CAL BOATS

owner's manual

CAL 392 - TWIN-CABIN

CAL 393 - TRI-CABIN

CAL BOATS

CAL 392, 393

On behalf of Jensen Marine, we would like to thank you for selecting a Cal 39. Great care has been taken in both the construction methods and equipment used on your boat.

The use of anodized aluminum, stainless steel, teak wood, and fiberglass all combine to produce a yacht that has much lower maintenance requirements than those in the past. However, it is vital that the necessary maintenance requirements be performed faithfully.

This manual is designed to familiarize you with your boat and to help you establish a prudent checklist to be used before and after each outing.

The location and function of each system onboard will be outlined to help make any adjustments or maintenance procedures more easily undertaken.

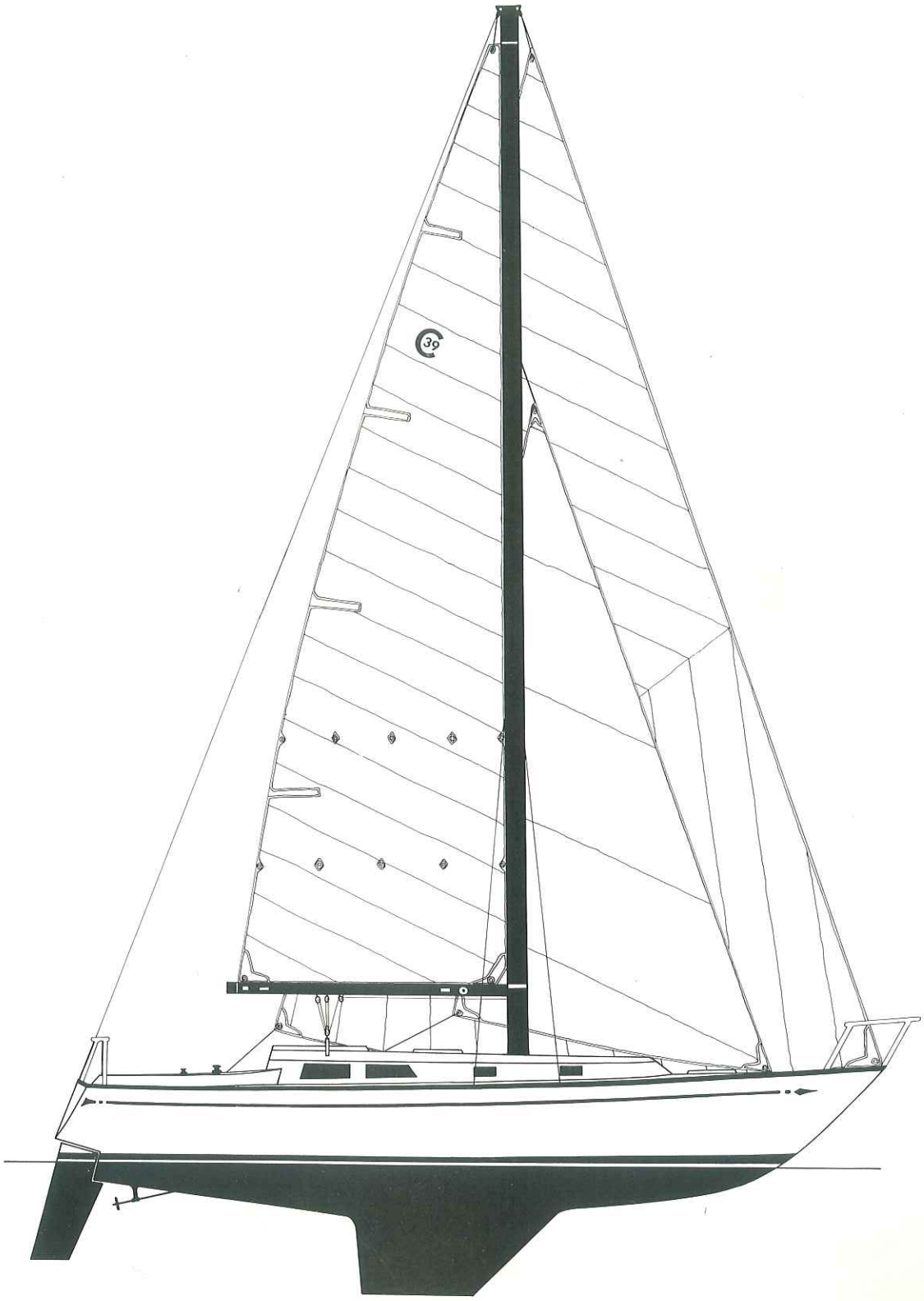
Cal Boats reserves the right to change specifications without notice and this manual may not reflect all such changes. Since we are always striving to improve our product, modifications and improvements are constantly in process. Therefore, it is possible that your boat may contain features different from those enumerated in this manual. It is impractical to revise this manual for each such modification and it is our policy to make improvements whenever it is appropriate without waiting for corresponding updates in our manual.

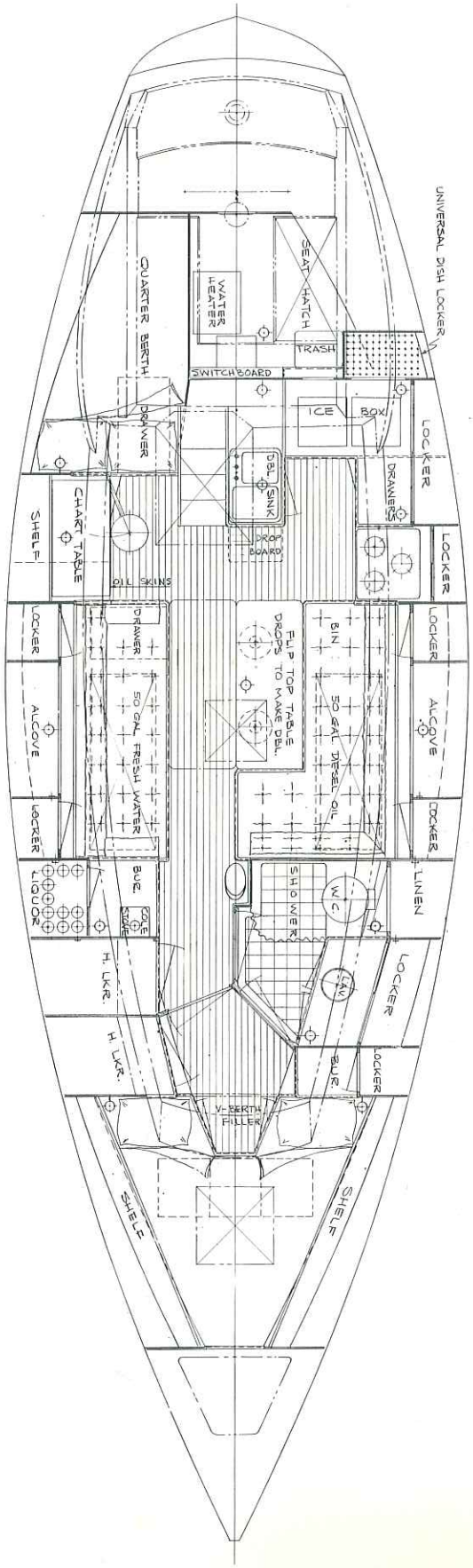
Full information on optional equipment may not be contained herein. Contact the option manufacturer or your Cal Boats dealer for more information.

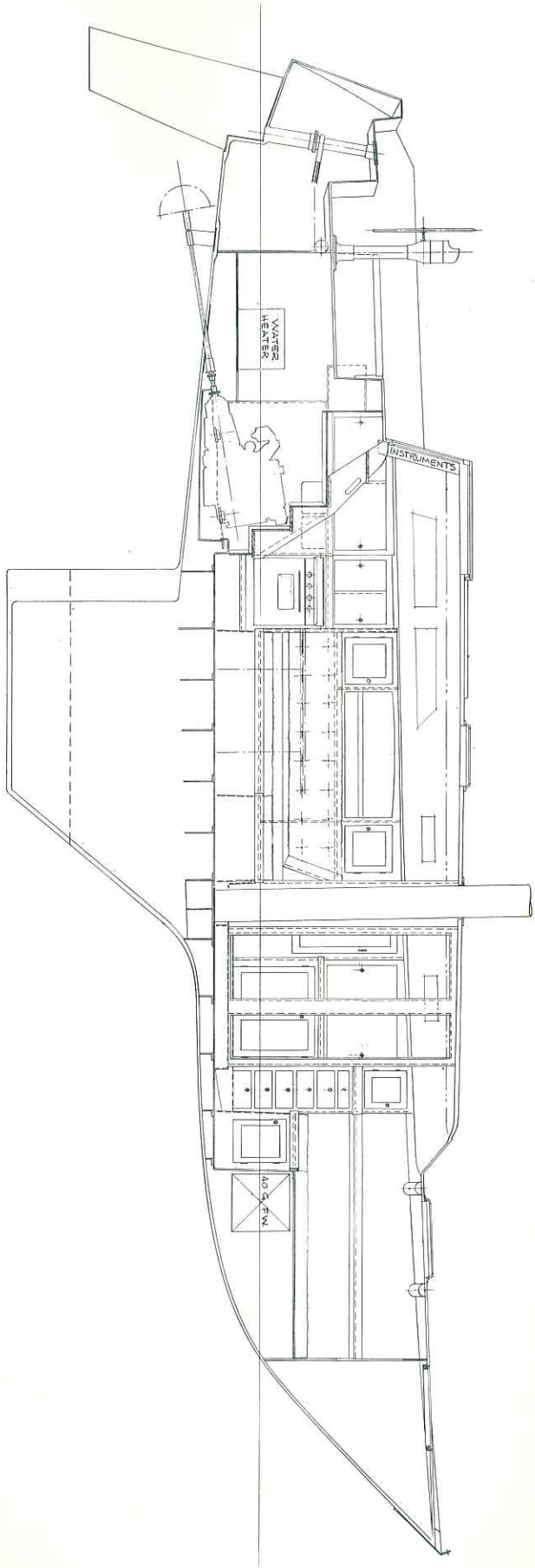
Please read and understand this manual and all others included with your boat before operating any of the boat's systems.

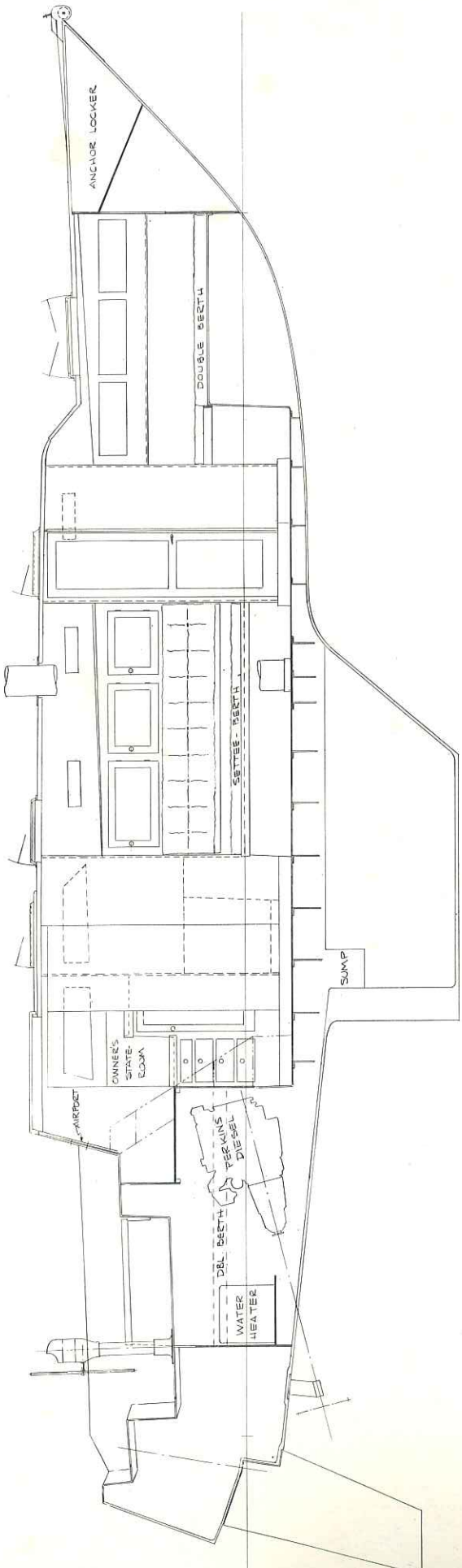
In addition to information contained in this manual, there are certain federal, state, and local regulations pertaining to the safe and legal operation of pleasure craft that you should familiarize yourself with. Local governmental agencies and boating groups can help you become aware of these regulations.

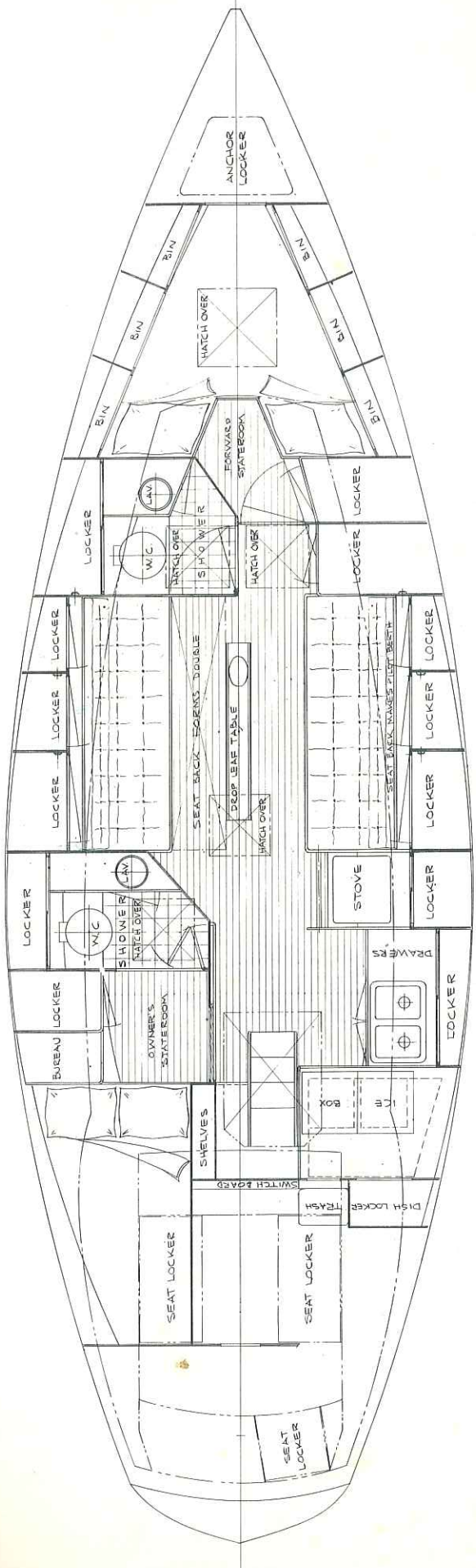
HAPPY SAILING!!


C 39


UNIVERSAL DISH LOCKER
SEAT HATCH
WATER HEATER
QUARTER BERTH
TRASH
SWITCH BOARD
ICE BOX
DRAWER
DBL SNK
DRAWERS
LOCKER
SHELF
CHART TABLE
DROP BOARD
OIL SKINS
LOCKER
DRAWER
FLIP TOP TABLE DROPS TO MAKE DBL.
BIN
LOCKER
ALCOVE
50 GAL FRESH WATER
50 GAL DIESEL OIL
ALCOVE
LOCKER
LOCKER
LIQUOR
BUR.
CODE STOVE
SHOWER
W.C.
LINEN
H. LKR.
LAV.
LOCKER
H. LKR.
BUR.
LOCKER
V-BERTH FILLER
SHELF
SHELF


WATER HEATER
INSTRUMENTS
40 G. FW


ANCHOR LOCKER
DOUBLE BERTH
SETTEE BERTH
SUMP
OWNER'S STATEROOM
FAIRLEAD
PERKINS DIESEL
DBL BERTH
WATER HEATER


ANCHOR LOCKER
BIN
HATCH OVER
FORWARD STATEROOM
LOCKER
W.C
SHOWER
SEAT BACK FORMS DOUBLE
DROP LEAF TABLE
SEAT BACK MAKES PILOT BERTH
STOVE
DRAWERS
OWNER'S STATEROOM
BUNK
SHELVES
SWITCH BOARD
TRASH
DISH LOCKER
SEAT LOCKER

CAL 393

INTERIOR

The port main berth is convertible to a double berth. To do it, raise the backrest. Slide the ship bolt back to release the slip apart hinges. Slide the backrest forward about 3/4" and the hinges will separate. The backrest now hooks over the inboard edge of the existing berth and lays on a cleat of the main bulkhead. There is a folding leg already attached under the inboard aft corner. Press the spring loaded release lever to swing the leg down.

Storing the backrest is a reverse of the above. Be sure to engage the ship bolt to prevent the backrest from accidentally coming loose.

CAL 392

TWIN-CABIN INTERIOR

PRESSURIZED WATER SYSTEM

Water Tanks. 110 gallons of fresh water are stored in two tanks; one under the starboard settee and the second under the cockpit sole. Tanks are filled through deck plates.

Each tank has its own shut-off valve located directly on the tank. All valves should remain closed except for the one tank being used. This prevents accidental loss of all water in the event of a malfunction and also serves as an inventory of remaining water. For best boat trim, draw from the tanks in the ends of the boat first. This leaves the remaining water over the center of gravity for better stability.

Water Pump. For the pressurized system, it is located under the starboard settee. Access is provided by the hatch at the aft end. From here, the water is plumbed to both the head and galley. Turn on switch on master control panel to activate.

The Head. There is a sink faucet and a shower. The sink drains to a through hull fitting with a gate valve located under the sink. The shower drains into the bilge. Be sure to pump the bilge after using the shower. The switch is located on the master control panel.

Galley Sink. It drains to a through hull fitting and gate valve located under the sink. This valve is accessible through the cabinet door facing the sink. The galley ice box drains into the bilge.

Bilge Pumps. Two bilge pumps (one manual and one electric) are standard. The manual pump is located at the aft end of the cockpit. It is a flush-mount design with a socket that accepts the handle provided. The electric pump is mounted in the engine compartment just aft of the engine. The exhaust hoses for both pumps are plumbed to above waterline through hulls in the transom.

CAL 393

TRI-CABIN INTERIOR

PRESSURIZED WATER SYSTEM

Water Tanks. A total of 120 gallons of fresh water is stored in two separate tanks, 60 gallons each. One tank is located under the port main berth and one tank is located under the starboard main berth. The tanks are filled through plates on either side deck.

Each tank has its own shut-off valve located directly on the tank. All valves should remain closed except for the one tank being used. This prevents accidental loss of all water in the event of a malfunction and also serves as an inventory of remaining water. For best boat trim, draw from the tanks in the ends of the boat first. This leaves the remaining water over the center of gravity for better stability.

Water Pump. The pressure pump is located behind the port settee backrest cushion. The switch controlling it is located on the master distribution panel beneath the companionway. Turn on the valve from only one tank to supply the pump. The pump is a demand type and should only run while water is being drawn.

The Head. Both head compartments are supplied with pressure hot and cold water, stainless steel sink, and telephone type shower. The showers drain to the bilge, so be sure to turn on the pump after using the shower. The sinks drain through valves directly overboard.

Galley Sink. It drains to a through hull fitting and gate valve located under the sink. This valve is accessible through the cabinet door facing the sink. The galley ice box drains into the bilge.

Bilge Pumps. Two bilge pumps (one manual and one electric) are standard. The manual pump is located at the aft end of the cockpit. It is a flush-mount design with a socket that accepts the handle provided. The electric pump is mounted in the engine compartment just aft of the engine. The exhaust hoses for both pumps are plumbed to above waterline through hulls in the transom.

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HOT WATER SYSTEM

The hot water system may be used with shore power or when the engine is running.

Water Heater. The six gallon water heater is located under the cockpit sole just aft of the engine. Access to this unit and its plumbing is through the removable engine room covers below the port seat hatch.

WARNING!

Never operate the water heater without water in the tank. The heating coil will burn out. To check, turn on pressure water pump and open hot water tap. When air ceases to flow, tank is full.

Shore Power Operation of Water Heater. With shore power plugged in and breaker on, throw the toggle switch on the AC panel labeled "WATER HEATER".

While Engine is Running. Engine heat transfer is automatic when the engine is running.

OPTIONAL SALT WATER GALLEY PUMP

The optional hand pump has a bronze intake through hull and gate valve located near the galley sink drain.

DECK DRAINS

There are three deck drains. One is located in the anchor well and drains automatically through a hole well above the waterline at the bow. There are also two cockpit drains that are plumbed to bronze through hulls below the transom, just above the rudder.

THROUGH HULL LOCATIONS

Head Area. One through hull is standard. It is located under the sink for the sink drain. Please note that additional through hulls may exist depending on the head unit installed.

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THROUGH HULL LOCATIONS (Cont'd)

Galley Area. Two are standard. One is for engine intake and one is for the galley sink drain. A third may be installed for the optional salt water pump.

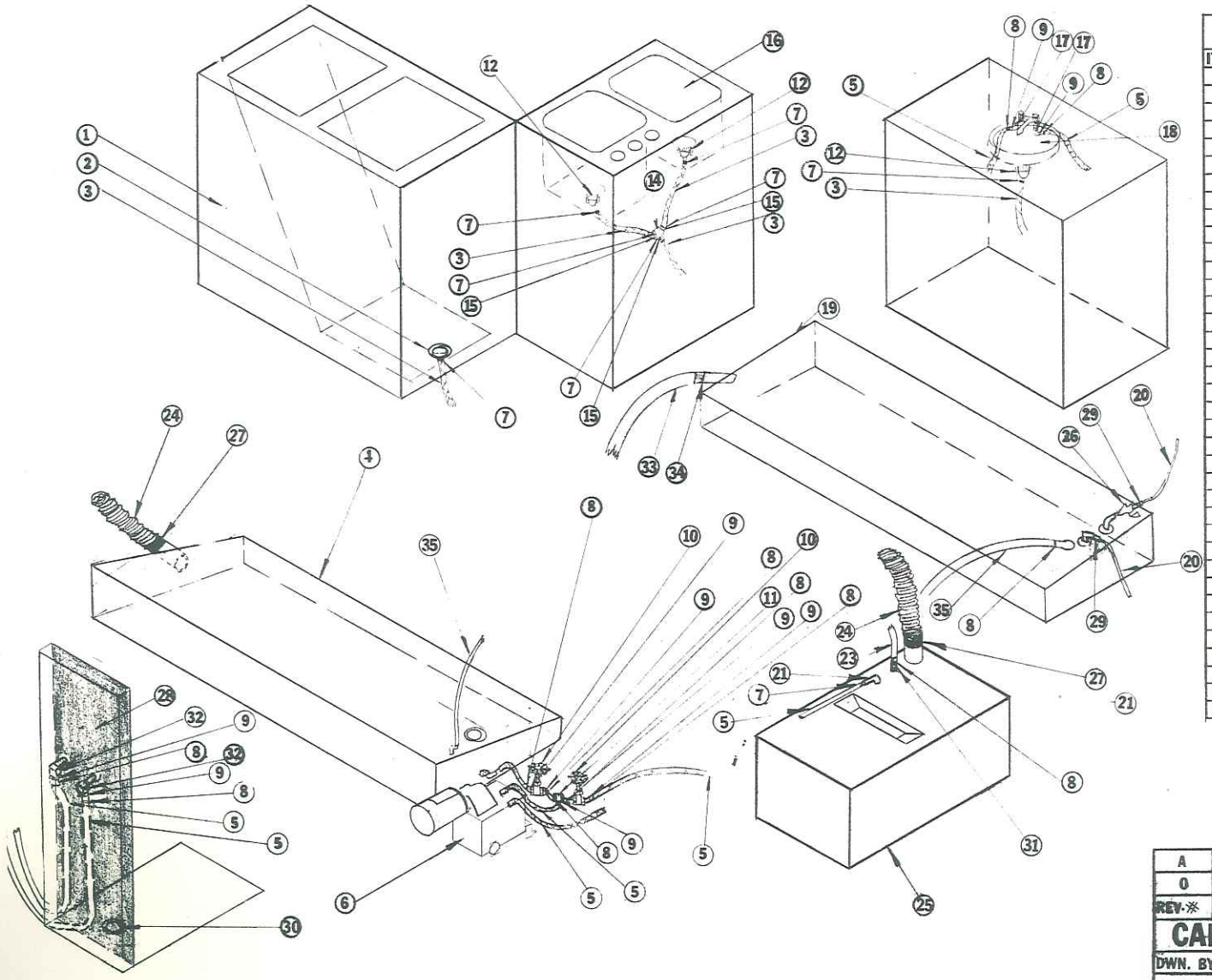
THROUGH HULL VALVE OPERATION

Turn valve clockwise to close, counterclockwise to open. If you feel resistance from blockage, do not force the handle. Unclog plugged valves by disconnecting drain hose from sink and running a stiff piece of wire through the hose. Forcing a valve may cause breakage.

HEADS

The standard boat is equipped with a recirculating chemical USCG Type 3 device with deck discharge. Instructions are included with it and should be read before using.

Several optional waste retention and treatment systems are available. Always read the operating instructions included with them before using.



BILL OF MATERIAL

ITEM	PART NO.	QTY.	DESCRIPTION
1	(REF)	1	ICEBOX
2	42166	1	ICEBOX DRAIN T-H
3	40002		HOSE, REIFORCED VINYL 3/4"
4	80142	1	TANK, WATER 50 GAL.
5	40003		HOSE REINFORCED VINYL 1/2"
6	80168	1	PUMP, WATER PRESSURE
7	43016	8	CLAMP, NO.20
8	43015	3	CLAMP, NO.10
9	40434	9	ADAPT. BRASS 1/2PX1/2H
10	42007	2	VALVE, GATE BRASS 1/2"
11	42215	1	TEE, BRASS 1/2"
12	40606	3	SINK TRAP, PLAS.
13	42517		ELL, BRASS 3/4X90°
14	42539	1	TEE, BRASS 3/4"
15	42802	2	ADAPT., PLAS. 3/4PX3/4H
16	81200	1	DOUBLE SINK
17	42539	2	ELL, BRASS 1/2X90°
18		1	LAV. SINK
19	26017	1	TANK, FUEL 50 GAL.
20	40034		HOSE, FUEL 1/4"
21	42834	1	ELL 90° PLAS. 3/8PX1/2H
22	43013	1	CLAMP, NO. 6
23	40031		HOSE, FUEL VENT 5/8
24	40027		HOSE, U-2; 1 1/2
25	80143	1	TANK, WATER 40 GAL.
26	42015	1	VALVE, ANDERSON 1/4"
27	40001	1	CUFF, U-2; 1 1/2
28	(REF)	1	FALSE BULKHEAD
29	40301	2	ADAPT. FLARE 1/4X3/8"
30	42252		BUSH., 1/4 TO 3/8
31	42535	1	ADAPT. PLAS. 3/8PX1/2H
32	40409	2	ELL, BRASS 3/8X90°
33	40032		HOSE, 1 1/2" BLACK
34	43014	1	CLAMP, NO. 32
35	40038		HOSE, VENT 5/8
36	40607	1	SHOWER DRAIN 1"
37			

LEGEND

T-H = THRU-HULL
P = PIPE
H = HOSE

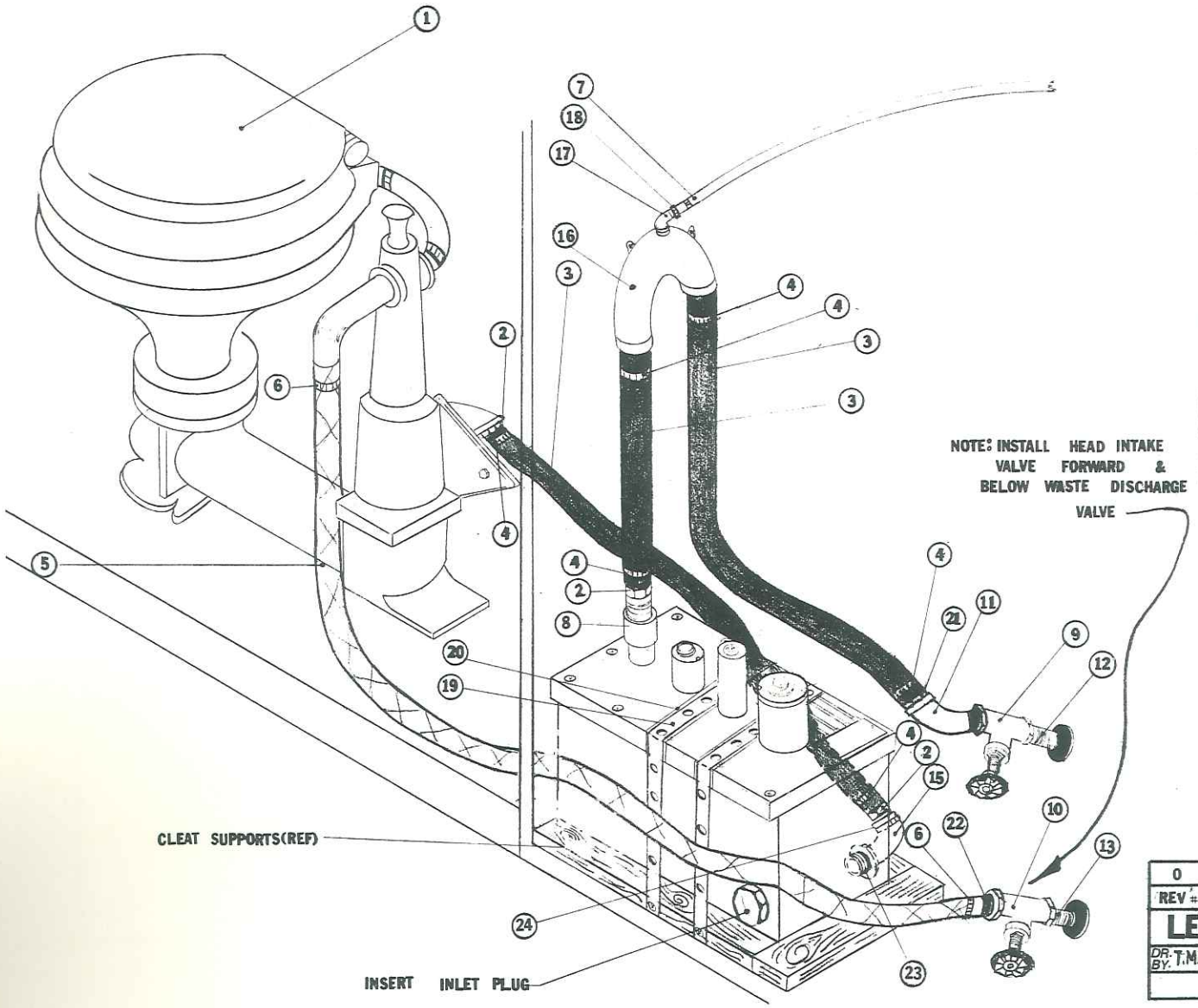
REV.	DESCRIPTION	DATE
A	CHANGED AUX. WATER TANK (25)	11/29/77
0	ISSUE	4/8/77

CAL 39 STANDARD PLUMBING

DWN. BY T. MERDOR

JENSEN MARINE

DWG. NO. 112977



BILL OF MATERIAL

ITEM	PART NO.	QTY.	DESCRIPTION
1		1	MANUAL PUMP TOILET
2	42835	2	ADAP. 1 1/2 P X 1 1/2 H PLAS
3	40032		HOSE, 1 1/2 BLACK
4	43014	6	CLAMP NO 32
5	40002		HOSE REINFORCED 3/4
6	43016	2	CLAMP NO. 20
7	40004		HOSE CLEAR VINYL 3/8
8	(REF)	1	SLIP
9	42010	1	VALVE GATE BRS. 1 1/4
10	42002	1	VALVE GATE BRS. 1/2
11	42538	1	ELL 90° X 1 1/4 ST. BRS.
12	42160	1	T-H 1 1/4 BRS.
13	42159	1	T-H 1/2 BRS.
14			
15	42516	1	EL ST 1 1/2M X 1 1/2F SLIP
16	20513	1	LOOP ANTI SYPHON 1 1/2
17	40409	1	ELL 90° X 3/8 BRS
18	40431	1	ADAP 3/8 P TO 3/8 H BRS
19	43100		TAPE, PLUMBERS COPPER 1"
20	13469		TAPE, ASBESTOS
21	42848	1	ADAP. 1 1/4 P X 1 1/2 H BRS
22	40618	1	ADAP 1/2 P X 3/4 H BRS
23	40322	1	ADAP. 1 1/2 F SL X 1 1/2 M THD
24	40323	1	ADAP. 1 1/2 M S X 1 1/2 F THD

H = HOSE
P = PIPE
T-H = THRU-HULL
SL = SLIP
THD = THREAD

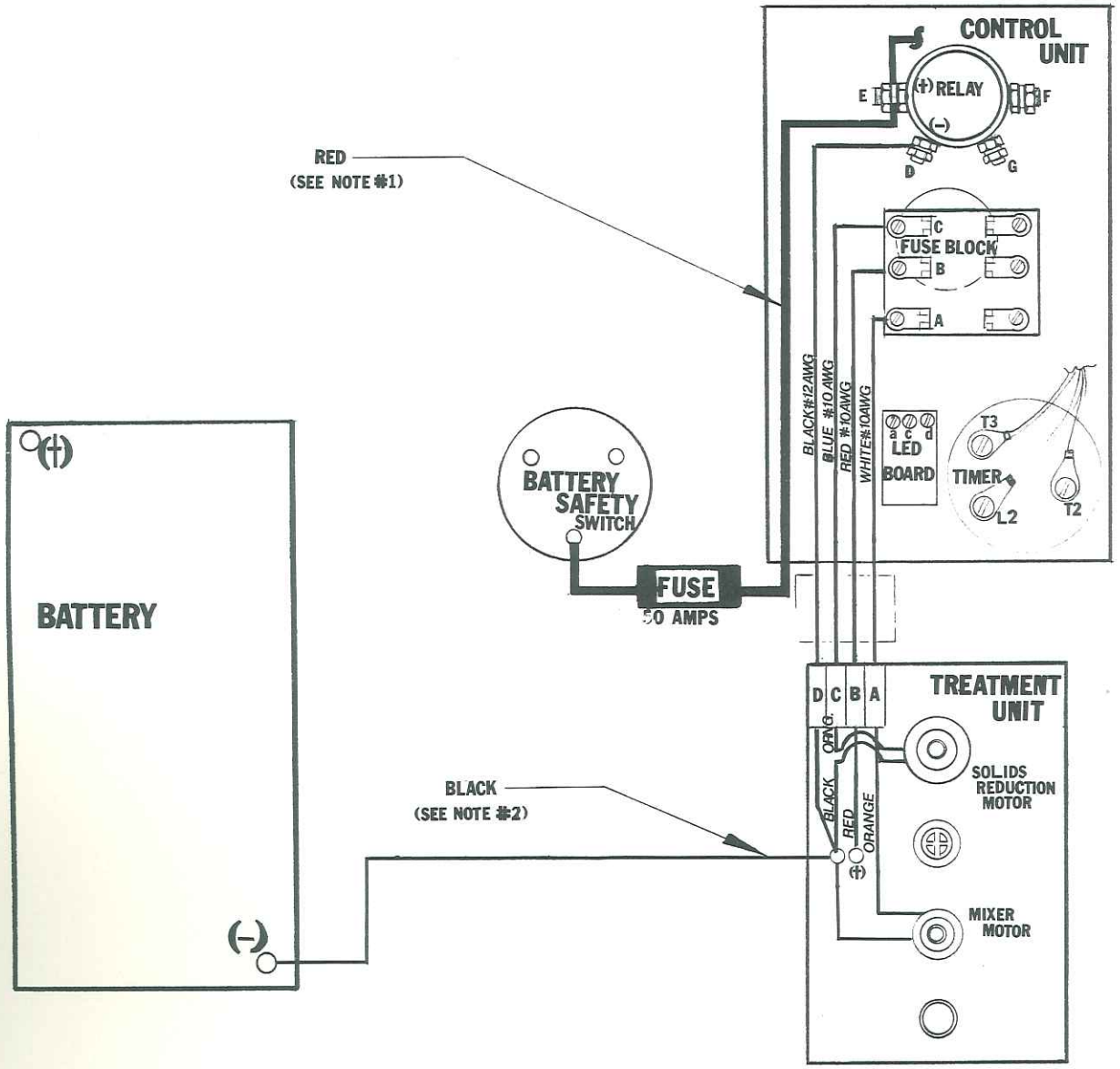
REV #	DESCRIPTION	DATE
0	ISSUE	6/20/77

LECTRA-SAN INSTALLATION

DR. BY: T. MEADOR

JENSEN MARINE

DRW. NO. #62077



NOTES:

1. CONDUCTOR SIZE IS DETERMINED BY DISTANCE BETWEEN POWER SUPPLY AND CONTROL UNIT. IF DISTANCE IS LESS THAN 10 FEET USE #6-1 WIRE; 10 FEET TO 25 FEET USE #4-1 WIRE; IF MORE THAN 25 FEET USE #2-1 WIRE.

2. CONDUCTOR SIZE IS DETERMINED BY DISTANCE BETWEEN CONTROL UNIT AND MAIN GROUND IF DISTANCE IS LESS THAN 10 FEET USE #6-1 WIRE; 10 FEET TO 25 FEET USE #4-1 WIRE IF MORE THAN 25 FEET USE #2-1 WIRE.

0	ISSUE	6/24/77
REV #	DESCRIPTION	DATE

LECTRA-SAN WIRING

DR. BY: T. MEADE

JENSEN MARINE

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ELECTRICAL

Electrical Control Panel. This panel is located below the removable steps in the galley. It controls the distribution of AC and DC power throughout the boat. The master battery switch is located on the starboard side of the panel.

Battery Condition Indicator. The indicator on your boat is called a suppressed zero voltmeter. The test switch activates the meter reading for batteries 1 and 2. If the master battery switch is positioned at "BOTH", the battery condition indicator will read the condition of both batteries regardless of the test switch position. Therefore, to test each battery independently, be sure the master battery switch is positioned on either "1", "2", or "OFF".

Before starting the engine, test the condition of each battery and select the strongest one for starting the engine by appropriate positioning of the master battery switch.

Engine Alternator. The engine alternator will bring the starting battery back to a full charge within 15 to 30 minutes, assuming the battery was fully charged before starting the engine.

Voltage range interpretations are as follows:

Engine not running or at idle	BELOW 11	very low charge
	11-12	low charge
	12-13	well charged
Engine running above idle speed	13-13½	low charge rate
	13½-15½	alternator and voltage regulator OK
	15½ or more	voltage regulator out of adjustment

When both batteries are fully charged, change the master battery switch to either "1" or "2". This keeps one battery in reserve at all times. Use the "BOTH" position for engine starting only when both batteries are low, unless one is completely discharged. In this case, do not use the "BOTH" position for engine starting since the discharged battery will rob the other more fully charged battery of its crucial starting power voltage.

WARNING!

Never move the master battery switch to "OFF" while the engine is running. You may burn out the alternator diodes.

CAL 392, 393

Circuit Breakers. Accessory loads may be selected as desired by turning on the master control panel circuit breakers. The circuit breakers will automatically open the circuit by switching themselves to "OFF" in the event of an overload on a particular circuit. Always investigate the cause of the overload and correct any deficiencies before repositioning the circuit breaker to "ON".

All wires, connections, and terminals should be inspected regularly for loose connections which may cause electrical sparks or high resistance. This is especially important for engine accessory wiring.

Before leaving your boat, always turn the master battery switch to the "OFF" position. DO THIS ONLY AFTER YOU HAVE SHUT DOWN THE ENGINE, for you may burn the alternator diodes.

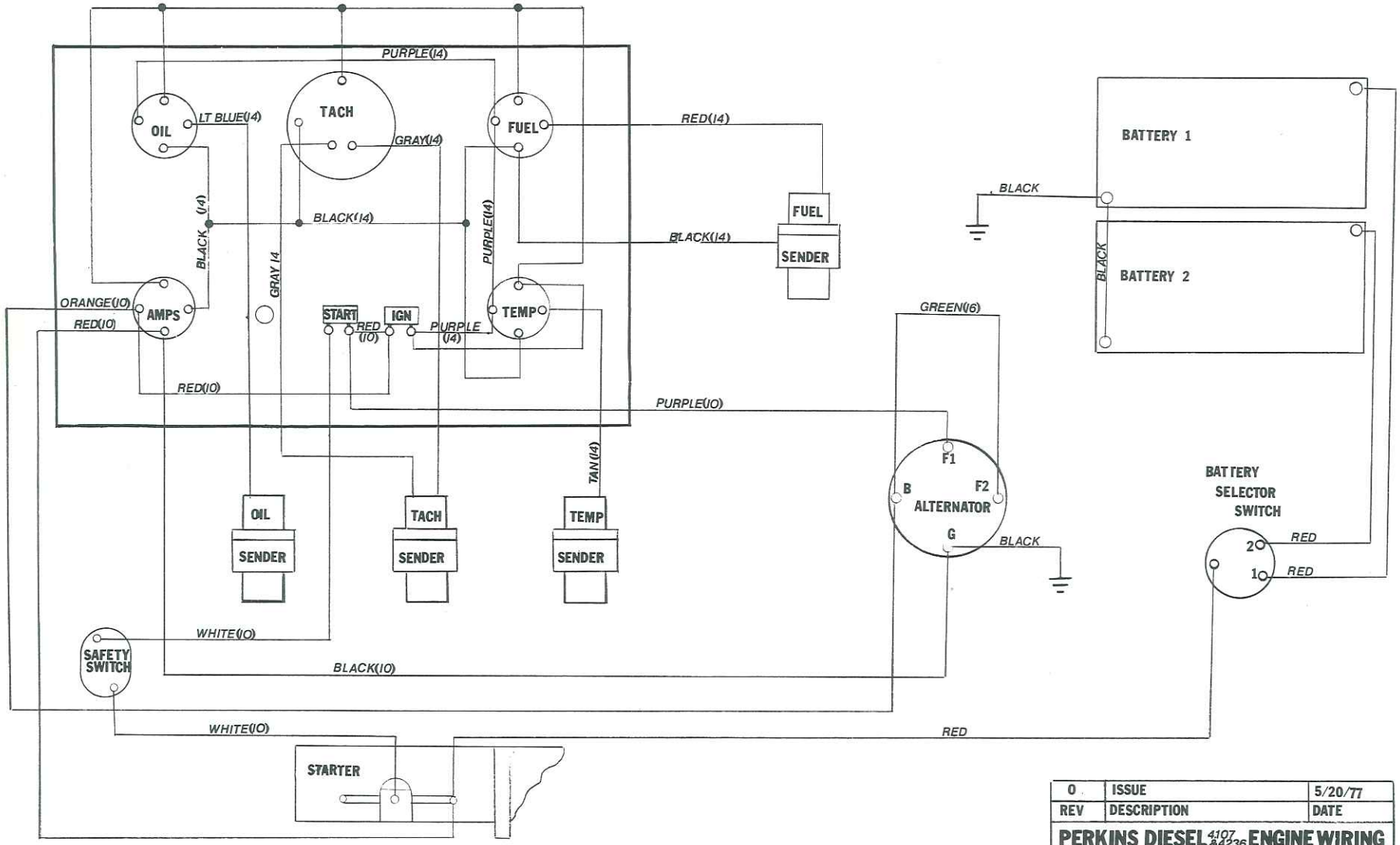
Batteries. There are two 105 amp marine batteries in acid proof boxes located aft of the engine. Access is through the port seat hatch and removable engine room covers. Inspect the fluid level frequently and keep filled. Add only distilled water.

WARNING!

> You may switch from one battery to another for charging, but DO NOT pass through the "OFF" position while the engine is running. This may burn out the alternator diodes. Keep the engine RPM as low as possible when switching batteries.

Shore Power System. The shore power system accepts 110 VAC through a three-prong male connection located in the cockpit. There are two current carrying conductors, positive and negative, as well as, a grounded non-current carrying conductor. Never use an adapter that eliminates the grounding conductor. Severe shock may result.

A master circuit breaker is provided for the shore power system. To activate shore power, throw the circuit breaker switch after the shore power line is connected to dock power.



0	ISSUE	5/20/77
REV	DESCRIPTION	DATE

PERKINS DIESEL 4107 & 4236 ENGINE WIRING

DR. BY T. MEADOR **JENSEN MARINE**

PERKINS — PETERBOROUGH

PART No.	NA001906
PRO. No.	

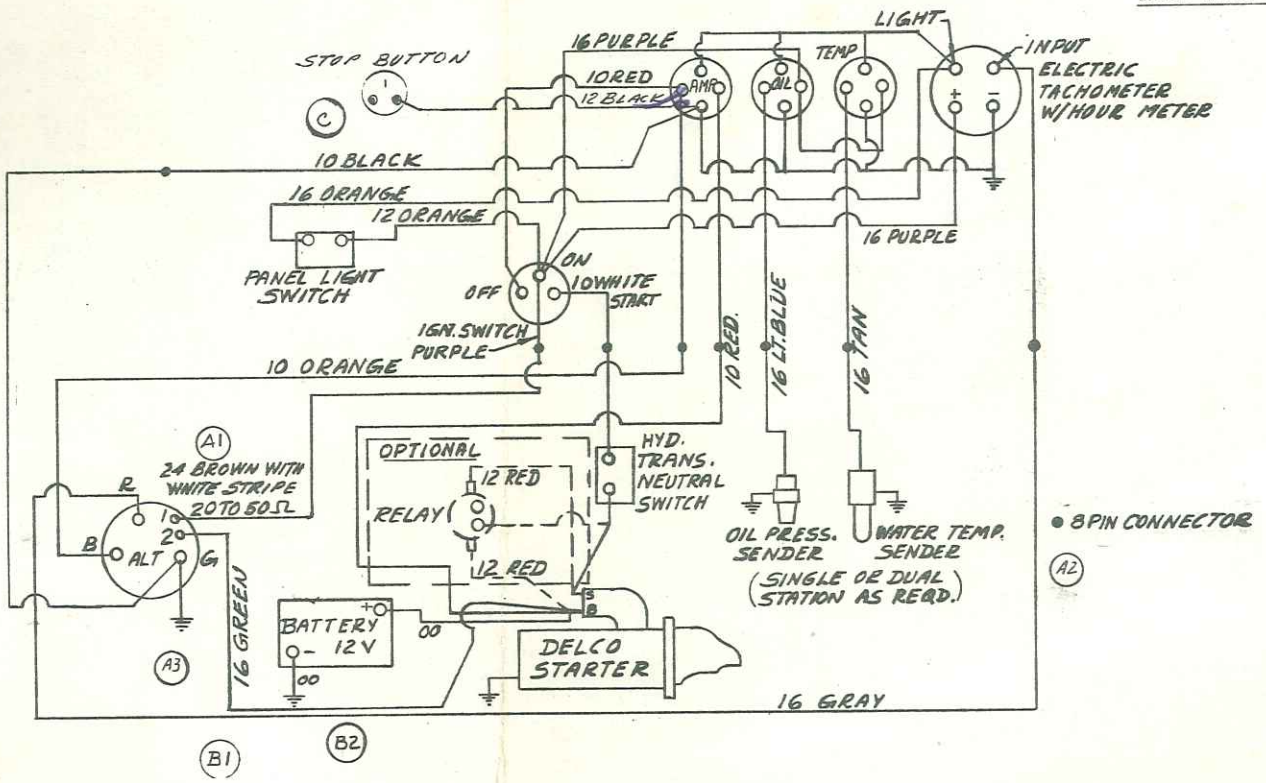
AMENDMENT No. 1427	A
A1 20-50 was 10-50 Ohms A2 Remove Single Pin Connector A3 Rerouted Green Wire was to terminal on ammeter	
AMENDMENT No. 1671	**B**
B1)Title Changed B2)Wire rerouted see Alt. Sheet for details R. Hunt Oct 29,1976	
AMENDMENT No. 1738	**C**
C1) Add Stop Button & Label Wire 12 Black R. Hunt May 31, 1977	
AMENDMENT No.	**D**
AMENDMENT No.	**E**

DRAWING NOT BE SCALED.
IF IN DOUBT — ASK.

WHIT. & B.S.F. THREADS TO BE B.S.I. SPEC. No. 84 LATEST ISSUE. UNIFIED THREADS TO BE B.S.1580 LATEST ISSUE.
HOLE CENTRES AND PITCH CIRCLE DIAMETERS TO BE WITHIN ± .008.
MACHINED DIMENSIONS (FRACTIONS & DECIMALS) TO BE WITHIN ± .015 UNLESS OTHERWISE STATED.
MACHINED ANGULAR DIMENSIONS TO BE WITHIN ± ½°
ALL DIMENSIONS IN INCHES

REMOVE ALL BURRS, SHARP CORNERS & PROCESSING RESIDUE.

THIRD ANGLE PROJECTION



WHEN PATTERN IS MODIFIED THE LATEST MASTER DRAWING NUMBER SUFFIX TO APPEAR IN A POSITION IMMEDIATELY FOLLOWING THE PATTERN OR DIE NUMBER.

TD

APPROVED FOR PROD.		
D	R.Hunt	June28,72
C		
T		
TC		
P		

M F—REF

Marine Wiring Diagram-Elec. Tach with Hour Meter, Delco Starter & 10 S.I. Alternator.

SURFACE TEXTURE SPECIFICATION TO B.S. 308 & B.S. 1134	FIRST USED ON T6.354MGT(US682)
	INTRODUCTORY ALT :—
	COMPARABLE WITH :—
√ = MACHINE	SCALE — None

PART No. & MANUFACTURERS IDENTIFICATION MARK MUST APPEAR ON ALL COMPONENTS

MATL.		PATT OR DIE No.	
SPECN.			
MATL. CODE		PRO. No.	
FORM			
TREATMENT		PART No.	NA1906

E T 268

CAL BOATS

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ENGINE OPERATION

2.57:1

Standard Engine. A Perkins 4-108 diesel with 2 to 1 reduction is installed as the standard engine in your boat. We suggest that you follow inspection and maintenance procedures provided by the Perkins Company.

Starting Your Engine

1. Make sure engine water intake valve is open. It is located under the companionway steps. Turn valve grip counterclockwise to open.

2. Check fresh water level in engine header tank. It is also accessible under the companionway steps.

3. Open fuel supply valve. It is located under the port settee and is accessible through a removable cover plate. It is open when the handle is in line with the fuel hose.

4. Select the most fully charged battery on the master switch to start the engine.

5. Pull ignition switch out for running position. This energizes the instruments.

6. Check transmission for neutral position. The lever should be in a vertical position.

7. If engine does not turn over when start button is pushed, first, make sure battery has been switched on. Second, be sure that the transmission is in neutral. A safety switch prevents starting while in gear.

ABOVE ALL, READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTIONS!

Fuel System. The 50 gallon steel fuel tank is located under the port settee and is plumbed to a chrome fuel plate on deck near the port shrouds. The best fuel for the engine is #2 light.

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Shifting Gears

1. Always return throttle to idle speed before shifting gears.
2. Always be sure what is ahead of you or behind you before you start or change directions.
3. Gear shift handle is located on the pedestal. Move the handle forward for forward gear and aft for reverse.

Stopping Engine

1. Return throttle to idle position.
2. On early models, pull knob on Bowden wire cable to kill engine. On later models, push momentary button and hold until the engine stops.
3. Shut off ignition.

Maintenance. It is very important that the engine manufacturer's maintenance instructions be followed faithfully to keep the engine in peak operating condition. The manual shipped with the engine is the best source of information.