AMF

Hatteras Yachts

43 Double Cabin

DEALER

OWNER

C O N T E N T S

Section 1

Introduction
Specifications

I N T R O D U C T I O N

This manual has been prepared to enable the owner to familiarize himself with his new yacht. In addition to basic operating instructions and suggestions for yacht care, detailed information for the various systems has been supplied.

It must be realized that an "expert yachtsman" is a product of years of training and practical experience, and that this manual in itself is not intended as a substitute for this. It does, however, present basic information concerning proper operation of this particular yacht and should be read thoroughly by the experienced yachtsman as well as by the novice.

For additional training in the proper operation of any vessel, the owner should address himself to his dealer, to the publications on the subject, and to programs offered by the United States Coast Guard.

The technical information contained herein covers the basic standard equipment supplied with each yacht of this particular model. Optional or custom equipment specified by the owner is covered by the Manufacturer's Manual for that particular item.

EXPRESS LIMITED WARRANTY PAGE

WARRANTY EXPIRED
NOT APPLICABLE

HATTERAS_____ **VITAL INFORMATION** HULL SERIAL NO._____

ENGINES: MANUAL SUPPLIED ( )
Manufacturer_____
Type_____
Model No. Port - Starboard -
Serial No. Port - Starboard -
Primary Fuel Filter Element_____
Secondary Fuel Filter Element_____
Lube Oil Filter Element_____

MARINE GEAR: MANUAL SUPPLIED ( )
Manufacturer_____
Ratio_____
Type_____
Serial No. Port - Starboard -

GENERATOR NO. 1: MANUAL SUPPLIED ( )
Manufacturer_____
Model_____
Serial No._____

GENERATOR NO.2: MANUAL SUPPLIED ( )
Manufacturer_____
Model_____
Serial No._____

BATTERIES:
Manufacturer_____
Type_____
Quantity_____
Capacity_____

BATTERY CHARGER: MANUAL SUPPLIED ( )
Manufacturer_____
Type_____
Serial No._____

PROPELLER SHAFTS:
Dia (Main)_____ in._____ mm Length_____ in._____ cm
Dia (Stub)_____ in._____ mm Length_____ in._____ cm
Material_____
For Shaft Machining Details See Drawing In Appendix_____

PROPELLERS:
Manufacturer_____
Material_____
Number of Blades_____
Diameter X Pitch_____ in._____ cm

*STANDARD FUEL:
Capacity_____ Gallons_____ Liters

*STANDARD WATER:
Capacity_____ Gallons_____ Liters

*INSTALLED HOLDING TANK:
Capacity_____ Gallons_____ Liters

OVEN: MANUAL SUPPLIED ( )
Manufacturer_____
Model_____
Serial No._____

*Tank capacities are actual gallonage figures obtained upon initial filling of a prototype tank. The usable gallonage may be considered to be approximately 90% of the stated actual gallonage but may vary with trim conditions, running angles, and other operating variables.

RANGE: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

FREEZER: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

WASHER/DRYER: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

TRASH COMPACTOR: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

HEADS: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

TRANSFORMER No.1: MANUAL SUPPLIED ( )
Manufacturer _____
Model No. _____
Serial No. _____

TRANSFORMER No.2: MANUAL SUPPLIED ( )
Manufacturer _____
Model No. _____
Serial No. _____

ICE MAKER: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

DISH WASHER: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

REFRIGERATOR: MANUAL SUPPLIED ( )
Manufacturer _____
Model No. _____
Serial No. _____

MICROWAVE OVEN: MANUAL SUPPLIED ( )
Manufacturer _____
Model No. _____
Serial No. _____

STEREO SYSTEM:

TAPE: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

RECEIVER: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

AIR CONDITIONING SYSTEM: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

STEERING SYSTEM: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

STABILIZING SYSTEM: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

DESALINATOR (WATER MAKER): MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

SEARCHLIGHT: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

SAFE: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Combination _____
Serial No. _____

FOOD CENTER: MANUAL SUPPLIED ( )
Manufacturer _____
Model _____
Serial No. _____

PAINT AND FINISHING MATERIALS

MODEL **HULL SERIAL NO.**

INTERIOR	MANUFACTURER	NUMBER & COLOR
Oil		
Sealer		
Paint		
EXTERIOR		
Varnish		
Sealer		
Oil		
Bottom		
Boot Stripe		
Hull		
Superstructure		
Feature Stripe		

SPECIAL INSTRUCTIONS

LAMP AND FUSE INFORMATION

A.C. LAMPS

USAGE	VOLTS	WATTAGE	TYPE	MANUFACTURER	HATTERAS P/N
Panel Pilot Light	120V	1.2 ma	B2A	G.E.	24-165
Interior Lights (Incandescent) Halo Light	120V	40W	40T10	G.E.	24-717
Interior Lights (Incandescent) Salon Halo	120V	40W	29	HALO	24-779
Interior Lights (Fluorescent) Bow Head	120V	15W	F15T12CW	Sylvania	24-690
Interior Lights (Fluorescent) Master Head	120V	20W	F20T12CW	Sylvania	24-695
Interior Lights (Fluorescent) Galley Lights	120V	8W	F8T5CW	Sylvania	24-587

D.C. LAMPS

Panel Pilot Lights	14.4V	.10A	1813	G.E.	24-824
Panel Pilot Lights Bilge Pump & Shower Pump	14.4V	.10A	1813	G.E.	24-824
Navigation and Anchor Lights	12.8V	1.04A	94	G.E.	24-580
Transom Light	12.8V	.97A	211-2	Sylvania	24-164
Dome Lights	12.8V	1.04A	94	G.E.	24-580
Instrument Lights	14.4V	.12A	53	G.E.	27-227
Searchlight (Rayline) (if Installed)	12V	120W	98039-0020	ITT-Jabsco	78-348
Optional Flying Bridge Compass Lights (Ritchie)	14.4V	.12A	53	G.E	24-227
or					
Optional Flying Bridge Compass Lights (Danforth)	32V	.04A	22-20228	Chicago Minature	90-267

D.C. LAMPS (Continued)

USAGE	VOLTS	WATTAGE	TYPE	MANUFACTURER	HATTERAS P/N
Lower Station Compass (Ritchie)	12V	.20A	9L1V1	Ritchie	90-235
or					
Lower Station Compass Light (Danforth)	14V	.20A	1487	G.E.	90-281
Interior Lights Halo Light	12.8V	1.04	94	G.E.	24-580
Interior Lights Closet & Bunk Light	12V	25W	25A	Sylvania	24-715
Interior Lights Engine Room	12V	25	25A	Sylvania	24-715
Interior Lights Galley Light	12V	15W	15A	Sylvania	24-730

A. C. FUSES

USAGE	CURRENT	Nominal Voltage Rating (MAX. VOLTAGE)	MANUFACTURER	HATTERAS P/N
Crisper	1/4A	250V	Bussman MDL 1/4	24-920
Head Blower	1A	250V	Bussman MDL-1	24-871
Shore Line	30A	250V	Bussman FRN-30	24-231

D. C. FUSES

Battery Condition Meter & Engine Room Blower	7 1/2	32V	Bussman AGC 7 1/2	24-916
Battery Charger	50A	250V	Bussman FRN-50	24-233
Horn	20A	32V	Bussman AGC-20	24-918
D.C. Distribution Panel	100A	32V	Bussman ANL-100	24-243
Systems Monitor	1A	250V	Bussman AGC-1	24-219
Engine Shutdown Solenoid & Trim Tab	15A	250V	Bussman AGC-15	24-917

RECOMMENDED SPARE PARTS LIST (JOHNSON & TOWERS 6-71TI)

DESCRIPTION	MANUFACTURER	MFG.P/N	HATTERAS P/N	QUANTITY
Fluids				
Engine Oil MIL-L-2104B SAE 40HD	Texaco (or Equal)	URSA 1679	18-929	*
Marine Gear Oil MIL-L-2104B SAE 40HD	Texaco (or Equal)	URSA 1679	18-929	*
7.5KW Generator Oil MIL-L-2104B 40HD	Texaco (or Equal)	URSA 1679	18-929	*
Engine and Generator(s) Antifreeze-Ethylene Glycol Base (Do Not Use the Anti-Leak Type)	Prillman (or Equal)	----	18-940	*
Engine Coolant Rust Inhibitor	Nalco Chemical Co.	NALCOOL 2000	18-331	*
Hydraulic Steering Fluid Aircraft Hydraulic Oil MIL-5606B	Texaco (or Equal)	1537	18-933	
Freshwater Pump (MR-7) [Parts for One]				
Repair Kit (Includes)	Galley Maid	40800	---	1
Stator 1 each	Galley Maid	40333	---	
Seal Set 1 each	Galley Maid	40201	---	

*See the equipment Manufacturer's Manual

DESCRIPTION	MANUFACTURER	MFG. P/N	HATTERAS P/N	QUANTITY
**Delta Head [Parts for One]				
Pump Kit (Includes)	Galley Maid	40820	---	1
Stator, Suction	Galley Maid	40233	---	1
Stator, Discharge	Galley Maid	40150	---	1
Seal Set	Galley Maid	40201	---	2
**Groco EB Head [Parts for One]				
Gasket	Groco	HT-52-A	---	1
Joker Valve	Groco	H-27	---	1
Flap Gasket & Spacer Ring	Groco	HT-26	---	1
Check Ball	Groco	HT-56	---	1
Diaphragm Assembly	Groco	HT-3554-A	---	1
Plastic Separator	Groco	HT-3557-A	---	1
Inlet Gasket	Groco	HT-3557	---	1
Plastic Bearing (Pedal)	Groco	HT-3563-A	---	1
Rubber Seal	Groco	HT-3564	---	2
Miscellaneous				
Water Filters Galley Cartridge	AMF Cuno	AP-217	90-037	1
Windshield Wiper Blade 22"	AMBAC	BD-721011-22	78-301	3
Bilge Pump 12V	Rule Industries	02B1400	36-022	1
Float Switch	Rule Industries	35	36-024	1
1/2" Square Flax Packing for Rudder Stuffing Box	Raybestos		12-306	6'
1/4" Square Flax Packing for Shaft Log Stuffing Box	Raybestos		12-308	6'
Port and Stbd. Propeller	See Vital Information Page			
Propeller Shaft	See Vital Information Page			

** If Installed

DESCRIPTION	MANUFACTURER	MFG.P/N	HATTERAS P/N	QUANTITY
7.5KW ONAN Generator [Parts for One]				
Fuel Filter	Onan	122-0325	42-451	1
Fuel Filter	Onan	122-0326	42-452	1
Oil Filter	Onan	122-0453	42-453	1
Impeller	Onan	131-0160	42-483	1
Solenoid 12V	Onan	307-0628	42-455	1

DESCRIPTION	MANUFACTURER	MFG.P/N	HATTERAS P/N	QUANTITY
6-71TI J & T Engines (Emergency Spare Parts For One)				
Fuel Pump Kit				
Port Engine	Detroit Diesel	5199561	---	1
Stbd. Engine	Detroit Diesel	5199560	---	1
N-90 Injectors	Detroit Diesel	5228790	---	6
Rocker Cover Gasket Kit	Detroit Diesel	5143407	---	2
Belts Alternator	Gates	N3995	---	2
Raw Water Pump Impeller Kit	Detroit Diesel	5194860	---	1
Filter Elements				
Fuel-Primary	Detroit Diesel	5575032	42-267	2
Fuel-Secondary	Detroit Diesel	5574508	42-466	2
Lube-Oil	Detroit Diesel	5573014	42-459	2
Zinc Electrode	Detroit Diesel	8517479	42-463	1
Solenoid 12V D.C. 65A	Cole-Hersee	24059	24-787	1
Service Manual "71"	Detroit Diesel	6SE177	---	1
Timing Guage	Detroit Diesel	J-1853	---	1
Feeler Gauge Set	Detroit Diesel	J-9708-01	---	1
Fuel Pump Wrench	Detroit Diesel	J-4242	---	1

Section 2

Construction

BASIC CONSTRUCTION

FIBERGLASS

The major structure of this yacht is of molded Fiberglass Reinforced polyester. The open areas, decks and cabin tops are made more rigid by sandwiching a lightweight core material between two fiberglass skins. The basic structural sections (hull and superstructure) are joined by mechanical fasteners and fiberglass reinforced polyester, making an integral unit.

The shower(s) is also molded fiberglass reinforced polyester.

The exterior surface is painted, the decks non-skidded and the bottom painted with anti-fouling paint. See the Maintenance section for care.

WOOD

The interior is wood paneling with a hand rubbed oil finish. The counter tops are covered with high-pressure laminate. Exterior wood is finished with oil. See the Maintenance section for care.

WINDOWS

The windows are tinted flat safety glass. The portlights are acrylic or polycarbonate. There are screens on all opening windows and portlights. See the Maintenance section for care.

HARDWARE

All hardware, including deck safety rails, is chromium-plated brass or stainless steel. The bridge rails, bow rails and stanchions are stainless steel. See the Maintenance section for care.

UPHOLSTERY

The interior carpeting, vinyl floor covering, headliner, drapes, and furniture are as specified for this particular yacht. The exterior cushions are covered with vinyl. See Maintenance section for care.

GRAVING PLAN

The graving plan depicts the dry dock dimensions and cradle dimensions. See drawing in the Appendix.

Section 3

Systems

ENGINE AND PROPULSION SYSTEM

(See Fig. 3.1)

ENGINE

Information about the engines is contained in the Engine Manufacturer's Manual and is not repeated here. The life and performance of the engines are dependent upon the care given them. Follow the Manufacturer's Manual and watch the instruments carefully.

MARINE GEARS

The gear units connected to the engines are combination reverse and reduction gears. The reduction gear ratios are listed on the Vital Information page of this manual.

For longest life, shifting should be performed with the engine at idling speed. For more information, consult the Gear Manufacturer's Manual.

PROPELLER SHAFTS

Information on diameter, length, and material of propeller shafts is listed on the Vital Information page of this manual. Shaft, shaft couplings, and struts are shown on Fig. 3.1. For shaft machining details, see the drawing in the Appendix.

SHAFT ALIGNMENT

Prior to delivery of this yacht the shaft alignment has been carefully set, but it should be checked periodically. See Fig. 3.1.

PROPELLERS

Information concerning the propellers is given on the Vital Information page of this manual. These propellers have been found by test and experience to be the best suited for normal all around service.

If the operating characteristics of the yacht are substantially changed by the addition of extra equipment or alterations, a change of the propeller pitch may be advisable. Installation of propellers is shown on Fig. 3.1.

YACHT SPEED

Because yacht speed is dependent on many variables, no speed can be guaranteed. Some of the more important factors affecting the speed are as follows:

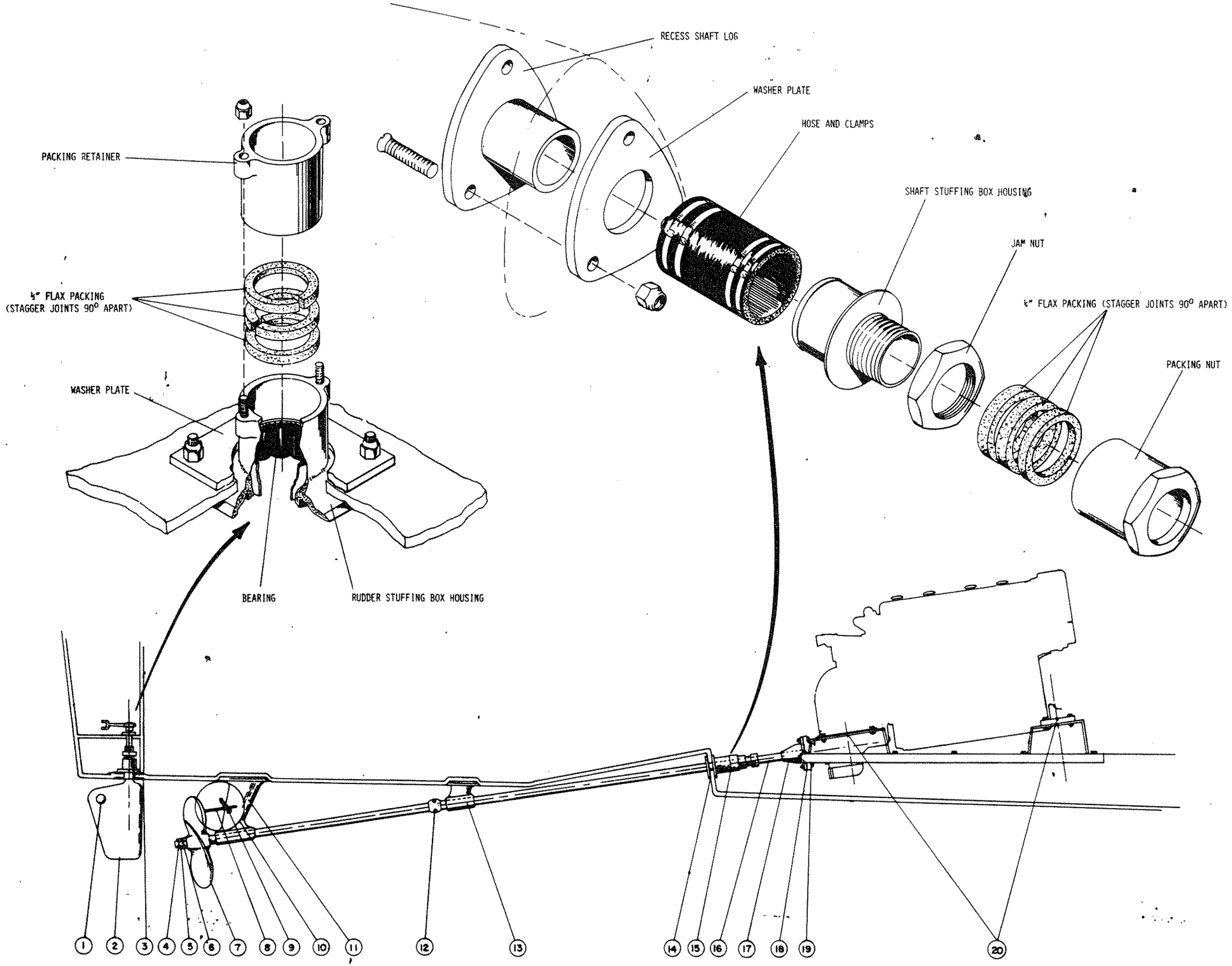
1. Engine Efficiency: With normal care and maintenance the engines will maintain peak efficiency. If they are neglected, the power will decrease and repairs could become necessary. Have the engine manufacturer's local dealer service them as indicated by the Engine Manufacturer's Manual.
2. Atmospheric Conditions: Engines will develop more power when the ambient air temperature is cool. The power variation due to temperature can be as much as ten percent. For this reason, greater speeds are generally obtained in the spring and fall, rather than summer.
3. Personal Equipment and Accessories: All personal equipment, passengers, and accessories added to the yacht will tend to decrease the speed. Do not overlook the adverse effect as this weight is added on a day-by-day basis.
4. Marine Growth: In order to maintain maximum speed, the bottom of the yacht should be kept free of marine growth to minimize water flow resistance.

5. Water in the Bilge: The bilges should be kept dry to keep excess weight down.

6. Damaged Underwater Equipment: Loss of speed and excessive vibration can result from damaged propellers, shafts, or struts. Always inspect underwater gear thoroughly at every opportunity.

WARNING

FOR THE SAFETY OF PERSONNEL AND TO PREVENT POSSIBLE DAMAGE TO THE YACHT AND ITS CONTENTS, SPEED MUST BE ADJUSTED TO SUIT SEA CONDITIONS ACCORDING TO ACCEPTED PRINCIPLES OF GOOD SEAMANSHIP.



INSTALLATION OF PROPELLERS

1. REMOVE BURRS, CORROSION, AND FOREIGN MATERIAL FROM PROPELLER AND SHAFT TAPER.
2. HAND LAP PROPELLER TO SHAFT
3. SLIDE WHEEL OVER SHAFT TAPER AND ALIGN KEYSLOT IN WHEEL HUB WITH KEYSEAT IN SHAFT
4. INSERT KEY
   CAUTION FORCING PROPELLER WILL CAUSE MISALIGNMENT
5. INSTALL PROPELLER AND LOCKING NUTS (5), (6) AND COTTER PIN (4)
6. TRACK PROPELLER (7) REPAIR OR REPLACE SHAFT AND/OR PROPELLER IF MISALIGNMENT IS INDICATED.

DRIVE TRAIN ALIGNMENT

1. REMOVE BOLTS (19)
2. HOLD COUPLINGS (17) TOGETHER, A .006" FEELER GAUGE SHOULD GRIP 360° BETWEEN COUPLING FACES (18)
3. IF MISALIGNED, LOOSEN ENGINE MOUNTS (20) AND SHIM
4. RETIGHTEN MOUNTS, RECHECK ALIGNMENT, AND REINSTALL BOLTS (20)
5. TEST RUN YACHT. IF VIBRATION PERSISTS, FOLLOW PROPELLER TRACKING PROCEDURE (10)

REPACKING STUFFING BOXES

CAUTION TO AVOID POSSIBLE FLOODING DO NOT ATTEMPT REPACKING WHILE YACHT IS IN THE WATER

1. REMOVE PACKING RETAINER OR NUT
2. REMOVE OLD PACKING FROM HOUSING OR NUT
3. CUT NEW FLAX PACKING SQUARE, THE LENGTHS EQUAL TO THE CIRCUMFERENCE OF THE SHAFT .
4. INSTALL NEW PACKING IN HOUSING OR NUT (STAGGER BUTT JOINTS 90°)
5. REINSTALL PACKING RETAINER OR NUT AND TIGHTEN NUTS SNUGLY.
6. LAUNCH YACHT, TIGHTEN PACKING RETAINER OR NUT UNTIL STUFFING BOX WEEPS.

DO NOT OVERTIGHTEN

NOTES:

1. SEE DRAWING CMC-91 FOR INSTALLATION OR REMOVAL OF COUPLINGS
2. CAUTION DO NOT RELY ON RUDDER STUFFING BOX TO RETAIN RUDDER WHEN SERVICING RUDDER COMPONENTS
3. SEE VITAL INFORMATION PAGE FOR SHAFT, PROPELLER, MARINE GEAR, AND ENGINE PARTICULARS.
4. SEE DRAWING CMC-184 FOR SHAFT MACHINING.

COAT MATING SURFACES WITH LOCTITE NO. 767 ANTI-SEIZE COMPOUND

LEGEND

1. ZINC
2. RUDDER
3. RUDDER STUFFING BOX
4. COTTER PIN
5. LOCKING NUT JAM
6. LOCKING NUT
7. PROPELLER
8. INDICATOR
9. CLAMP
10. TRACKING PROCEDURE
11. MAIN STRUT
12. ZINC
13. INTERMEDIATE STRUT
14. RECESSED SHAFT LOG
15. SHAFT LOG STUFFING BOX
16. SHAFT
17. COUPLINGS
18. COUPLING FACES
19. COUPLING BOLTS
20. ENGINE MOUNTS AND BOLTS

CAP SCREW DIA	TORQUE FT LBS	TORQUE METER kgs
7/8	100	13.83
3/4	100	13.83
5/8	75	10.373
1/2	50	6.915

TABLE A

HIN	DRAWN	APPD	DWG NO.
AE-290-343	CRM		CIB-581

AMF HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

PROPULSION SYSTEM

FIGURE 3.1, 43 DOUBLE CABIN

STEERING SYSTEM

(See Fig. 3.2)

The steering on this yacht is accomplished with a manually powered hydraulic system. This system consists of a helm unit, slave cylinder, reservoir, relief valve, rudder assembly, and associated piping.

HELM

The helm unit is a hydraulic pump driven by the wheel which, when turned, pumps fluid to the slave cylinder. See Fig. 3.2 for the total number of wheel revolutions (lock-to-lock).

SLAVE CYLINDER

The slave cylinder is connected to the rudder arm and is powered by the helm unit.

RESERVOIR

The reservoir is used to store the system fluid. It has a fluid level sight gauge, air pressure gauge, filler valve, and fluid filler plug.

RELIEF VALVE

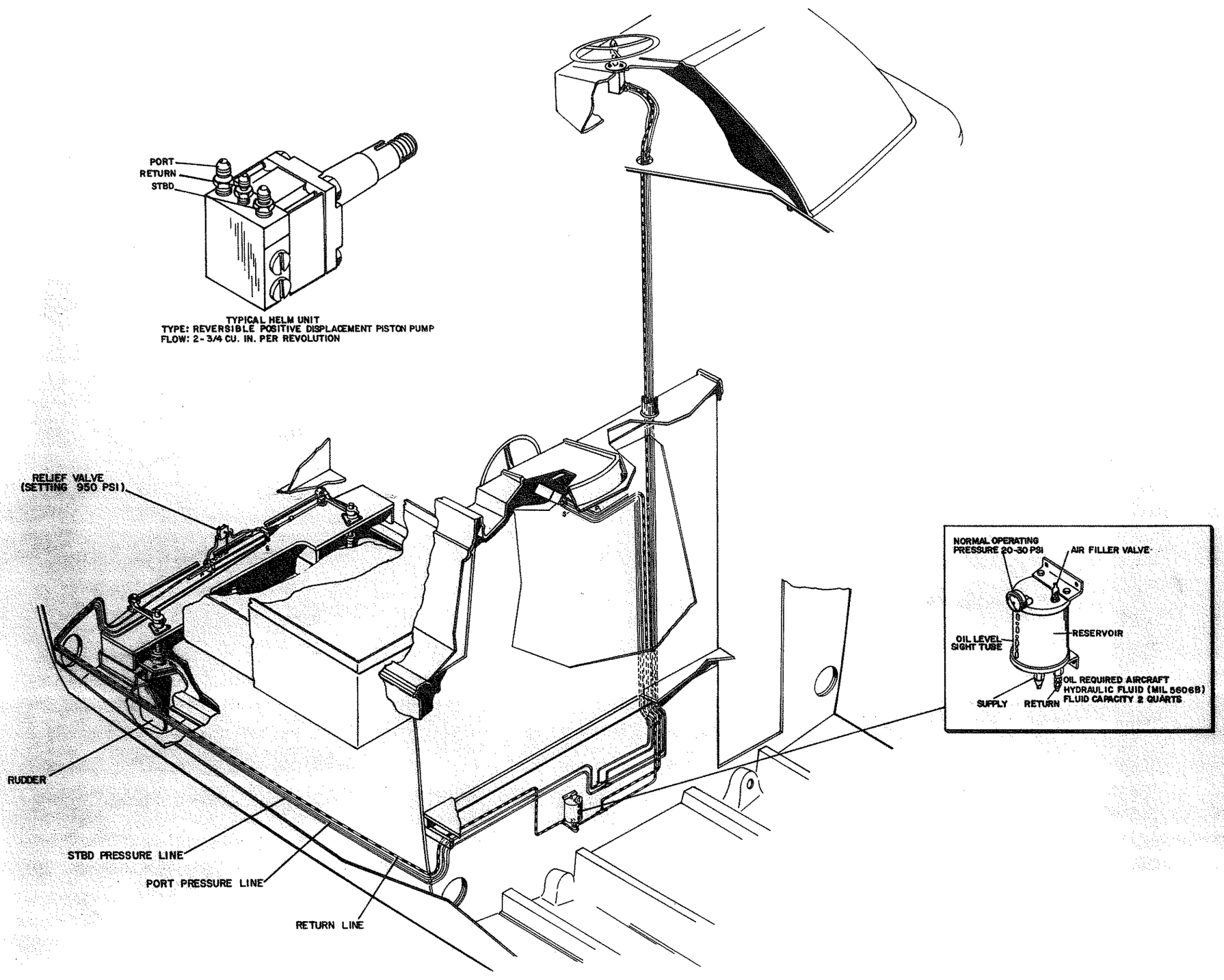
The relief valve is used to protect the system from over pressure and to assist in purging the system of air.

RUDDER ASSEMBLY

The rudder assembly consists of the rudders, rudder arms, stuffing boxes, and a tie bar.

For additional information, see Manufacturer's Manual and Fig. 3.2.

TYPICAL HELM UNIT
TYPE: REVERSIBLE POSITIVE DISPLACEMENT PISTON PUMP
FLOW: 2-3/4 CU. IN. PER REVOLUTION



NOTE:
WHEEL REVOLUTIONS (HARD OVER PORT TO HARD OVER STBD)
5 TURNS.

HIN AE-290	DRAWN R MOSER	APPD CAR	DWG NO C1B-582

AMF

HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

STEERING SYSTEM

FIGURE 3.2 43 DOUBLE CABIN

FUEL SYSTEM

(See Fig. 3.3)

This yacht has molded fiberglass reinforced polyester fuel tanks built to Underwriters' Laboratories Marine Standards. Each tank has brass plates located in the top of the tank containing the fuel supply lines, return lines, vent line, fuel fill, and gauge (indicates an approximate level only). See Fig. 7.1 for access hatch locations. All fuel tank and engine supply and return lines are plumbed to a fuel manifold. This enables the selection of either or both engines to be supplied and returned to any fuel tank. The generator supply(with a shutoff valve)and return lines are plumbed to the same tank. See Fig. 3.3.

CAUTION

ALWAYS RETURN FUEL TO SUPPLYING TANK TO PREVENT OVERFLOWING OF ANY ONE TANK.

FUELING

The fuel tanks should be filled at the end of each day's operation and before dark if possible, to minimize condensation in the tank. Certain precautions must be followed every time the yacht is fueled. These precautions are listed below.

BEFORE FUELING

1. The yacht must be securely tied.
2. Shut down engines, bilge blowers, generator(s), and all other electrical circuits.
3. Close all ports, windows, doors, and hatches to prevent fumes from accumulating on board.
4. Ask all crew and passengers who are not needed for fueling operation to leave the area.

5. Do not permit SMOKING in this area.
6. Be sure there is a fully charged fire extinguisher close at hand.
7. Check fuel level in each tank.

WHILE FUELING

1. Keep nozzle in direct contact with deck flange to ground static electricity.
2. Do not leave hose unattended.
3. Allow for expansion of fuel.
4. Do not over fill.

WARNING

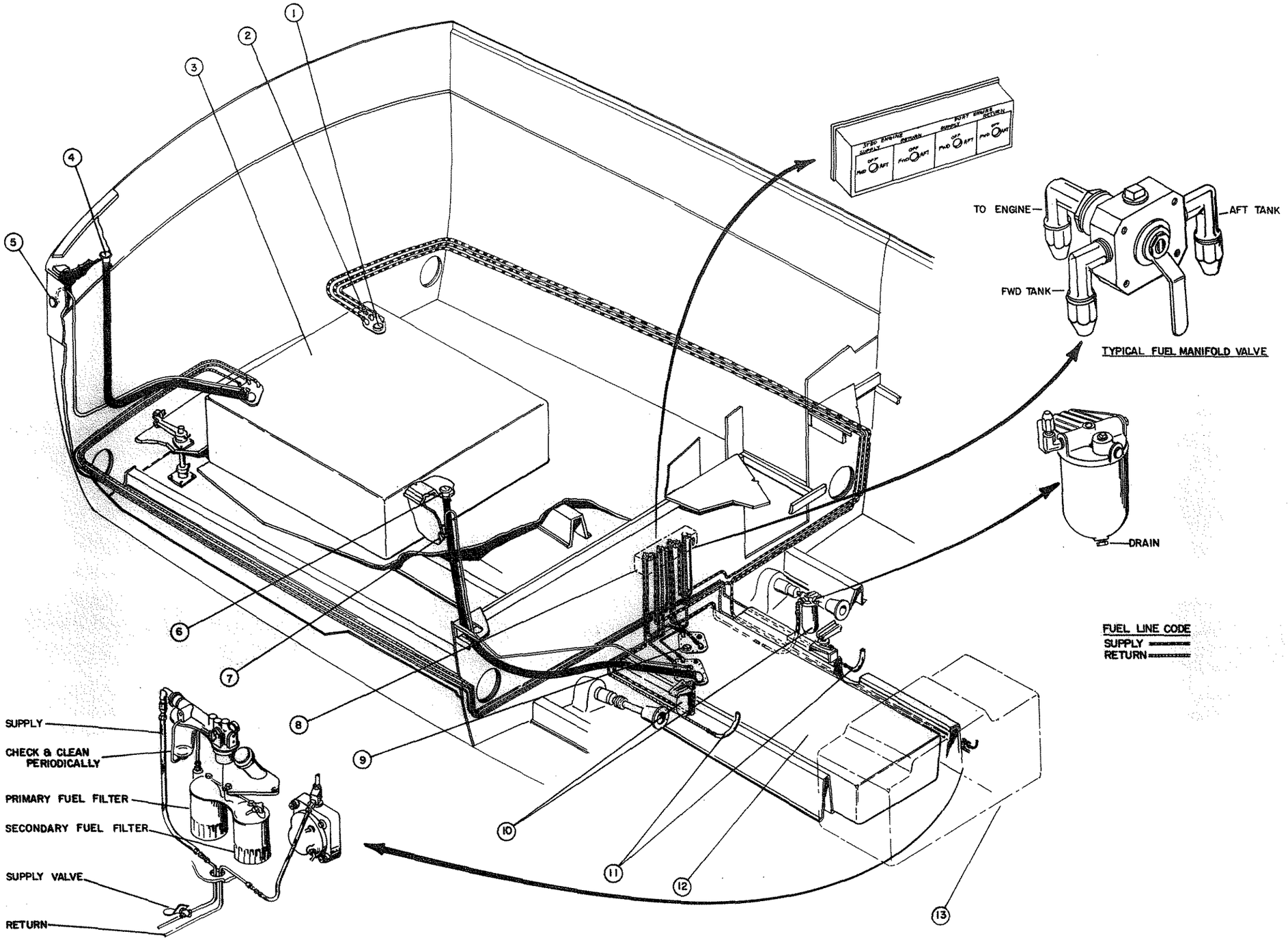
WHEN FILLING FUEL TANK(S) DO NOT USE FULL VOLUME OF DOCKSIDE FUEL PUMP. IN SOME CASES IT MAY BE POSSIBLE TO USE MORE VOLUME THAN THE VENT LINE CAN RELIEVE, CAUSING THE TANK OR FITTINGS TO RUPTURE.

AFTER FUELING

1. Reinstall fuel deck plates.
2. Wipe up any spilled fuel and dispose of rags ashore.
3. Open all ports, windows, doors and hatches, then turn on bilge blowers. Ventilate this way for at least five minutes or until odor can no longer be detected.
4. As soon as possible start engines and move from the fueling area.

WARNING

DO NOT USE FUEL TANK(S) FOR POTABLE WATER STORAGE TANK(S) TO AVOID POSSIBLE CONTAMINATION FROM TOXIC RESINS. CONVERSELY, DO NOT USE WATER TANK(S) FOR FUEL STORAGE TANK(S) AS THEY ARE NOT ADEQUATE FOR THIS PURPOSE.



NOTES

1. TO WINTERIZE: FILL FUEL TANKS & DRAIN WATER FROM FUEL FILTERS
2. TANK CAPACITIES ARE ACTUAL GALLONAGE FIGURES OBTAINED UPON INITIAL FILLING OF A PROTOTYPE TANK. THE USABLE GALLONAGE MAY BE CONSIDERED TO BE APPROXIMATELY 90% OF THE STATED ACTUAL GALLONAGE BUT MAY VARY WITH TRIM CONDITIONS, RUNNING ANGLES AND OTHER OPERATING VARIABLES.
3. CAUTION OPERATE ENGINE ROOM BLOWERS AT LEAST TWO MINUTES BEFORE STARTING, DURING ENGINE STARTING OPERATION AND WHEN OPERATING BELOW CRUISING SPEED.
4. WARNING DO NOT USE THE FULL VOLUME OF THE DOCKSIDE FUEL PUMP WHILE FILLING THE FUEL TANKS. IN SOME CASES IT MAY BE POSSIBLE TO USE MORE VOLUME THAN THE VENT LINE CAN RELIEVE, CAUSING THE TANK OR FITTING TO RUPTURE.
5. DO NOT LEAVE THE FUEL REFILLING HOSE UNATTENDED DURING FILLING
6. CAUTION ALWAYS RETURN FUEL TO THE SUPPLYING TANK TO PREVENT THE OVERFLOWING OF ANY ONE TANK.

LEGEND

1. AFT FUEL TANK GUAGE & PLATE
2. AFT FUEL TANK VALVE
3. 283 GALLON AFT FUEL TANK (NOTE 2)
4. AFT FUEL TANK FILL PLATE (NOTE 4)
5. AFT FUEL TANK VENT
6. KEEL FUEL TANK FILL PLATE (NOTE 4)
7. KEEL FUEL TANK VENT
8. FUEL MANIFOLD BOARD (NOTE 6)
9. KEEL FUEL TANK GUAGE
10. PRIMARY FUEL FILTERS (ENGINE)
11. ENGINE FUEL RETURN LINES
12. 92 GALLON KEEL FUEL TANK (NOTE 2)
13. GENERATOR

TOTAL FUEL CAPACITY 375 GALLONS (NOTE 2)

HIN	DRAWN	APPD	DWG NO.
AE-290	R MOSER	RRR	CIB-583

AMF

HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

FUEL SYSTEM

FIGURE 3.3, 43 DOUBLE CABIN

EXHAUST SYSTEMS

(See Fig. 3.4)

This yacht is equipped with water cooled exhaust systems for the engines and generator.

WARNING

A BY-PRODUCT OF COMBUSTION, CARBON MONOXIDE GAS, IS PRESENT IN THE EXHAUST FROM THE ENGINES AND GENERATOR. THIS GAS IS COLORLESS, ODORLESS, VERY TOXIC, AND COULD BE FATAL WHEN INHALED.

WHEN UNDER WAY OR AT THE DOCK WITH THE ENGINES OR GENERATOR RUNNING, THE DIRECTION OF THE WIND SHOULD BE TAKEN INTO CONSIDERATION. CLOSE ALL PORTLIGHT(S) AND WINDOW(S) LOCATED NEAR EXHAUST OUTLETS TO PREVENT ENTRY OF EXHAUST FUMES.

ADDITIONALLY, A PREVENTATIVE MAINTENANCE PROGRAM MUST BE FOLLOWED TO PREVENT EXHAUST LEAKS.

ENGINE EXHAUST SYSTEM

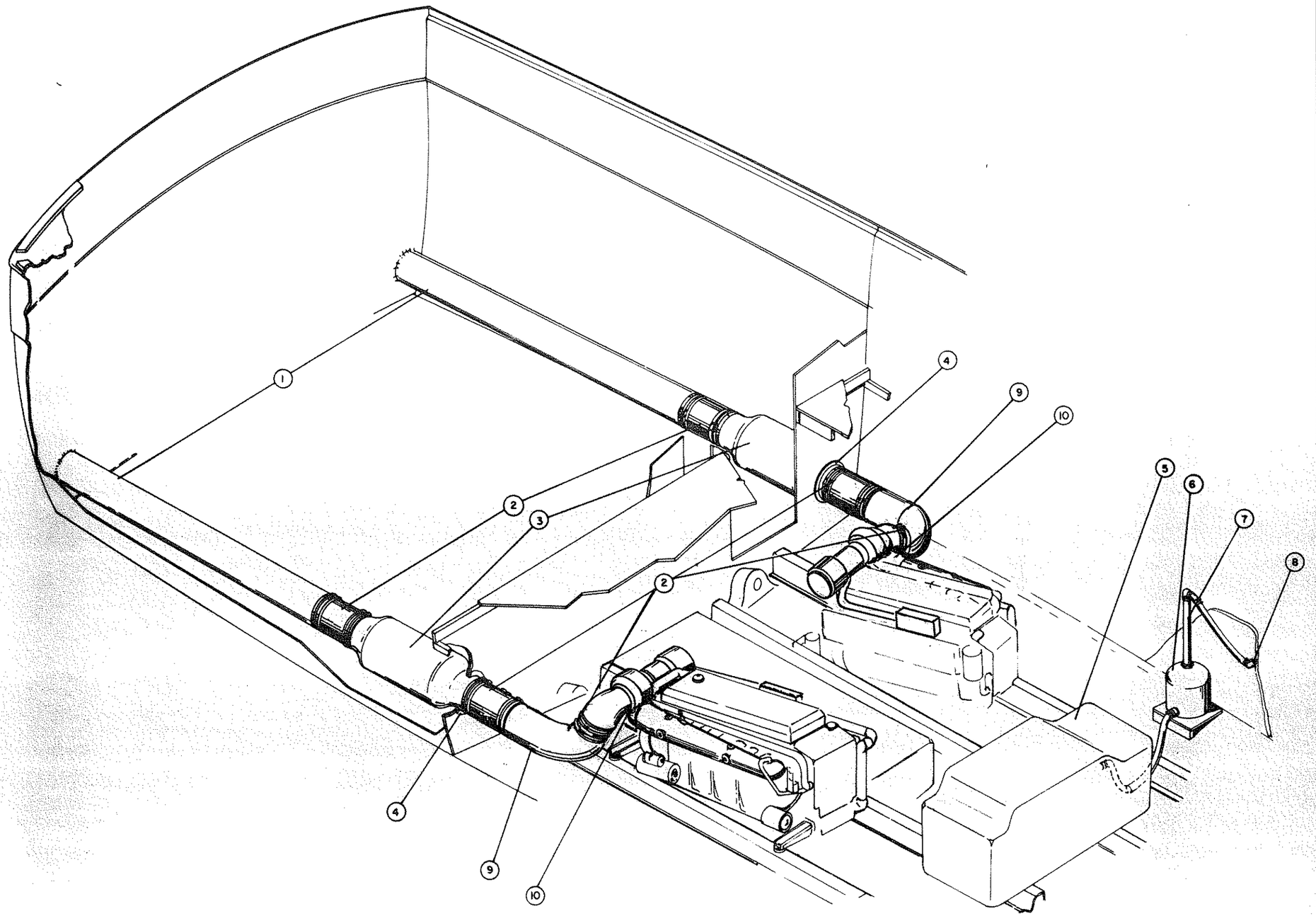
The engine exhaust system consists of elbows, collectors, insulating blankets, mufflers, fiberglass tubing, hose, stainless steel clamps and aluminum bulkhead flanges. For maintenance information, see the Maintenance section of this manual.

GENERATOR EXHAUST SYSTEM

The generator exhaust system consists of a riser, a muffler, pipe, hose, stainless steel clamps and a through hull fitting. The water and exhaust gases are intermixed in the generator's exhaust elbow and discharged through the hose, pipe, and muffler and then out the through hull fitting. For maintenance information, see the maintenance section of this manual.

NOTE

When the engines and generator are running, make a visual inspection of exhaust outlets to be certain that water is discharging.



NOTES

1. CHECK ALL COMPONENTS OF THE EXHAUST SYSTEM FOR TIGHTNESS AND POSSIBLE WEAR PERIODICALLY.
2. WARNING A BY-PRODUCT OF COMBUSTION, CARBON MONOXIDE GAS, IS PRESENT IN THE EXHAUST FROM THE ENGINES AND GENERATOR. THIS GAS IS COLORLESS, ODORLESS, VERY TOXIC, AND COULD BE FATAL WHEN INHALED.

   WHEN UNDER WAY OR AT THE DOCK WITH THE ENGINES OR GENERATOR RUNNING, THE DIRECTION OF THE WIND SHOULD BE TAKEN INTO CONSIDERATION. CLOSE ALL PORTLIGHT(S) AND WINDOW(S) LOCATED NEAR EXHAUST OUTLETS TO PREVENT ENTRY OF EXHAUST FUMES.

   ADDITIONALLY, A PREVENTIVE MAINTENANCE PROGRAM MUST BE FOLLOWED TO PREVENT EXHAUST LEAKS.

LEGEND

1. EXHAUST TUBE
2. EXHAUST HOSE WITH DOUBLE SS CLAMPS
3. MUFFLER
4. BULKHEAD EXHAUST FLANGE
5. GENERATOR
6. GENERATOR MUFFLER
7. GENERATOR MUFFLER STAND PIPE
8. GENERATOR EXHAUST THRU HULL FITTING
9. ELBOW
10. WATER JACKETED ELBOW

6-71TI J&T

HIN	DRAWN	APPD	DWG NO
AE-290	R MOSER		C1B-710

AMF HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

EXHAUST SYSTEM

FIGURE 3.4, 43 DOUBLE CABIN

VENTILATION SYSTEMS

(See Fig. 3.5)

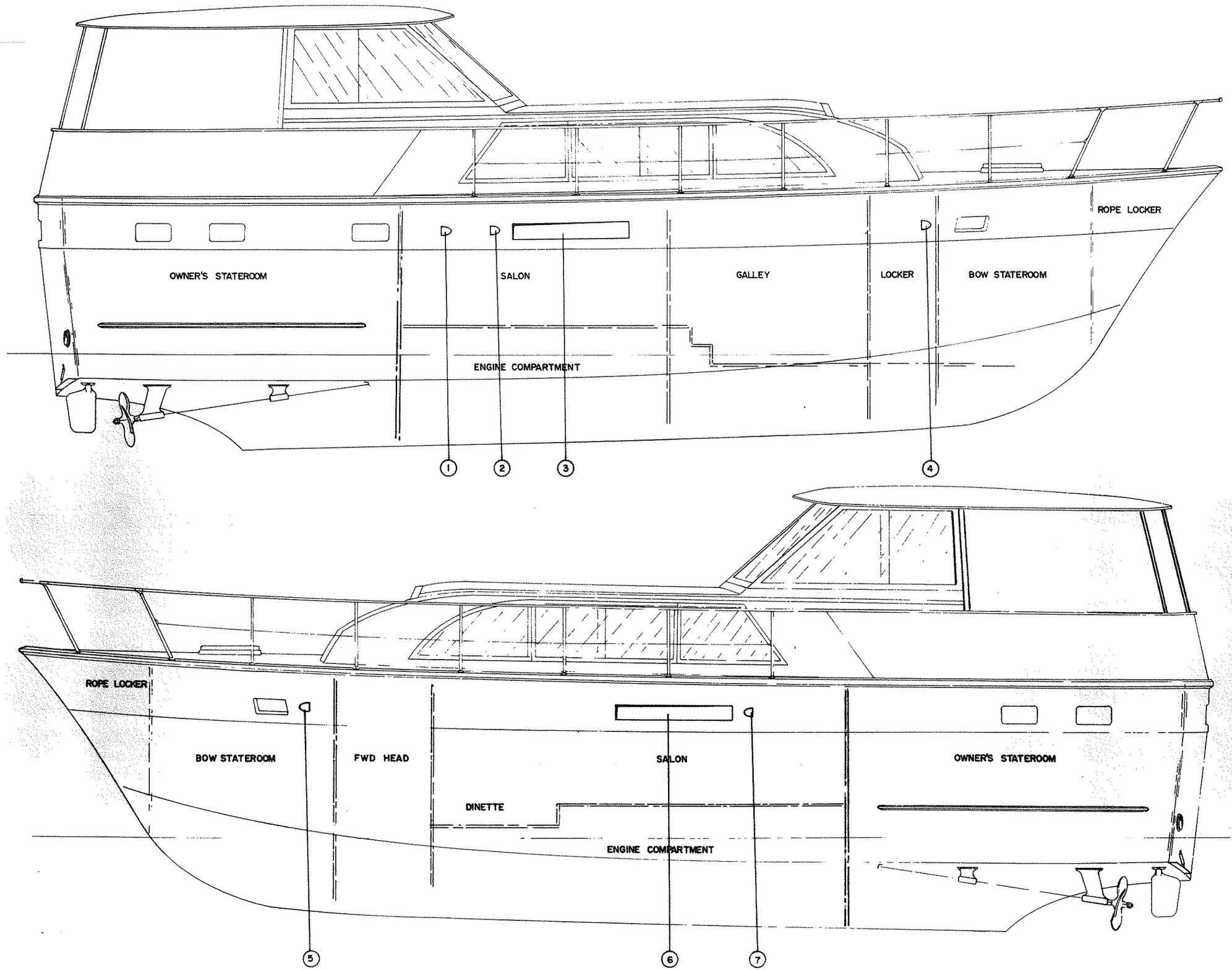
The ventilation system consists of both 12V D.C. and 120V A.C. blowers and ventilators. These are used to ventilate various areas (bilge, engine compartment, galley and heads) of the yacht.

ENGINE COMPARTMENT

The engine compartment has two ventilating systems to be used for different purposes, not necessarily at the same time. The first is the 12V D.C. blower(s) used to ventilate the engine compartment before and during starting of the engines and when operating below cruising speed. Switch(es) are located on the console, and the operation is covered in the Engine Operating Instructions section of this manual. The second engine compartment system consists of ventilators used to provide the combustion air supply for the engines and generator.

HEAD

The head has 120V A. C. blower to exhaust overboard which is controlled by a switch in the head. The fuse for the blower is an inline fuse located at the blower.



LEGEND

1. OWNER'S HEAD 120V BLOWER
2. ENGINE COMPARTMENT STBD 12V EXHAUST BLOWER
3. ENGINE COMPARTMENT STBD VENTILATOR (ENG. COMBUSTION AIR)
4. GALLEY 120V BLOWER
5. BOW HEAD 120V BLOWER
6. ENGINE COMPARTMENT PORT VENTILATOR (ENG. COMBUSTION AIR)
7. ENGINE COMPARTMENT PORT 12V EXHAUST BLOWER

(STANDARD ARRANGEMENT)

HIN	DRAWN	APPD	DWG NO
AE - 290	CRM		CIB-585

AMF

HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

VENTILATION SYSTEM

FIGURE 3.5, 43 DOUBLE CABIN

FRESHWATER SYSTEM

(See Fig. 3.6)

This yacht has a hot and cold water pressure system consisting of fresh water storage tank, water pressure pump, water heater, check valves, temperature/pressure relief valve and pressure reducing valve.

WATER TANK

The freshwater storage tank is molded fiberglass reinforced polyester manufactured with components meeting U.S. Food and Drug Administration requirements; it includes a level gauge (indicates an approximate level only) and plumbing connections. See Fig. 7.1 for access hatch locations.

CAUTION

WHEN FILLING WATER TANK, DO NOT USE FULL VOLUME OF DOCKSIDE SUPPLY. IN SOME CASES IT MAY BE BE POSSIBLE TO USE MORE VOLUME THAN THE VENT LINE CAN RELIEVE CAUSING THE TANK OR FITTINGS TO RUPTURE.

WARNING

DO NOT USE HOLDING TANK, FUEL TANKS OR BAITWELL FOR POTABLE WATER STORAGE TANK(S) TO AVOID POSSIBLE CONTAMINATION FROM TOXIC RESINS.

DOCKSIDE PRESSURE CONNECTION

The dockside water is connected through a pressure reducing valve and then into the system. When connected to shore water, the on board pump and tank are bypassed by a check valve to supply pressurized water without operation of the automatic water pressure system.

CAUTION

IN ORDER TO AVOID POSSIBLE DAMAGE IN CASE OF COMPONENT FAILURE, DO NOT LEAVE YACHT UNATTENDED WITH DOCKSIDE WATER CONNECTED FOR LONG PERIODS OF TIME.

NOTE

The water storage tank cannot be filled through this connection.

SHORE PRESSURE REDUCING VALVE

The pressure reducing valve will take a supply of dockside pressure up to 300 psi and deliver water to the on-board system at 40 psi.

WATER FILTER

The filter is located in the cold water branch line serving various pieces of equipment as shown on Fig. 3.6. This filter will reduce objectionable taste and odor in the water.

Supplied with your yacht is a replacement cartridge. The cartridge should be replaced when there is a decrease in water pressure at the faucet or when objectionable taste and/or odors are detected. Always have a spare cartridge on hand. See Manufacturer's Manual for cartridge replacement.

ENGINE ROOM FRESHWATER

The engine room is equipped with a hand held water fill hose. This hose enables the filling of the engines and generator closed cooling systems.

WARNING

DO NOT CONNECT THE FRESHWATER SYSTEM TO ANY PORTION OF ENGINE OR GENERATOR WATER SYSTEMS. TO DO SO WILL CAUSE CONTAMINATION OF FRESHWATER SYSTEM BY MIGRATION OF TOXIC MATERIAL FROM THE ENGINE OR GENERATOR WATER SYSTEM.

WATER PRESSURE PUMP

The water pressure pump is operated by 12V D.C. and is equipped with a combination pressure and "dry tank shutoff" switch with a reset lever. The pump is self-priming after the initial start. This initial start is required only at factory installation, dealer make ready for delivery, after a long lay-up or if the pump has run completely dry. The procedure for an initial start is as follows:

1. Remove the upper air injector fitting as applicable.
2. Fill the priming plug port with water.
3. Replace the air injector line (use Teflon impregnated pipe sealant).
4. Open one faucet to release the air.
5. Start pump with reset switch on pump until pressure builds up to 15 psi.
6. Close the faucet.

The normal operating pressure is 32 psi which can be read on the pump pressure gauge. The pressure can be adjusted as indicated on Fig. 3.6.

NOTE

Check aerators in faucets periodically for restrictions that may cause inadequate water flow.

For more information, see the Water Pump Manufacturer's Manual.

WATER HEATER

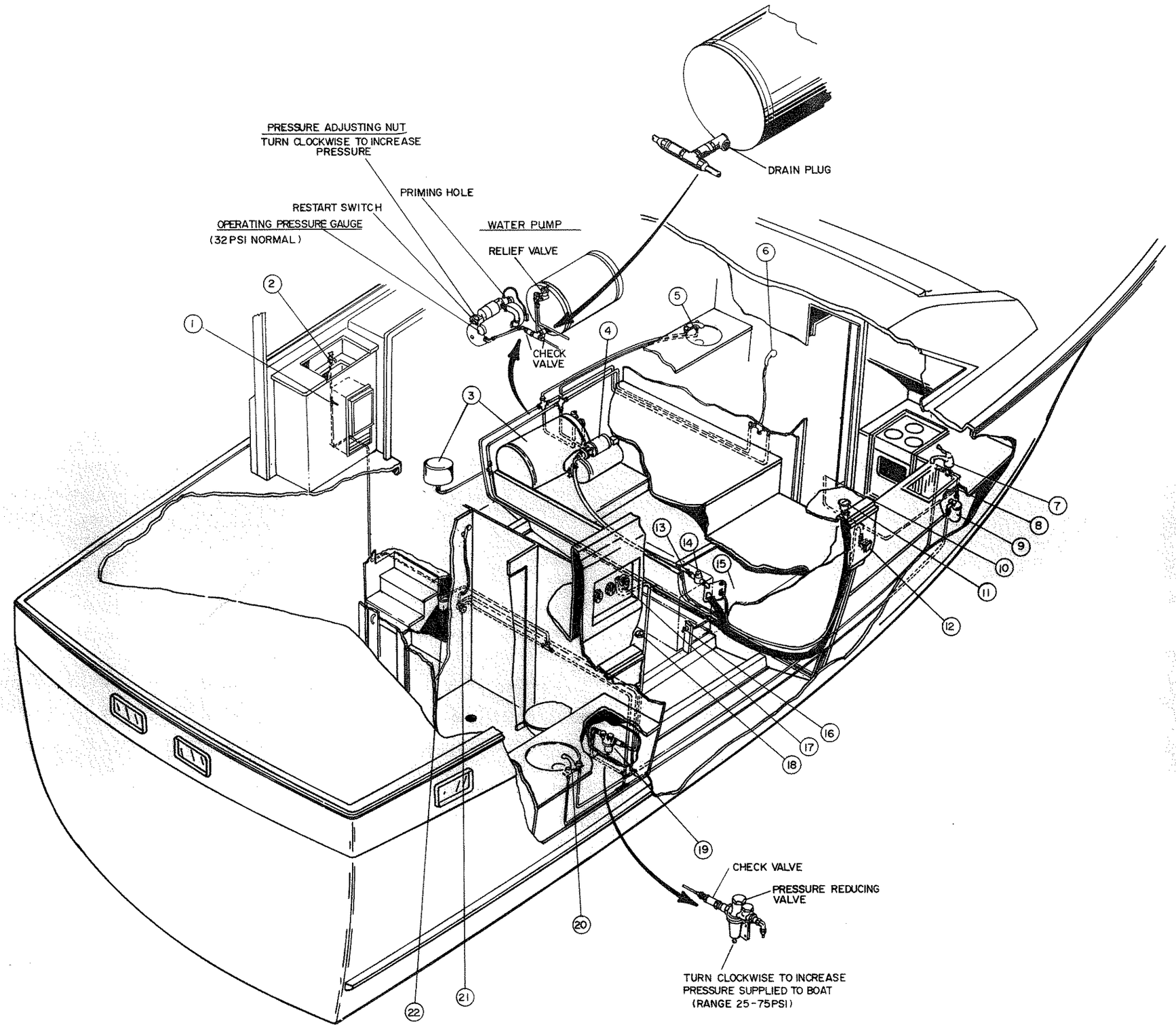
The water heater is operated by 120V A.C. and is equipped with a temperature/pressure relief valve. Connected to the relief is a copper tube to control any overflowing water.

CAUTION

THE HEATING ELEMENT MAY BE DAMAGED IF IT IS TURNED ON WITHOUT WATER IN THE TANK.

NOTE

In order to fill the water heater, be certain the freshwater system is pressurized then open any hot water faucet above the elevation of the heater until all air is discharged from the system.



NOTES

1. TO WINTERIZE
   A. PUMP TANK DRY BY OPENING ALL FAUCETS (PUMP WILL SHUT OFF WHEN THE TANK IS EMPTY).
   B. DRAIN THE WATER HEATER
   C. PURGE WATER FROM ALL LINES, TUBING AND PUMP(S)
   ALTERNATE METHOD
   USE COMMERCIAL NON-TOXIC ANTIFREEZE FOR WATER. FOLLOW INSTRUCTIONS ON CONTAINER.
2. CAUTION WHEN FILLING WATER TANK DO NOT USE FULL VOLUME OF DOCKSIDE SUPPLY. IN SOME CASES IT MAY BE POSSIBLE TO USE MORE VOLUME THAN THE VENT LINE CAN RELIEVE, CAUSING THE TANK OR FITTINGS TO RUPTURE.
3. WARNING DO NOT CONNECT THE FRESH WATER SYSTEM TO ANY PORTION OF ENGINE OR GENERATOR WATER SYSTEMS. TO DO SO WILL CAUSE CONTAMINATION OF THE FRESH WATER SYSTEM BY MIGRATION OF TOXIC MATERIAL FROM THE ENGINE OR GENERATOR WATER SYSTEMS.
4. CAUTION TO AVOID POSSIBLE DAMAGE IN CASE OF COMPONENT FAILURE DO NOT LEAVE THE YACHT UNATTENDED WITH THE DOCKSIDE WATER CONNECTED FOR EXTENDED PERIODS.
5. TANK CAPACITIES ARE ACTUAL GALLONAGE FIGURES OBTAINED UPON INITIAL FILLING OF A PROTOTYPE TANK. THE USABLE GALLONAGE MAY BE CONSIDERED TO BE APPROXIMATELY 90% OF THE STATED ACTUAL GALLONAGE BUT MAY VARY WITH TRIM CONDITIONS, RUNNING ANGLES AND OTHER OPERATING VARIABLES.

LEGEND

1. OPTIONAL ICE MAKER
2. OPTIONAL BAR SINK FAUCET
3. WATER HEATER & PRESSURE TANK
4. WATER PUMP
5. FWD HEAD LAVATORY FAUCET
6. FWD HEAD SHOWER
7. GALLEY SINK FAUCET
8. REFRIGERATOR OPTIONAL ICE MAKER CONNECTION
9. GALLEY SINK FILTER
10. TO REFRIGERATOR OPTIONAL ICE MAKER
11. WATER TANK FILL PLATE
12. WATER TANK VENT
13. CHECK VALVE
14. WATER STRAINER
15. 130 GALLON WATER TANK (NOTE 5)
16. ENGINE ROOM WATER CONNECTION (NOTE 3)
17. DOCKSIDE WATER CONNECTION
18. WATER TANK GAUGE
19. PRESSURE REDUCING VALVE
20. OWNER'S HEAD LAVATORY FAUCET
21. OWNER'S HEAD SHOWER
22. OPTIONAL BAR SINK FILTER

TOTAL WATER CAPACITY 130 GALLONS (SEE NOTE 5)

(STANDARD ARRANGEMENT)

HIN	DRAWN	APPD	DWG NO.
AE-290	R MOSER		CIB-587

AMF HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

FRESHWATER SYSTEM

FIGURE 3.6, 43 DOUBLE CABIN

DUNCAN-PARNELL, INC., CHARLOTTE, NC

WASTE SYSTEM

(See Figs. 3.7.A and 3.7.B)

PUMP AND DRAIN

This system consists of automatic bilge pump, sump pump, air conditioner (if installed), lavatory, sink, and deck drains discharging overboard as shown on Fig. 3.7.A.

THROUGH HULL FITTINGS

All underwater through hull fittings are bronze and fitted with sea valves. Check all sea valves periodically for correct operation. See Fig. 3.7.B.

HAND BILGE PUMP

The hand bilge pump is to be manually operated when desired and is also to be used when there is no electrical power to the other bilge pumps.

SHOWER SUMP PUMP

The shower sump pump receives water from the shower drains. The pump is normally operated by an automatic float switch in the sump. There is a pilot light to indicate when the pump is running and a manual switch to override the automatic float switch as well. These lights and switches are located in each head.

TOILET AND HOLDING TANK SYSTEM

This system consists of electric toilet, holding tank, liquid level sensor, indicator light, and associated plumbing. To operate, the toilet intake through hull and the toilet-to-holding tank valves must be open and the button adjacent to the toilet depressed until solids have been cleared from the bowl for 5 seconds. The waste discharges directly into a holding tank. See Fig. 3.7.A. for capacities. The holding tank has a liquid

level sensor with an indicator light in the head. This light will illuminate when the tank is approximately 3/4 full. When this appears, it is recommended that the tank be pumped out shortly thereafter to avoid "backing up" in low level toilets. The procedure is as follows:

1. Remove "waste" plate plug on the deck. Connect dockside pumpout apparatus to deck fitting.
2. The dockside facility will pump the waste from the yacht's tank.

NOTE

To prevent sludge build-up in tank and resultant objectionable odors, flush tank with water. Pump out again.

3. When operation is completed, disconnect the dockside apparatus and replace the "waste" plate plug.
4. Check to be certain that the holding tank indicator light in the head has gone off.

There is a toilet-to-through hull valve that will enable the toilet to discharge overboard. This valve should only be used when operating in waters outside the territorial limits of the United States and where overboard discharge of untreated sewage is permitted.

NOTE

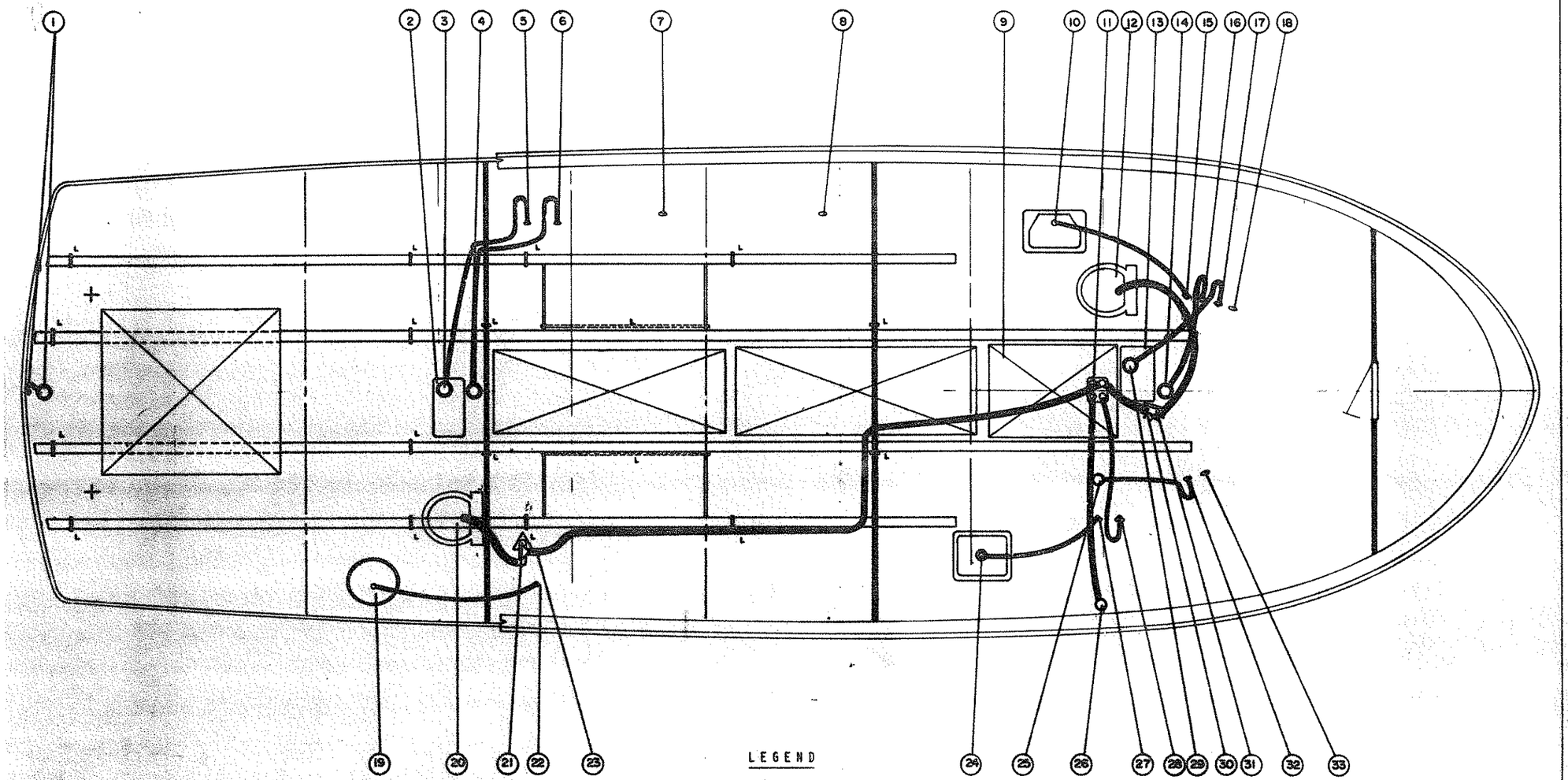
The Federal Law prohibits the discharge of sewage into the waters of the United States. The toilet-to-through hull valve has been closed and handle removed and tied to valve before leaving the factory.

CAUTION

CLOSE THE TOILET-TO-HOLDING TANK VALVE BEFORE OPENING THE TOILET-TO-THROUGH HULL VALVE. CONVERSELY,

CLOSE THE TOILET-TO-THROUGH HULL VALVE BEFORE OPENING THE TOILET-TO-HOLDING TANK VALVE. SHOULD BOTH VALVES BE OPENED SIMULTANEOUSLY, THE HOLDING TANK MAY FLOOD WITH SEAWATER.

For more information about the toilet, see the Manufacturer's Manual.



LEGEND

1. AFT BILGE PUMP AND DISCHARGE
2. OWNER'S HEAD SHOWER SUMP
3. OWNER'S HEAD SHOWER SUMP PUMP
4. CENTER BILGE PUMP
5. OWNER'S HEAD SHOWER SUMP PUMP DISCHARGE
6. CENTER BILGE PUMP DISCHARGE
7. OPTIONAL BAR SINK DRAIN
8. A/C CONDENSING UNITS DISCHARGE
9. 90 GALLON HOLDING TANK (NOTE 7)
10. FWD. HEAD LAVATORY
11. HOLDING TANK SENDER
12. FWD HEAD TOILET
13. FWD HEAD SHOWER SUMP
14. FWD BILGE PUMP
15. FWD HEAD LAVATORY DRAIN
16. FWD BILGE PUMP DISCHARGE
17. FWD HEAD SHOWER SUMP PUMP DISCHARGE
18. SALON A/C CONDENSATION DRAIN
19. OWNER's HEAD LAVATORY
20. OWNER'S HEAD TOILET
21. OWNER'S HEAD TOILET-TO-HOLDING TANK VALVE
22. OWNER'S HEAD LAVATORY DRAIN
23. OWNER'S HEAD TOILET-TO-HOLDING TANK VALVE
24. GALLEY SINK
25. HAND BILGE PUMP
26. HOLDING TANK PUMP OUT DECK FITTING
27. GALLEY SINK DRAIN THRU HULL FITTING
28. HOLDING TANK VENT
29. FWD HEAD SHOWER SUMP PUMP
30. FWD HEAD TOILET-TO-THRU HULL VALVE AND DISCHARGE
31. FWD HEAD TOILET-TO-HOLDING TANK VALVE
32. HAND BILGE PUMP DISCHARGE
33. BOW A/C DRAIN

TOTAL HOLD TANK CAPACITY 90 GALLONS (NOTE 7)

NOTE A

THE FEDERAL WATER POLLUTION CONTROL ACT PROHIBITS THE DISCHARGE OF OIL OR OILY WASTE INTO OR UPON THE NAVIGABLE WATERS AND CONTIGUOUS ZONE OF THE UNITED STATES IF SUCH DISCHARGE CAUSES A FILM OR SHEEN UPON, OR DISCOLORATION OF THE SURFACE OF THE WATER OR CAUSES A SLUDGE OR EMULSION BENEATH THE SURFACE OF THE WATER.

VIOLATORS ARE SUBJECT TO A PENALTY OF $5,000

NOTE B

THE FEDERAL LAW PROHIBITS THE DISCHARGE OF SEWAGE INTO THE WATERS OF THE UNITED STATES. THE TOILET-TO-THROUGH HULL VALVE HAS BEEN CLOSED AND HANDLE REMOVED AND WIRED TO VALVE BEFORE LEAVING THE FACTORY.

NOTES:

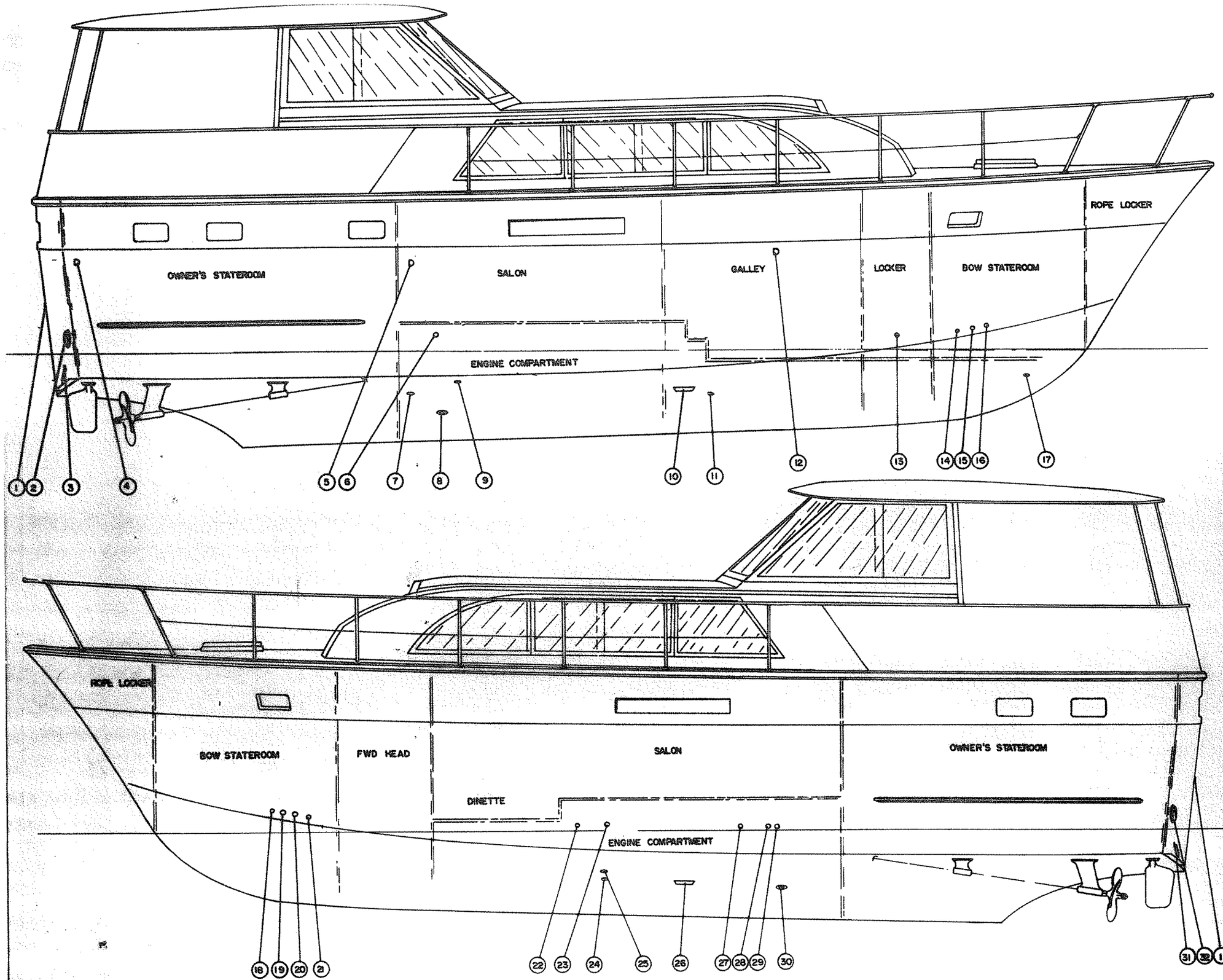
1. CAUTION CLOSE THE TOILET-TO-HOLDING TANK VALVE BEFORE OPENING THE TOILET-TO-THROUGH-HULL VALVE. CONVERSELY, CLOSE THE TOILET-TO-THROUGH-HULL VALVE BEFORE OPENING THE TOILET-TO-HOLDING TANK VALVE. SHOULD BOTH VALVES BE OPENED SIMULTANEOUSLY, THE HOLDING TANK MAY FLOOD WITH SEAWATER.
2. TO WINTERIZE PUMPS & DRAINS:
   A. PURGE WATER FROM ALL LINES, TUBES, AND DRAINS
   B. POUR APPROXIMATELY ONE QUART OF ANTIFREEZE INTO EACH DRAIN.
3. TO WINTERIZE TOILET AND HOLDING TANK SYSTEM:
   A. CLEAN AND DEODORIZE TOILETS
   B. IF THE TOILET(S) ARE THE CHLORINATED TYPE REMOVE THE CHLORINE AND THOROUGHLY RINSE THE TOILET(S)
   C. PUMP OUT HOLDING TANK(S)
   D. FLUSH TOILET(S) AND FILL HOLDING TANK(S) WITH FRESHWATER TO REMOVE RESIDUAL CLEANING AGENTS, DEODORANTS, DISINFECTANTS, SEWAGE AND OTHER CHEMICALS
   E. PUMP OUT HOLDING TANK AGAIN
   F. FLUSH APPROXIMATELY 2 GALLONS OF ANTIFREEZE IN EACH TOILET LEAVING 2" IN THE BOWL.
   CAUTION AFTER WINTERIZING DO NOT ADD ANY CLEANING AGENTS, DEODORANTS, DISINFECTANTS OR OTHER CHEMICALS AS THIS MAY PRODUCE A HAZARDOUS CHEMICAL REACTION WITH THE ANTIFREEZE AND CAUSE DAMAGE TO THE TOILET AND/OR HOLDING TANK SYSTEM.
4. TO DEWINTERIZE THE TOILET AND HOLDING TANK SYSTEM:
   A. FLUSH TOILET(S) AND FILL HOLDING TANK WITH FRESHWATER TO REMOVE THE ANTIFREEZE FROM THE SYSTEM.
   B. PUMP OUT HOLDING TANK
5. TOILET DISCHARGE THROUGH HULL FITTINGS ONLY ARE SHOWN. FOR INTAKE THRU HULL FITTING LOCATIONS SEE FIG. 3.7.B (THRU-HULL-FITTINGS) AND FIG.7.1 (ACCESS HATCH LOCATIONS)
6. L=LIMBER TUBES (TYP. PORT & STBD.)
7. TANK CAPACITIES ARE ACTUAL GALLONAGE FIGURES OBTAINED UPON INITIAL FILLING OF A PROTOTYPE TANK. THE USABLE GALLONAGE MAY BE CONSIDERED TO BE APPROXIMATELY 90% OF THE STATED ACTUAL GALLONAGE BUT MAY VARY WITH TRIM CONDITIONS, RUNNING ANGLES AND OTHER OPERATING VARIABLES.

HIN	DRAWN	APPD	DWG NO
AE-290 310	CRM		CIB-586

AMF HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

PUMP AND DRAIN SYSTEM

FIGURE 3.7.A, 43 DOUBLE CABIN



LEGEND

1. AFT BILGE PUMP DISCHARGE
2. STBD ENGINE EXHAUST
3. STBD TRIM TAB
4. AFT FUEL TANK VENT
5. KEEL FUEL TANK VENT
6. OWNER'S HEAD LAVATORY DRAIN
7. OWNER'S HEAD TOILET DISCHARGE
8. STBD ENGINE INTAKE
9. OWNER'S HEAD TOILET INTAKE
10. STBD BONDING PLATE
11. GENERATOR INTAKE
12. WATER TANK VENT
13. GALLEY SINK DRAIN
14. HOLDING TANK VENT
15. HAND BILGE PUMP DISCHARGE
16. BOW A/C CONDENSATION DRAIN
17. FWD. HEAD TOILET DISCHARGE
18. SALON CONDENSATION DRAIN
19. FWD. HEAD SHOWER SUMP PUMP DISCHARGE
20. FWD. BILGE PUMP
21. FWD. HEAD LAVATORY DRAIN
22. A/C CONDENSING UNITS SEA WATER DISCHARGE
23. GENERATOR EXHAUST
24. FWD. HEAD TOILET INTAKE
25. A/C INTAKE
26. PORT BONDING PLATE
27. OPTIONAL BAR SINK DRAIN
28. CENTER BILGE PUMP DISCHARGE
29. OWNER'S HEAD SHOWER SUMP PUMP DISCHARGE
30. PORT ENGINE INTAKE
31. PORT TRIM TAB
32. PORT ENGINE EXHAUST

TO WINTERIZE:

1. CLOSE VALVE
2. REMOVE PLUG ON SIDE OF VALVE TO DRAIN BALL
3. REMOVE PLUG IN STRAINERS

HIN	DRAWN	APPD	DWG NO.
AE-290 310	CRM		CIB-586

AMF

HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

THRU HULL FITTINGS

FIGURE 3.7.B, 43 DOUBLE CABIN

FIRE EXTINGUISHER EQUIPMENT

GENERAL

This yacht is equipped with two types of fire extinguisher equipment: portable dry chemical fire extinguishers and a fixed CO_2 system. Follow the manufacturer's instructions as provided on the equipment in the manufacturer's manual and as indicated below. Safe operating practices dictate regular inspection and maintenance of the equipment.

PORTABLE EXTINGUISHERS

The portable dry chemical fire extinguishers are marked indicating their use classification, content, and contain important instructions with which the operator should be familiar. It is recommended that this information be studied and understood by everyone who may have occasion to use a portable extinguisher.

NOTE

SHAKE ALL FIRE EXTINGUISHERS PERIODICALLY TO PREVENT THEIR CONTENTS FROM SOLIDIFYING.

Basic Operating Instructions

1. Hold extinguisher upright and aim discharge nozzle at the base of the fire. Spray the powder in a slow, sweeping, side-to-side motion across the entire burning area, directing it at the base of the flames.

WARNING

AVOID INHALING THE POWDER. IT COULD CAUSE IRRITATION AND VOMITING. IF THIS OCCURS, CALL A PHYSICIAN IMMEDIATELY. (THE CHEMICAL COMPOUND IS SHOWN ON THE NAMEPLATE.)

2. Do not get too close to the fire and stay near an exit. If discharging powder scatters the flame, move back. The extinguisher will shoot approximately 10 feet, discharging the contents in a total time of approximately 12 seconds.
3. Stay low to avoid smoke, heat, fumes.
4. After extinguishing the fire, maintain a close watch for possible reignition.
5. After the fire has been extinguished, clean up residue as soon as possible as it may cause corrosion.
6. Have extinguisher recharged as soon as possible.

WARNING

USE OF ANY AGENT OTHER THAN DRY CHEMICAL SPECIFIED ON THE NAMEPLATE COULD CAUSE DAMAGE OR PERSONAL INJURY.

FIXED EXTINGUISHER SYSTEM (See Fig. 3.8)

The fixed fire extinguisher system is a self-contained carbon dioxide (CO_2) system used to protect the engine compartment. This system requires no outside source of power to operate. It consists of a cylinder and valve assembly, an automatic control head, a heat actuated device (H.A.D.), a remote manual release, piping, and a pressure switch.

Carbon Dioxide (CO_2)

CO_2 is rated for use on Class B and Class C fires; however, it is not suitable for combustible metals or materials that contain their own oxidizing agent. The CO_2 is stored in the cylinder in the form of a liquid and upon release becomes a gas. Each cylinder is weighed before installation to insure the proper amount of CO_2 is contained in the cylinder.

Automatic Discharge

Automatic discharge is actuated by the heat-actuated device(s) (H.A.D.) located in the protected engine compartment.

Manual Discharge

For manual discharge, there is a remote release and also a lever on the control head. These are shown on Fig. 3.8.

WARNING

BEFORE DISCHARGING SYSTEM, BE CERTAIN THAT MACHINERY SPACE IS NOT OCCUPIED TO AVOID POSSIBLE INJURY TO PERSONNEL.

Pressure Switch

A pressure switch is located in the piping to the nozzle. This switch is activated by pressure during discharge and operated the "Fire" point of the Systems Monitor. In order to prevent starting the engines after discharge, this switch also opens the circuit to each engine auxiliary starting solenoid. After discharge, this pressure switch must be manually reset by depressing the pin on the switch housing. This will enable the engines to be started and will clear the "FIRE" point of the Systems Monitor.

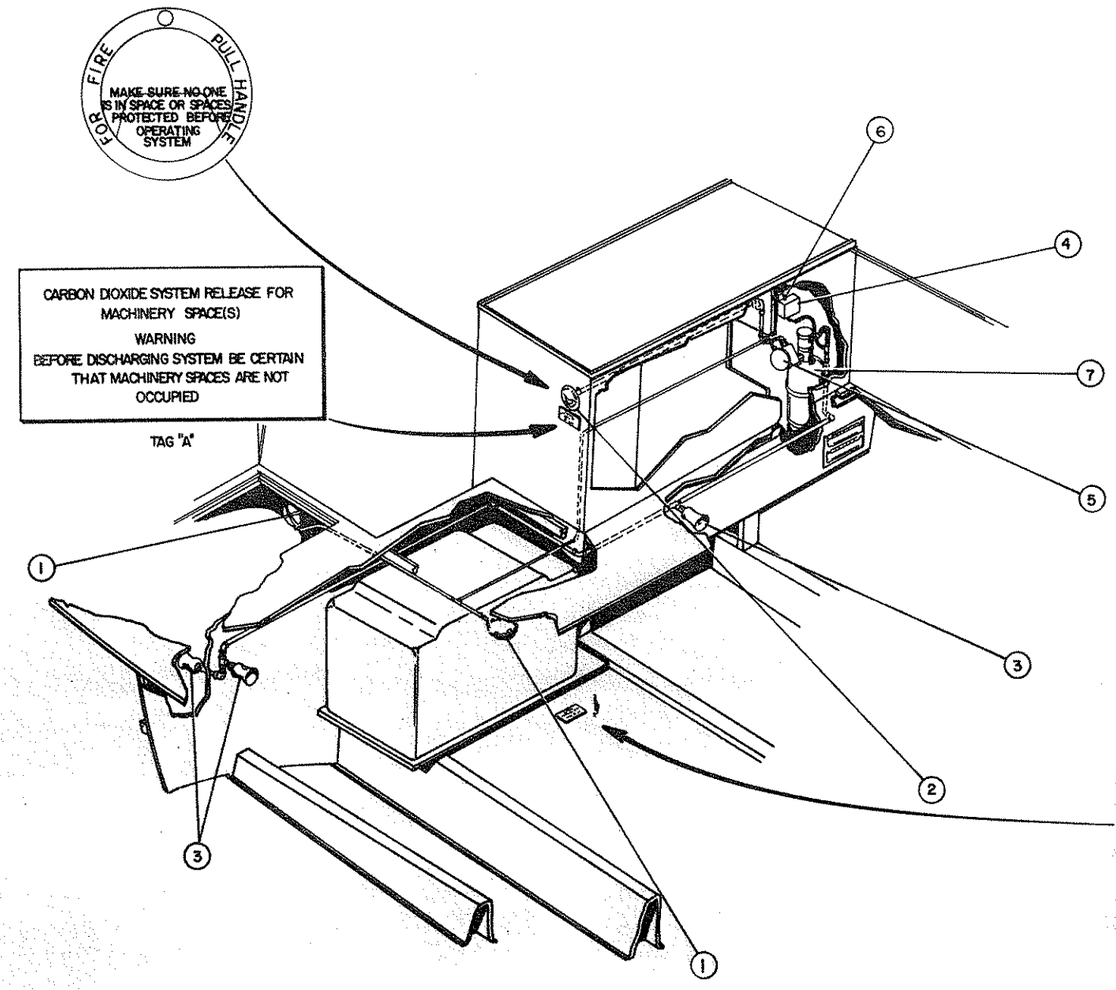
WARNING

SHOULD THE CO_2 SYSTEM DISCHARGE, ALLOW CO_2 TO REMAIN AS LONG AS POSSIBLE, THEN PURGE THE MACHINERY SPACE (USING EXHAUST BLOWERS) FOR AT LEAST 10 MINUTES BEFORE ENTERING. IF UPON ENTRY THERE ARE ANY NOTICEABLE EFFECTS SUCH AS REDUCED VISIBILITY OR IMPAIRED REFLEXES, WITHDRAW IMMEDIATELY AND CONTINUE TO PURGE FOR AT LEAST ANOTHER 10 MINUTES.

CAUTION

DO NOT OPERATE THE YACHT WITH A DISCHARGED CO_2 SYSTEM EXCEPT IN AN EMERGENCY AS THERE WILL BE NO FURTHER AUTOMATIC FIRE EXTINGUISHER PROTECTION. BE PREPARED TO EXTINGUISH SUBSEQUENT FIRES WITH HAND HELD EQUIPMENT.

The fire extinguisher system should be checked and tested periodically. See the manufacturer's manual for more information.



WARNING
MACHINERY SPACE(S) PROTECTED BY A CARBON DIOXIDE FIRE EXTINGUISHING SYSTEM, WHEN SYSTEM IS DISCHARGED DO NOT ENTER UNTIL SPACE HAS BEEN THOROUGHLY VENTILATED

TAG "B"

NOTES

1. WARNING SHOULD THE CO_2 SYSTEM DISCHARGE, ALLOW CO_2 TO REMAIN AS LONG AS POSSIBLE THEN PURGE THE MACHINERY SPACES (USING EXHAUST BLOWERS) FOR AT LEAST 10 MINUTES BEFORE ENTERING. IF UPON ENTRY THERE IS ANY NOTICEABLE EFFECTS SUCH AS REDUCED VISIBILITY OR IMPAIRED REFLEXES, WITHDRAW IMMEDIATELY AND CONTINUE TO PURGE FOR AT LEAST ANOTHER 10 MINUTES.
2. CAUTION DO NOT OPERATE THE YACHT WITH A DISCHARGED CO_2 SYSTEM EXCEPT IN AN EMERGENCY AS THERE WILL BE NO FURTHER AUTOMATIC FIRE EXTINGUISHING PROTECTION. BE PREPARED TO EXTINGUISH SUBSEQUENT FIRE WITH HAND HELD EQUIPMENT.
3. PRESSURE SWITCH (INDICATING SYSTEM DISCHARGE) IS INTERLOCKED TO PREVENT STARTING OF ENGINES AFTER DISCHARGE. THIS SWITCH ALSO ACTUATES THE "FIRE" PORTION OF THE SYSTEMS MONITOR. PURGE THE MACHINERY SPACE AS INDICATED IN THE WARNING ABOVE PRIOR TO ENTERING TO RESET THIS SWITCH.

LEGEND

1. H.A.D. (HEAT ACTUATED DEVICE)
2. REMOTE MANUAL RELEASE
3. NOZZLE
4. PRESSURE SWITCH (NOTE 3)
5. CONTROL HEAD WITH MANUAL RELEASE
6. RESET PIN
7. BOTTLE

(STANDARD ARRANGEMENT)

HIN	DRAWN	APPD	DWG NO.
AE-290	R MOSER		CIB-589

AMF

HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

FIRE EXTINGUISHING SYSTEM

FIGURE 3.8, 43 DOUBLE CABIN

ELECTRICAL

(See Fig. 3.9.A through 3.9.C)

GENERAL

The yacht is equipped with two electrical systems: A 12V D.C. battery system and a 120V A.C. system as shown on Fig. 3.9.A. The 12V D. C. system supplies power to all equipment necessary for the basic operation of the yacht. The 120V A.C. system supplies power to all items not essential to the basic operation of the yacht as well as to all appliances. The 120V A.C. system obtains its power from the generator, separate shore power connections, or from a combination of the two. (When air conditioning is installed).

APPLIANCES

Installed on this yacht are various types of appliances. The electric panel from which they receive their power is shown on Fig. 3.9.A. Instructions and information about the individual appliances are contained in their respective Manufacturer's Manuals.

12V D.C. SYSTEM (See Fig. 3.9.A)

This yacht has two 12V D.C. battery banks located in the engine compartment; each bank consists of two 12 volt batteries in parallel. The ships service, electronics panel and the starboard engine are powered from the starboard battery bank. The port engine, and generator, receive power from the port battery bank. The battery banks can be paralleled [switch located on the console(s) for starting either engine in the event that one bank is not fully charged.

The battery banks are connected to their respective engines and the generator through disconnect switches. The disconnect switches and hour meters are located in the engine compartment.

CAUTION

TO AVOID POSSIBLE EQUIPMENT DAMAGE OR LOSS OF CONTROL CIRCUIT FUNCTIONS INCLUDING SHUTDOWN, DO NOT TURN THE DISCONNECT SWITCH(ES) OFF WHILE THE ENGINE(S) OR GENERATOR IS RUNNING.

The battery banks are charged as required by the alternators on their respective engines or by the 120V A. C. battery charger. A battery condition meter and selector switch for checking either battery bank are located in the 12 V D.C. portion of the 120V A.C. Ship's Service Electrical Panel in the salon.

120V A.C. SYSTEM

The 120V A.C. System is divided into two basic systems when air conditioning is installed; a 120V A.C. Ship's Service System and a 120V A.C. Air Conditioning System. Each system consists basically of power sources, a load distribution and switching panel. The power sources are the Generator and their respective 120V A.C. Shoreline.

The 120V A.C. Ship's Service System provides the power for all 120V A.C. items (except the air conditioning system if installed). This is controlled by the 120V A.C. Ship's Service Electrical Panel located in the Salon. This panel contains the selector switch for the power source (Ship's Service Shoreline or Generator), circuit breakers for the individual circuits, an input voltmeter, a wattmeter, a water heater pilot light, a battery charger pilot light and a reverse polarity indicator for the shore power.

The 120V A.C. Air Conditioning System (if installed) provides the power for all air conditioning equipment; it is controlled by the 120V A.C.

Air Conditioning Electrical Panel located in port aft salon locker. This panel contains the selector switch for the power sources (Air Conditioning Shoreline or Generator), circuit breakers for individual circuits, an input voltmeter, a wattmeter and a reverse polarity test for the shore power.

120V A.C. GENERATOR (See Fig. 3.9.B)

The generator is located in the engine compartment. Power for starting the generator is supplied from the port battery bank through a disconnect switch located in the engine compartment. The fuel system for the generator is shown on Fig. 3.3.

The generator can be controlled from either the 120V A.C. Service Ship's Service Electrical panel or from the generator itself. Each location has a preheat and start-stop switch, see Figs. 3.9.A and 3.9.B.

The generator is designed to automatically shut down due to low oil pressure or high temperature. The cause must be corrected and, in the case of low oil pressure, reset button depressed (located on the generator inside the sound shield) before restarting.

CAUTION

WHEN OPERATING FROM THE MAIN ELECTRICAL PANEL, BE CERTAIN THAT THE GENERATOR BREAKER IN THE ENGINE COMPARTMENT IS ON BEFORE STARTING THE GENERATOR. THE GENERATOR "ON" LIGHT ON THE PANEL WILL NOT INDICATE WHETHER OR NOT THE GENERATOR IS RUNNING UNLESS THIS BREAKER IS ON.

BATTERY CHARGER

For the battery charger to operate, the appropriate 120V A.C. distribution panel breaker must be turned on. Additionally, the off switch on the charger must be "ON".

Automatic Operation: To operate automatically, the "Manual-Auto" switch on the charger must be in the "Auto" position and D.C. output breaker must be "ON". Automatic operation is the normal condition. In this mode the starboard battery bank, supplying ships service, is monitored for its state of charge. Additionally, in this mode the charger is automatically turned off by an oil pressure switch on the engine.

Manual Operation: To operate manually, the "Manual-Auto" switch on the charger must be placed in the "Manual" position. In this mode the unit will continue to charge and will not cut off even though the battery condition light indicates a full charge. Should an engine alternator fail while underway, the charger can be operated in this mode to provide power to the batteries until repairs can be made. This, of course, requires simultaneous operation of the A.C. generator to supply 120V A.C. power to the charger.

CAUTION

DO NOT LEAVE THIS SWITCH IN THE MANUAL MODE UNNECESSARILY FOR AN EXTENDED PERIOD AS OVERCHARGING WILL RESULT IN BATTERY DAMAGE.

WARNING

WHEN BATTERIES ARE CHARGING, THEY PRODUCE A COMBUSTIBLE GAS. DO NOT CHECK ELECTROLYTE LEVEL WITH OPEN FLAME.

WARNING

IF SULFURIC ACID FROM BATTERIES CONTACTS EYES, SKIN OR CLOTHING, FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER. FOR CONTACT WITH EYES, GET MEDICAL ATTENTION.

BONDING SYSTEM (See Fig. 3.9.D)

This yacht is equipped with a bonding system to effectively interconnect all underwater equipment and through hull fittings below the waterline. This is done to insure that all fittings are at equal electrical potential, minimizing the effect of corrosion due to stray electrical currents. Also aiding in prevention of corrosion of the underwater fittings, there are zinc collars and discs on the shafts and rudders. These will corrode before the underwater fittings and should be checked and replaced periodically according to the type of water and use of the yacht. See Fig. 3.1. Additionally, the R.F. Screen System, the A.C. Electrical System case grounds, the D.C. Electrical System case grounds, and the D.C. Battery negatives are all connected to the Bonding System. This bonding and grounding system insures that the cases of all metallic equipment on board are at the same potential.

CAUTION

TO ENSURE CONTINUED SYSTEM INTEGRITY, IT IS IMPERATIVE THAT NO PORTION OF THE BONDING SYSTEM BE UTILIZED AS A NORMAL CURRENT CARRYING CONDUCTOR. [Specifically, this means that all negative or neutral connections used to supply power to a piece of equipment should be made only at the appropriate negative or neutral bus. The bonding or ground system should be utilized only as a "case ground" connection for equipment. However, in the case of radio equipment it is desired to connect a source of R.F. energy (transmitting equipment) to the R.F. Screen and, thereby, to the bonding system. See the R.F. Screen section of this manual for further details. In the case of other electrical

equipment, also see the Adding Electrical Accessories section of this manual for further details]

RADIO FREQUENCY (R.F.) GROUNDING SCREEN (See Fig. 3.9.A)

The R. F. Screen is used for a counterpoise ground for marine radio equipment operating on approximately 3-28 MHz. The R.F. Screen is laminated into the hardtop for maximum surface area with connections as shown on Fig. 3.9.A.

CAUTION

TO ENSURE CONTINUED SYSTEM INTEGRITY, RADIO (R.F.) GROUNDING SHOULD BE MADE ONLY TO THE R.F. SCREEN SYSTEM OR (IF REQUIRED) DIRECTLY TO THE YACHT'S BONDING SYSTEM. DO NOT USE ANY ELECTRICAL PANEL NEGATIVE OR GROUND CONNECTION TO ACCOMPLISH THIS. CONVERSELY, D.C. NEGATIVE CONNECTION SHOULD BE MADE ONLY TO THE APPROPRIATE D.C. NEGATIVE BUS AND NEVER TO ANY PORTION OF THE R.F. SCREEN OR BONDING SYSTEM.

ADDING ELECTRICAL ACCESSORIES

Both the A.C. and D.C. Electrical Systems of this yacht have been designed to accommodate the addition of electrical equipment at a later date. Each of the A.C. and D.C. Distribution Panels provide spare breakers for addition of electrical accessories.

When adding additional circuits, it is suggested that these steps be followed:

1. Decide to which panel the circuit is to be connected.
2. Consult the appropriate diagram in the Appendix of this manual.
3. Check to see if a circuit of the type to be added has been provided. If so, follow the breaker sizing, wire sizing, wire color code and wire number identification as shown on the diagram.
4. If no provision has been made, the same items as mentioned in Step 3 above must be decided upon.
5. Each new circuit should be properly identified on the face of the electrical panel to which it is connected. This may be done by utilizing breaker identification already provided for optional items on the face of the panel. If this is not the case, it is suggested that some type of permanent tag be affixed adjacent to the appropriate breaker.
6. Whenever additions are made, they should be recorded on the copies of the diagrams as mentioned above.

WARNING

WORK OF THIS NATURE SHOULD BE PERFORMED ONLY BY COMPETENT ELECTRICAL PERSONNEL TO AVOID ELECTRICAL SHOCK AND FIRE HAZARDS. BE CERTAIN THAT ALL CIRCUITS ARE DE-ENERGIZED BEFORE WORKING ON ANY PORTION OF THE ELECTRICAL SYSTEM.

The recommended type of wire to be used for accessory wiring is type AWM (Appliance Wire Material), THW, or MTW with a 90°C conductor rating for use in machinery spaces (engine room) and a 75°C rating in all

other spaces. All wiring should be of the tinned copper stranded type and with a minimum insulation rating of 600 volts.

A.C. Wire Color Code

Line (Hot Wire) - Black

Neutral (Ground Conductor) - White

Grounding Conductor (Bonding) - Green

D.C. Wire Color Code

Positive (+) Battery Connection - Red

Negative (-) Battery Connection - Yellow

Grounding Conductor (Bonding) - Green

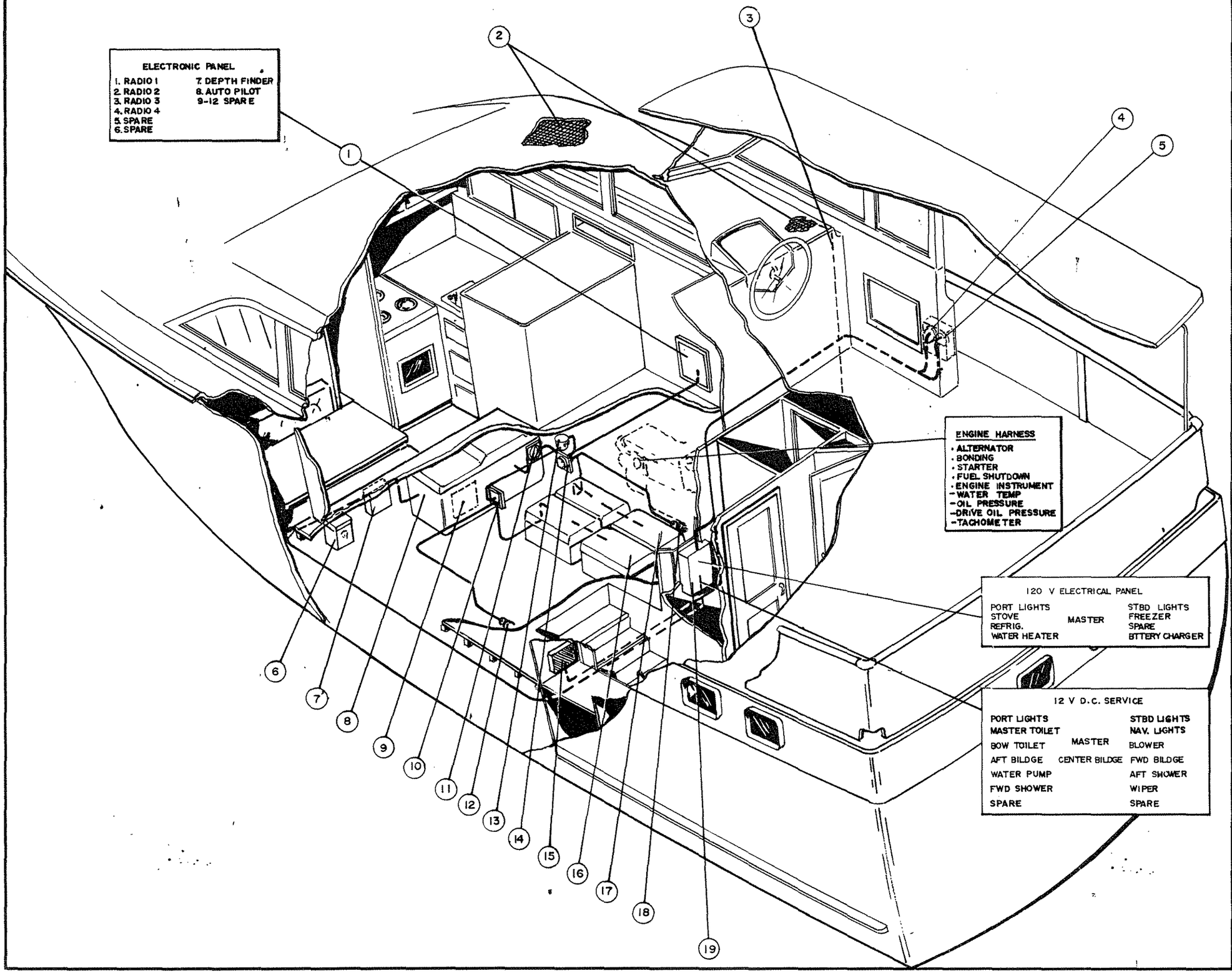
For detailed information on this and additional practices, refer to the current American Boat and Yacht Council's Safety Standards for Small Craft, Institute of Electrical and Electronics Engineers' Recommended Practice for Electric Installation on Shipboard, and Article 310 National Fire Protection Association's National Electric Code.

WARNING

TO AVOID ELECTRICAL SHOCK HAZARD WHEN WORKING ON THE YACHT FROM THE WATER, TURN OFF ALL SOURCES OF ELECTRICAL POWER AND DISCONNECT ALL SHORELINE CONNECTIONS.

WARNING

TO AVOID ELECTRICAL SHOCK HAZARD WHEN THE YACHT IS OUT OF THE WATER AND IT IS NECESSARY TO USE ELECTRICAL POWER ON BOARD, A CONNECTION FROM THE BOAT YARD GROUNDING SYSTEM TO ONE OF THE SHAFT STRUTS MUST BE MADE. A MINIMUM OF NO. 8 AWG WIRE SIZE MUST BE USED FOR THE CONDUCTOR AND SHOULD PREFERABLY BE GREEN IN COLOR FOR EASY IDENTIFICATION.



LEGEND

1. 12V A.C. ELECTRONIC PANEL
2. R.F. SCREEN
3. BONDING STRAP (FOR CONNECTION TO BONDING SYSTEM SEE FIG. 3.9.D) PORT & STBD.
4. OPTIONAL 120V A.C. SHORELINE WITH 30 AMP FUSES FOR AIR CONDITIONING
5. 120V. A.C. SHORELINE WITH 30 AMP FUSES
6. BATTERY CHARGER
7. GENERATOR MASTER BREAKER
8. GENERATOR
9. GENERATOR CONTROL PANEL
10. PORT ENGINE BATTERY DISCONNECT SWITCH
11. GENERATOR DISCONNECT SWITCH
12. PORT ENGINE STARTER
13. BATTERY PARALLEL SOLENOID
14. STBD. ENGINE & ELECTRONIC PANEL BATTERY DISCONNECT SWITCH
15. 120V A.C. AIR CONDITIONING ELECTRIC PANEL (SEE FIG. 3.9.C)
16. PORT BATTERY BANK
17. STBD BATTERY BANK
18. STBD ENGINE STARTER
19. 120V A.C. ELECTRICAL PANEL

IMPORTANT WHENEVER SHORELINE RECEPTACLE(S) IS NOT IN USE, RECEPTACLE COVER(S) SHOULD BE SECURED IN THE CLOSED POSITION.

SHORELINE CONNECTING AND DISCONNECTING PROCEDURE

1. TURN OFF THE BOATS SHORELINE BREAKER BEFORE CONNECTING OR DISCONNECTING SHORELINE
2. CONNECT SHORE POWER CABLE AT THE BOAT FIRST
3. DISCONNECT SHORE POWER CABLE AT SHORE OUTLET FIRST

(STANDARD ARRANGEMENT)

HIN	APPD	DWG NO.
AE-290 -342	JLC	CIB -590

AMF HATTERAS · YACHTS
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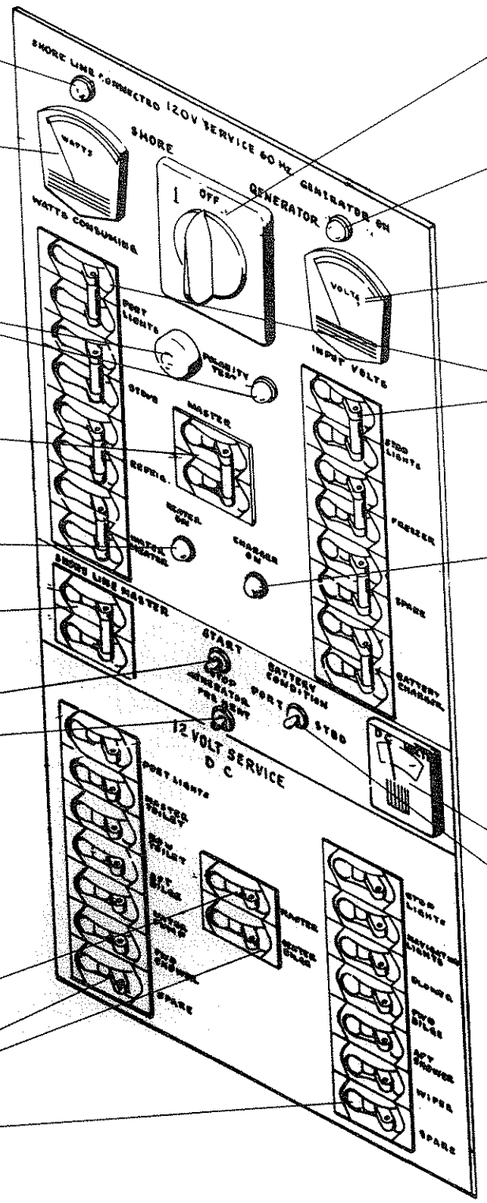
12 V DC AND 120 VAC SYSTEM PICTORIAL

FIGURE 3.9.A, 43 DOUBLE CABIN



INDICATES THAT THE 120V A.C.SHIP'S SERVICE SHORELINE IS CONNECTED

INDICATES THE POWER BEING CONSUMED BY THE 120V A.C. SHIP'S SERVICES SYSTEM.

120V SHIP'S SERVICE SHORELINE POLARITY TEST BUTTON AND INDICATOR LIGHT. AUDIBLE SIGNAL IS LOCATED INSIDE PANEL

120V A.C. SHIP'S SERVICE MASTER BREAKER MUST BE IN THE "ON" POSITION TO SUPPLY POWER TO THE 120V A.C. SHIP'S SERVICE DISTRIBUTION BREAKERS. LIMITS CURRENT TO 50 AMPS (APPROXIMATELY 6000 WATTS AT 120 VOLTS)

INDICATES 120V POWER IS BEING SUPPLIED TO THE WATER HEATER

120V SHIP'S SERVICE SHORELINE MASTER BREAKER LIMITS CURRENT TO 30 AMPS (APPROXIMATELY 3600 WATTS AT 120 VOLTS)

HOLD IN "START" POSITION UNTIL GENERATOR RED LIGHT COMES ON

HOLD IN "STOP" POSITION UNTIL GENERATOR RED LIGHT GOES OFF NEEDED ONLY WHEN GENERATOR IS NOT WARM

120 VOLT SHIP'S SERVICE MASTER BREAKER. MUST BE IN THE "ON" POSITION TO SUPPLY POWER TO THE 12V D.C. SHIP'S SERVICE DISTRIBUTION BREAKERS. (LIMITS CURRENT TO 100 AMPS)

12 VOLT D.C. SHIP'S SERVICE DISTRIBUTION BREAKERS

120V A.C. SHIP'S SERVICE SELECTOR SWITCH (SUPPLIES POWER TO THE 120V SHIP'S SERVICE BREAKERS)

INDICATES THAT THE GENERATOR IS OPERATING

INDICATES VOLTAGE BEING SUPPLIED BY THE 120V SHORELINE OR GENERATOR. SHOULD REGISTER APPROXIMATELY 120 VOLTS.

120V A.C. SHIP'S SERVICE DISTRIBUTION BREAKERS

INDICATES 120V A.C. POWER IS BEING SUPPLIED TO THE BATTERY CHARGER. (DOES NOT INDICATE BATTERY CHARGER IS CHARGING)

BATTERY CONDITION METER

BATTERY CONDITION METER SELECTOR SWITCH

OPERATING INSTRUCTIONS

TO SUPPLY POWER FROM THE 120V A,C. SHIP'S SERVICE SHORELINE

1. PLACE BOTH THE 120V A.C. SHIP'S SERVICE SELECTOR SWITCH AND THE 120V A.C. SHIP'S SERVICE MASTER BREAKER IN THE "OFF" POSITION.
2. TURN OFF THE SHORELINE MASTER BREAKER THEN CONNECT THE SHORELINE TO THE 120V. A.C. SHIP'S SERVICE RECEPTACLE (SEE FIGURE 3.9.A FOR LOCATION AND PROCEDURE)
3. THE SHORELINE LIGHT SHOULD THEN INDICATE THAT POWER IS BEING SUPPLIED TO THE PANEL.
4. PLACE THE SHORELINE MASTER BREAKER IN THE "ON" POSITION.
5. CHECK THE POLARITY BY DEPRESSING THE PUSH BUTTON. IF THE POLARITY IS REVERSED THE INDICATOR LIGHT WILL ILLUMINATE AND THE AUDIBLE SIGNAL WILL SOUND. SHOULD THIS OCCUR THE SHORELINE MUST BE DISCONNECTED AND THE DOCK-SIDE WIRING PROBLEM CORRECTED.
6. PLACE THE 120V A.C. SHIP'S SERVICE SELECTOR SWITCH IN THE "SHORE" POSITION.
7. CHECK THE VOLTAGE READING ON THE VOLTMETER; IT SHOULD READ APPROXIMATELY 120 VOLTS.
8. PLACE THE SHIP'S SERVICE MASTER BREAKER IN THE "ON" POSITION TO SUPPLY POWER TO THE SHIP'S SERVICE DISTRIBUTION BREAKERS.
9. CHECK THE WATTMETER FOR THE POWER BEING CONSUMED; THIS SHOULD NOT EXCEED 3600 WATTS (30 AMPS AT 120V A.C.)

TO SUPPLY POWER FROM THE 120V A.C. GENERATOR

1. PLACE BOTH THE 120V A.C. SHIP'S SERVICE SELECTOR SWITCH AND THE 120V A.C. SHIP'S SERVICE MASTER BREAKER IN THE "OFF" POSITION
   CAUTION: WHEN OPERATING FROM THE SHIP'S SERVICE ELECTRICAL PANEL, BE CERTAIN THAT THE GENERATOR MASTER BREAKER IN THE ENGINE COMPARTMENT IS ON BEFORE STARTING THE GENERATOR
2. START THE GENERATOR
   A. PREHEAT (WHEN NECESSARY) FOR APPROXIMATELY 20 SEC. NOTE: PREHEATING NEEDED ONLY WHEN THE GENERATOR IS NOT WARM
   B. HOLD THE GENERATOR START/STOP SWITCH IN THE "START" POSITION UNTIL THE GENERATOR INDICATOR LIGHT ILLUMINATES.
   C. THE GENERATOR "ON" LIGHT INDICATES WHEN THE GENERATOR IS SUPPLYING POWER TO THE PANEL.
3. PLACE THE 120V A.C. SHIP'S SERVICE SELECTOR SWITCH IN THE "GENERATOR" POSITION.
4. CHECK THE VOLTAGE READING ON THE VOLTMETER: IT SHOULD READ APPROXIMATELY 120 VOLTS.
5. PLACE THE SHIP'S SERVICE MASTER BREAKER IN THE "ON" POSITION TO SUPPLY POWER TO THE SHIP'S SERVICE DISTRIBUTION BREAKERS.
6. CHECK THE WATTMETER FOR THE POWER BEING CONSUMED; THIS SHOULD NOT EXCEED 6000 WATTS (50 AMPS AT 120V A.C)
7. TO STOP THE GENERATOR, PLACE THE SHIP'S SERVICE MASTER BREAKER IN THE "OFF" POSITION AND HOLD THE GENERATOR START/STOP SWITCH IN THE "STOP" POSITION UNTIL THE GENERATOR INDICATOR LIGHT GOES OUT. THE GENERATOR "ON" LIGHT ON THE PANEL WILL NOT INDICATE WHETHER OR NOT THE GENERATOR IS RUNNING UNLESS THIS BREAKER IS ON.

NOTE: WHEN OPERATING BOTH THE 120V A.C. SHIP'S SERVICE SYSTEM AND THE 120V A.C. AIR CONDITIONING SYSTEM (IF INSTALLED) FROM THE GENERATOR, ADD BOTH OF THEIR RESPECTIVE WATTMETER READINGS TO OBTAIN THE TOTAL AMOUNT OF POWER BEING CONSUMED; THIS SHOULD NOT EXCEED 7500 WATTS.

HIN	DRAWN	APPD	DWG NO
AE-290	R MOSER	JLC	CIB-592

AMF

HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

120 V.A.C. SHIPS SERVICE AND 12 V D.C. SERVICE PANELS
FIGURE 3.9.B, 43 DOUBLE CABIN

120V A.C. AIR CONDITIONING SELECTOR SWITCH (SUPPLIES POWER TO THE AIR CONDITIONING CIRCUIT BREAKERS)

INDICATES WHEN GENERATOR IS OPERATING

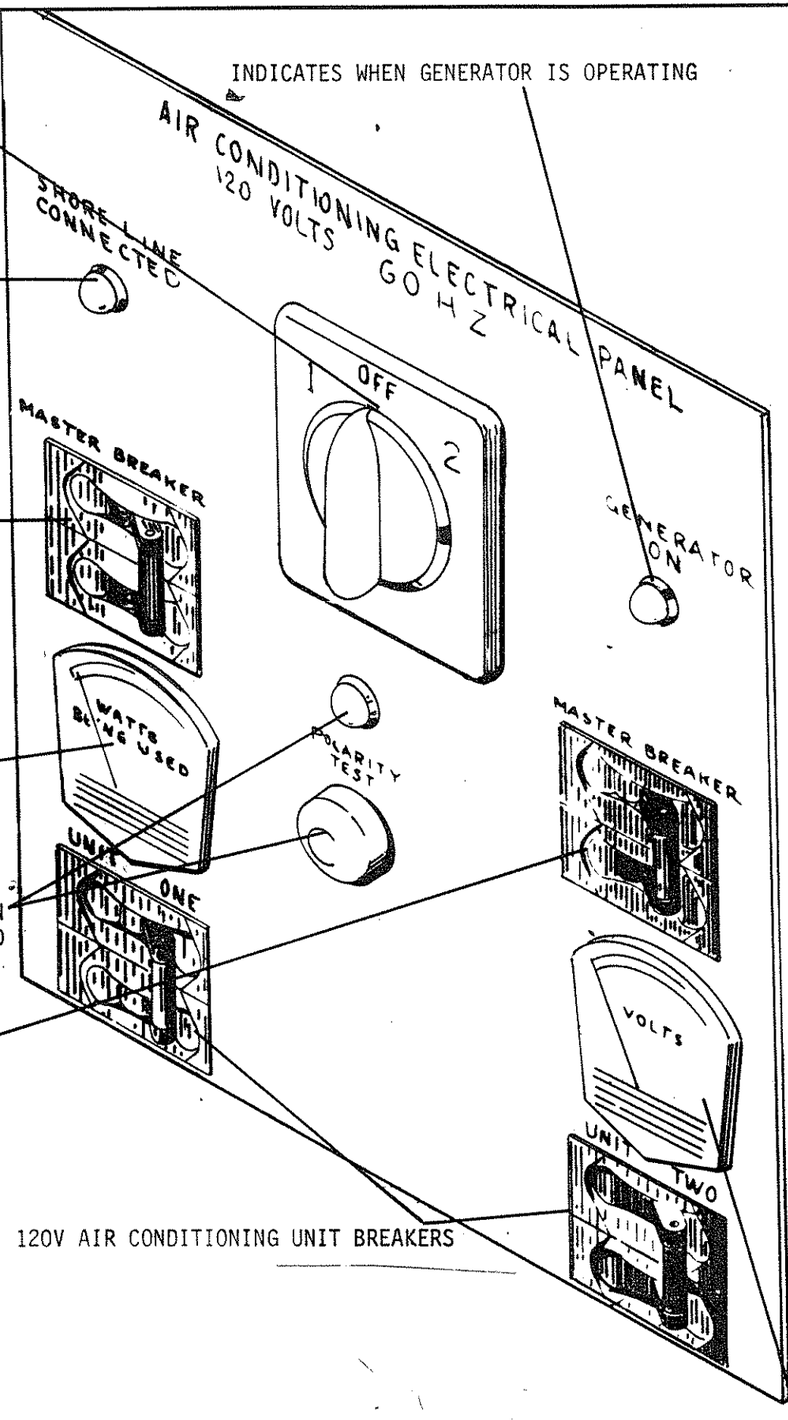
INDICATES THAT THE 120V A.C. AIR CONDITIONING SHORELINE IS CONNECTED.

120V A.C. AIR CONDITIONING SHORELINE MASTER BREAKER. LIMITS CURRENT TO 30 AMPS (APPROXIMATELY 3600 WATTS AT 120 VOLTS)

INDICATES THE POWER BEING CONSUMED BY THE AIR CONDITIONING SYSTEM

120V A.C. AIR CONDITIONING POLARITY TEST BUTTON AND INDICATOR LIGHT. AUDIBLE SIGNAL IS LOCATED INSIDE PANEL.

GENERATOR MASTER BREAKER. LIMITS CURRENT TO 50 AMPS (APPROXIMATELY 6000 WATTS AT 120 VOLTS)



120V AIR CONDITIONING UNIT BREAKERS

INDICATES VOLTAGE BEING SUPPLIED THE 120V AIR CONDITIONING SHORELINE OR GENERATOR. SHOULD REGISTER APPROXIMATELY 120 VOLTS.

OPERATING INSTRUCTIONS

TO SUPPLY POWER FROM THE 120V A.C. AIR CONDITIONING SHORELINE

1. PLACE BOTH THE 120V A.C. AIR CONDITIONING SELECTOR SWITCH AND THE 120V A.C. AIR CONDITIONING UNIT BREAKERS IN THE "OFF" POSITION.
2. TURN OFF THE SHORELINE MASTER BREAKER THEN CONNECT THE SHORELINE TO THE 120V A.C. AIR CONDITIONING RECEPTACLE. (SEE FIG. 3.9.A FOR LOCATION AND PROCEDURE)
3. THE SHORELINE LIGHT SHOULD THEN INDICATE THAT POWER IS BEING SUPPLIED TO THE PANEL.
4. PLACE THE SHORELINE MASTER BREAKER IN THE "ON" POSITION.
5. CHECK THE POLARITY BY DEPRESSING THE PUSH BUTTON. IF THE POLARITY IS REVERSED THE INDICATOR LIGHT WILL ILLUMINATE AND THE AUDIBLE SIGNAL WILL SOUND. SHOULD THIS OCCUR THE SHORELINE MUST BE DISCONNECTED AND THE DOCKSIDE WIRING PROBLEM CORRECTED.
6. PLACE THE 120V A.C. AIR CONDITIONING SELECTOR SWITCH IN THE "SHORE" POSITION.
7. CHECK THE VOLTAGE READING ON THE VOLTMETER; IT SHOULD READ APPROXIMATELY 120 VOLTS.
8. PLACE THE 120V A.C. AIR CONDITIONING UNIT BREAKERS IN THE "ON" POSITION TO SUPPLY POWER TO THE AIR CONDITIONING EQUIPMENT.
9. CHECK THE WATTMETER FOR THE POWER BEING CONSUMED; THIS SHOULD NOT EXCEED 3600 WATTS.(30 AMPS AT 120V A.C.)

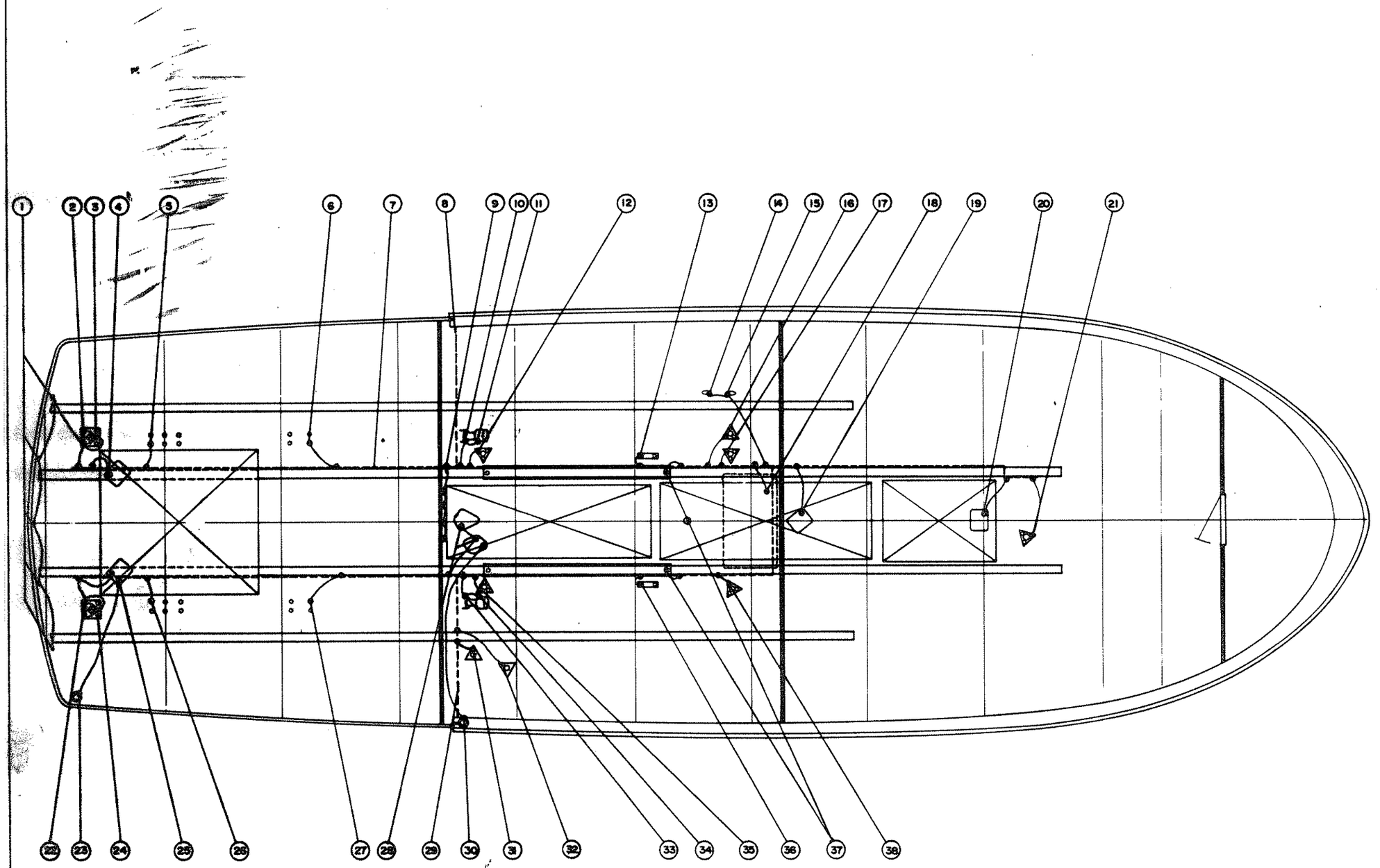
TO SUPPLY POWER FROM THE 120V A.C. GENERATOR

1. PLACE BOTH THE 120V A.C. AIR CONDITIONING SELECTOR SWITCH AND THE 120V A.C. AIR CONDITIONING UNIT BREAKERS IN THE "OFF" POSITION.
2. TURN OFF THE GENERATOR MASTER BREAKER ON THE AIR CONDITIONING PANEL THEN START THE GENERATOR FROM THE 120V A.C. SHIP'S SERVICE PANEL. (SEE FIG.3.9.B. FOR INSTRUCTION)
   A. THE GENERATOR "ON" LIGHT INDICATES WHEN THE GENERATOR IS SUPPLYING POWER TO THE PANEL.
3. PLACE THE GENERATOR MASTER BREAKER ON THE AIR CONDITIONING PANEL IN THE "ON" POSITION AND PLACE THE 120V A.C. AIR CONDITIONING SELECTOR SWITCH IN THE "GENERATOR" POSITION.
4. CHECK THE VOLTAGE READING ON THE VOLTMETER; IT SHOULD READ APPROXIMATELY 120 VOLTS.
5. PLACE THE 120V A.C. AIR CONDITIONING UNIT BREAKERS IN THE "ON" POSITION TO SUPPLY POWER TO THE AIR CONDITIONING EQUIPMENT.
6. CHECK THE WATTMETER FOR THE POWER BEING CONSUMED; THIS SHOULD NOT EXCEED 6000 WATTS. (50 AMPS AT 120V A.C.)

NOTE WHEN OPERATING BOTH THE 120V A.C. SHIP'S SERVICE SYSTEM AND THE 120V A.C. AIR CONDITIONING SYSTEM (IF INSTALLED) FROM THE GENERATOR, ADD BOTH OF THEIR RESPECTIVE WATTMETER READINGS TO OBTAIN THE TOTAL AMOUNT OF POWER BEING CONSUMED; THIS SHOULD NOT EXCEED 7500 WATTS.

HIN AE-290	APPD JLL	DWG NO. CIB-593
AMF	HATTERAS YACHTS HIGH POINT NEW BERN NORTH CAROLINA	

AIR CONDITIONING ELECTRICAL PANEL
FIGURE 3.9.C, 43 DOUBLE CABIN



NOTES

CAUTION TO ENSURE CONTINUED SYSTEM INTEGRITY IT IS IMPERATIVE THAT NO PORTION OF THE BONDING SYSTEM BE UTILIZED AS A NORMAL CURRENT CARRYING CONDUCTOR.

LEGEND

1. SWIM PLATFORM
2. PORT RUDDER STUFFING BOX
3. PORT RUDDER ARM
4. AFT FUEL TANK PLATE
5. PORT MAIN STRUT
6. PORT INTERMEDIATE STRUT
7. BONDING STRAP
8. UP TO R. F. SCREEN
9. FUEL MANIFOLD
10. PORT RECESSED SHAFT LOG
11. PORT SHAFT LOG STUFFING BOX
12. PORT ENGINE INTAKE
13. PORT BONDING SYSTEM
14. GENERATOR EXHAUST
15. A/C CONDENSING UNITS DISCHARGE
16. A/C PUMP INTAKE
17. FWD. HEAD TOILET INTAKE
18. GENERATOR
19. WATER TANK PLATE
20. HOLDING TANK PLATE
21. FWD HEAD TOILET DISCHARGE
22. STBD RUDDER STUFFING BOX
23. AFT FUEL TANK DECK FILL PLATE
24. STBD RUDDER ARM
25. AFT FUEL TANK PLATE
26. STBD MAIN STRUT
27. STBD INTERMEDIATE STRUT
28. KEEL FUEL TANK PLATES
29. UP TO R.F. SCREEN
30. KEEL FUEL TANK DECK FILL PLATE
31. OWNER'S HEAD TOILET DISCHARGE
32. OWNER'S HEAD TOILET INTAKE
33. STBD. RECESSED SHAFT LOG
34. STBD SHAFT LOG STUFFING BOX
35. STBD ENGINE INTAKE
36. STBD BONDING PLATE
37. ENGINE BEDS
38. GENERATOR INTAKE

310

MIN	DRAWN	APPD	DWG NO.
AE - 290	CRM	JLL	CIB - 594

AMF HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

BONDING SYSTEM

FIGURE 3.9.D, 43 DOUBLE CABIN

SYSTEMS MONITOR (3 POINT)

The Systems Monitor consists of a display panel, remote display panel (if installed) and sensor switches. The display panel(s) has an audible signal, test button and display lights for port engine high water temperature/ oil pressure starboard engine high water temperature/oil pressure and engine room fire. The fuses for the system are on the safety monitor display panel.

The engine functions (temp/oil) are activated when their respective key switches are turned "ON". These indicate high engine water temperature or low engine oil pressure. To determine which one has activated the monitor, check the appropriate engine gauges.

The engine room fire point is "ON" at all times using power only when activated. This indicates the discharge of the on board fire extinguisher system.

When an abnormal condition is indicated, the audible signal will sound and the appropriate display light will illuminate. The sensor switch contacts are of the "normally open" type that "close" when activated.

The test button is used for testing the lights and audible signal portion of the display panel(s) only. The individual point circuit wiring is tested as follows:

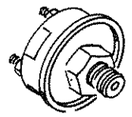
1. To test the engine oil pressure point, turn the appropriate key switch "ON". This function is tested normally during engine starting since there is no oil pressure at this time.
2. To test the engines temperature point, short out the terminals on the water temperature sensor switch on the engines.

3. To test the engine room fire point, raise the fire extinguisher system discharge pressure switch reset pin.

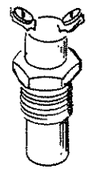
NOTE

It is important that this system be tested regularly and that any malfunction be repaired without delay.

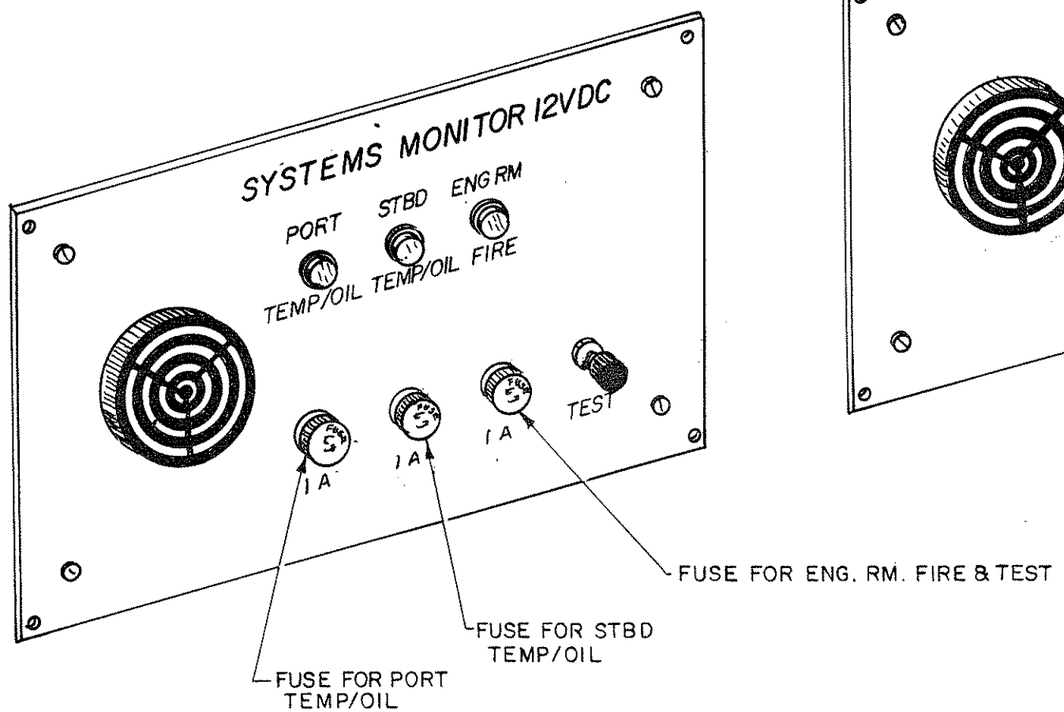
For operating instructions, see Fig. 3.10



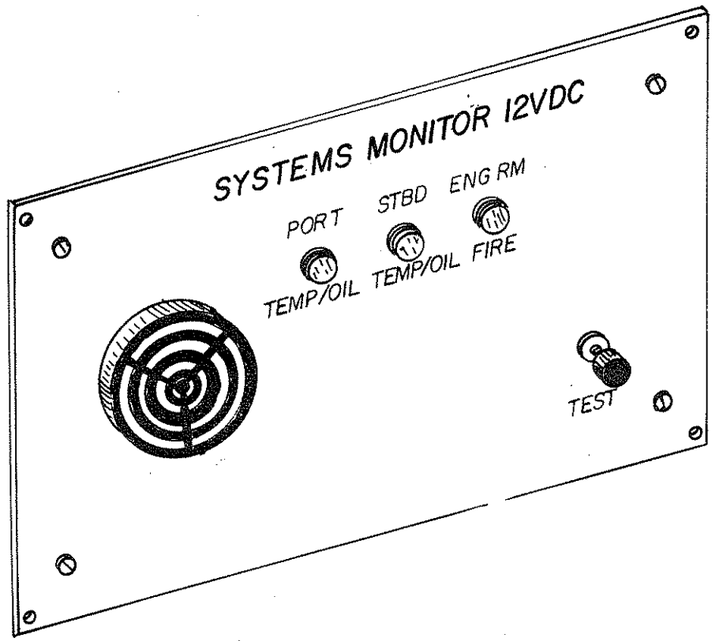
ENGINE OIL PRESSURE SENDER



ENGINE WATER TEMPERATURE SENDER



MAIN DISPLAY PANEL



REMOTE DISPLAY PANEL

OPERATION

1. IN AN ABNORMAL CONDITION, THE APPROPRIATE LIGHT WILL ILLUMINATE AND THE AUDIBLE SIGNAL WILL SOUND.
2. TO DISABLE THE PORT OR STARBOARD TEMP/OIL POINT, TURN THE APPROPRIATE KEY SWITCH OFF OR REMOVE THE APPROPRIATE FUSE.
3. TO TURN OFF THE ENGINE ROOM FIRE POINT, THE FIRE EXTINGUISHER SYSTEM DISCHARGE PRESSURE SWITCH MUST BE RESET BY DEPRESSING THE PIN ON THE SWITCH HOUSING. TO DISABLE THIS SECTION REMOVE THE APPROPRIATE FUSE.

NOTE

ANY PROBLEM ACTIVATING THE MONITOR SHOULD BE REPAIRED WITHOUT DELAY.

4. TO TEST THE DISPLAY LIGHTS AND AUDIBLE SIGNAL ONLY, DEPRESS THE TEST BUTTON.
5. TO TEST THE ENGINE OIL PRESSURE POINT, TURN THE APPROPRIATE KEY SWITCH "ON." THIS FUNCTION IS TESTED NORMALLY DURING ENGINE STARTING SINCE THERE IS NO OIL PRESSURE AT THIS TIME.
6. TO TEST THE ENGINE TEMPERATURE POINT WIRING, SHORT OUT THE TERMINALS ON THE SENSOR SWITCH ON THE ENGINE.
7. TO TEST THE ENGINE ROOM FIRE POINT, RAISE THE FIRE EXTINGUISHER SYSTEM DISCHARGE PRESSURE SWITCH RESET PIN.

HIN	APPD	DWG NO.
AE-290	34	C1B-488

AMF HATTERAS YACHTS HIGH POINT NEW BERN NORTH CAROLINA

SYSTEMS MONITOR 3 POINT

FIGURE 3.10 43 DOUBLE CABIN

AIR CONDITIONING AND HEATING (IF INSTALLED)

(See Fig. 3.11)

The air conditioning and heating system consists of condensing units, seawater pump, through hull fittings, cooling units, and controls.

CONDENSING UNIT

The condensing unit consists of a refrigerant compressor, refrigerant receiver, accumulator, refrigerant-to-water heat exchanger, associated electrical components, and system service valves. This unit is located in the engine room.

SEAWATER PUMP

The seawater pump receives seawater via a through hull fitting and sea valve which must be open. It circulates the raw seawater through the refrigerant-to-water heat exchanger. This water is then discharged overboard.

COOLING UNIT

The cooling is the refrigerant-to-air heat exchanger which is located in the area to be cooled or heated. The air is forced through the tube-fin assembly by a fan (integral part of the unit) to cool or heat the area according to mode of operation.

CONTROLS

The controls are located near their respective units. There are three basic controls (off-start-run switch, fan speed control switch, and thermostat).

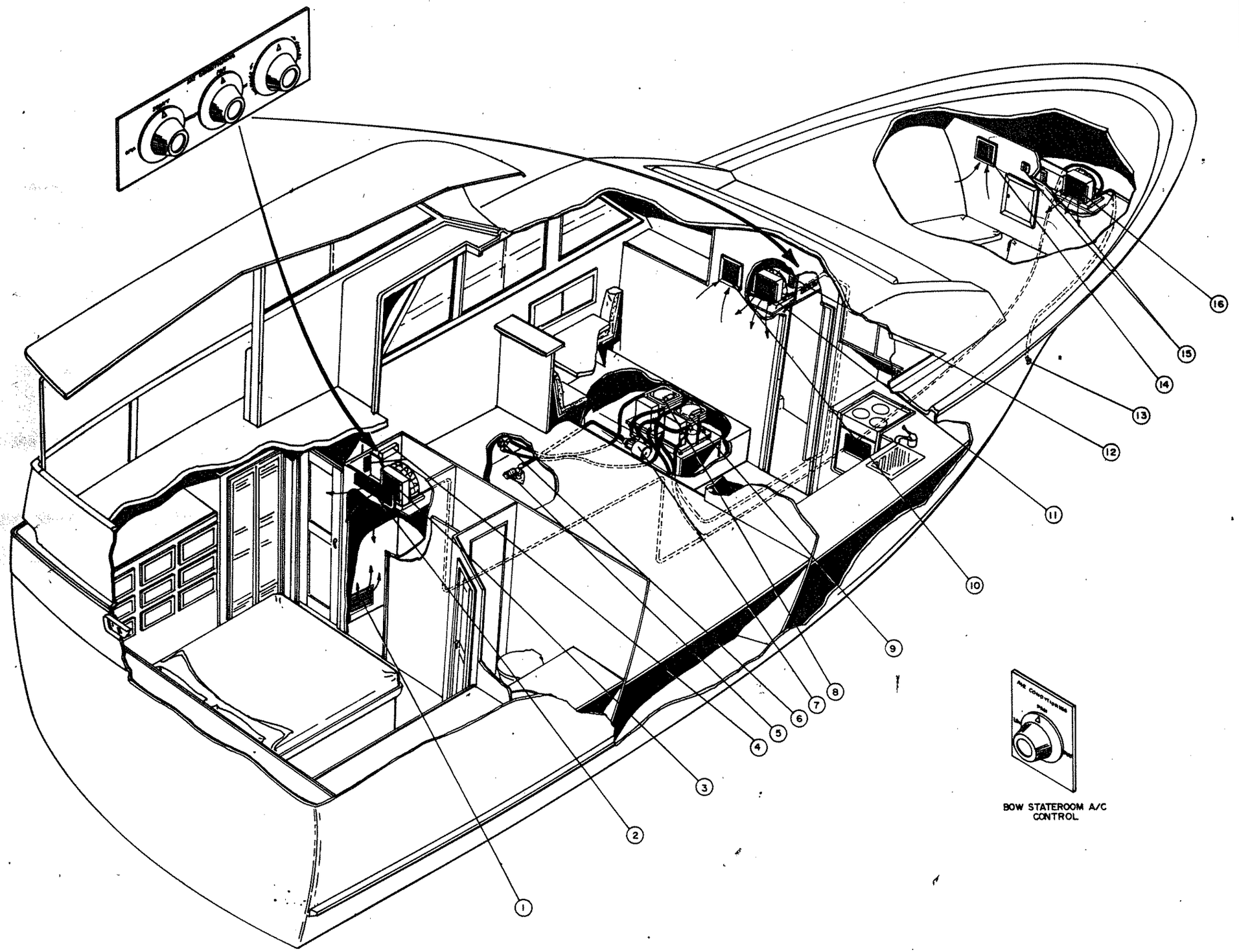
OPERATION OF THE SYSTEM

1. Seawater valve must be open.
2. Circuit breakers must be on.
3. Turn the thermostat knob clockwise for cooling and counterclockwise for heating.
4. Turn the main control knob to "START". This will energize the seawater pump and cooling unit fans. Check the overboard discharge to make sure that water is flowing.
5. Turn the control knob to "RUN" or "COOL" and the compressor will start cooling or heating according to the thermostat setting.
6. To set the thermostat, allow the unit to operate until the area is cooled or heated to the desired temperature. Then turn the thermostat knob slowly toward its center position until it "clicks once". The thermostat is now set to maintain a constant temperature.
7. Set the fan speed as desired. If operating on the heat cycle, use the low fan speed for 5 to 15 minutes until the unit begins to heat well. Then set to medium fan speed. When operating the cooling mode, use any fan speed desired keeping in mind that the lower the fan speed, the less effective the system will be.
8. To turn the system off, return the main control knob to the "OFF" position.

NOTE

To operate the fan only, turn the control knob to "START" and set the desired fan speed.

For more information, refer to the Manufacturer's Manual.



BOW STATEROOM A/C CONTROL

LEGEND

1. OWNER'S STATEROOM RETURN AIR GRILL
2. OWNER'S STATEROOM SUPPLY GRILL
3. OWNER'S STATEROOM FAN UNIT
4. OWNER'S STATEROOM A/C CONTROL AND TERMINAL BLOCK
5. SEA VALVE AND STRAINER FOR A/C CONDENSING UNIT
6. A/C CONDENSING UNITS SEA WATER DISCHARGE
7. PUMP FOR A/C CONDENSING UNITS
8. SALON CONDENSING UNIT
9. OWNER'S AND BOW STATEROOM CONDENSING UNIT
10. SALON RETURN AIR GRILL
11. SALON FAN UNIT
12. SALON A/C CONTROL AND TERMINAL BLOCK
13. BOW STATEROOM FAN UNIT CONDENSATE DRAIN
14. BOW STATEROOM RETURN AIR GRILL
15. BOW STATEROOM A/C CONTROL AND TERMINAL BLOCK
16. BOW STATEROOM FAN UNIT

(STANDARD ARRANGEMENT)

HIN	DRAWN	APPD	DWG NO.
AE-290-334	R MOSER	JLC	C18-595

AMF HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

AIR CONDITIONING SYSTEM

FIGURE 3.11, 43 DOUBLE CABIN

STEREO SYSTEM

(See Fig. 3.12)

This yacht is equipped with a stereo system. The main system components are an AM/FM receiver, tape deck, speakers, and volume control.

AM/FM RECEIVER

The AM/FM receiver is the main control center. The operation and functions are covered in the Manufacturer's Manual. The receiver is normally connected to an antenna installed as shown on Fig. 3.12.

TAPE DECK

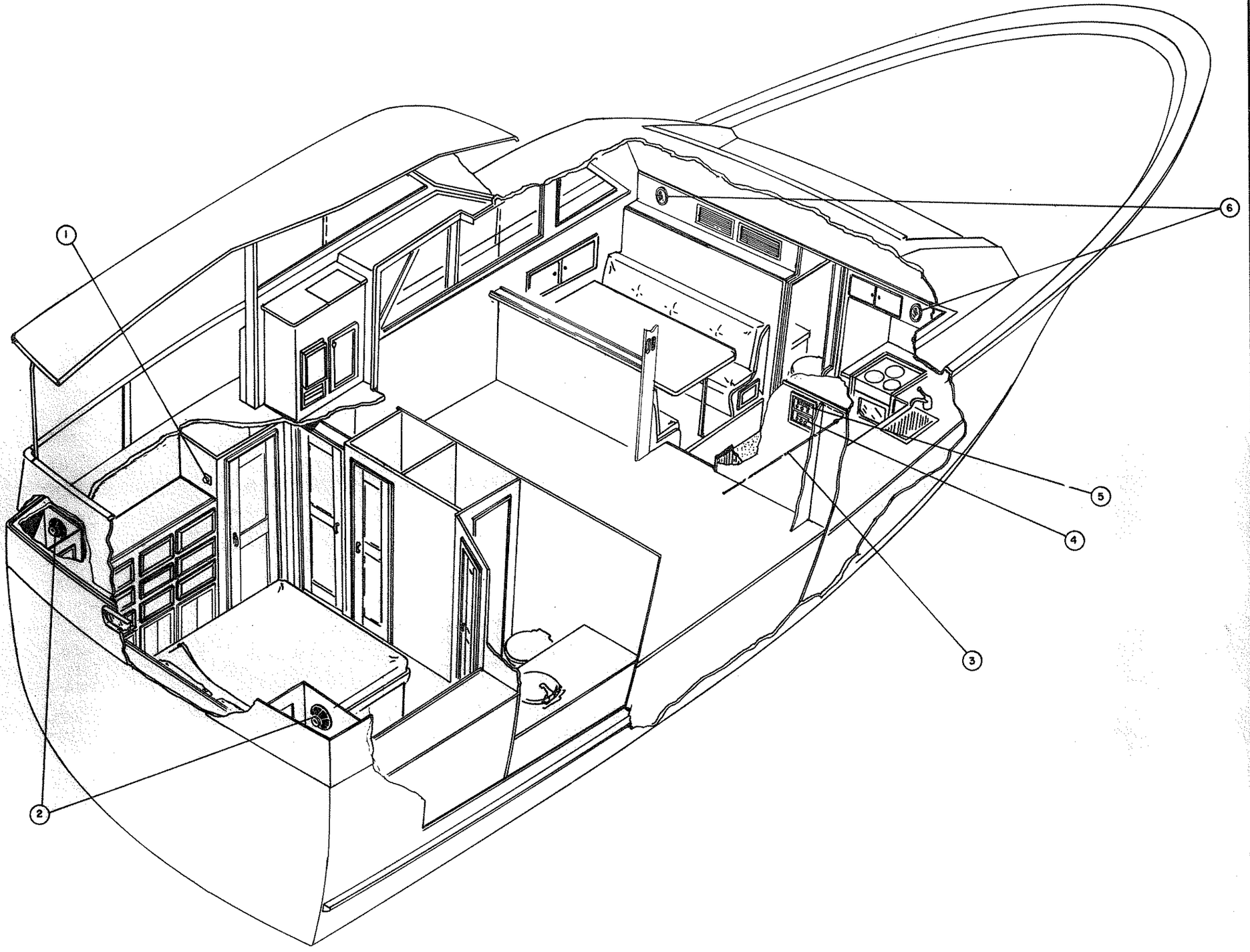
The tape deck is played in conjunction with the amplifier and speakers. The operation and functions are covered in the Manufacturer's Manual.

SPEAKERS

The pair of speakers is installed in enclosures lined with acoustical material in the areas shown on Fig. 3.12. The volume of individual pairs of speakers (other than salon) can be regulated by a control in their respective area. The overall system volume should be controlled at the AM/FM receiver and set as low as possible. The individual area speaker controls should then be set as high as possible for comfortable listening.

CAUTION

OPERATION OF THE RECEIVER VOLUME CONTROL AT THE LOWEST POSSIBLE LEVEL AND INDIVIDUAL AREA CONTROLS AT THE HIGHEST LEVEL IS IMPERATIVE. TO TURN THE RECEIVER VOLUME TO A HIGH LEVEL AND THEN REDUCE THE EXCESSIVE VOLUME BY USING THE INDIVIDUAL AREA CONTROLS, WILL OVERDRIVE THE RECEIVER AMPLIFIER, CAUSING DISTORTION AND SHORTENING ITS LIFE.



CAUTION OPERATION OF THE RECEIVER VOLUME CONTROL AT THE LOWEST POSSIBLE LEVEL AND INDIVIDUAL AREA CONTROLS AT THE HIGHEST LEVEL IS IMPERATIVE TO TURN THE RECEIVER VOLUME TO A HIGH LEVEL AND THEN REDUCE THE EXCESSIVE VOLUME BY USING THE INDIVIDUAL AREA CONTROLS WILL OVERDRIVE THE RECEIVER AMPLIFIER CAUSING DISTORTION AND SHORTENING ITS LIFE.

LEGEND

1. OWNER'S STATEROOM VOLUME CONTROL
2. OWNER'S STATEROOM SPEAKERS
3. ANTENNA
4. TAPE DECK
5. AM-FM RECEIVER
6. SALON SPEAKER

(STANDARD ARRANGEMENT)

HIN	DRAWN	APPD	DWG NO.
AE-290	V SPERA	J.L.	CIB-623

AMF

HATTERAS YACHTS
HIGH POINT NEW BERN
NORTH CAROLINA

STEREO SYSTEM

FIGURE 3.12, 43 DOUBLE CABIN

MISCELLANEOUS SYSTEMS

TELEVISION ANTENNA SYSTEM (IF INSTALLED)

The television antenna system consists of antenna, rotor, and amplifier mounted at the highest practical location. Additionally, there is a power supply, television jack, and control for use at the television set. A coupler-amplifier is used when more than one television jack is installed and is also used to connect the antenna to the FM stereo receiver. For more information see the Manufacturer's Manual and drawing in Appendix.

Section 4

Operating Instructions

ENGINE OPERATING INSTRUCTIONS

(See Fig. 4.1)

ENGINE STARTING PROCEDURE

1. Complete Pre-Start Check List.
2. Turn on the engine compartment blower switch (26). Operate blower at least two minutes prior to and during engine starting operations.
3. Move the throttle levers (9) to the idle position (full aft).
4. Position the clutch levers (18) in neutral (center detent).
5. Turn the key switch (1) or (27) to the "ON" position.
6. Depress the start button (3) or (25) and the shutdown button (2) or (28) simultaneously to purge excess fuel and/or water from the engine.
7. Release the shutdown button after several revolutions.
8. Continue to depress the start button until the engine starts, then release.

CAUTION

TO PREVENT THE STARTER FROM OVERHEATING, DO NOT OPERATE MORE THAN 30 SECONDS WITHOUT ALLOWING ONE-MINUTE INTERVALS BETWEEN STARTING ATTEMPTS.

9. If the port or starboard battery bank is excessively discharged, hold the battery's parallel selector switch (32) to the opposite bank and depress the starter button. Release both switches as soon as the engine starts.
10. Allow a 5 minute warm-up period.
11. Check all instruments (tachometer (8) and (21), engine water temperature (11) and (16), engine oil pressure (12) and (19), battery voltage (10) and (15), and drive oil pressure (13) and (17).
12. Complete After Starting Check List.

MARINE GEAR OPERATION

NOTE

Allow a 5 minute engine warm-up before engaging marine gear.

1. To engage the forward drive, position the clutch levers (18) in the forward detent.
2. To engage the reverse drive, position the clutch levers (18) in the aft detent.

NOTE

Gear selection should be made with the throttle levers in the idle position (full aft).

THROTTLE OPERATION

1. To increase speed, move the throttle levers (9) forward. To decrease speed, move the throttle levers (9) aft.
2. To prevent the possibility of water being forced back into the engines while "drift fishing", lying to at sea, trolling, or similar circumstances, maintain a minimum idle of 800 RPM.

NOTE

Turn on the engine room blowers while operating below cruising speed.

ENGINE SHUTDOWN PROCEDURE

1. Return the throttle levers to the idle position.
2. Position the clutch levers in the neutral position.
3. Complete Before Shutdown Check List.
4. Allow the engines to idle for a few minutes, then depress the shutdown button (2) and (28) . This activates a solenoid connected to the injector racks placing them in a no-fuel position, thus stopping the engine.

NOTE

Should the engine malfunction (or for emergency shutdown), pull the emergency shutdown T-handle (36) or (37). This is connected to the air shutoff valve latch assembly and will shutoff the air supply to the engine preventing further combustion of fuel. Before the engine can be restarted, the T-handle must be pushed back into place and the air shutdown valve latch manually reset. See Fig. 4.1. Do not start the engine until the malfunction has been corrected.

5. Turn off the key switch after engine shutdown is completed.
6. Complete After Shutdown Check List.

CAUTION

THE EMERGENCY SHUTDOWNS ARE FOR EMERGENCY ONLY! USE OF SHUTDOWNS AT HIGH ENGINE RPM MAY DAMAGE SEALS WITHIN THE ENGINE.

CONSOLE OPERATED EQUIPMENT INSTRUCTIONS

(See Fig. 4.1)

BILGE PUMPS

1. For normal operation, place the bilge pump switches in the automatic position (The light indicates operation.)
2. For direct operation hold the switch in the manual position.

NOTE

See Fig. 4.1, for location and quantity of bilge pump switches

NAVIGATION/ANCHOR LIGHTS

1. To turn on the navigation lights (port and starboard side lights, 20 point light, and 12 point stern light), pull the navigation/anchor switch (6) to the first position.
2. To turn on the anchor light only, pull the navigation/anchor switch (6) to the second position.

INSTRUMENT LIGHTS

1. To turn on the instrument lights, pull the instrument light switch (4).
2. To turn on the compass light, pull the compass light switch (5).

COMPASS

Install all equipment on the yacht, then have the compass(es) (14) compensated by competent service personnel.

NOTE

Keep all metallic objects away from the compass.

WINDSHIELD WIPERS (If Installed)

For low speed operation, turn the windshield wiper control switch(es) (33), (34), and (35) clockwise to the first position. For high speed operation, turn the windshield wiper control switch(es) clockwise to the second

position. When the windshield wiper control switch(es) is returned to the off position, the wiper will "self park".

HORN

To blow horn depress horn button (23). The air horn compressor is electrically driven and is located in close proximity to the horn.

SYSTEM MONITOR (3 POINT)

The systems monitor (7) has no off-on switch or "power on" indicating light. The purpose of this monitor is to provide a highly noticeable warning system indicating the discharge of the onboard fire extinguisher system or the loss of A.C. power. For additional information, see the Systems section.

HELM

The helm (22) is a hydraulic pump driven by the wheel. For additional information, refer to the Steering System section.

TRIM TAB (IF INSTALLED)

The trim tabs are located on the transom and used to change the running angle of the yacht. The trib tab switch (20) controls either or both port and starboard trim tabs.

WARNING

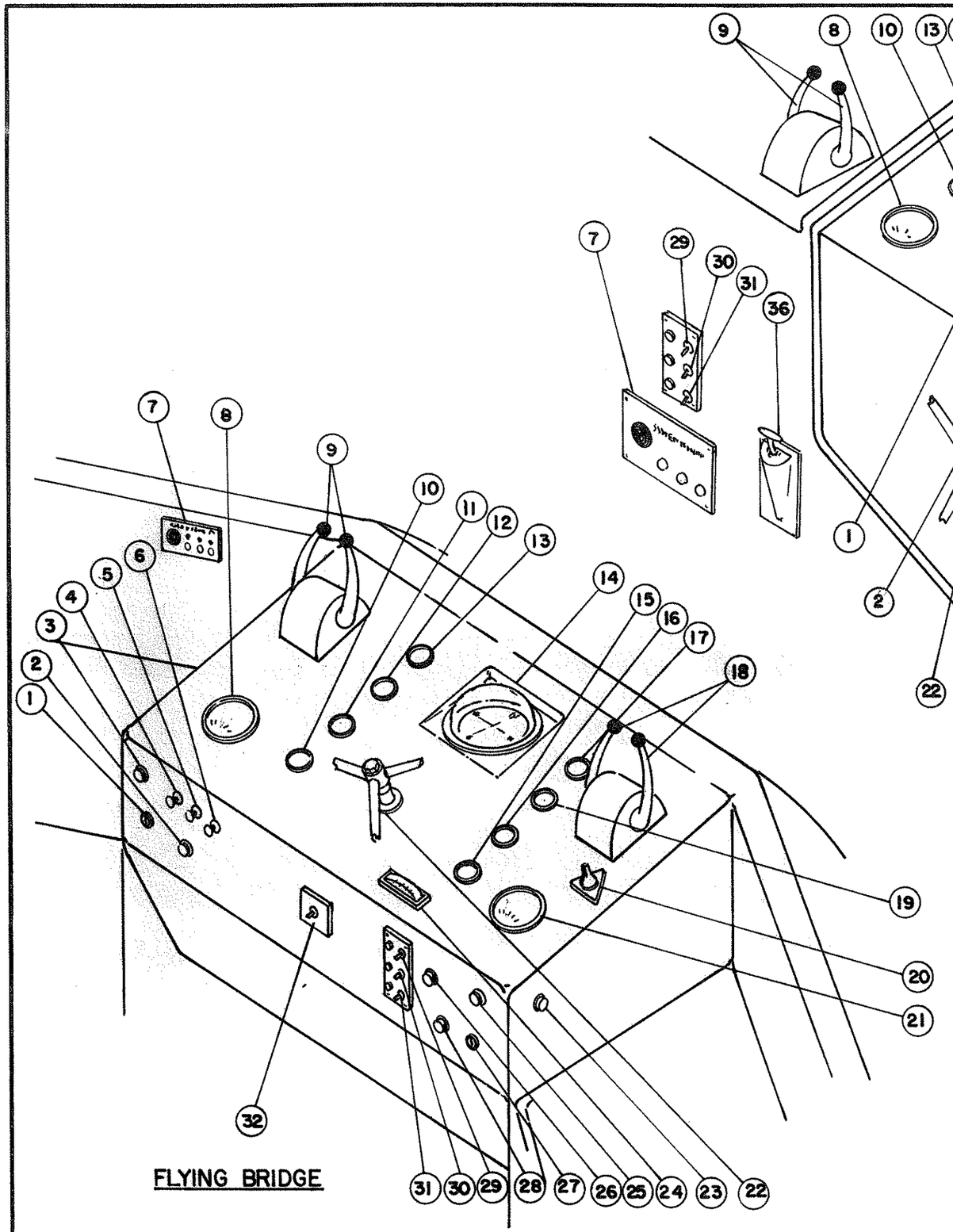
WHEN IN FOLLOWING SEAS, SET TRIM TABS FULLY UP

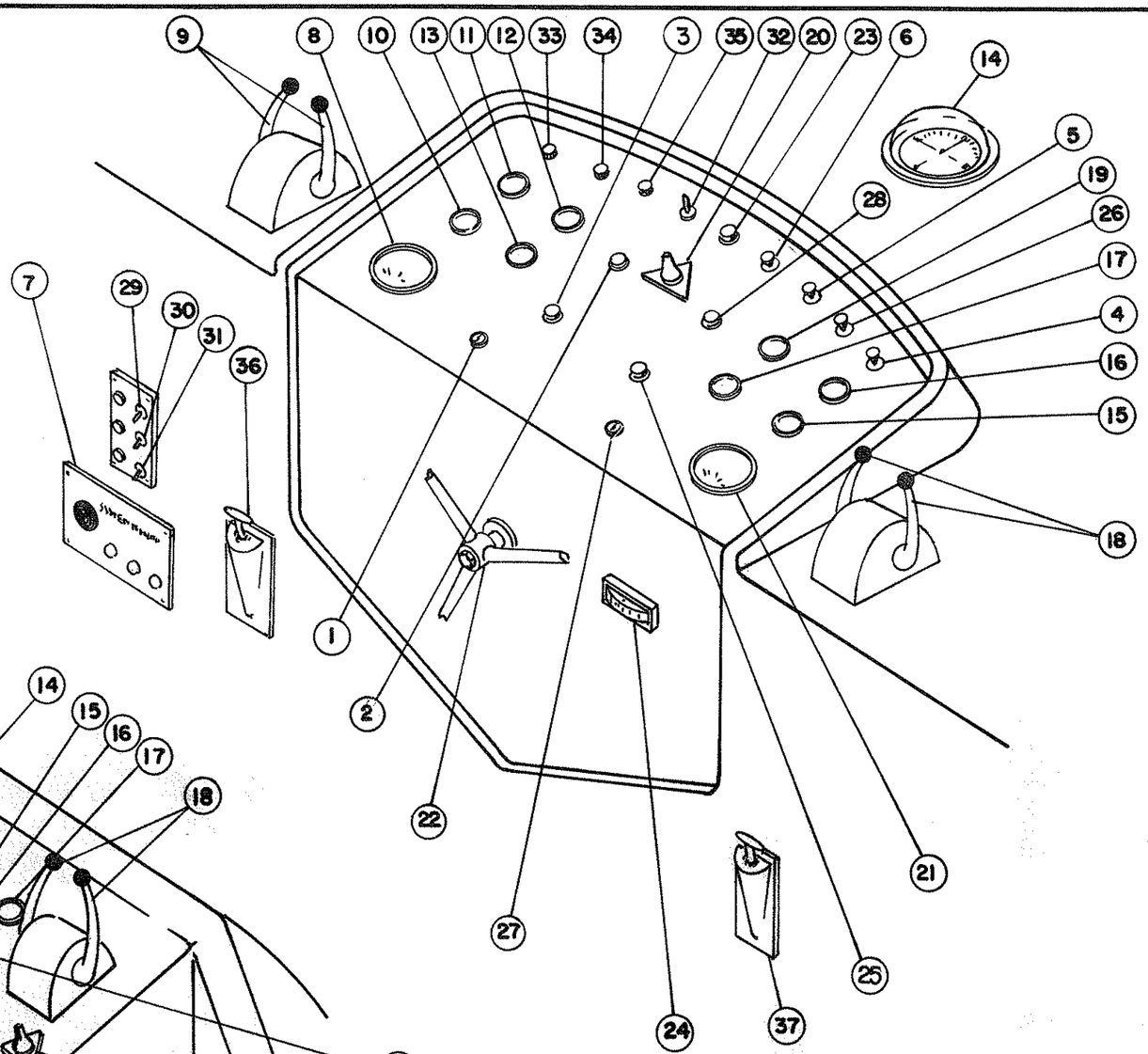
TO AVOID POSSIBLE LOSS OF CONTROL OR BROACHING

For additional information, refer to the Trim Tab Manufacturer's Manual.

RUDDER ANGLE INDICATOR (IF INSTALLED)

The rudder angle indicator (24) is electrically operated by a sender on the rudder assembly that reads the rudder position.





LEGEND

1. PORT ENGINE KEY SWITCH
2. PORT ENGINE SHUTDOWN BUTTON
3. PORT ENGINE START BUTTON
4. INSTRUMENT LIGHTS SWITCH
5. COMPASS LIGHT SWITCH
6. NAVIGATION/ANCHOR LIGHTS SWITCH
7. SYSTEMS MONITOR
8. PORT ENGINE TACHOMETER
9. THROTTLE CONTROLS
10. PORT BATTERY VOLTMETER
11. PORT ENGINE WATER TEMPERATURE GAUGE
12. PORT ENGINE OIL PRESSURE
13. PORT DRIVE OIL GUAGE
14. COMPASS
15. STBD. BATTERY VOLTMETER
16. STBD. ENGINE WATER TEMPERATURE GAUGE
17. STBD. DRIVE OIL GAUGE
18. CLUTCH CONTROLS
19. STBD ENGINE OIL PRESSURE GAUGE
20. TRIM TAB SWITCH
21. STBD. ENGINE TACHOMETER
22. HELM
23. HORN
24. RUDDER ANGLE INDICATOR
25. STBD. ENGINE START BUTTON
26. ENGINE COMPARTMENT BLOWERS SWITCH
27. STBD. ENGINE KEY SWITCH
28. STBD. ENGINE SHUTDOWN BUTTON
29. FWD. BILGE PUMP SWITCH & LIGHT
30. CENTER BILGE PUMP SWITCH & LIGHT
31. AFT BILGE PUMP SWITCH & LIGHT
32. BATTERY PARALLEL SWITCH
33. PORT WINDSHIELD WIPER SWITCH
34. CENTER WINDSHIELD WIPER SWITCH
35. STBD. WINDSHIELD WIPER SWITCH
36. PORT ENGINE T-HANDLE SHUTDOWN
37. STBD. ENGINE T-HANDLE SHUTDOWN

NOTE: OPTIONAL EQUIPMENT, LOCATION AND APPEARANCE MAY VARY.

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AE-290	JLC	CIB-596

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CONTROLS

FIGURE 4.1, 43 DOUBLE CABIN

DUNCAN-PARNELL, INC., CHARLOTTE NTS

Section 5

Check List

PRE-START CHECK LIST

1. ( ) Engine and generator coolant levels
2. ( ) Engine and generator oil levels
3. ( ) Manual air shutdown valves open; to reset, see Fig. 4.1
4. ( ) Throttle and clutch control installation at engine for tightness and operation
5. ( ) Engine mounting bolts tight, see Fig. 3.1 for torques
6. ( ) Drain water from fuel filters, see Fig. 3.3
7. ( ) Engine, generator and air conditioner strainers free of trash and sea valves open
8. ( ) Engines and generator(s) to be checked for fuel, water or oil leaks
9. ( ) Shaft log stuffing boxes for excessive leakage
10. ( ) Steering system fluid level, see Fig. 3.2
11. ( ) Battery disconnect switches on
12. ( ) Rudder stuffing boxes for leakage
13. ( ) Steering linkage and rudder stock components
14. ( ) Fuel level in tanks
15. ( ) Fuel manifold, select tank(s)

CAUTION

ALWAYS RETURN FUEL TO SUPPLYING TANK TO PREVENT OVERFLOWING OF ANY ONE TANK.

16. ( ) Manual bilge pump(s) operation
17. ( ) Bilge water level - all compartments, see Fig. 7.1
18. ( ) Engine room and bilge to be checked for fumes

AFTER STARTING ENGINE CHECK LIST

( ) 1. Engine and generator exhaust outlets to be checked for water discharge

( ) 2. Engine room visual inspection for fuel, water, oil, or exhaust leaks.

( ) 3. Navigation and anchor lights

( ) 4. Horn, windshield wipers, trim tabs (if installed), and stabilizers (if installed)

( ) 5. Steering -- turn the wheel from hard over port to hard over starboard and count the revolutions of the wheel. The number of revolutions for your steering in shown on Fig. 3.2.

( ) 6. Systems Monitor system test, see Fig. 3.10

WARNING

TO AVOID POSSIBLE HEARING INJURY, WEAR EAR PROTECTION WHEN WORKING IN THE ENGINE ROOM FOR EXTENDED PERIODS OF TIME WHILE ENGINES ARE RUNNING.

SHUTDOWN CHECK LIST

BEFORE

( ) 1. Marine gear oil level

AFTER

( ) 1. Engine and generator to be checked for fuel, water, or oil leaks

( ) 2. Shaft log stuffing boxes excessive leakage

( ) 3. Rudder stuffing boxes excessive leakage

( ) 4. Refueling -- see Fuel section of this manual

CAUTION

TO AVOID POSSIBLE FIRE HAZARD, TURN OFF ALL ELECTRICAL EQUIPMENT WHILE REFUELING.

Section 6

Maintenance

INTRODUCTION

This section provides guidelines and instructions to be used in addition to the Pre-Start, After Starting Engine, and Shutdown check lists. These guidelines are presented in a form that can be used as a check list if desired. The time intervals have been determined by "average" conditions. However, the more frequently the yacht is being used, the more often these items should be performed.

As mentioned above, these are only guidelines and they are recommended to be used in conjunction with the periodic maintenance requirements for the engines, generator(s), and various other pieces of equipment installed on the yacht. These requirements are found in their respective Manufacturer's Manuals. Most of these manuals also have a troubleshooting section that may be helpful in making repairs. Read these Manufacturer's Manuals carefully to become more familiar with their operation and maintenance procedures. Should you have questions concerning maintenance, please contact your dealer for assistance.

TYPE I MAINTENANCE

(APPROXIMATELY EVERY 30 DAYS OR 100 HOURS, WHICHEVER COMES FIRST)

INTERIOR:

( ) 1. Open all windows and doors to air out yacht.

( ) 2. Inspect all life jackets and life rings for deterioration.

( ) 3. Clean interior wood and panels. See Maintenance Instructions.

( ) 4. Inspect and adjust all doors, if necessary. They may expand due to moisture.

( ) 5. Inspect and adjust all drawers, if necessary. See Maintenance Instructions for lubrication.

( ) 6. Check all portlights and lubricate dog threads with white petroleum jelly.

( ) 7. Check all fire extinguishers for full charge.

( ) 8. Clean shower stalls, doors, and curtains per Maintenance Instructions.

( ) 9. Check bow hatch for operation and watertight fit.

EXTERIOR:

( ) 1. Inspect and clean exterior fiberglass and wood finish. Clean per Maintenance Instructions.

( ) 2. Inspect all hardware for condition and tightness. Clean per Maintenance Instructions.

( ) 3. Inspect all exterior seat cushions for mildew and mold. Clean per Maintenance Instructions.

( ) 4. Clean all glass windows, windshields, etc. per Maintenance Instructions.

( ) 5. Clean all acrylic portlights and windshields per Maintenance Instructions.

( ) 6. Clean non-skid areas with nylon bristle brush and mild liquid detergent.

MECHANICAL AND ELECTRICAL

( ) 1. Inspect all shower pumps and bilge pumps.

A. Remove any debris from pickup or strainer.

B. Check operation of float switches.

C. Check electrical connections for corrosion and tightness.

D. Check operation of pump.

E. Check all hoses and hose connections for possible signs of leaks.

( ) 2. Clean any debris from limber holes

( ) 3. Cycle all through hull sea valves from open to closed position. See Fig. 3.7.B for locations.

( ) 4. Inspect hand bilge pump(s).

A. Check operation, hoses, hose connections for leaks

B. Remove any debris from pickup.

( ) 5. Inspect and clean raw water strainers [engines, generator(s) air conditioning (if installed)].

CAUTION

TO AVOID POSSIBLE FLOODING SHUT OFF THROUGH HULL SEA VALVES BEFORE CLEANING STRAINERS.

( ) 6. Inspect shaft stuffing boxes and bearings for wear and excessive leaks., If necessary to replace or tighten, see Fig. 3.1 for instructions.

( ) 7. Inspect exhaust hoses, hose clamps, tubing, muffler, and risers. See Fig. 3.4

( ) 8. Check engine mounting bolts for tightness. See Maintenance Instructions for tightening and alignment.

( ) 9. Inspect engine and marine gear.

A. Check all hose and hose connections for possible leaks.

B. Check all electrical connections for corrosion and tightness.

C. Check entire engine and marine gear for any signs of fuel.

( )10. Inspect all fuel lines, hoses, flare nuts, valves, fittings, and tanks for signs of leaks. See Maintenance Instructions for pressure testing of tanks.

( )11. Inspect holding tank(s), hose, and plumbing for leaks. See Maintenance Instructions for pressure testing of tanks.

( )12. Inspect all water lines, hoses, flare nuts, valves, fittings, filter, and tanks. See Maintenance Instructions for tank testing.

( )13. Inspect water pump(s) for proper operation.

( )14. Inspect hot water heater and relief valve for proper operation.

( )15. Inspect heating and air conditioning system (if installed).

A. Check lines, condensing units, cooling units, flare nuts, and fittings for leaks

B. Check all electrical connections for corrosion and tightness.

C. Check operation of sea water pump.

( )16. Inspect all exhaust blowers and ventilating fan(s) (if installed).

A. Check electrical connections for corrosion and tightness.

B. Check all hoses and clamps for leaks

C. Check operation.

( )17. Inspect toilets for leaks and proper operation

( )18. Inspect all faucets and shower mixing valves for leaks and proper operation. Remove any debris from faucet aerators.

( ) 19. Inspect all drains for pluggage and leaks.

( ) 20. Inspect battery charger for proper operation.

( ) 21. Inspect all batteries

A. Check electrolyte level

B. Check cables and connections. Clean per Maintenance Instructions.

( ) 22. Inspect fire extinguisher system (piping, mechanical equipment, and cylinder) for proper operation. See Manufacturer's Manual for replacing cylinder(s).

( ) 23. Inspect all steering lines, hoses, flare nuts, helm, and slave cylinder for possible leaks.

( ) 24. Inspect throttle, clutch, and shutdown cables for proper adjustment and ease of operation.

( ) 25. Inspect shaft strut bolts for tightness and leaks.

( ) 26. Inspect rudder stuffing box for wear and excessive leaks. If necessary to tighten or replace, see Fig. 3.1 for instructions.

( ) 27. Inspect rudder assembly for operation

( ) 28. Inspect searchlight for proper operation (if installed).

( ) 29. Inspect all electrical wires for signs of chafing.

( ) 30. Inspect mooring and anchor lines for wear.

( ) 31. Check operation of all D.C. interior lighting.

TYPE II MAINTENANCE

(APPROXIMATELY EVERY 6 MONTHS OR 500 HOURS, WHICHEVER COMES FIRST)

( ) 1. Perform all of Type I Maintenance.

( ) 2. Pull out the plunger on the fire extinguisher system pressure switch to verify operation of the Systems Monitor "FIRE" Point Additionally, attempt to engage the starter on each engine in the normal manner to verify the operation of the starter interlocks. Reset plunger when the test is complete.

( ) 3. Test fire extinguisher system actuator and control head for operation with a manometer.

NOTE

It is recommended that this test be performed by a qualified service man.

( ) 4. Weigh fire extinguisher system cylinder(s). See Manufacturer's Manual for more information.

NOTE

Before hauling the yacht, close engines, generator(s), and air conditioner sea valves (if installed). This will prevent the raw water pumps from losing their prime. This does not apply when hauling for winter storage.

( ) 5. Haul the yacht out of the water. Follow the Maintenance Instructions.

A. Scrub and repaint bottom, if necessary.

B. Check all underwater equipment for signs of wear and damage.

TYPE III MAINTENANCE

(ANNUALLY OR APPROXIMATELY 1,000 HOURS, WHICHEVER COMES FIRST)

( ) 1. Perform Type I and Type II Maintenance.

( ) 2. Have manufacturer's representative inspect and service the entire fixed fire extinguisher system.

( ) 3. Winterize as follows: (if necessary)

- ( ) A. Winterize Fuel System per Fig. 3.3
- ( ) B. Haul the yacht out of the water. Follow Maintenance Instructions.
- ( ) C. Winterize sea valves and strainers per Fig. 3.7.B
- ( ) D. Winterize Freshwater system per Fig. 3.6.
- ( ) E. Winterize Pump and Drain system per Fig. 3.7.A
- ( ) F. Winterize engines, generator, and various other equipment according to their respective Manufacturer's Manual instructions supplied with the yacht.
- ( ) G. Polish the exterior chrome and stainless steel hardware or coat with suitable material.
- ( ) H. Open hatches, windows, and portlights for ventilation during storage (if conditions permit).
- ( ) I. Check all underwater equipment for possible damage and wear.
- ( ) J. Clean out all lockers, cabinets, drawers, etc., and leave partially open for ventilation.
- ( ) K. Remove all gear that could be damaged by cold or dampness such as: upholstery, life preservers, books, papers, etc.
- ( ) L. Oil keys with lightweight oil and insert in locks to lubricate tumblers. Remove keys.

( ) 4. Make ready after winter storage: (if necessary)

( ) A. Check all underwater equipment for possible wear and damage.

( ) B. Clean out all through hull openings and scuppers.

( ) C. Clean propellers and shafts with emery cloth.

( ) D. Check through hull fittings, and seawater strainers for reinstallment of drain plugs.

( ) E. Launch yacht using the plan drawing in the Appendix.

( ) F. Perform Type I Maintenance.

( ) G. Follow engine, generator, and various other Manufacturer's Manuals for maintenance prior to returning to service.

( ) H. Fill water tank(s) and check freshwater system.

CAUTION

THE HEATING ELEMENT MAY BE DAMAGED IF IT IS TURNED ON WITHOUT WATER IN THE TANK.

NOTE

In order to fill the water heater, be certain the freshwater system is pressurized then open any hot water faucet above the elevation of the heater until all air is discharged from the system.

CAUTION

TO AVOID POSSIBLE EQUIPMENT DAMAGE IF COMMERCIAL, NON-TOXIC ANTIFREEZE WAS USED FOR WINTERIZATION, FOLLOW INSTRUCTIONS ON CONTAINER PRIOR TO USE OF WATER SYSTEM.

( ) I. Check Fuel system and fill tanks, if necessary.

( ) J. Check out all electrical equipment for proper operation (lights, toilets, appliances, etc.).

( ) K. Have compasses compensated by competent service personnel, if necessary.

( ) L. Take on board all other equipment (navigational instruments, charts, linens, chairs, etc.).

( ) M. Check trim of yacht.

( ) N. Follow the Check Lists (Pre-Start, After Starting Engine, and Shutdown) provided in this Manual.

MAINTENANCE INSTRUCTIONS

INTERIOR AND EXTERIOR CLEANING:

Fiberglass and Wood:

1. Wash exterior surfaces with mild liquid detergent and rinse thoroughly with fresh water.

NOTE

Do not use any abrasive compounds.

2. Chamois and dry varnish areas (when applicable) and bright work.
3. Re-oil teakwood, when necessary, with a resin-oil marine teakwood finish. Follow manufacturer's instructions.

Hardware:

1. Clean and polish with suitable compound.

Cushions:

1. Remove the exterior cushion covers.
2. Wash covers with mild detergent or a solution of two parts water and one part liquid chlorine bleach. Rinse off with fresh water.
3. Air dry both cover and polyfoam (if wet).

NOTE

Do not dry in sunlight.

Glass Windows:

1. Clean with a good window cleaner.

Acrylic or Polycarbonate Portlights and Windshields:

1. Wash with non-abrasive soap or detergent using a soft, grit-free cloth, sponge, or chamois.
2. Use bare hand to feel and dislodge any caked dirt.
3. Dry with clean damp chamois.

Washing Interior Acrylic Surfaces:

1. Where water cannot be used freely, dust very lightly (do not wipe) with a soft, clean cloth or feather duster. Surface can now be wiped carefully with a soft, grit-free cloth or chamois.
2. To remove masking adhesive from surface, use a commercial non-flammable acrylic cleaner. Follow instructions on the container.

NOTE

This should be done before washing.

3. To remove grease and oil, use a commercial non-flammable acrylic cleaner. Follow instructions on the container.

CAUTION

DO NOT USE THE FOLLOWING SOLVENTS OR CLEANERS: ACETONE, CARBON TETRACHLORIDE, DRY CLEANING FLUID, LACQUER THINNERS, WINDOW SPRAY, OR KITCHEN SCOURING COMPOUNDS. THESE WILL ATTACK OR SCRATCH THE ACRYLIC. ADDITIONALLY, SOME ARE HIGHLY TOXIC AND MAY PRESENT A PERSONNEL HAZARD.

4. To improve the appearance of surface scratches, fill with paste wax. Use hard automobile paste wax applied in a light even film with a soft cotton flannel cloth to clean surface. Polish to a high luster with a clean, dry, cotton flannel cloth.

CAUTION

DO NOT USE CHEESECLOTH, MUSLIN, OR SHOP CLOTHS AS THESE MAY SCRATCH THE SURFACE.

A hand polishing kit may be used for deeper surface scratches.

Interior Wood and Paneling:

1. Use furniture polish or wood panel cleaner. Follow instructions on container.

Shower Stalls, Doors, and Curtains:

1. Use liquid detergent or two parts water and one part chlorine bleach with soft, grit-free cloth or sponge.

CAUTION

DO NOT USE SCOURING PADS OR ABRASIVE COMPOUNDS AS THEY WILL SCRATCH THE SURFACE.

Drawers:

1. Drawers can be made to slide easier by applying wax or bar soap to sliding contact area.

TIGHTENING AND ALIGNMENT OF ENGINE:

If engine mounting bolts have vibrated loose, it may be necessary to realign the engine; follow the steps on Fig. 3.1.

REMOVAL OF PROPELLER SHAFT COUPLING

If it is necessary to remove the shaft coupling, follow the steps on Drawing CMC-91 in the Appendix.

BATTERIES

The batteries and connecting cables should be cleaned with baking soda and rinsed with fresh water. If necessary, remove cables and clean terminal and post. To prevent corrosion, use an oxide inhibitor compound on terminal connected to the batteries.

WARNING

IF SULFURIC ACID FROM BATTERIES CONTACTS EYES, SKIN, OR CLOTHING, FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER. FOR CONTACT WITH EYES, GET MEDICAL ATTENTION.

PRESSURE TEST TANKS:

All fiberglass tanks should be pressure tested when repaired for leaks in tank or when replacing gauges or fittings. This should be done with all lines and fill hoses disconnected and all tank fittings plugged.

A low pressure diaphragm gauge of 0 - 10 psi or a mercury manometer is recommended for this test. For further details, see Fig. 6.5.

CAUTION

OPERATE REGULATOR AND READ MANOMETER ACCORDING TO MANUFACTURER'S INSTRUCTIONS AS EXCESSIVE PRESSURE WILL DAMAGE THE TANK.

HAULING THE YACHT:

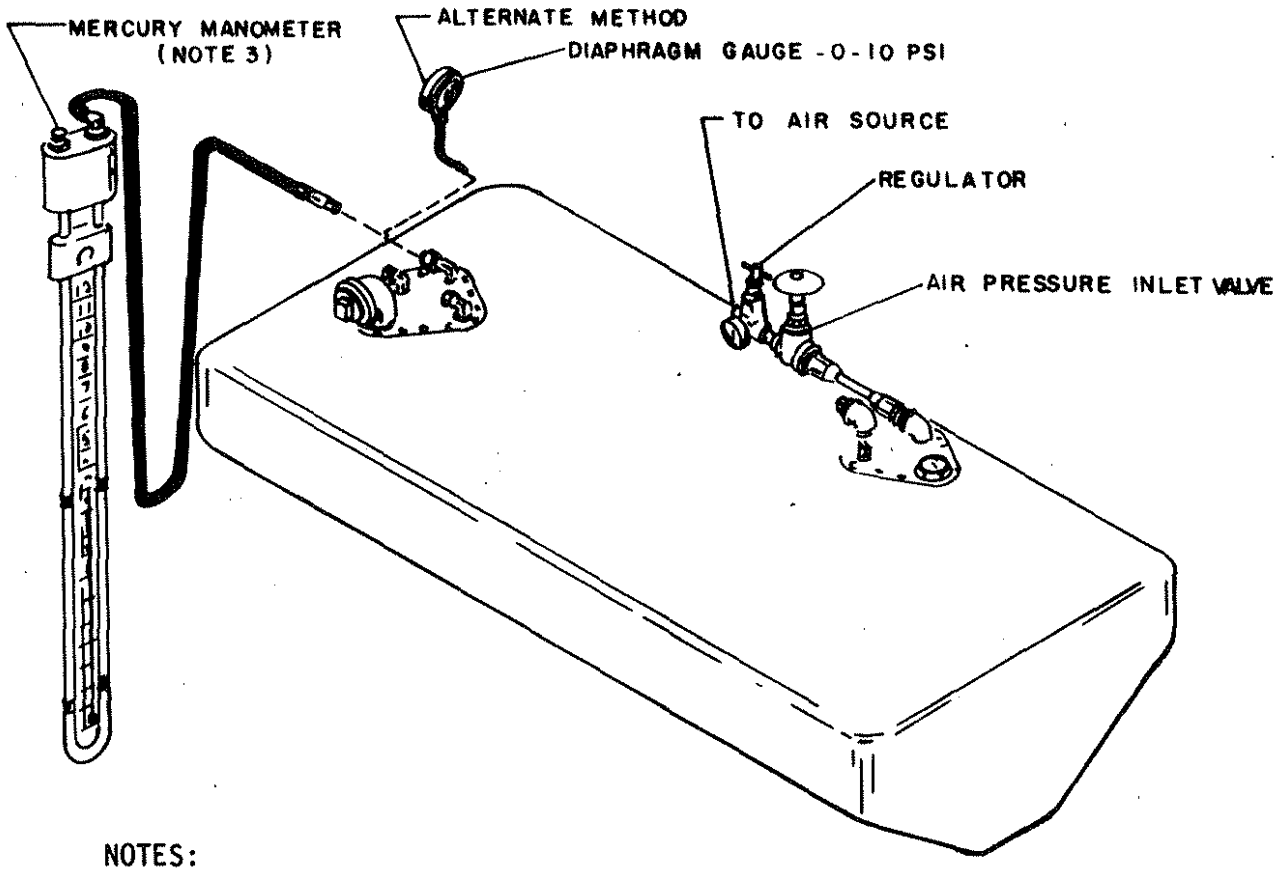
The following steps will assist you in hauling and positioning the yacht on the cradle.

1. Follow the graving plan drawing in the Appendix for location of the keel and underwater gear.

NOTE

When hauling the yacht for winter storage, lift bow slightly higher than the stern to allow water to drain from the exhaust outlet in the transom.

2. Wash sides and bottom as soon as yacht is out of the water for easier cleaning.
3. Locate yacht on cradle in accordance with the graving plan drawing.
4. Remove hull drain plug (when installed). See Fig. 7.1 for location.



NOTES:

1. USE SOAP SOLUTION ON FITTINGS AND TANK SURFACES TO DETECT LEAKS. IF THERE IS A LEAK THE SOLUTION WILL BUBBLE.

2. WARNING DO NOT USE SOAP SOLUTION THAT CONTAINS AMMONIA. AS IT WILL ATTACK BRASS FITTINGS CAUSING THEM TO LEAK.

3. CAUTION OPERATE REGULATOR AND READ MANOMETER ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AS EXCESSIVE PRESSURE WILL DAMAGE THE TANK.

TEST PRESSURE

FUEL TANK 4 PSI OR 8" OF MERCURY
HOLDING TANK 4 PSI OR 8" OF MERCURY
WATER TANK 1½ PSI OR 3" OF MERCURY

TEST PRESSURE (METRIC EQUIVALENT)

FUEL TANK - 2812.4 KGS/SQ M OR 20.32 CM OF MERCURY
HOLDING TANK - 2812.4 KGS/SQ M OR 20.32 CM OF MERCURY
WATER TANK - 1054.65 KGS/SQ M OR 7.62 CM OF MERCURY

Sepia AE-290

MTR BJ 126, AM 324, AN 254	DWG RM	APPD	DWG NO. CIA-8

AMF HATTERAS YACHTS
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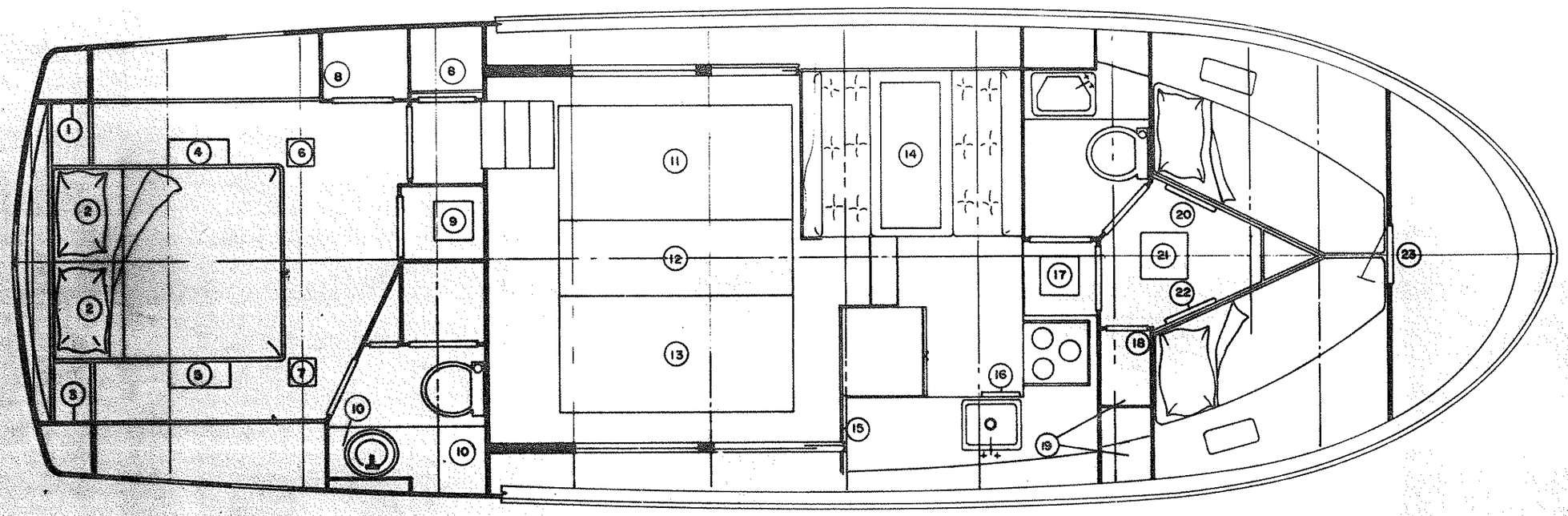
TITLE TYPICAL TANK TEST
FIGURE 6.5

Section 7

Appendix



ACCESS LEGEND

1. OWNER'S STATEROOM SPEAKER
2. AFT FUEL TANK PLATES AND GAUGE
   RUDDER SHELF
   AFT BILGE PUMP
3. OWNER'S STATEROOM SPEAKER
   AFT FUEL TANK DECK FILL PLATE
4. PORT MAIN STRUT
5. STBD. MAIN STRUT
6. PORT INTERMEDIATE STRUT
7. STBD. INTERMEDIATE STRUT
8. PORT EXHAUST HOSE AND CLAMPS
9. CENTER BILGE PUMP
   OWNER'S HEAD SHOWER SUMP
10. STBD. EXHAUST HOSE AND CLAMPS
11. PORT ENGINE HATCH
12. ENGINE COMPARTMENT ACCESS
13. STBD ENGINE HATCH
14. WATER HEATER
    A/C CONDENSING UNITS
15. CO_2 BOTTLE AND PRESSURE SWITCH
16. GALLEY SINK WATER FILTER
    GALLEY SINK DRAIN
17. HOLDING TANK PLATE
18. HAND BILGE PUMP
19. 120V GALLEY BLOWER
    HOLDING TANK VENT
    HOLDING TANK PUMP OUT DECK PLATE
20. SALON A/C DRAIN
    FWD HEAD SHOWER SUMP PUMP DISCHARGE
    FWD. BILGE PUMP DISCHARGE
    FWD. HEAD LAVATORY DRAIN
21. FWD. HEAD TOILET DISCHARGE
    FWD. BILGE PUMP
    SHOWER SUMP
22. HAND BILGE PUMP DISCHARGE
    BOW A/C DRAIN
23. BOW A/C FAN UNIT
    ROPE LOCKER

NOTE:
1. ENGINE COMPARTMENT ITEMS NOT SHOWN

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HIN AE-290	DRAWN CRM	APPD	DWG NO CIB-597

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ACCESS HATCH LOCATIONS

FIGURE 7.1, 43 DOUBLE CABIN