BERTRAM 25

A WORD OF WELCOME

We are pleased that you have chosen a Bertram, and know that her unique design will give you outstanding performance and many years of boating pleasure.

Your Bertram is built of the finest, most modern materials and is manufactured under rigid quality controls. Her hull is of high-impact, multi-laminate fiberglass. High pressure laminates and vinyl throughout further reduce maintenance. She comes to you as the most thoroughly tested and trouble-free boat on the market today.

As durable as her construction is, your Bertram will benefit by reasonable care. And, as is always true with things mechanical, maintenance, adjustments, or repairs may be required from time to time for certain components. Thus, this owner's manual, containing a wealth of detailed information, has been specially prepared for your particular model to guide you in keeping her in yacht condition.

To fully enjoy your Bertram, you should understand her completely. To this end, we suggest that you read this manual thoroughly. If any points arise that you do not completely understand, your Bertram dealer will be glad to assist you.

Included are warranties, ours plus those of manufacturers of engines and accessories. It is the owners responsibility to send these in.

When your boat requires service, contact your Bertram dealer. He is anxious to help you.

We wish you many years of pleasurable yachting on your new Bertram 25.

DATA SHEET

NAME OF BOAT

OWNER'S NAME & ADDRESS

HAILING PORT

HULL NUMBER

REGISTRATION NUMBER

HEIGHT ABOVE WATERLINE

BEAM

DRAFT

LENGTH OVER ALL

FUEL CAPACITY

DOOR KEY NUMBER

TECHNICAL DATA HULL NO. _____

ENGINES

Manufacturer _____ Gear Manufacturer _____

Model _____ Gear Model _____

Type Fuel Filter: Gear Ratio _____

1. _____
2. _____
3. _____

Type Oil Filter: _____ Type Spark Plugs _____

PORT ENGINE

Serial No. _____

Gear Serial No. _____

STARBOARD ENGINE

Serial No. _____

Gear Serial No. _____

BATTERIES

Manufacturer _____ Type _____

PROPELLER SHAFTS

Material _____ Diameter _____

Length _____

OUTDRIVES

Manufacturer _____ Reduction Gear _____

Model _____

PROPELLERS

Manufacturer _____ Style _____

Diameter _____ Pitch _____

No. of Blades _____ Material _____

TABLE OF CONTENTS

TABLE OF CONTENTS (CONT'D) PAGE

TABLE OF CONTENTS (CONT'D)

TABLE OF CONTENTS (CONT'D)

ILLUSTRATIONS PAGE

INITIAL CHECKLIST

Upon boarding his Bertram 25 for the first time, the wise owner will want to familiarize himself with the total operation of the various systems of his boat.

I. Location and function of all 12 volt electrical switches and fuses.

a. Master Switches

There is a master switch located forward in the engine compartment near the battery boxes on the MerCruiser powered 25. The only 12 volt circuit that is excluded from the master fuse circuit is the bilge pump. This circuit operates on a circuit directly from the battery to the switch on the helmsman's console through its own fuse to the bilge pump. On MerCruiser powered boats, the bilge pump fuse is attached to the port battery box on the outboard side.

b. Master Fuses

Master fuses protect the wiring between the batteries and the main fuse panel. This fuse panel is located under the instrument panel and is accessible through the forward side of the console.

c. Optional D. C. System

Radio, depth finder, etc., are protected by labeled fuses.

II. Location of 110 Volt Electrical System (Optional)

The cutover switches and fuses are located below the 12 volt fuse panel and access is the same as the fuse panel.

CONTROLS AND INSTRUMENTS

THE IMPORTANCE OF INSTRUMENTS

To avoid mechanical damage, become accustomed to checking your instruments frequently when running your boat and pay particular attention to them on initial startup.

IGNITION AND STARTER SWITCH

After checking the master switches to see that they are in the "on" position, that fuel valves are open and that the blower has been operating for a minimum of five (5) minutes, turn the key to the right as far as it will go. When the engine "fires", release key and duplicate the procedure on the other engine. Check instruments immediately to be sure that you have oil pressure and that all other instruments are normal. The engines should be run until the water temperature gauge shows that they are up to normal operating temperature. (See Engine Manual).

ACCESSORY SWITCHES

Each of these toggle switches operates either a light or an electrical accessory. These switches all operate from the engines' starting batteries. Excessive use of any of the accessories when engines are not charging the batteries could draw the batteries down to a point where starting the engines could be difficult.

BATTERY PARALLELING SWITCH (OPTIONAL)

In the event that engine starting becomes difficult due to a weak battery, this switch may be held either in the port or starboard position simultaneously to operating the starter switch; e.g., if starboard battery is weak, throw the paralleling switch to port position. This allows the port battery to assist the weaker starboard battery. In essence, what you have is a built-in jumper for your batteries.

GAUGES

Gauges are as follows: Fuel, Oil Pressure, Tachometer, Ammeter and Engine Water Temperature gauge. All these instruments are energized from the boat's 12 volt electrical system. Engine Hour Meters (optional) are mounted on the port side of console. During cruising speed, the gauges should read:

Oil Pressure	MerCruiser	40 - 60 psi
Ammeter	MerCruiser	0 - Charging
Water Temp.	MerCruiser	In Green

AMMETER

This is a gauge that indicates the rate of charge going from the alternator to the battery. The ability of the alternator to maintain a charge depends on the ratio of current generated and the rate of consumption by electrical accessories. A low charging rate normally indicates the batteries are at full charge and the accessory demand is low.

FUEL GAUGE

The electric fuel gauge is mounted on the port side of the instrument console. There is one fuel tank in the stern drive boat. The sender is located in the rear of the tank.

LUBE OIL PRESSURE GAUGE

Almost all serious engine trouble will be reflected on the oil pressure gauge. Therefore, if any radical change in oil pressure should occur, turn engine off immediately. During operation it is normal for a slight variation to occur. This is caused by oil temperature and engine RPM. (Consult Engine Manual for operating procedure).

WATER TEMPERATURE GAUGE

This gauge, too, is very important and should be checked frequently while running. Your engines are equipped with thermostats which govern the temperature and flow of water through the engine. These thermostats should be checked and cleaned periodically to be sure they are working properly. Never run engines with thermostats removed. The Lube Oil Gauge and Water Temperature Gauge should be observed simultaneously as most malfunctions will be reflected in these gauges. Consult engine manual for further information.

TACHOMETER

This gauge registers the RPM of the engine in increments of 100. There is no correlation of RPM's to speed of boat due to slippage of propeller and other varying factors.

CONTROLS

CONTROL CONSOLE

The control console contains all controls, gauges and switches necessary for the control and operation of the boat. Included are Engine (throttles) and Reverse Gear Control and Blower Switch. Navigation light switches, Fuel Gauge, Wiper Switch, Instrument Light Switch, Compass Light and Horn Switch.

ENGINE AND MARINE GEAR CONTROL

Clutch and throttle controls are installed within easy reach of the helmsman. The controls are of the "push-pull" cable type and are directly connected to the carburetor throttle lever and marine gear control arm. There are two types of controls used, depending on the model. With the single lever controls, each engine clutch and throttle is controlled by the same lever. When you wish to disengage the throttle from the clutch control, place the lever in the "neutral" position, depress the button in the hub of the lever and this will allow you to use the throttle without having the gear engaged. When you want to use both gear and throttle, bring the lever to the Neutral position and the disengage button will "click" in, locking the gear and throttle together. On the Flybridge model, there are two levers for each throttle control mounted on the starboard side of the instrument panel and two levers for each clutch control mounted on the port side of the

instrument panel. As an option, power shift can be installed. This option, as its name implies, is a power assist to the shifting operation and is manufactured by MerCruiser.

MERCRUISER TILT SWITCH

These switches control the angle of the outdrive in relation to the transom. The switches are located on the console within easy reach of the helmsman. The outdrives should be raised fully when the boat is docked for a period of time or when hauling the boat. See MerCruiser manual for care and preventive maintenance and for operation of power trim.

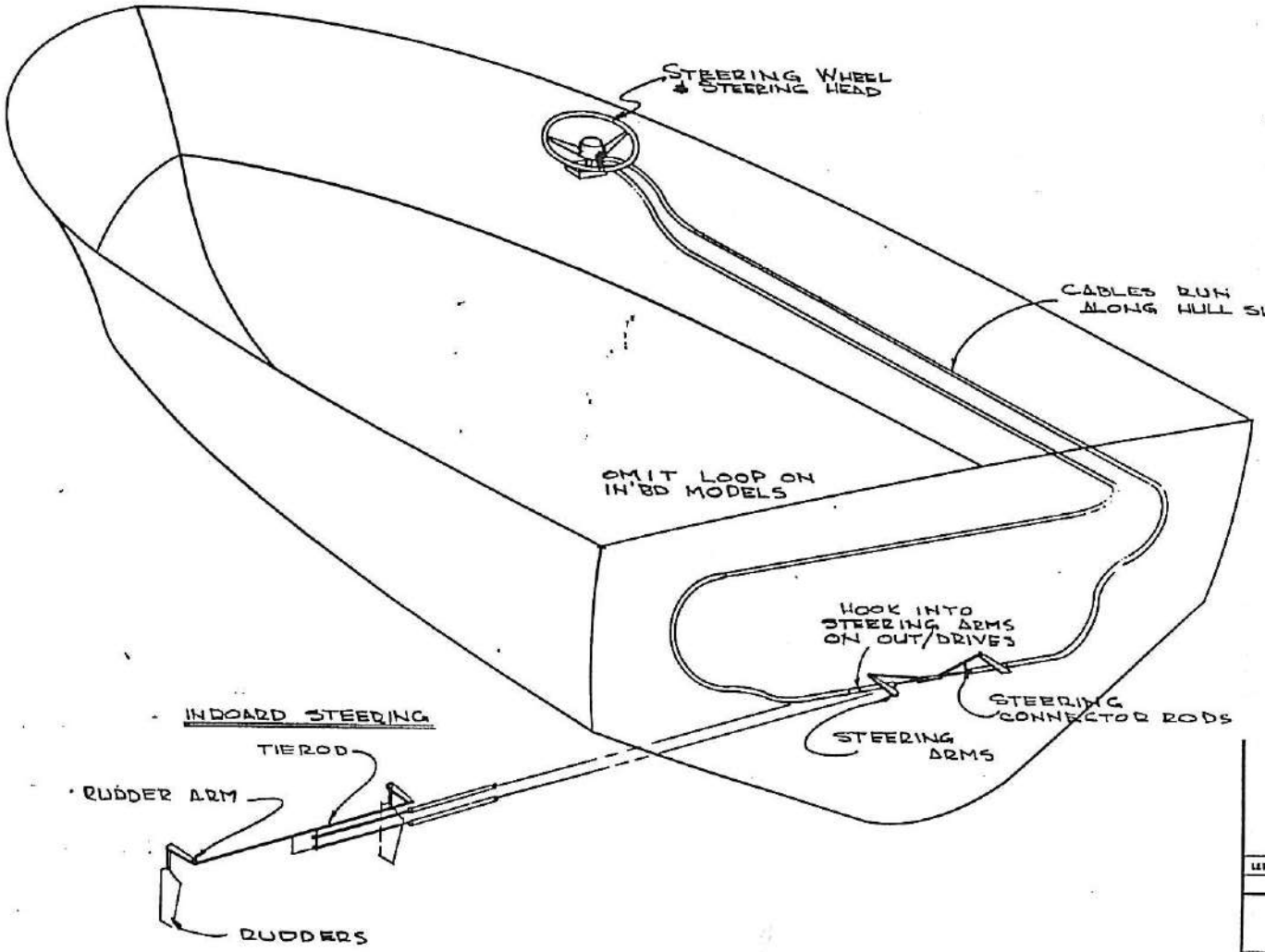
IGNITION SWITCHES

Ignition switches and battery paralleling switch (optional) are grouped on the Instrument Console. There is a key for each ignition switch. To start each engine, insert the proper key in the switch, (be sure that the marine gear control is in neutral). Turn key all the way to the right. As soon as engine "fires", release the key. If engine refuses to start after two or three tries, check the engine as continuous use of starter can be damaging. Never engage the starter for over ten seconds at a time. See Engine Manual.

STEERING SYSTEM

The steering system on the Bertram 25 is a push-pull cable type. This system transmits power from the steering wheel to the

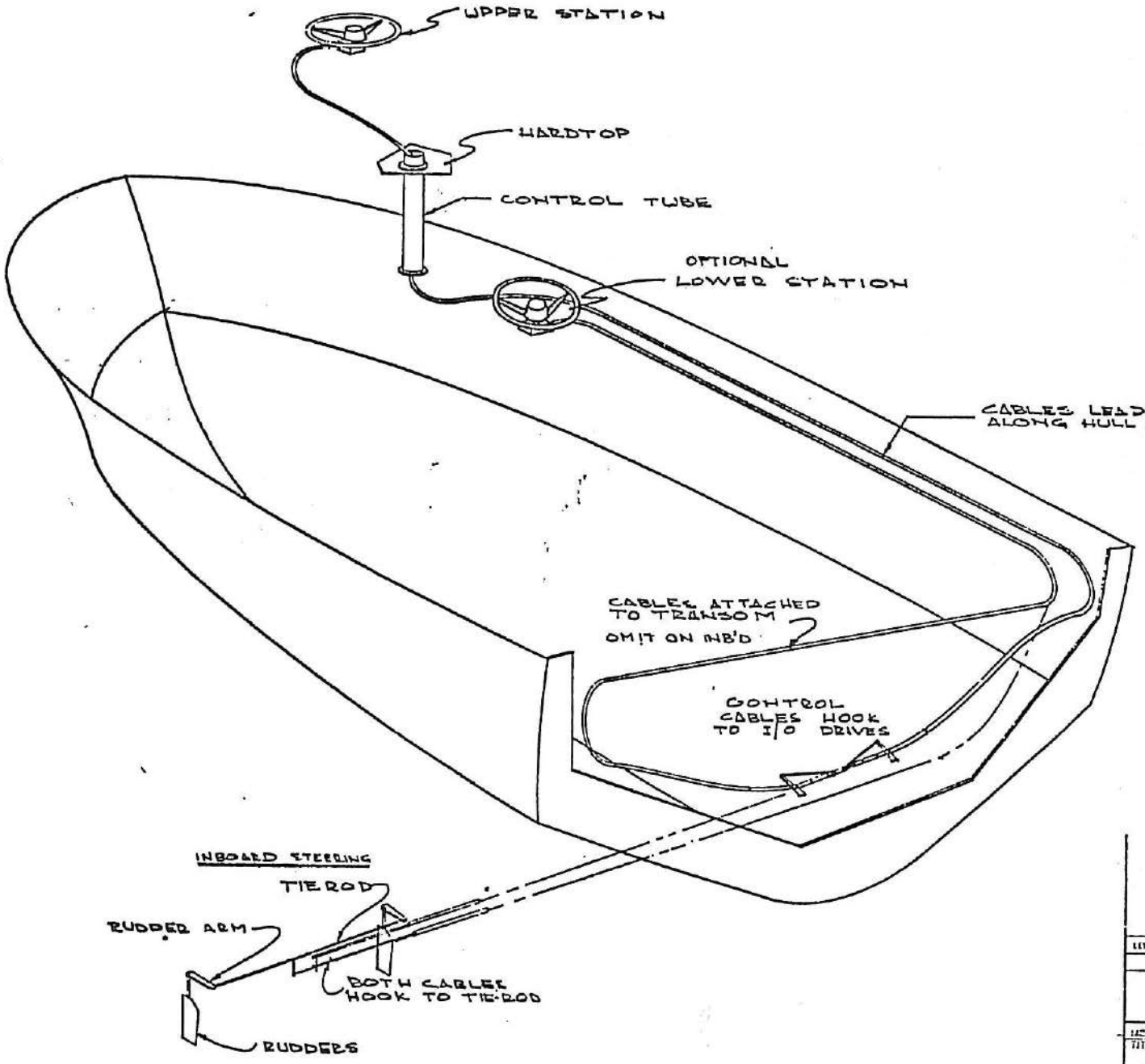
outdrive. The cable runs through a flexible watertight conduit. The push-pull cable acts alternately in tension and compression.



LET.	DESCRIPTION	BY	DATE	APPV.
	REVISIONS			

BERTRAM YACHT
MIAMI, FLORIDA, U.S.A.
A SUBSIDIARY OF WHITTAKER CORPORATION

MODEL 25' SINGLE STATION
TITLE STEERING SYSTEM
SCALE NONE
PLAN NO C 2259 REV
BY M. DEBERG DATE NOV 29/67
APPVD DATE 1-4-68
FILE 25'



LET	DESCRIPTION	BY	DATE	APP'D
	REVISIONS			

BERTRAM YACHT
MIAMI, FLORIDA, U.S.A.

MODEL 25 SPORT FISHER

TITLE STEERING SYSTEM DUAL STATION

UNIT NONE PART NO.

DRAWING NO. C 2265

APPROVED DATE 6-

SCALE 3/8"

POWER PLANT AND TRANSMISSION OF POWER

ENGINES

All necessary data and information about the engines are contained in the engine operator's manual which will accompany this book. Just a reminder -- the life and performance of your engines is dependent upon the way they are cared for, so follow the manufacturers instructions and watch the instruments carefully to obtain many hours of pleasurable boating.

MARINE GEARS

On MerCruiser engines, this unit is in the outdrive housing and is mechanically operated. See Engine Manual for service procedure.

PROPELLERS

Information on propellers should be recorded on the Ship's Information Page of this book. The propellers recommended are those that your boat was tested with. If weight has been added or the operating characteristics have been changed due to addition of special equipment, it may be necessary to change the pitch to suit existing conditions.

INSTALLATION OF PROPELLERS

MerCruiser propellers fit on a spline and are secured with a

nut and locking washer. To remove, lift up the tab of locking washer and back off the locking nut, then, pull the propeller straight off spline. When putting on a new wheel, be sure the propeller is all the way up against the thrust plate of the housing. Bend back the tabs of the lock washer.

BOAT SPEED

Boat speed is dependent on many variable factors, so no catalogue or advertised speed can be guaranteed.. A short discussion of some of the more important factors affecting boat speed are presented below.

ENGINE EFFICIENCY

With normal care and maintenance, the engines will maintain peak efficiency; however, if they are neglected, the power will fall off and expensive repairs could become necessary. Take care of the engines!

ATMOSPHERIC CONDITIONS

Engines will develop more power when the ambient air and water temperatures are cool, in fact, the power variations due to temperature can be as much as ten percent. For this reason, greater speeds are generally obtained in the spring and fall.

PERSONAL EQUIPMENT AND ACCESSORIES

All personal equipment and accessories added to the boat will tend to decrease the speed as will adding passengers. Often the effect of this added weight is not taken into consideration on the performance of the boat.

MARINE GROWTH

In order to obtain maximum speed, the bottom of the boat

must be kept free of marine growth including moss. Any growth on the boat's bottom will increase the resistance of the boat as it moves through the water, thus decreasing speed.

WATER IN THE BILGE

Since a barrel of water weighs over 400 pounds, the bilges must be kept pumped dry in order to keep excess weight down. As mentioned before, added weight will reduce boat speed.

DAMAGED UNDERWATER EQUIPMENT

Loss of speed and excessive vibration can result from damaged propellers, shafts, or struts.

ELECTRICAL

GENERAL

The Bertram 25' Electrical System is 12 volt, D. C. with the power being supplied by the two (2) heavy duty batteries installed on the boat. The batteries are kept charged by the engine alternators. This 12 volt D. C. system is protected by fuses with the exception of the Bilge Pump which is run as an independent circuit. The fuses are mounted on a panel and numbered. A plaque near the fuse panel gives the corresponding circuit names alloted to each number. The fuse panel is located under the instrument panel on the forward side of the steering console. Access to the fuse panel is through a hatch on the main bulkhead in the cabin. There is a 110 volt A. C. system (optional). This system consists of a marine type socket mounted on the starboard side of the cockpit ceiling panel with a polarity light to indicate the correct polarity. There is a shore line to connect with the shore power. Two conveniently placed outlets are installed. This system is protected by circuit breakers located on the main bulkhead on the starboard side.

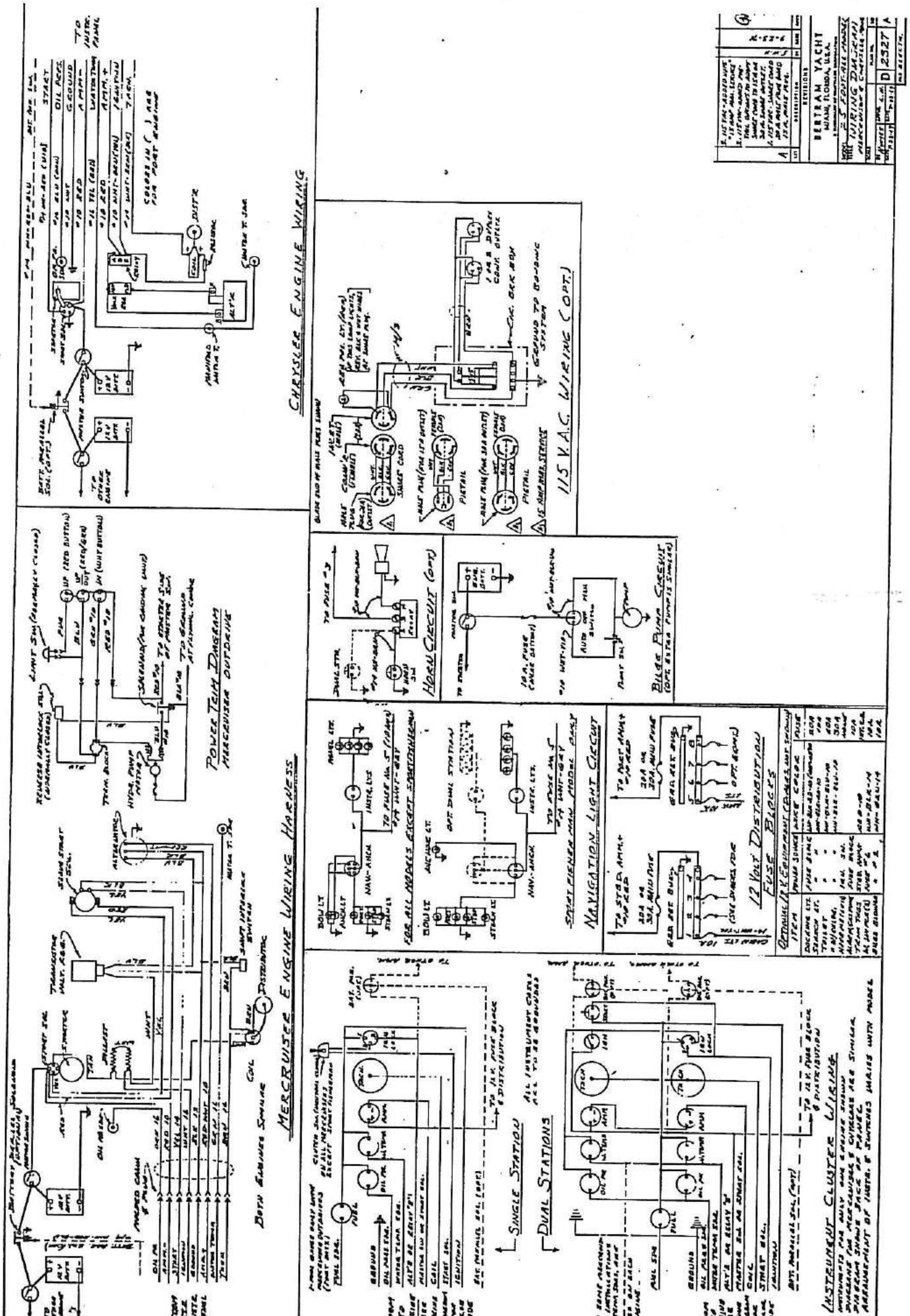
BATTERIES

Your 12 volt system gets its supply from (2) two 12 volt batteries. On the MerCruiser powered boats, they are located in the

forward end of the engine compartment port and starboard. Water in these batteries is to be kept at approximately 1/4" above the top of battery plates to insure maximum service. These batteries can be put in parallel by operating the Paralleling Switch (optional) if one battery is low.

GROUND BONDING SYSTEM

All Bertrams are fitted with a bonding system to minimize electrolysis. This system consists of a copper strip running fore and aft, on or near the keel. All underwater fittings and hardware are bonded into this system. Wire jumpers are connected to this strip tying the electrical equipment together with the boat's electrical ground which is a negative polarity.



FUEL SYSTEM

FUELING INSTRUCTIONS

These steps should be followed in this order each time you fuel your Bertram.

1) Close windows, doors, hatches, engine hatches and shut-off fuel lines at tank.

2) Do not operate any equipment. This means power plant, bilge blower or any other electrical accessory.

3) Make sure that fuel nose nozzle is touching the boat's fill pipe fitting before any fuel is pumped.

4) Fill tank until fuel overflows through the vent fitting on hull side below fill pipe.

5) After caps have been replaced and tightened, open all windows and hatches. Check, both visually and by smell, to make sure there are no leaks nor fuel fumes present. Open fuel valves at tank and inspect fittings to be sure there are no leaks.

6) Operate bilge blower and after a minimum of five minutes operation, start engines - then close engine hatches and open up boat as you desire.

FUEL TANK

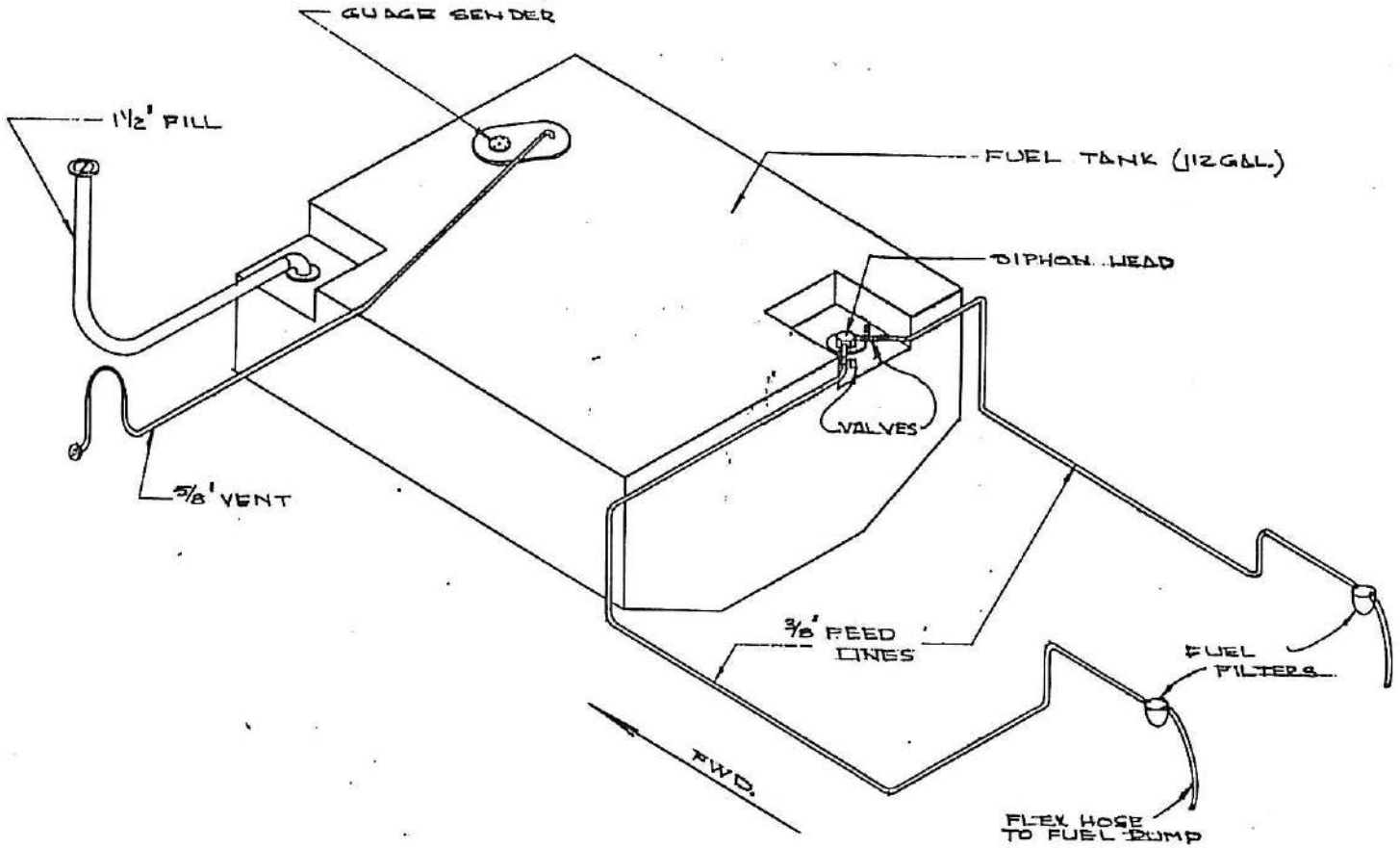
The Bertram 25' inboard/outboard has a fuel capacity of 112.

U. S. gallons carried in one tank located forward of the engine compartment. The fill and vent for this tank is located on the port side of the boat.

Vent lines penetrate the hull sides below fill. Bertram fuel tanks are of molded fiberglass construction. The fuel tank is not an integral part of the hull. There are two shutoff valves in all fuel feed lines, one service valve at the fuel filter and the other valve at the tank.

FUEL

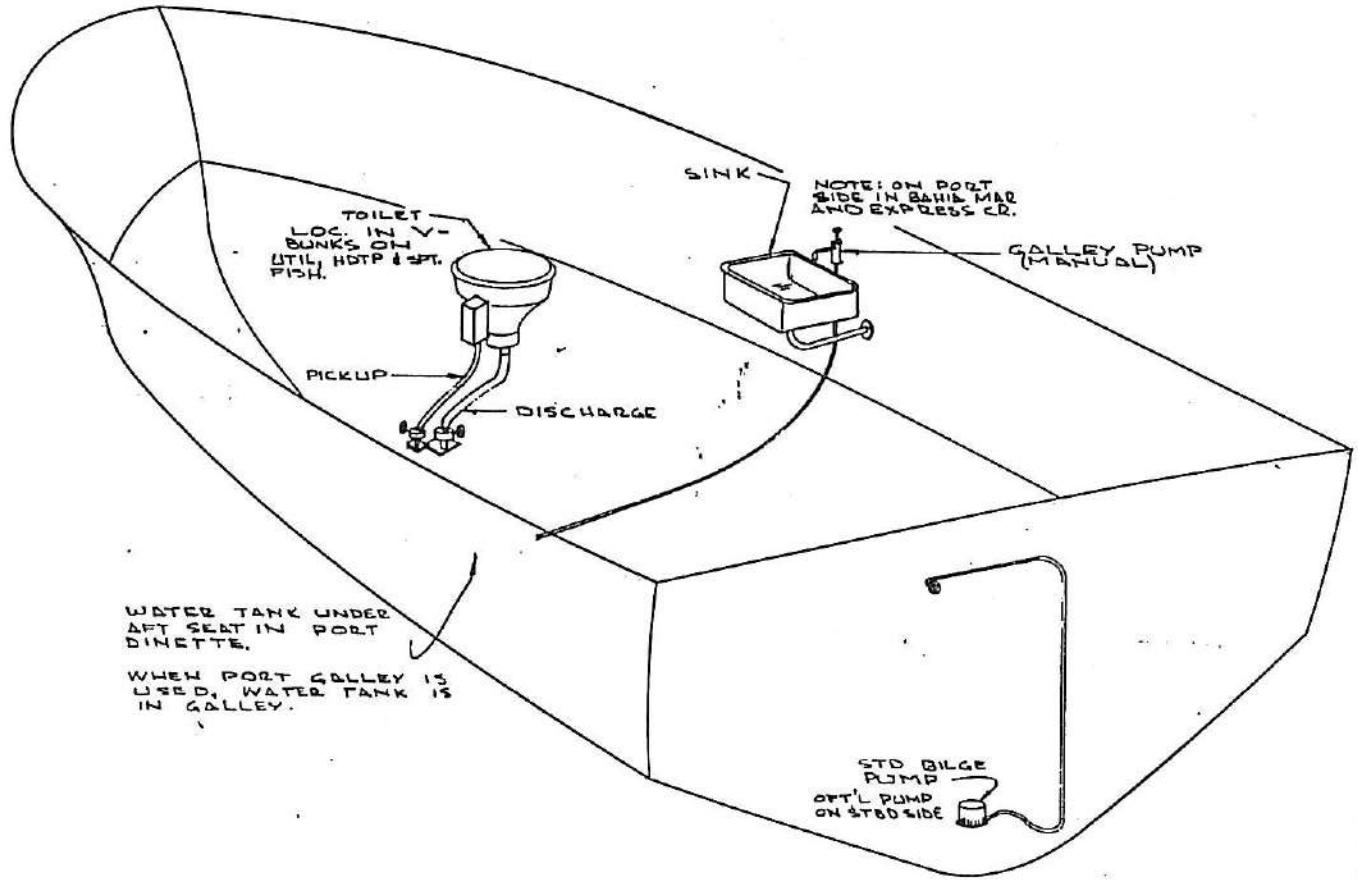
Use only the type of fuel recommended by the engine manufacturer. Should you be forced to use a lower than specified octane in gasoline engines, do not exceed 2700 RPM under any conditions as severe internal damage to the engines could result at higher RPM's. See the Engine Operator's Manual for more information.



LET.	DESCRIPTION	BY	DATE	APPR.
	REVISIONS			

BERTRAM YACHT
MIAMI, FLORIDA, U.S.A.
A SUBSIDIARY OF WHITTAKER CORPORATION

MODEL	28' INBD/OTBD
TITLE	FUEL SYSTEM
SCALE	NONE
DRAWN	
APPROV.	
DATE	2-19-69
DRAWING NO.	C 2273
FILE	215



LET.	DESCRIPTION	BY	DATE	APPV.
	REVISIONS			

BERTRAM YACHT
MIAMI, FLORIDA, U.S.A.
A SUBSIDIARY OF WHITTAKER CORPORATION

MODEL 25'
TITLE FRESH WATER & DRAINAGE SYSTEM
SCALE NONE
PLAN NO. C 2311
REV.
BY JEDPBCC
DATE 5/10/69
APPRD.
DATE
FILE 25'

ELECTRICAL ACCESSORIES

GENERAL

The Bertram 25 is fitted out with the finest electrical accessories available.

BILGE PUMP, AUTOMATIC

The Bilge Pump is wired directly to the battery. This assures you that, even if you have the Master Battery Switch in the "off" position, your Bilge Pump will still operate if the Bilge Pump Switch is in the "auto" position. The Bilge Pump circuit is protected by its own fuse mounted on the port battery box, on MerCruiser powered boats. The Bilge Pump Switch is located on the console.

ENGINE COMPARTMENT BLOWER (OPTIONAL)

The engine compartment blower is mounted inboard on the transom at center line with a control switch on the console. The blower takes suction from the lowest part of the engine compartment by means of a flexible hose and exhausts the fumes through the stern ventilator. The blower is powered by the 12 volt system and is protected by a fuse on the fuse panel. The blower should be run for at least five (5) minutes before starting the engines and after the engines have stopped to remove all fumes.

COMMANDING YOUR BERTRAM

PRE-STARTING INSTRUCTIONS

The following are routine procedures that should be followed each time you take your Bertram out.

1) Always check fuel supply.

2) Never start engines without first running bilge blower and checking the bilge by smell for gasoline vapor.

3) Make sure the seacock or valve for the engine cooling water is open. The rubber impellers in the pump will not last long when run dry.

4) Make sure the fuel valves at the tank and at the engines are open.

5) Check engine and reverse gear oil. Make sure they are at the proper level.

STARTING INSTRUCTIONS

1) Be sure master switch near battery is in "on" position.

2) Check clutch control lever to insure that clutch is not engaged.

3) On boats equipped with single lever controls, be sure that lever is in neutral position and that clutch control is disengaged. Move throttle lever forward to open throttle to facilitate starting. As soon as engine starts, return to neutral position and engage with a clutch

control. This will be indicated by a "click" from the locking button.

MANEUVERING

In docking or maneuvering an inboard-outboard, you use the steering wheel and throttles to maneuver. In docking, approach at a slow speed and at about a 30 degree angle to the dock. When the bow of the boat is approximately five feet from the dock, turn the wheel in the direction of the dock and put the engines in reverse. This will cause the stern of your boat to swing in toward the dock and reduce your speed at the same time. Because your propellers move in the direction that the wheel is turned, it may be necessary to use a little throttle to slow your forward progress.

STOPPING ENGINES

Simply turn key in switch to STOP.

CRUISING SPEEDS

As you increase speed, your Bertram will increase her angle of trim. That is, the bow rises. From a maximum angle, she will start to level off and assume a planing attitude. Do not stay at the maximum angle, or "on the hump" any longer than necessary. Take note of your engine RPM's on the hump. Then cruise either under that speed or over it. Best cruising speed also depends on the type of engines your Bertram has. But as a rule, top cruising speed RPM should be 10% to 15% less than the top RPM.

Power Trim (MerCruiser)

Your MerCruiser outdrives when regulated, as explained in the MerCruiser Manual, will act as trim tabs and it is recommended that you read this section of the manual to enable you to take advantage of this feature.

Trim Tabs (Optional)

If trim tabs have been installed on your boat you can trim your boat at low RPM's to 3^{o} to 5^{o} and maintain this angle until your hull speed reaches a point where you are "over the hump". The trim tab control switches are within easy reach of the helmsman, and are electric switches which control the hydraulic pump which, in turn, operates the trim tabs.

Engine performance will be affected to a slight degree by atmospheric conditions. You will find your engines develop less power in warm air temperatures. Similarly, dry air reduces power, as will high altitudes. If you are cruising regularly in waters well above sea level, you will want to change carburetor adjustments to get a better air fuel mixture.

The famous Bertram v-hull cushions pounding by slicing rather than slapping waves. You'll be able to go out in weather that keeps ordinary boats at their moorings. But even Bertrams can encounter

extreme conditions that call for sensible seamanship. While your Bertram will withstand far greater punishment than you will probably ever subject her to, speed should be reduced under severe conditions in the interest of your comfort, and to reduce needless strain on the engines.

CRUISING

In order to avoid going aground or damaging underwater gear, it is important to know the draft of your Bertram, or the amount of water you must have under you at all times. Draft will vary depending on how many people and how much equipment or personal effects you are carrying. What's more, your draft will be somewhat less in salt water than in fresh water.

You can determine maximum draft by measuring the freeboard from the sheer to the water line at the center of the transom. Subtract this freeboard from the hull depth at the transom (see docking plan in this manual) to get the hull draft at the transom. Add depth of underwater gear as indicated in docking plan, and you have the maximum draft. Record the figure where you can refer to it quickly.

If you plan to travel waterways crossed by bridges, you'll also want to know the height of your Bertram from the waterline. Take your measurement when your Bertram is lightened of its fuel,

passengers and equipment. This will give you a small safety factor when the boat is loaded.

For the best results, try to maintain the original trim of the boat. You can do this by noticing her trim carefully when she is first launched, before extra equipment has gone aboard. Of course, all gear and equipment should be properly stored while cruising.

CALLING AT PORTS AWAY FROM HOME

When cruising abroad, try to purchase fuel equal to American standards. (See fuel systems section for requirements in your engines). Carry extra fuel filters with you, since replacement may be necessary.

LEAVING YOUR BERTRAM

The following are procedures to follow when leaving your boat overnight, or for a short period of time:

1) Lock all ignition or engine circuits.

2) Lock all doors, windows and hatches.

3) Make sure mooring lines are well secured with adequate allowance for tide.

4) Bumper and spring lines set.

5) Turn on auto bilge pump.

6) Cockpit drain plugs in place.

The following steps should be followed when leaving your boat

for longer periods of time, such as a week or more:

1) Follow all of the above steps.

2) Turn master battery switch to OFF position.

3) Automatic bilge pump should be left on "auto" position.

If for some reason your boat is taking on water, also, to assure full charge, the batteries should be checked frequently.

4) Close all seacocks or valves.

5) Turn off all fuel valves.

6) Cockpit drain plugs in place.

41

MAINTENANCE

PERIODIC MAINTENANCE

The maintenance the Bertram 25' requires during the boating season depends to a great extent on the conditions under which the boat is used. Adequate ventilation of the cabin during periods of non-use will reduce the interior maintenance, and keeping the exterior waxed will minimize the exterior maintenance.

In this section, a suggested preventive maintenance program is set forth for the boat under "average" conditions, and if this program is used, it should be used in conjunction with the periodic maintenance recommended in the respective operating manuals for the engines.

DAILY

1) Pump bilges as required:

2) Ventilate engine compartment.

3) Check engine lubricating oil levels.

4) Check engine coolant levels (if fresh water cooled).

5) Check fuel, water, and oil systems for leaks.

6) With engines running, check engine circulating water by observing engine exhausts. Water should be exhausting along with the gases.

7) Top off fuel tanks and water tanks at end of day's operation.

8) Wash down boat with fresh water.

EVERY 100 HOURS OR 60 DAYS (WHICHEVER COMES FIRST):

EXTERIOR

1) Visually inspect exterior fiberglass finish; clean and wax.

2) Inspect all hardware and apply protective polish. Tighten any loose fittings.

3) Inspect all exterior seat cushions. If wet, remove covers and air dry in sunlight all polyfoam and covers. Clean covers with mild soap solution or light Clorox solution. Wash any cleaning materials off with fresh water.

INTERIOR

1) Completely air out the boat.

2) Inspect all life jackets.

3) If any mildew is found, thoroughly wash down area with Clorox solution.

4) Inspect and operate all drawers and doors. Slight adjustment may be necessary on doors and drawers due to expansion from moisture. Drawers can be made to slide easier by using wax or a lubricant.

5) Check all fire extinguishers for full charge.

6) Check operation of lights.

7) Check bow hatch for operation and watertight fit.

8) Inspect the toilet for proper operation.

ENGINE COMPARTMENT

1) Follow periodic preventive maintenance for engines and marine gears as specified in engine manual.

2) Inspect exhaust hoses and hose clamps.

3) Check engine mounting bolts to see that they are tight. If bolts are found to be loose, realign engine. If coupling must be broken loose, lubricate coupling bolts with Vaseline.

4) Check all hoses on engines, and hose clamps. Inspect for leaks.

5) Check fuel lines, flare nuts, and valves for leaks.

6) Check Morse control cable brackets for tightness.

7) Check electrical connections and clean if corroded.

8) Lubricate Morse control heads and cables with Vaseline.

9) Check exhaust blower for operation and hose for leaks (optional).

10) Check all wiring to see that it is not rubbing or insulation worn off.

11) Check all battery cells with hydrometer. They should be between 1.250 and 1.265. Water cells as necessary.

12) Clean battery terminals, scrape and pack with Vaseline.

13) Clean out stringer limber holes.

14) Check operation of all switches, indicator and controls.

15) Check electrical connections for tightness and corrosion.

16) Check all fittings for steering system.

FLYBRIDGE

1) Check operation of all switches, indicator and controls.

2) Check electrical connections for tightness and corrosion.

3) Lubricate control heads and cables with Vaseline.

AS REQUIRED

1) Pull boat out of water, scrub if necessary.

NOTE: The mold release that is used to lay up the hull at the factory has a certain amount of wax which makes it difficult to get good adherence of the anti-fouling fiberglass bottom paint during the first several months of operation.

STORING YOUR BERTRAM

DRY STORAGE

1) Indoor storage is generally preferred, if there is good ventilation, and if the location is otherwise safe and dry. However, outdoor storage may be all that is available, or economically practical.

2) For any special instructions for covering the Bertram 25' for outdoor storage, refer to Docking Plan.

3) To keep bilge dry, remove bilge drain plug and open all valves and/or seacocks.

4) Drain all tanks, water lines and pumps of water to prevent damage from freezing. Add antifreeze to any low position lines that can't be drained. In warm climates, draining will prevent water stagnation.

5) Open windows, portlights and hatches sufficiently to allow air to circulate. Also, leave locker doors and drawers open.

6) Dry out ice chests and refrigerators, and prop oven.

7) If possible, remove mattresses and cushions, clean and store in a dry place. If they must be left aboard, prop up on one edge for maximum ventilation.

8) Synthetic material lines need only proper handling and occasional cleaning. Natural fiber lines should be dried and kept in a well ventilated place.

9) With all toilets, water delivery and discharge lines drained, apply a light coat of oil to all metal parts. Caution: Do not oil any rubber or leather parts.

10) To protect chrome, stainless or aluminum deck hardware, first remove any salt deposits with water. Then clean with a good quality nonabrasive type metal cleaner. Finally give items a light coat of grease.

11) Check propellers for nicks, dents and bent blades. Check struts and shafts also. Any replacement or repairs should be made at this time instead of during the spring rush.

12) Be sure all linkages of steering, engine and other controls are free and well lubricated.

13) Remove batteries and make arrangements for storage and periodic recharging.

WET STORAGE

All the above applies, except of course valves and seacocks should remain closed, and the electrical master switch placed in the off position. Cockpit drain plugs in position and secured.

FITTING OUT

In order to ensure maximum pleasure and enjoyment from your Bertram after an extended lay up, a thorough check of the boat and equipment is necessary with maintenance being done as

indicated. The following list should serve as a guide for the more important items to be accomplished (not necessarily in order to be done).

PRE-LAUNCH AND POST-LAUNCH CHECKS

In all likelihood, your Bertram has been delivered to you in the water, with these checks already made by your Bertram dealer. However, when she has been hauled, and you are fitting out for a new season, be sure these checks are made.

PRE-LAUNCH

1) Secure propeller nut, jam nut, cotter pin.

2) Are set screws on struts in place?

AFTER LAUNCH

1) Are valves free and operable?

2) Are supply and discharge lines secure?

3) Are fittings tight?

4) Are bilge pumps working?

5) Is bilge blower working?

ELECTRICAL SYSTEM CHECK

1) Batteries are properly charged at 1.260 sg. If below 1.220 sg., have charged.

2) Engine wire looms secure, away from exhaust manifold, connections tight.

3) Check the following standard and optional electrically operated equipment to make sure each is working properly.

Navigation Lights	Radio
Ship's Lighting	Depth Finder
Horn	Shore Line and Polarity Light
Wipers	Shore Line Transfer Switch
Toilet	

ENGINE CHECK

1) Fuel lines and cooling lines secure and tight fittings.

2) Exhaust fittings secure and tight.

3) Engine coupling, lock wire, lock washer, key in place.

4) Engine mount fastening tight, locked.

5) See Engine Manual for service.

CONTROLS CHECK

1) Clutch adjusted, fittings secured.

2) Throttle adjusted, fittings secured.

3) Steering is positive, linkage secure.

4) All gauges, water temperature, oil pressure, tachometer, ammeter, and full operating (after starting engines).

MAINTAINING YOUR BERTRAM

CARE OF FIBERGLASS CONSTRUCTION

The fiberglass construction which makes up the entire hull and most of the superstructure, consists of several parts. The exterior layer gelcoat is a special polyester resin into which coloring pigments have been incorporated to give built-in color. Just beneath the gelcoat, is a series of glass fabric laminations bonded together with polyester resin. The complete lamination and gelcoat are bonded together by a chemical action, and the part is a one-piece unit. The outside gelcoat -- approximately 0.015 inch depth -- gives the fiberglass part its glossy finish. The following recommendations will help you keep this unique material in the same condition it was when it left the factory.

SEASONAL CARE (AT FITTING OUT TIME)

1) Clean surface with soap and water.

2) Treat with an automotive type rubbing compound. Use lightly.

3) Wax and polish the surface with an automotive type wax. Some modern products give you rubbing and waxing action in one. These are also acceptable.

LOSS OF GLOSS

To restore the glossy appearance of the gelcoat surfaces,

a light buffing may be advisable. For hand buffing, use a slightly abrasive rubbing compound similar to Dupont No. 7. If a powder buffer is used, Mirro-Glaze No. 1 or similar product is recommended. After buffing, the surface should be waxed and polished as described above for Seasonal Care.

STAINS

The fiberglass gelcoat surface is non-porous and therefore highly resistant to stains. Most can be removed easily with household detergent. Crayon, lipstick or shoe polish can be removed with plain alcohol. Ink spots will come off with Ajax or a similar detergent. While penetrating stains are very uncommon, some products with unusual chemical contents may go too deep for ordinary methods of removal. In such cases, weak solutions of acids or alkalies, such as hydrochloric acid or ammonia can be tried. These may, however, produce a slight discoloration in the gelcoat. If none of the above methods are successful, it may be necessary to sand down through the gelcoat to remove the stain. This will require refinishing (see below).

SCRATCHES AND ABRASIONS

Those that do not penetrate the full thickness of the gelcoat can be treated by lightly sanding and buffing the area. Larger scratches that penetrate the gelcoat, but do not go deeply into the fiberglass or weaken the structure, can also be repaired, as follows:

1) Clean damaged area, first with mineral spirits or turpentine to remove dirt and wax. Follow with detergent and rinse. Allow to dry completely.

2) Secure a small amount of pigmented gelcoat resin matching the color of the area to be repaired. This is available from your Bertram dealer.

3) Add two drops of catalyst per cubic inch of gelcoat, and mix thoroughly. The mixture will gel in 15 minutes.

4) Fill scratch with the mixture before it hardens, and round off about 1/16" to 1/8" above surrounding surface.

5) Lay a piece of wax paper or cellophane on top of the patch and press lightly to remove air. Take off wax paper after 20 minutes, and allow patch to cure overnight.

6) Sand down patch with 600 grit wet sandpaper. Finish by rubbing and buffing with regular buffing compound.

Any repairs to fiberglass that are more extensive than those described here should be made only with the help and advice of your Bertram dealer.

PAINTING FIBERGLASS SURFACES

1) Thoroughly clean fiberglass part to be painted, removing any wax with mineral spirits, turpentine or other commercial solvents. Then wash with detergent and rinse.

2) After surface is dry, sand lightly with garnet, fine oxide or #220 sandpaper. Wipe clean of all dust.

3) Apply two thin coats of primer as recommended by marine paint manufacturer.

4) Apply regular of epoxy paint of good quality as manufacturer directs. While the fiberglass bottom of your Bertram is inherently anti-fouling, you may find your cruising waters make an anti-fouling paint application worthwhile. Follow the above directions (and those of the manufacturer) in applying such a paint to your hull.