

## TIN TIN - A BRIEF GUIDE

### ENGINE

- Tin tin's engine is a 55hp Volvo D2-55 with a conventional gearbox delivering the power to a feathering propeller via a shaft
- Cruising speed of approximately 7 knots at 2,400 rpm.

**There is little to be gained by exceeding 2,500 rpm, so please don't!**

- Engine oil dipstick is accessed via the middle step on the companionway (see photo). **Check daily in the morning when engine is cold, and do not overfill (ie only add oil when level is at the minimum).** (engine doesn't appear to burn oil)
- Both engine and gearbox use the same oil; spare oil is in aft deck locker on transom, port side.
- Engine tools and general tool kit is in saloon under seating on port side; spare impellor and belts are in lowest drawer below chart table.



### Starting Engine

1. Check gearbox is in NEUTRAL (throttle lever vertical);
2. Turn key fully ht and hold until engine starts.
3. Once engine is running, depress button on end of throttle lever and **gently** move throttle lever forward until the charge/alternator light on the engine control panel is extinguished and run at about 1,200 rpm in neutral until engine has warmed up;
4. Check cooling water is coming out of exhaust (port side, aft quarter);
5. Once engine has warmed up, return throttle to vertical position.

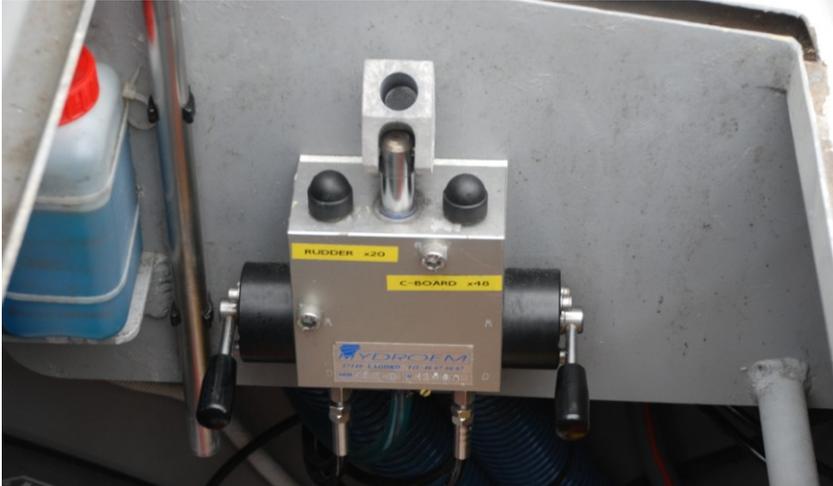
**When using engine please do not over rev, and remember to pause in the neutral position when moving from forward to reverse. As the propeller is a feathering one the gearbox does NOT have to be locked in gear when sailing, but can be left in neutral.**

### Stopping Engine

1. To stop engine, return throttle to neutral and then turn key to the left.

## KEEL AND RUDDER

Without doubt this is the most unusual aspect of the boat – all controlled via the manual hydraulic pump in the starboard cockpit locker.



- Starboard/outboard lever is for rudder, port/inboard lever is for keel.
- Both levers work in the same way – fully down to lower keel/rudder, fully up to raise, and central/horizontal to lock position.
- For NORMAL sailing the rudder is kept fully lowered – to do this lower starboard lever, pump until resistance is felt and then move lever to horizontal position.
- Keel is also usually set fully down when sailing, to give a draft of 2.5m. To do this lower the inboard lever, pump until resistance is felt and then move lever to horizontal position.

**If entering shallow water it is possible to allow the keel to lift but ONLY when moving at slow speeds.** To do this the lever is raised – if a gentle grounding should occur then the keel will (hopefully!) raise. Once you return to deeper water ensure the keel is fully down and return the lever to the horizontal position.

**At the end of your trip** please fully raise both the keel and the rudder.

## BOWTHRUSTER - RETRACTABLE



- The bowthruster is turned on by pressing top button and pushing the joystick forward until you hear a beep.
- To lower the bowthruster press the red button until you hear a double beep.
- Operate the thrusters in short bursts rather than a long period.
- To turn to starboard move the joystick forward
- To turn to port pull the joystick towards you
- Once you have finished manoeuvring raise the bowthruster by pressing the green button until you hear a double beep

**DO NOT SAIL OR MOTOR AT SPEED WITH THE BOWTHRUSTER LOWERED AS THIS WILL CAUSE (VERY EXPENSIVE) DAMAGE.**

## FUEL SYSTEM

- The fuel tanks are located under the aft cabins. They each have a capacity of 150 litres, and are both connected to the fuel gauge at the chart table.
- Please operate one tank at a time; when the tank gets low then close the valve on the fuel pipe running from this tank and then open the valve on the other tank.
- Fuel consumption (engine only) is approximately 2.0 to 2.5 litres per hour at cruising speeds (<2,300 rpm).
- Fillers for the fuel are located on the side decks abreast the cockpit;  
ENSURE FILLERS ARE TIGHTENED UP AFTER USE.
- Fuel gauge is on the instrument panel at the chart table for both tanks.
- Fuel supply is isolated when the engine battery is switched off. In addition to this there is also a manual shut off valve for each tank .
- Fuel supply also serves the domestic heating - if this is used continually remember to adjust consumption figures!

## PLEASE REFUEL BOAT AT ARDFERN/CRAOBH HAVEN/CRINAN BOATYARD BEFORE RETURNING INTO THE CANAL

## SAILS

- Furling jib is permanently rigged; keep some tension on sheets when furling sail and when in harbour.
- For extended downwind sailing sheets can be reset to use the rear genoa cars and the spinnaker pole can be used to pole out the genoa..
- Staysail is under berth in forward cabin; the stay for this is tied off to the port side of the mast; when needed it is taken forward to the securing point on the foredeck and secured using the tensioning lever (shown below).

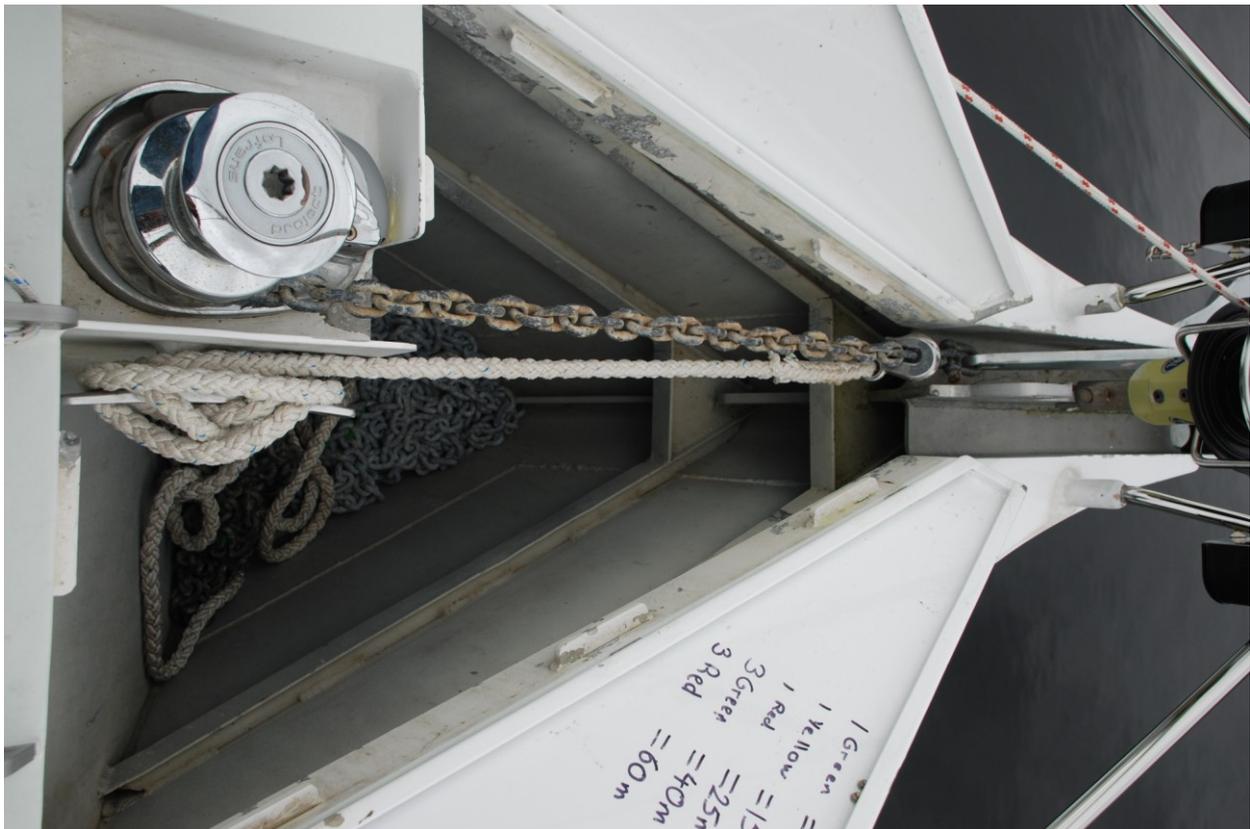


- Mainsail is stowed inside stac pac - unzip before use, and make sure that the main halyard runs **inside** the lazyjack lines;

- It is important to ensure that the boat is head to wind when hoisting or reefing the mainsail.
- All reefing lines are led aft to cockpit; No 3 & 2 reefs are single line systems, whereas No 1 only pulls down the leech (rear) of the sail; the luff (forward end) is reefed using the reefing eye at the mast.
- DO NOT use the electric winch to reef the sail as it will damage the blocks; the electric winch is to only be used for hoisting the main halyard. Trip switch for the winch is on the port side of the companionway.
- Be aware of the arrangement of the mainsheet and make sure you are not in the line of attack should the boat accidentally gybe; rig a preventer if necessary..
- Outhaul should not normally need to be adjusted unless 'tweaking'.
- For downwind sailing there is a cruising chute under the fore cabin berth – use at your peril!! To set this you will need to use the bowsprit which is stored under the saloon floor
- Beware of snagging spinnaker halyard with jib furler at top. Winds around it like a python. Keep tension on halyard when not in use. Cost the owner a trip up mast at Salen!

## ANCHOR

- Main anchor is 25kg ROCNA, attached to 70m chain;
- Anchor chain markings are written on underside of anchor locker lid



- When you have set the anchor the anchor hook and line can be set to ensure a quiet nights sleep. The line is fed through the starboard bow roller and the hook secured to the chain. The line is then pulled tight until there is about 10cm slack in the main chain, and the line is then secured to the cleat in the anchor locker.
- Second (kedge) anchor together with chain is located in transom locker.
- Spare (main) anchor (Delta) is in port cockpit locker

- Anchor windlass switched on at main battery switch panel under port aft cabin; circuit breaker is also located here.
- Control unit for windlass is located in forward heads (!) – this can be passed up through hatch for use on deck.

### **ONLY USE WINDLASS WITH THE ENGINE RUNNING**

**Please take care not to scratch the bow of the boat when retrieving the anchor, and under no circumstances should the boat be motored forward with the anchor still to be finally retrieved. We will check the bow after each charter for damage.**

### **TENDER AND OUTBOARD**

- Tender is an airdeck dingy with a solid transom - roll out on foredeck, inflate and lower over side (pump is in cockpit locker);
- Outboard is a 3.5hp Tohatsu 2-stroke, spare fuel (already mixed) is in port transom locker;

### **ELECTRICAL SYSTEM**

#### **Shorepower**

- Shorepower plugs in to socket on the transom.
- Shorepower lead is kept in cockpit locker.
- Trip switch for shorepower is on top right hand side of main panel – if it should trip then press the blue button to reset the system;
- Shorepower will operate the following:
  1. Battery charger - with both engine and domestic battery switches ON
  2. Water heater
  3. 240v sockets.

#### **Domestic Electrics**

Battery switches are all located under the aft port berth; the battery banks are charged by two alternators on the engine as well as the battery charger (when plugged in) and are separated by a blocking diode – this means that you cannot flatten the engine battery system by leaving the fridge on (for example). You will need to run the engine for at least 2 hours a day to charge the batteries.

Battery monitoring gauge is top left of the main panel at the chart table – you can check battery voltage, battery draw (in amps) or charge state (again in amps).

Main switch panel is to right of navigation station - **IT DOES WHAT IT SAYS ON THE SWITCH!**

- There are full manuals for all instruments on board in the boat file, located above chart table;
- There are plenty of lights on the boat, all individually switched. Be selective with their use, otherwise the batteries will quickly draw down;

**DEPTH = Depth below sounder – deduct 2 metres to show depth below keel when keel is fully down. DRAUGHT = 2.5m with keel fully down, 0.7m with keel fully up.**

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### HEATER

Heater control panel is on the side of the navigation station next to the doorway into the aft port cabin.



Only start the heater with the engine running; once it has started the engine can be turned off. To start the heater, press the wavy line button (bottom right) and then, once boat has warmed up, press this again to turn the heater off; it will take a few minutes to shut down, **during which time the batteries should not be switched off.**

### GALLEY

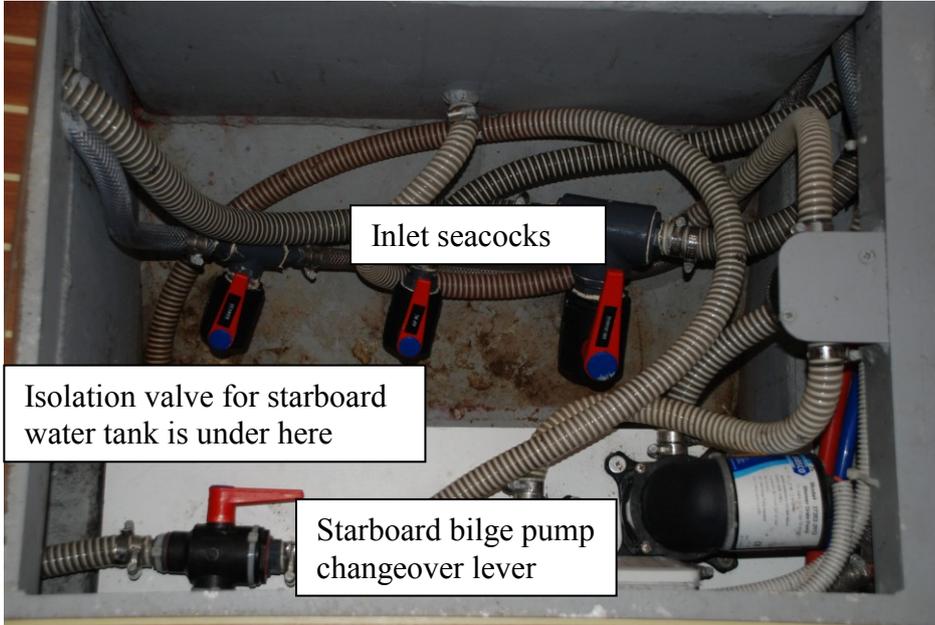
- Both rings and the oven have a thermocouple; hold button in for a few seconds once gas has lit;
- Gas shut off valve is in locker underneath cooker – please turn gas off at night
- Gas bottle and two spares are located in aft starboard transom locker.



## PLUMBING

- Freshwater capacity is 134 gallons/610 litres, in two tanks under saloon floor in bilge of boat – starboard tank is slightly larger than that on port side.
- Please drain one tank first before using other.
- Changeover sequence is to close valve on tank you have emptied BEFORE opening valve on full tank.

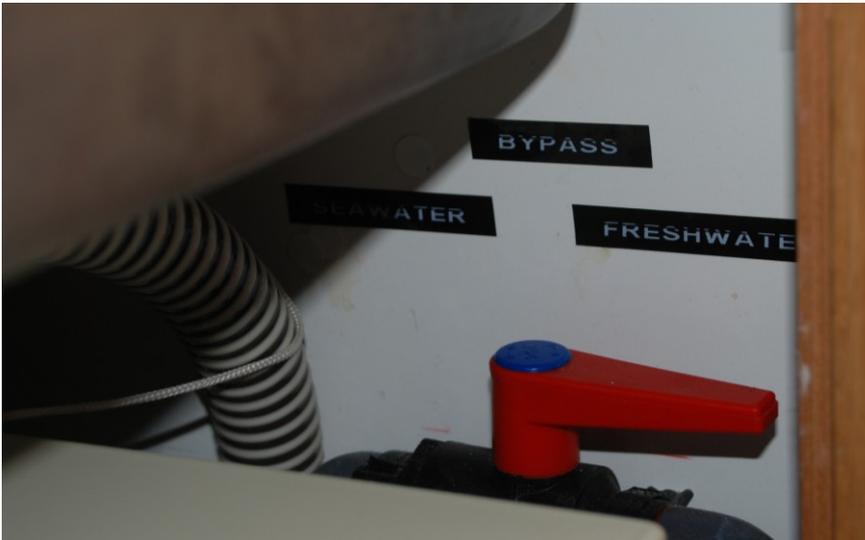
### STARBOARD SIDE OF SALOON FLOOR



### PORT SIDE /CENTRE OF SALOON FLOOR



- Water fillers are on side decks - tighten up after use;
- Outlet seacocks are under floor in aft starboard cabin and also in section forward of forward heads – all can be left open.
- Hot water is heated by both the engine and 240v shorepower;
- Water pump pressurises hot and cold water to the galley and both heads;
- There is also a foot pump under the galley – this can pump either fresh or salt water; changeover valve is in same cupboard as the rubbish bin.



- Shower discharge pump needs to be turned on at the main switch panel, and then the individual switch in each head is used to pump out shower as it fills.
- There are two electric bilge pumps, one for each side of the boat. These are switched on at the chart table. Each bilge pump has a changeover switch (shown in pictures) which allows either the aft or forward sections of the bilge to be emptied.
- Heads - **USE PLENTY OF WATER, AND ONLY A (LITTLE) PAPER - NOTHING ELSE TO GO DOWN THE TOILET - CLEARING BLOCKED HEADS WILL INVOLVE A £50 SURCHARGE**
- To minimise the chance of blockage, operate as follows:
  - Go to the toilet and use the minimum amount of paper possible.
  - Close toilet lid and give a full 6-8 pumps on the manual pump.
  - Leave for about 15 seconds.
  - Give another 8-10 pumps to pump the waste out of the boat
  - Leave the toilet for the next person to use

The toilet works on vacuum pressure, which will seal the toilet seat to the toilet. After a few minutes the vacuum will have weakened and the lid can be lifted.

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### SAFETY EQUIPMENT

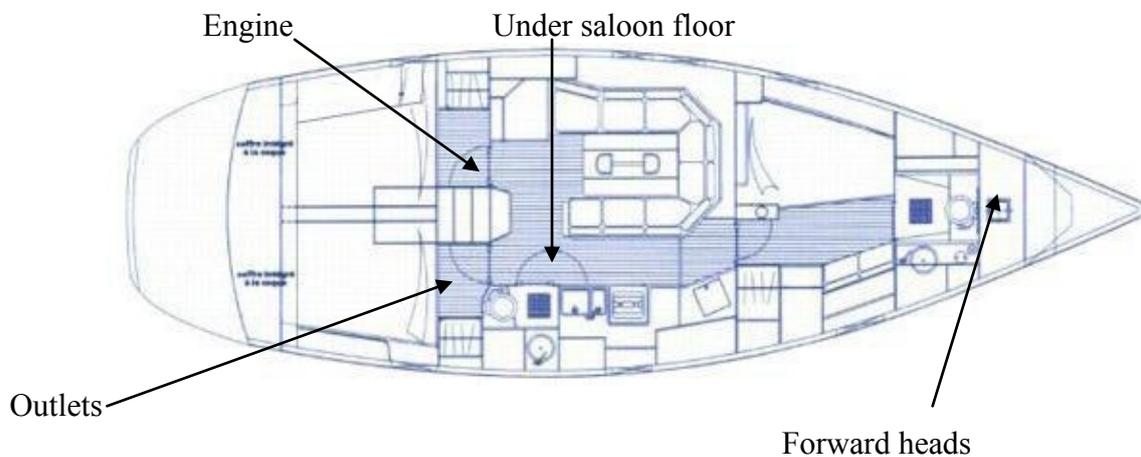
The location of seacocks and fire extinguishers are shown below.

- Flares and grab bag are located in the cockpit locker.
- Lifejackets and safety lines are in each cabin, spares under top step of the companionway.
- First Aid kit is in saloon; **please use the small kit for day to day issues, as breaking into the foil MCA kit will mean that it has to be replaced at a cost of £55 (to you!);**

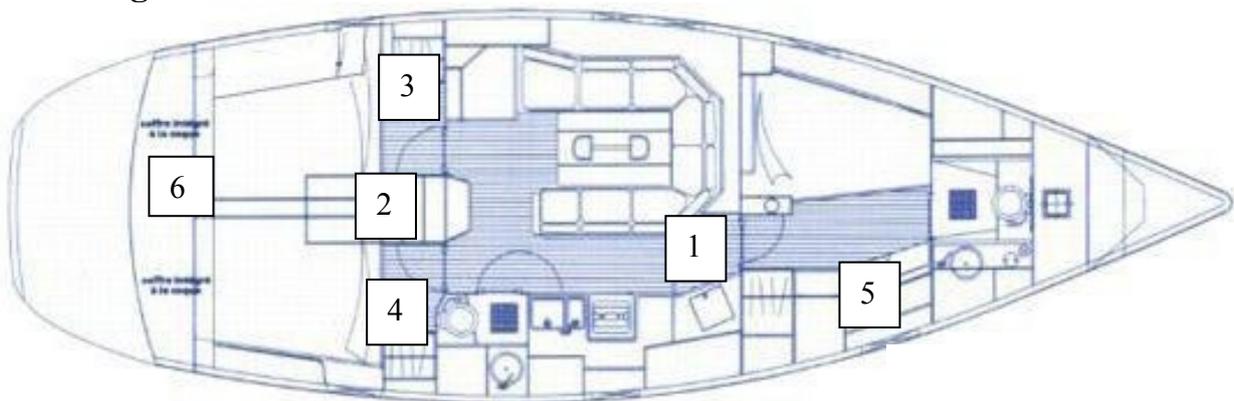
Liferaft is on the pushpit and is launched by pulling the quick release lever on the top of the raft. Only launch the raft in an extreme emergency (ie on fire or sinking) and remember that you are supposed to step up into the raft!

Emergency steering gear is located in the port side cockpit locker.

### Seacocks



### Fire extinguishers



1. Main extinguishers seat at galley
2. Automatic in engine compartment
3. Port aft cabin
4. Starboard aft cabin
5. Forward cabin