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## B A R B A R Y      C L A S S

### H A N D B O O K

#### INTRODUCTION

The Barbary was designed by Walter F. Rayner, as a complete answer to the genuine 12 ton Motor/Sailer, and she is the logical development of his Atlantic and Pacific Power Ketches. The first Barbary was launched in early 1970, and at the date of writing (1974) well over 30 craft have since followed.

#### ENGINE AND INSTALLATION

Mercedes-Benz OM 636 Mk II 42 h.p. marine diesel fitted with TMP 12000 Mk II oil operated gearbox, giving a reduction gearing of 2:1.

For servicing instructions on engine and gearbox, the manufacturers handbooks should be carefully followed. In the event of problems, contact your nearest agent below, or contact:-

ENGINE Mercedes-Benz (G. B.) Ltd., Katherine House, Dunstable Street, Amptill, Bedfordshire. Tel. Amptill 404212.

GEARBOX Nicor Marine, 20/21 Strawberry Lane, Willenhall, Staffs, Tel. Willenhall (0902) 68181.

#### Mercedes-Benz (G. B.) Ltd. Marine Agents

Anglesey Boat Company Limited Gallows Point, Beaumaris, Anglesey. Tel. Beaumaris 359.

Ron Adams Boat Services Limited Fort Victoria, Yarmouth, I. O. W. Tel. Yarmouth 760684

Chertsey Marine Penton Hook Marina, Staines Lane, Chertsey, Surrey. Tel. Chertsey 65195.

Robin Curnow Commercial Road, Penryn, Cornwall. Tel. Penryn 3438

## OIL

Engine, gearbox and 2:1 reductions - Duckhams 20/50

Greaser for propeller shaft which is accommodated in locker, Duckhams Keenol Grease. Turn down one turn approximately, every three to four hours. No grease or oiling should be required between services to the engine other than engine oil. If no service is carried out, or the engine is being used excessively oil can be applied to the linkages of the throttle gearbox and stop control cables. For any other service and lubrication details, see handbook.

## FUEL SYSTEM

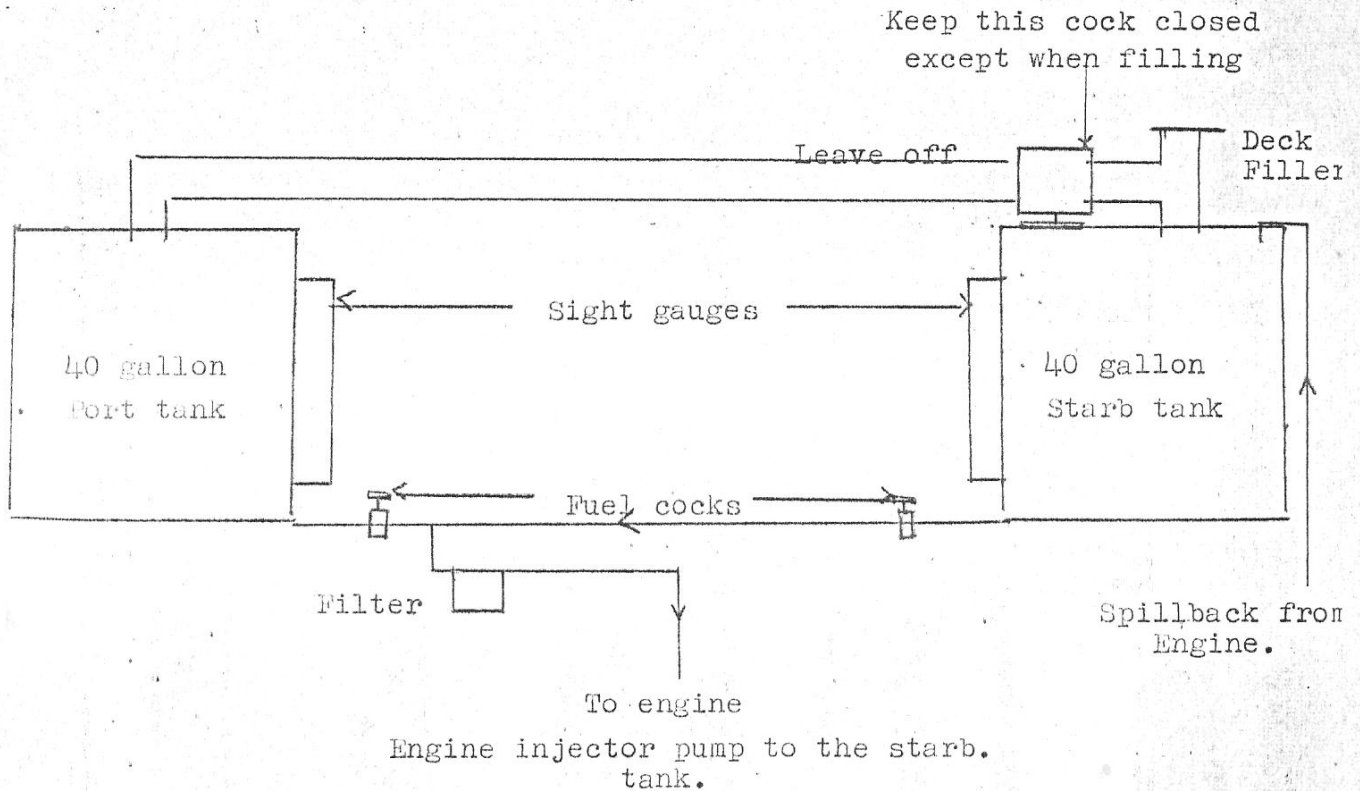
Two 40 gallon fuel tanks are fitted, one either side of the engine, and these are fitted from a common deck filler on the starboard sidedeck. When refuelling OPEN RED COCK ON LARGE CROSS PIPE above tanks. AT ALL OTHER TIMES KEEP THIS CLOSED.

Both tanks have sight gauges, and cocks and feed to a "T" before passing through the first fuel filter which is fitted on the port side of the forward engine room bulkhead.

ALWAYS RUN FROM STARBOARD TANK as this is the tank which received the "spillback" from the engine injector pump. Keep port tank cock shut except when transferring fuel to starboard tank. To level off tanks, either leave, for example, in harbour overnight with both fuel tanks on, or WITH CONSTANT SURVEILLANCE run from the port tank only, to transfer fuel via the engine injector pump to the starboard tank.

The above precautions are necessary to prevent fuel flowing in large quantities from one tank to the other when the vessel is heeled under sail or other circumstances.

CAV FILTRAP. Should water be collected in the bowl, this can be drained by removing the thumbscrew at the bottom without affecting the system.



DIAGRAMATIC FUEL SYSTEM

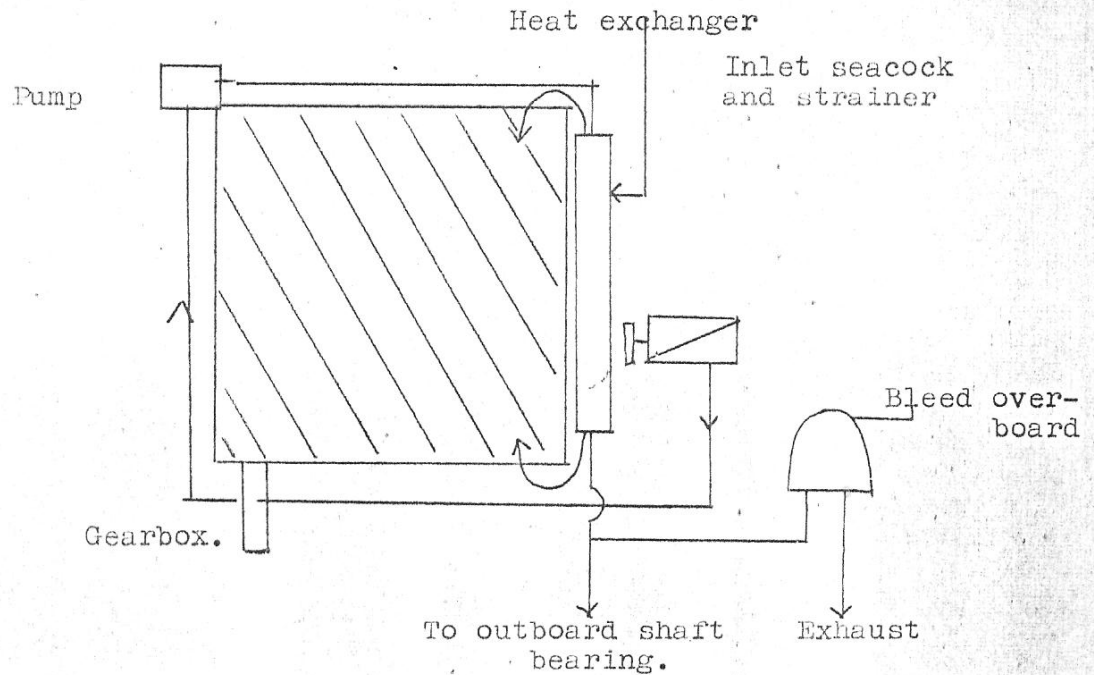
COOLING SYSTEM

Sea water is circulated by a separate pump on the engine from the combined inlet seacock and strainer (on the bottom left of the engine), through the gearbox, sea water pump and through the heat exchanger (top right of engine) to the mixing box (in the starboard cockpit locker) and thence overboard through the exhaust and outboard bearing.

Make sure that the seacock is turned on before running the engine, otherwise damage can be caused to the pump. The filter can be cleaned by turning off the gate valve and removing the perspex cover at the top of the square water filter.

Fresh water is circulated by the pump on the centre front of the engine through the engine and heat exchanger, and should be kept to one inch off the top of the neck.

NOTE If the engine is laid up afloat, the tube from the stern tube should be disconnected at the engine end and blocked off, otherwise there could be a change of syphoning back to the pump.



DIAGRAMATIC COOLING SYSTEM

STERN GEAR

The inner stuffing box has a remote lubricator in the starboard cockpit locker (which should be given half a turn ever one hours running) and a water lubricated outer bearing. This is lubricated by water from the sea water side of the engine cooling system and no further maintenance is required. Scoops on the outside of the bearing provide lubrication under sail.

ELECTRICS

The engine is fitted with an alternator and with the "charge" switch on the console in the "on" position is fully automated. A "Blocking diode", prevents discharging of the start battery by the domestic electrics and both batteries are automatically charged to the correct level. Also see "Instrument console".

## RIG

All spars are by Sparlight and are sound deadened. Roller reefing is by conventional side handle operated mechanism on the mizzen and by through the mast reefing on the main. The reefing handle (which is interchangeable with the winch handles) fits into the "star" socket on the forward edge of the mast and an automatic ratchet prevents unwinding. To unreef, raise the small lever, aft side of the mast below the handle to disengage the ratchet. Remove the kicking strap eye from the boom before reefing.

The rigging sizes are as follows:-

### MAIN MAST

Forestay	8mm	Back stay bottom	8mm
Cap shrouds	8mm	Main halyard	1 1/4"
Lower Fore	7mm	Jib Halyard	1 1/4"
Lower Aft	7mm	Topping lift	1"
Back stay top	8mm	Kicking strap	1"

### MIZZEN MAST

Cap shrouds	5mm
Lower Fore	5mm
Lower Aft	5mm
Jumper stay	5mm
Mizzen Halyard	1 1/4"
Topping Lift	1"
Main sheet	1 3/4"
Jib sheet	1 3/4"
Mizzen sheet	1 1/4"

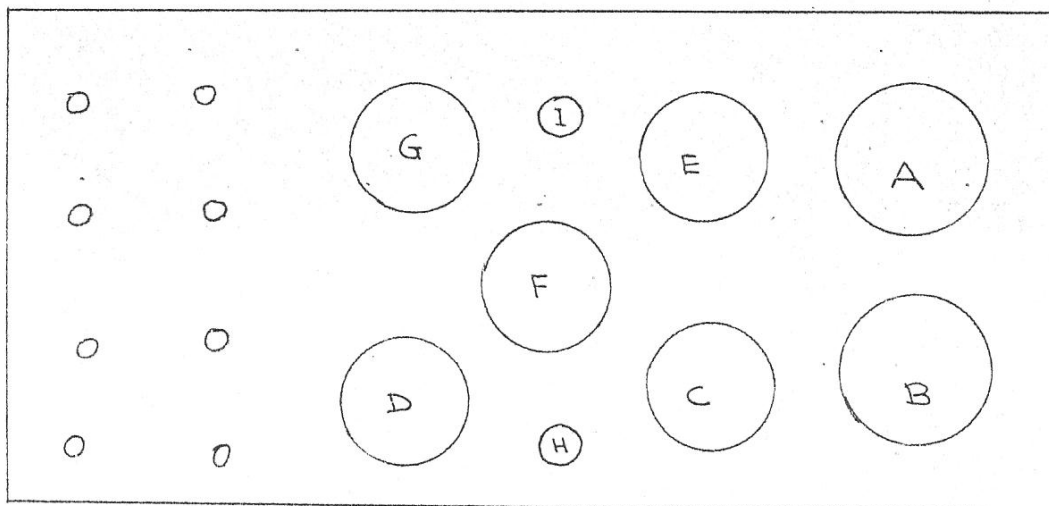
### GUARDRAILS

Upper Fore	Seapruf	5-9
Lower Fore	"	4-6
Upper aft	"	5-9
Lower aft	"	4-6
Upper gangway	"	5-9
Lower gangway	"	4-6
Staysail halyard		1 1/4"
Tack strop		6mm

### COCKPIT AND CONTROLS

Craft have been fitted with both Morse controls and Whitlock, although the latter is at present used as standard.

The engine has single lever controls by Morse.



### ENGINE INSTRUMENTATION

- A - Tachometer, electric by VDO. Maximum R. P. M. approximately 3,000, recommended cruising 2,000/2.500.
- B - Log, Sumlog by VDO with distance run and re-setable trip indicator.
- C - Engine oil pressure by VDO, manual reducing. Normal running approx 6-8
- D - Gearbox oil pressure by VDO, normal reading 8 when engaged.
- E - Ammeter will charge at approximately 30, reducing according to the condition of the batteries.
- F - Battery state, voltmeter to indicate state of charge of each battery seperately by means of selector switch belwo S = starting battery, D = domestic battery. NB This instrument is heavily dampened and will take approximately 30 seconds to indicate true reading. Testing should be donw with the engine stopped or alternator switched off.
- G - Coolant temperature approximately 90°.
- H - Heater indicator.
- I - Warning light.

### SWITCH GEAR

- Charge - Leave on (up) for normal fully automatic charging system.  
Switch OFF only to take RDF weights etc.
- Navigation - Port starboard and stern navigation lights.
- M/Head - All round white masthead light.
- Spreaders - Two white dock lights on mast below spreaders.
- Screen - Windscreen wipers operated separately, port switch operates two port wipers, starboard switch operates Halmsman wiper.
- Ignition - See starting procedure.
- Ignition warning light will glow before starting and when charge switch is OFF. At all other times it should be out.
- Heater - See starting procedure.

<sup>a</sup>  
Under the wheel locker contains the main ON/OFF electrical supply switch. This controls the entire domestic supply. Fuses for the various electrical circuits are also fitted here.

(If a pressurised water system is fitted, a smaller operate switch near the main switch activates this).

### COMPASS

Sestrel Hamble compass as standard is fitted forward of the wheel and this has been corrected before delivery. A deviation card will be on board.

### BILGE PUMP

Whale 15 Gallons per minute is fitted in after port locker. Intake is at lowest point of bilge under gearbox.



### CALOR GAS

Two 10lb bottles (both connected to common regulator) in self draining box in forward port locker. Four 10lb bottles are fitted if a hot and cold water system is fitted.

### MIKING BOX

To mix sea water with exhaust and prevent "sucking back". This is fitted under a cover in the forward starboard locker. A "Bleed" (antisiphon) overboard amidships to starboard may squirt water overboard. No maintenance is required.

### STARTING PROCEDURE

1. Check sea water cock is open and the weed trap is clear.
2. Check that starboard fuel cock is open (ie. unscrew to maximum) and that the port tank fuel cock is shut.
3. Switch on main electric supply under wheel.
4. Give half throttle OUT OF GEAR) by pulling lever out to port whilst in neutral and pushing forward.
- 4.a) Ensure that the stop control (behind helmsman legs) is pushed fully down.
5. Turn key one click clockwise, red warning light will glow and instruments activate charge.
6. If the engine is cold, press key down and turn clockwise against a spring. Hold until "heater" coil glows red. If the engine is hot, pass immediately through this position.
7. Press again and turn clockwise against a further spring to operate starter.
8. When the engine fires, release key, which will return to the position at 5.

### TO STOP ENGINE

ENSURE GEARBOX IS IN NEUTRAL, then pull up handle immediately behind helmsmans legs. Turn key off anticlockwise. It is unwise to turn key off whilst the engine is running.

#### TOILET

Blake sea toilet is fitted. Inlet seacock is under the saloon floor opposite the sink. Outlet seacock is under the teak panel immediately aft of the toilet. (Please follow the manufacturers instructions). For washbasin, see "Domestic water supply".

SEACOCKS Should be left closed when the boat is left unoccupied.

NOTE The hoses should be checked annually - This also applies to all engine hoses etc.

#### DOMESTIC WATER SUPPLY (Approx 80 gallons)

The filler is on the deck amidships to starboard. Tanks (interconnected) are under aft portion of dinette and main saloon floor. Inspection hatches are fitted. If hot and cold water pressure system is fitted, please see under extras.

#### GALLEY

Whale freshwater pump feeding from main tank. Outlet overboard immediately under sink to starboard with sea cock at skinfitting.

#### WASHBASIN

Freshwater pump from main tank, drain is overboard below heads floor under basin, sea cock at skinfitting.

#### WINTERISING

It is in the interest of the owner to see that the engine is correctly laid up, the water tanks drained if the craft is not being used and Marina for accomodation.