage or hard use may cause the keel fairing to leak. It is designed to do so, and will drain out again when the boat is ashore. Damage to the keel fairing is thus non-structural and maybe rectified easily.

If unsure contact RS Racing for more details.

3.3 Spar Care.

The boom and spinnaker pole (s) are aluminium structures. The mast is a carbon composite structure. Wash with fresh water as often as possible, both inside and out, especially around the mast foot area where there are dissimilar materials in contact with each other. Check all the riveted fittings and the masthead sheave on a regular basis for any signs of corrosion or wear.

3.4 Sail Care.

The main and jib should be rolled and stored dry, out of direct sunlight. Dry the spinnaker, fold it and store it in its bag.

When using a new sail for the first time try to avoid extreme conditions because high loads on new sailcloth can diminish the racing life of the sail.

If your sail is stained in any way try to remove it using normal detergent and warm water. **DO NOT** attempt to launder the sail yourself.

Repairs should be temporarily made using self-adhesive Dacron, Mylar or spinnaker repair tape (depending

on sail type). The sail should be returned to a sail maker for a professional repair. Check for wear and tear, especially around the batten pockets and boltrope, on a regular basis.

4. WARRANTY

1. This warranty is given in addition to all rights given by statute or otherwise.
2. LDC Racing Sailboats warrants all boats and component parts manufactured by it to be free from defects in materials and workmanship under normal use and circumstances, and the exercise of prudent seamanship, for a period of twelve (12) months from the date of commissioning by the original owner. The owner must exercise routine maintenance and care.
3. This warranty does not apply to defects in surface coatings caused by weathering or normal use and wear.
4. This warranty does not apply if the boat has been altered, modified, or repaired without prior written approval of LDC Racing Sailboats. Any changes to the hull structure, deck structure, rig or foils without the written approval of LDC Racing Sailboats will void this warranty.
5. The use of the boat for commercial purposes shall void this warranty.
6. Warranty claims for materials or equipment not manufactured by LDC Racing Sailboats can be made directly to the relevant manufacturer. LDC Racing Sailboats warrants that these parts were installed correctly and according to the instructions provided by the manufacturer.
7. Warranty claims shall be made to LDC Racing Sailboats as soon as practicable and, in any event, within 28 days upon discovery of a defect. No repairs under warranty are to be undertaken without written approval of LDC Racing Sailboats.
8. Upon approval of a warranty claim, LDC Racing Sailboats may, at its expense, repair or replace the component. In all cases, the replacement will be equal in value to the original component.

Due to the continuing evolution of the marine market, LDC Racing Sailboats reserves the right to change the design, material, or construction of its products without incurring any obligation to incorporate such changes in products already built or in use.