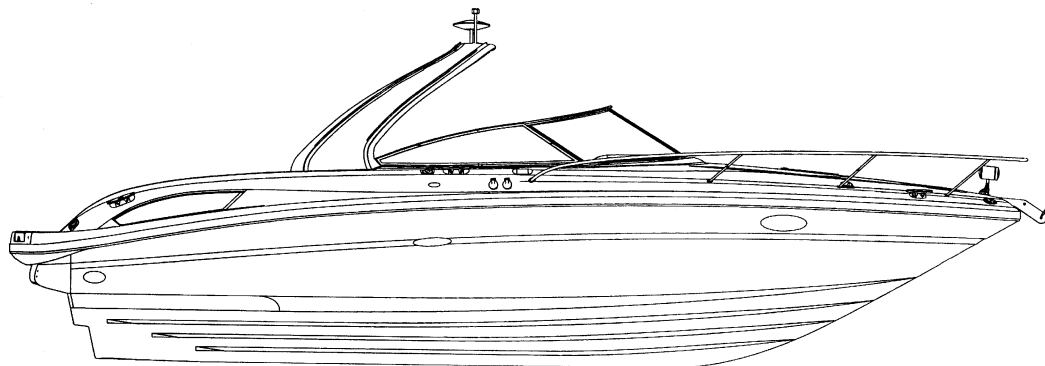


Owner's Manual Supplement

290 Sun Sport



Sea Ray

1-800-SRBOATS
www.searay.com

Sea Ray® • Owner's Manual Supplement • 290 Sun Sport • MRP #1576131

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Sea Ray Boats, Inc. 2600 Sea Ray Blvd., Knoxville, TN 37914.
For information call 1-800-SRBOATS, or fax 1-314-213-7878 Domestic/International
Internet address: <http://www.searay.com>

Note: Not all accessories shown in pictures or described herein are standard equipment or even available as options.
Options and features are subject to change without notice.



INTRODUCTION & TABLE OF CONTENTS

This owner's manual supplement has been written to provide additional specific information about your boat and should be read carefully.

The owner's manual packet has been compiled to help you to operate your craft with safety and pleasure. It contains details of the craft, the equipment supplied or fitted, its systems and information on its operation and maintenance. Please read the information in it carefully, and familiarize yourself with the craft before using it.

If this is your first craft, or you are changing to a type of craft you are not familiar with, for your own comfort and safety, please ensure that you obtain handling and operating experience before "assuming command" of the craft. Your dealer or yacht club will be pleased to advise you of local sea schools, or competent instructors.

PLEASE KEEP THIS OWNER'S MANUAL PACKET IN A SECURE PLACE, AND HAND IT OVER TO THE NEW OWNER WHEN YOU SELL THE CRAFT.

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(This book contains 60 pages.)



Information in this publication is based upon the latest product specifications available at printing. Sea Ray® Boats, Inc. reserves the right to make changes at any time, without notice, in the colors, equipment, specifications, materials and prices of all models, or to discontinue models. Should changes in production models be made, Sea Ray® is not obligated to make similar changes or modifications to models sold prior to the date of such changes.

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SUPPLEMENTAL GENERAL INFORMATION

LIFE SAVING EQUIPMENT

(PERSONAL FLOTATION DEVICE (PFD))

STORAGE: The 290 SS offers suitable storage for personal flotation devices (PFD's) under the cockpit floor storage and under the aft sun pad cushion.

OPERATION: Wear PFD according to manufacturer recommendations. See pamphlet *Federal Requirements And Safety Tips For Recreational Boats* in the owner's packet or get one from your dealer.

MAINTENANCE: Rinse with fresh water and let dry thoroughly. Do not store in a damp compartment. Avoid the possibility of mildew.

TROUBLESHOOTING

LIST OF REFERENCE MANUALS AND DRAWINGS

PERFORMANCE: Refer to "Power Capacity" in the owner's manual.

ENGINE: Refer to the owner's manual and/or the engine manual.

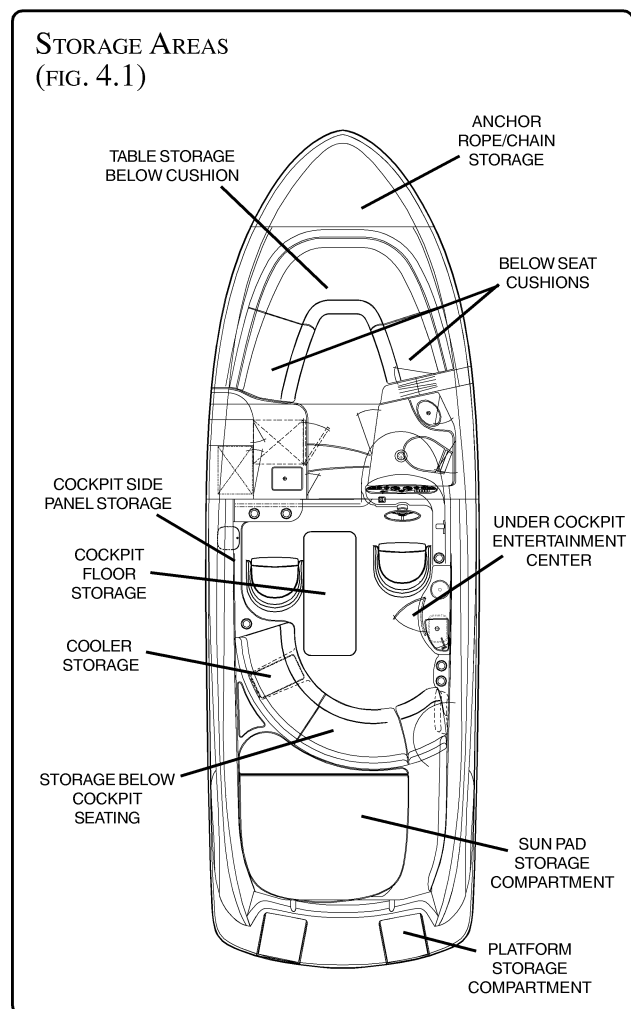
ELECTRICAL: Refer to electrical section of the owner's manual and electrical schematics in this owner's manual supplement. Only a qualified marine electrical technician may service the boat's electrical system.

REPAIR AND PARTS FACILITIES

To find a Sea Ray® dealer in your area, call Sea Ray® Customer Service, or send a fax or look on the Sea Ray® web site:

1-800-SRBOATS
FAX: 1-314-213-7878
Web Site: www.searay.com

To find repair and parts facilities for equipment installed on your boat, refer to the original equipment manuals (OEM's) found in the owner's manual packet.



DOCKING/LIFTING/TRAILERING



CLEATS: Cleats must not be used for lifting the boat, they are intended for mooring use only.



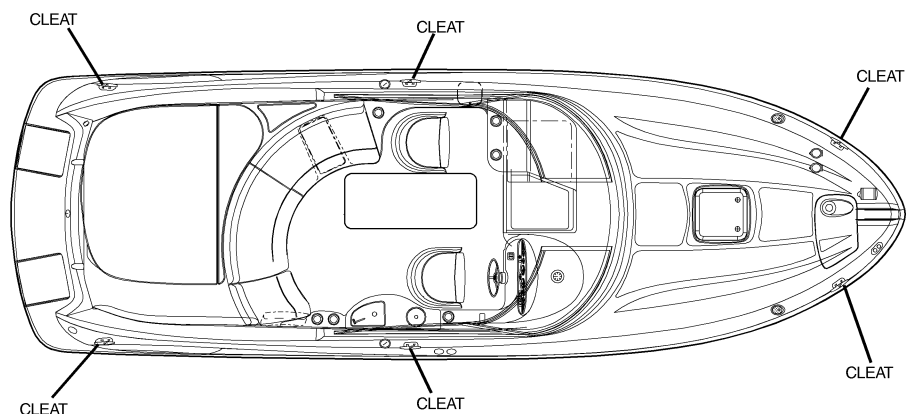
BOW AND STERN EYES: The bow eye should be used to haul the boat onto a trailer. The stern eyes should be used as tie down points for trailering the boat. The bow and stern eyes may be used for short term lifting of the boat such as for service. Long term lifting with

the bow and stern eyes may cause stress on the fiberglass and gel coat.

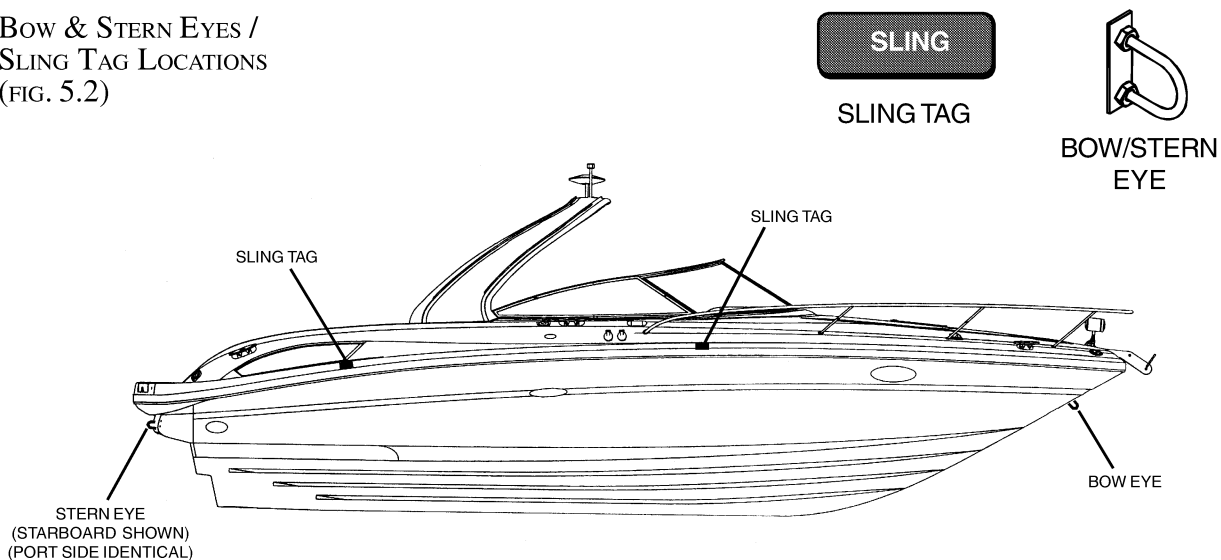
SLING

For long term storage use flat, wide belt-type slings and spreaders long enough to keep pressure from gunwales. Do not place slings where they may lift on underwater fittings. When slings are used for lifting the boat, they should be positioned at the "SLING" tag locations on the sides of the hull.

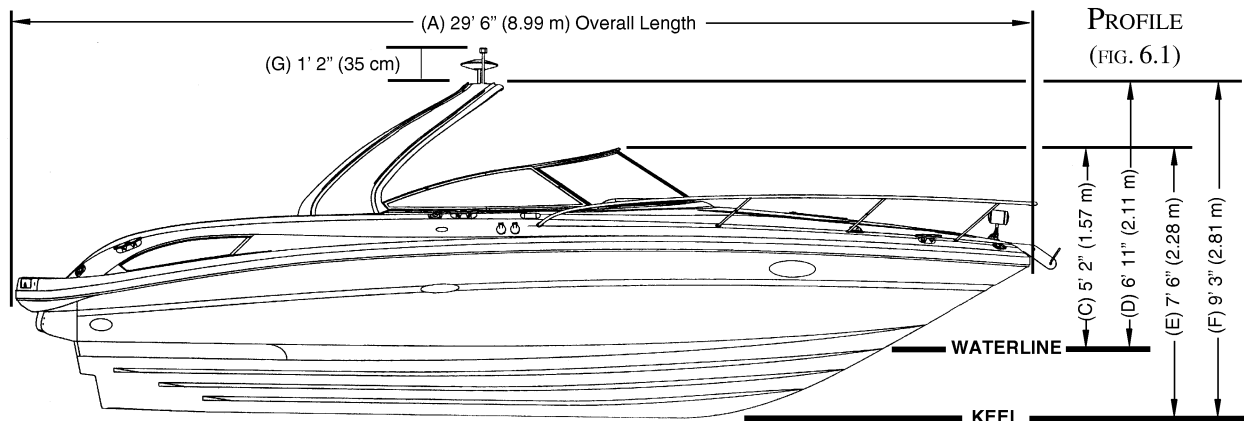
CLEAT LOCATIONS
(FIG. 5.1)



BOW & STERN EYES /
SLING TAG LOCATIONS
(FIG. 5.2)



GENERAL ARRANGEMENTS & DIMENSIONS

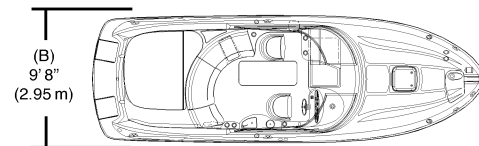


290 SS SPECIFICATIONS

(A) Overall Length	29' 6" (8.99 m)
(B) Beam	9' 8" (2.95 m)
Draft (Stern Drive Down)	40" (101.6 cm)
Draft (Stern Drive Up)	25" (63.5 cm)
Draft (Twin Stern Drive Down)	37" (94.0 cm)
Draft (Twin Stern Drive Up)	26" (66.0 cm)
Dry Weight (lbs.)	8,000 (3,629 kg)
Fuel Capacity (gal.)	130 (492.1 liters)
Usable Fuel (gal.)	123.5 (467 liters)
Water Capacity (gal.)	24 (90.8 liters)
Holding Tank (gal.)	20 (75.7 liters)
Dead Rise	21°

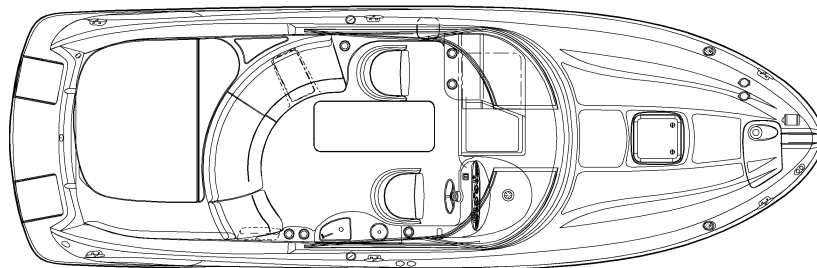
HEIGHT DIMENSIONS

(C) Waterline To Top Of Windshield	5' 2" (1.57 m)
(D) Waterline To Top Of Arch	6' 11" (2.11 m)
(E) Keel To Top Of Windshield	7' 6" (2.28 m)
(F) Keel To Top Of Arch	9' 3" (2.81 m)



(FIG. 6.2)

INTERIOR SEATING PLAN



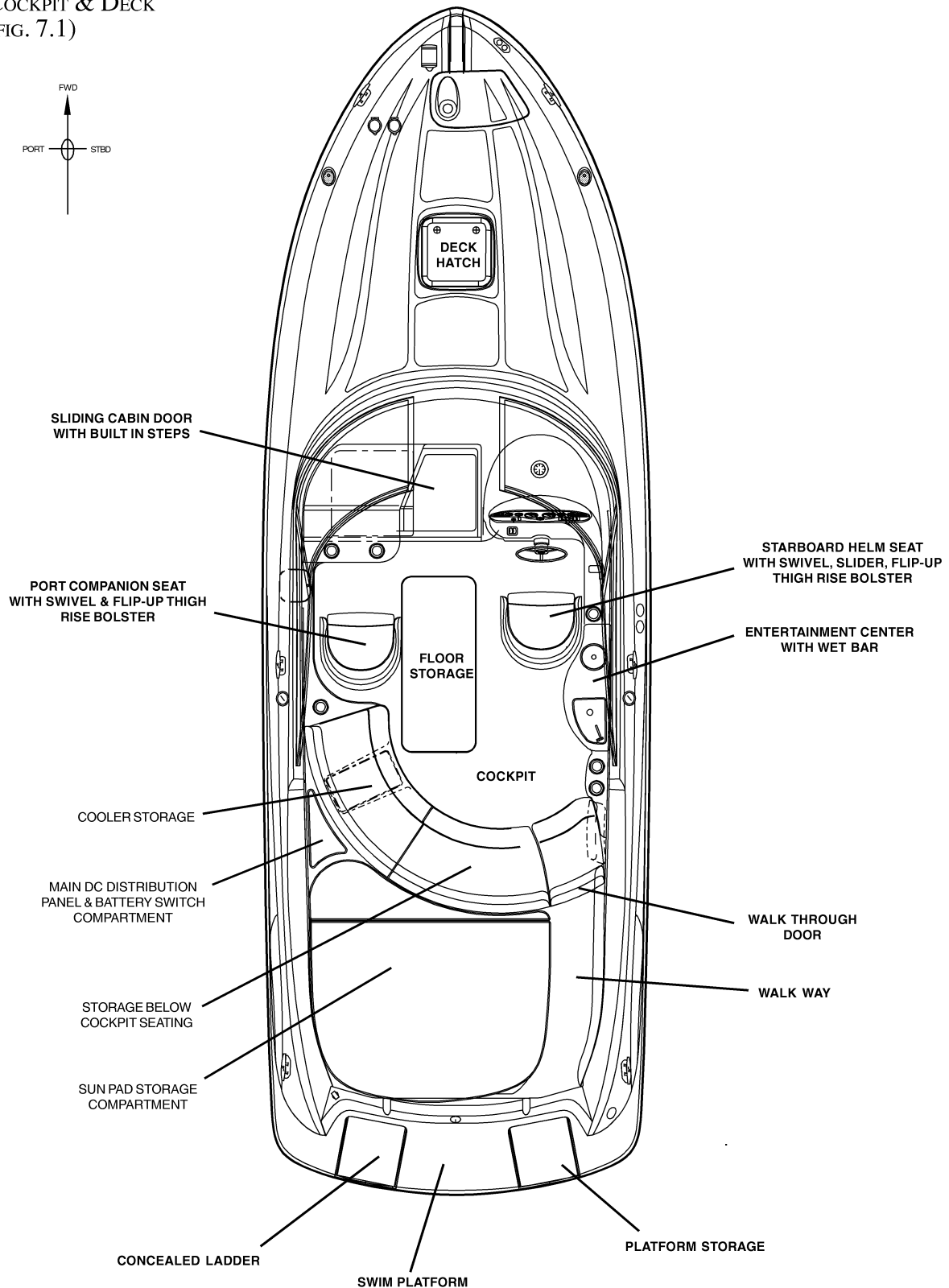
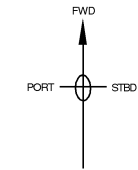
Starboard Double Helm Seat w/Flip-Up Thigh-Rise Bolster, Port Back-to-Back Lounger - Adjustable w/Flip-Up Thigh-Rise Bolster, Bow Rider Loungers, Aft Circular w/Sun Pad Filler Cushions

(FIG. 6.3)



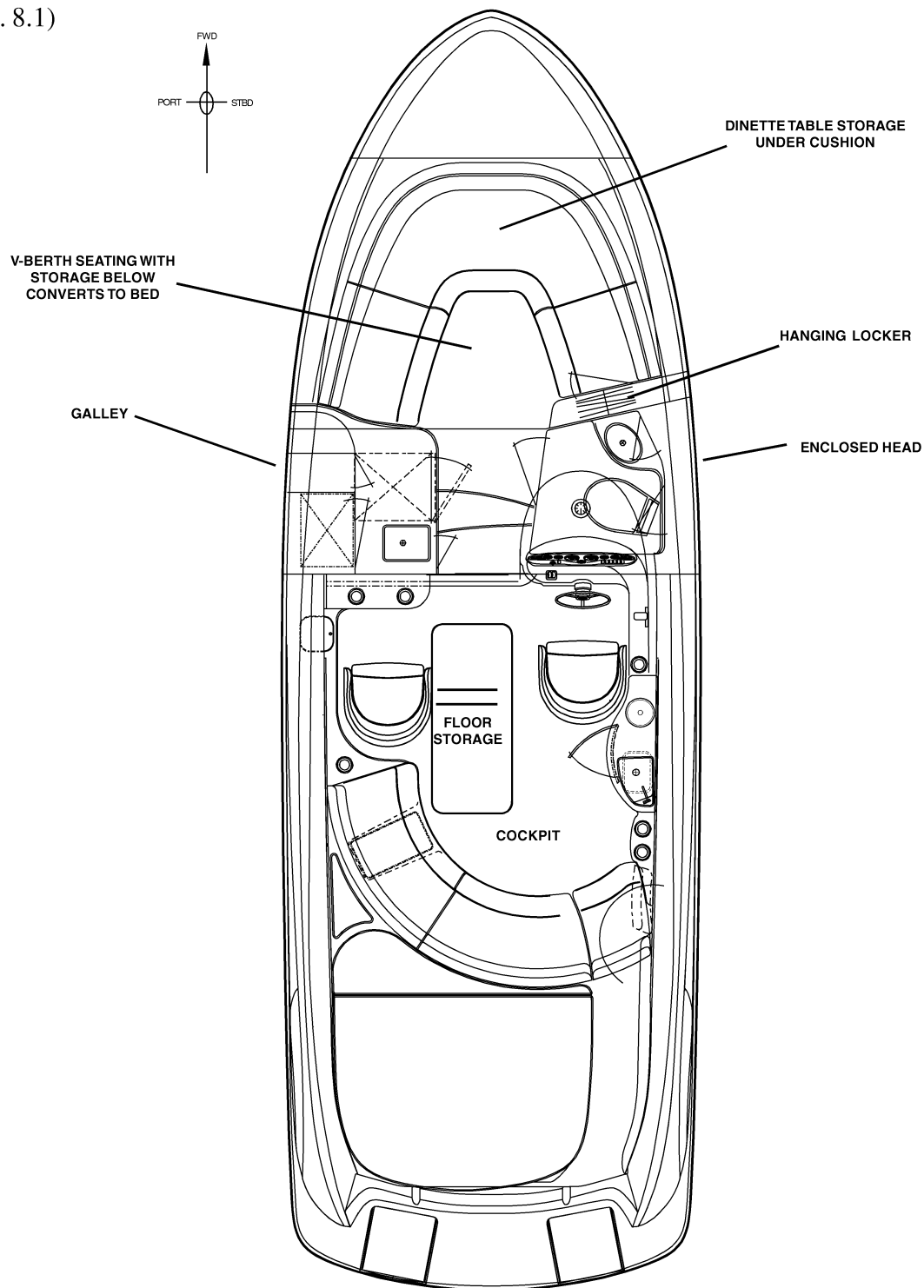
ACCOMMODATION PLAN

COCKPIT & DECK
(FIG. 7.1)



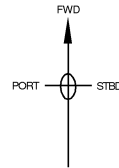
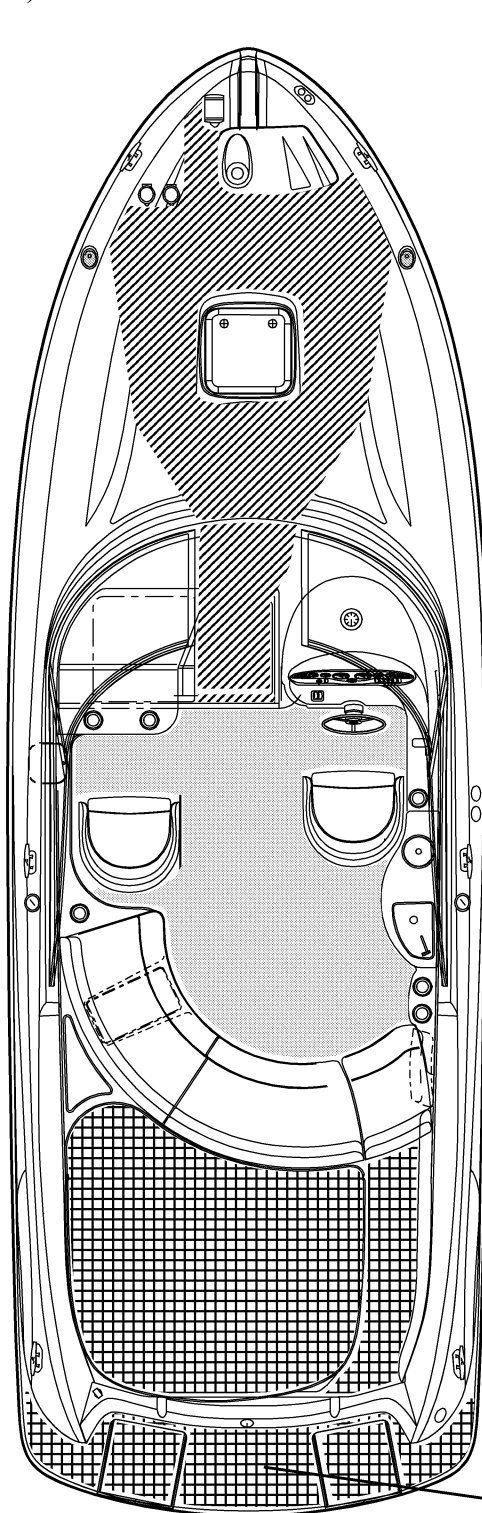
ACCOMMODATION PLAN (CONTINUED)

COCKPIT & CABIN
(FIG. 8.1)



DECK OCCUPANCY PLAN

(FIG. 9.1)

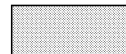


WARNING

SLIPPING HAZARD - Wet decks are slippery. Wear proper footwear and use extreme caution on wet surfaces.

WARNING

PERSONAL INJURY HAZARD
When underway, keep occupants clear of areas not designed for riding. Especially hazardous areas include seat backs, bow, gunwale, transom platform and fore and aft decks.



ACCOMMODATION DECK
(DECK AREA INTENDED FOR OCCUPATION WHILE UNDERWAY.)



WORKING DECK
(DECK AREA INTENDED FOR OCCUPATION DURING ANCHORING, MOORING AND EMERGENCY OPERATION ONLY)



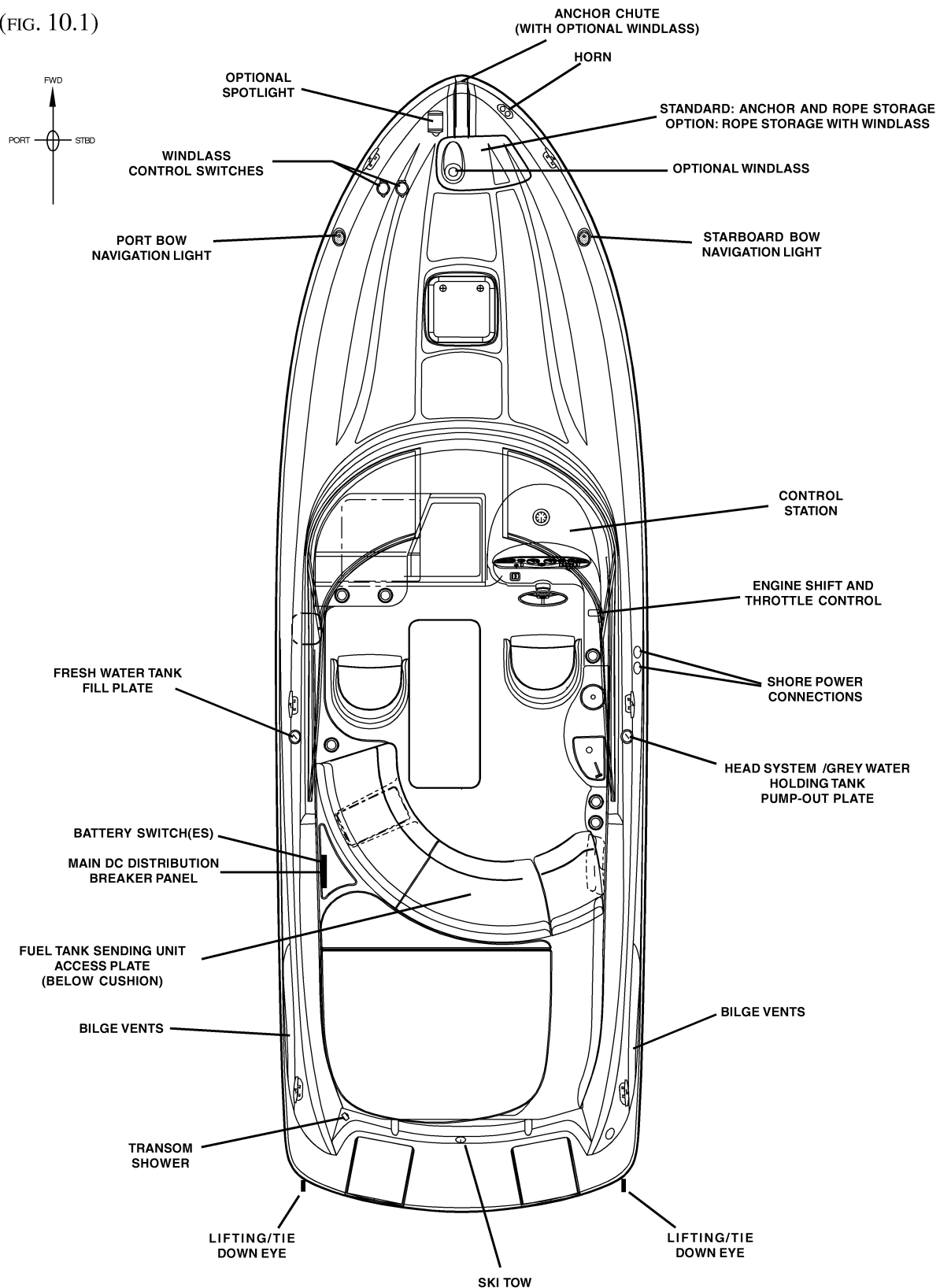
WORKING / RECREATION DECK
(USE EXTREME CAUTION! THIS AREA IS INTENDED FOR OCCUPATION DURING MOORING OPERATION WITH ENGINE IDLING AND FOR RECREATION USE WITH ENGINE OFF. DO NOT WALK ON OR OCCUPY THIS AREA WHEN BOAT IS MOVING ABOVE IDLE SPEED.)

DANGER

TO AVOID RISK OF SERIOUS INJURY OR DEATH SHUT OFF ENGINE WHEN NEAR SWIMMERS OR PRIOR TO USING SWIM PLATFORM AND BOARDING LADDER.

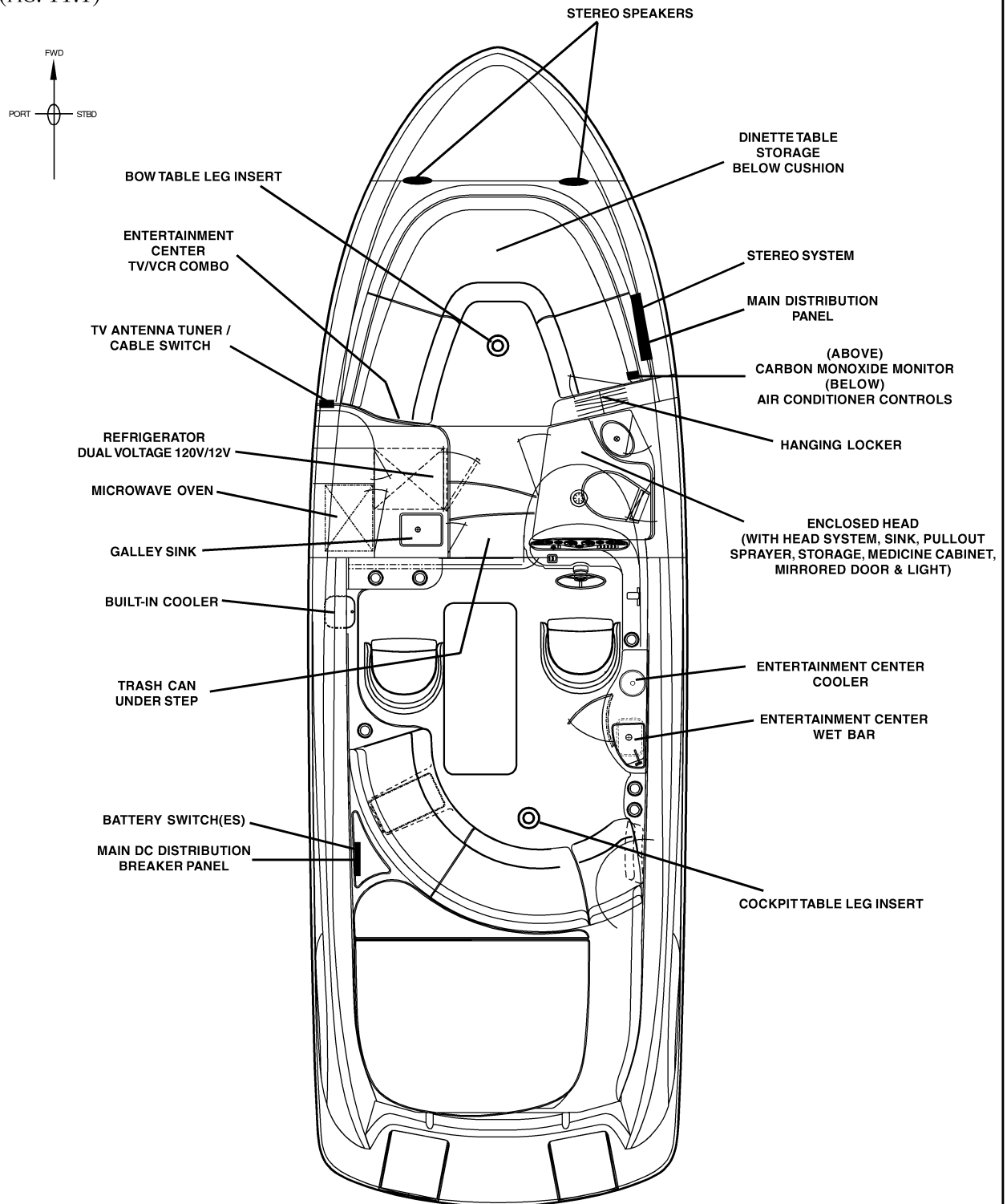
ACCESSORY LOCATIONS

(FIG. 10.1)



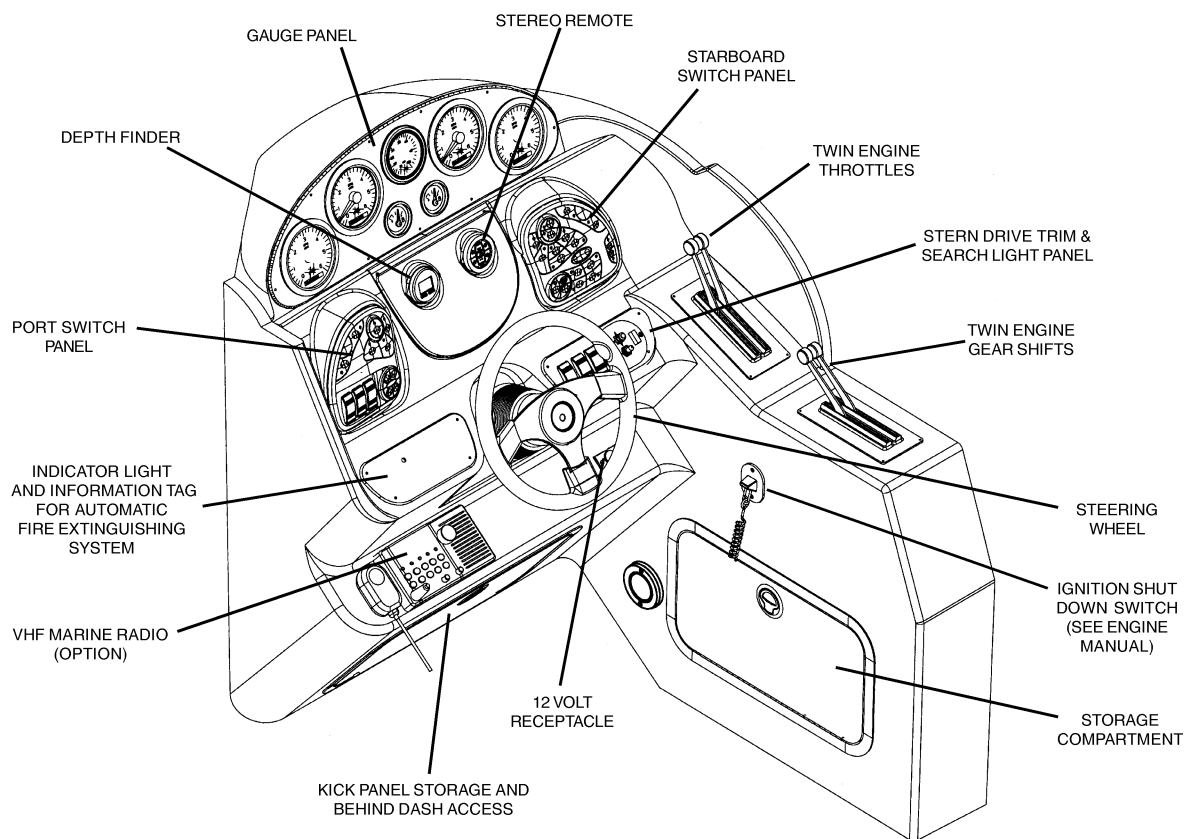
ACCESSORY LOCATIONS (CONTINUED)

(FIG. 11.1)

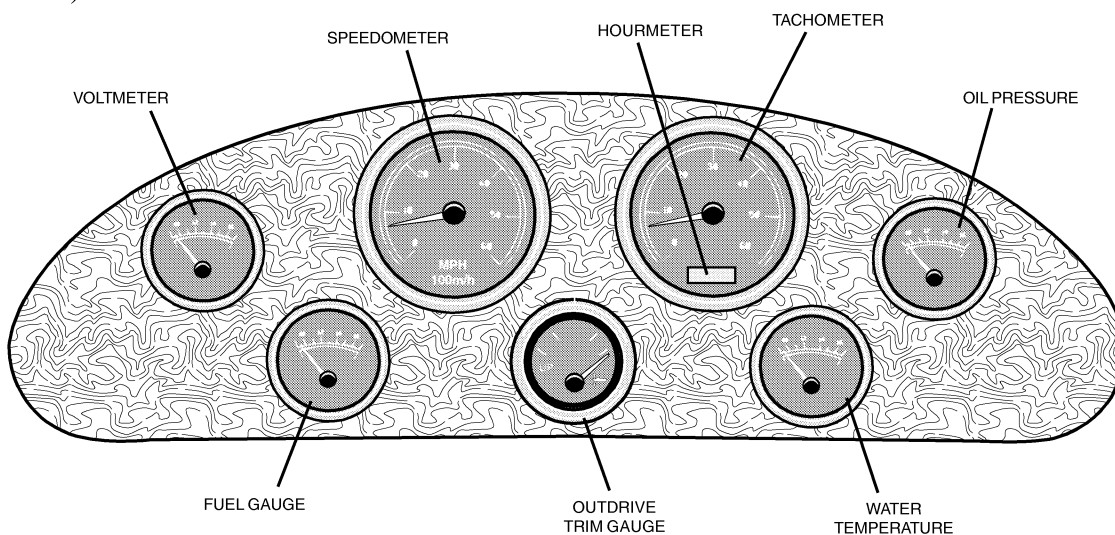


DASH LAYOUT

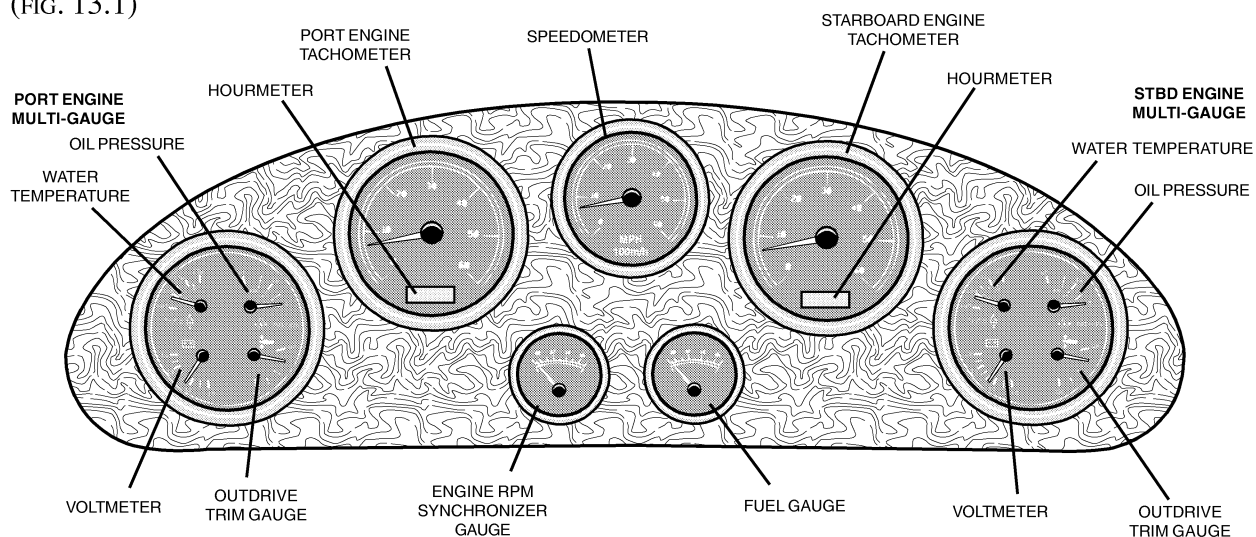
(FIG. 12.1)



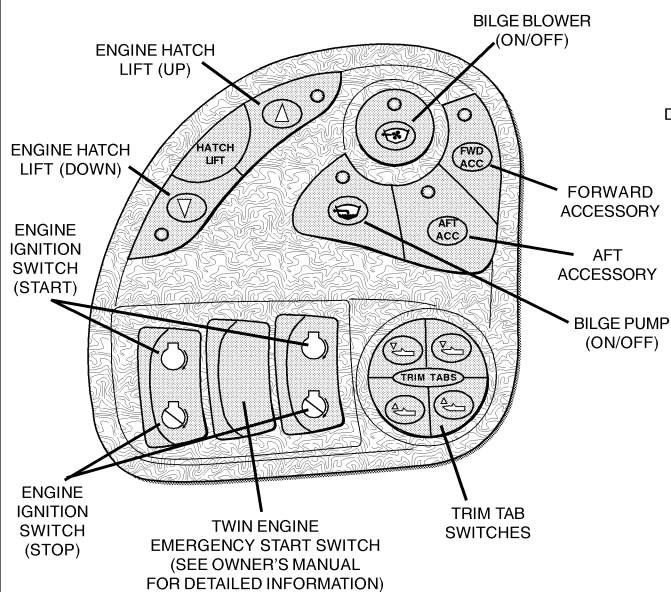
SINGLE ENGINE GAUGE PANEL
(FIG. 12.2)



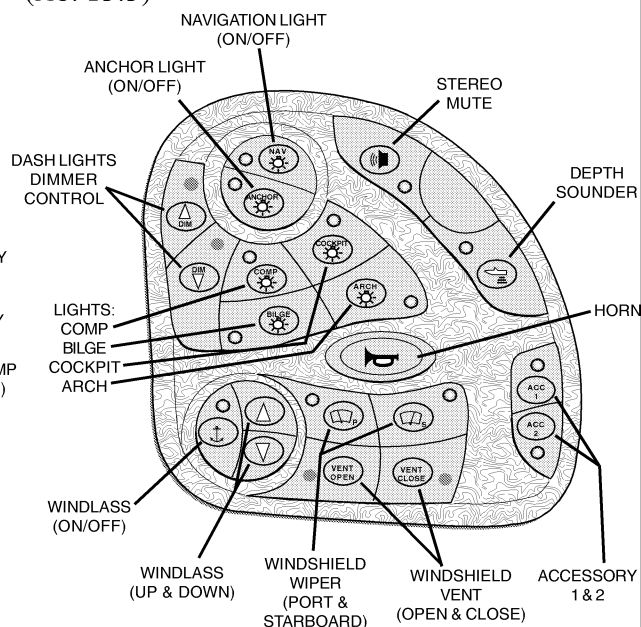
TWIN ENGINE GAUGE PANEL
(FIG. 13.1)



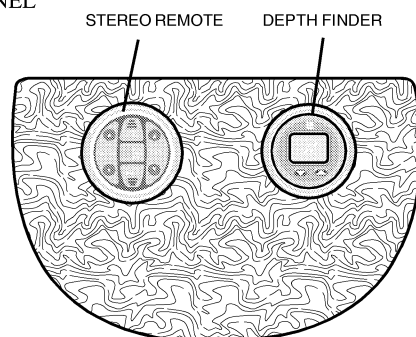
PORT SWITCH PANEL
(FIG. 13.2)



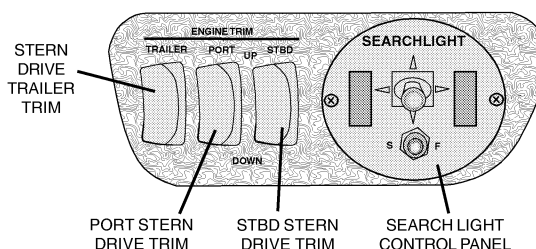
STARBOARD SWITCH PANEL
(FIG. 13.3)



CENTER PANEL
(FIG. 13.4)

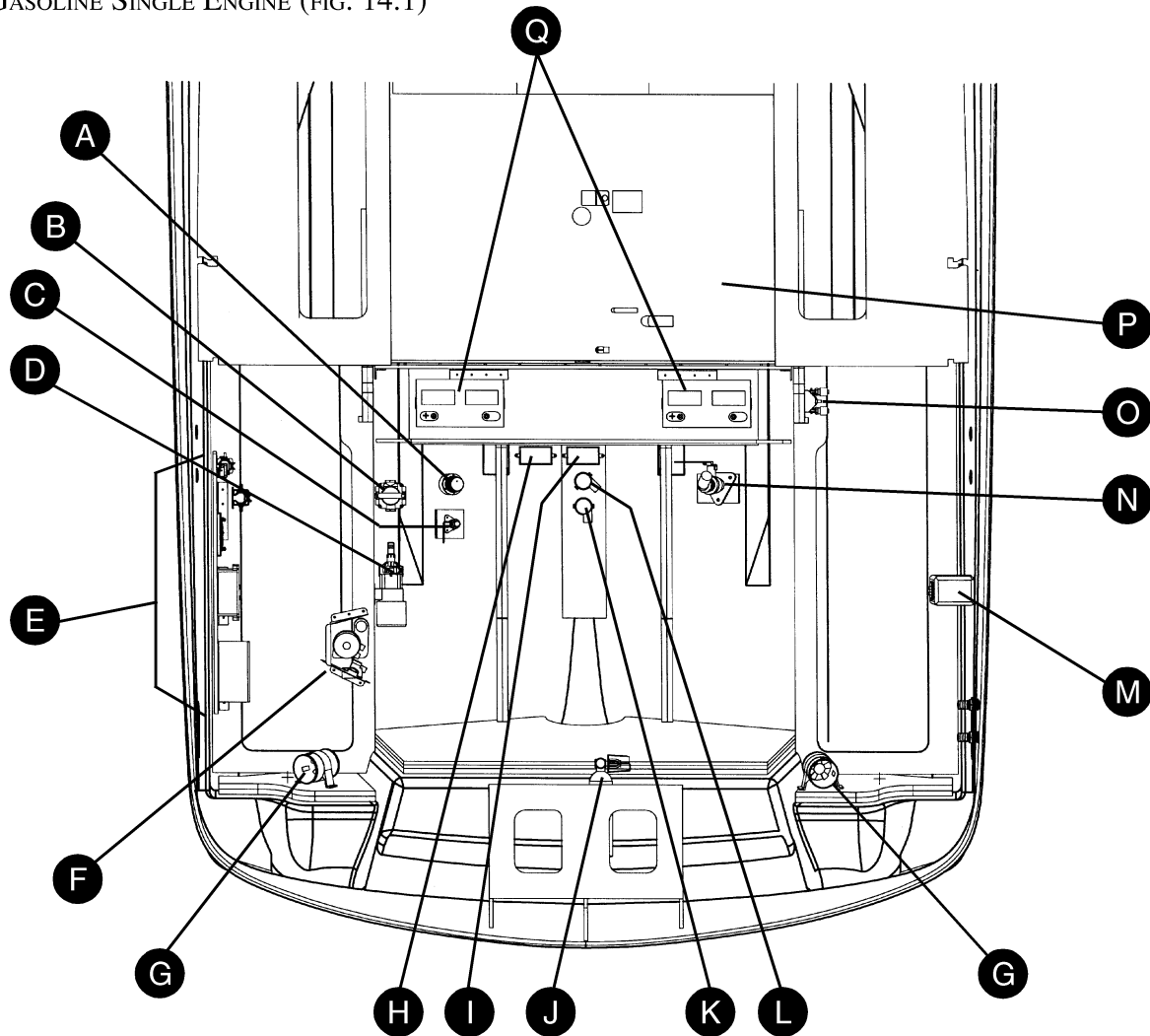


STERN DRIVE TRIM & SEARCH LIGHT PANEL (FIG. 13.5)



ENGINE COMPARTMENT LAYOUT

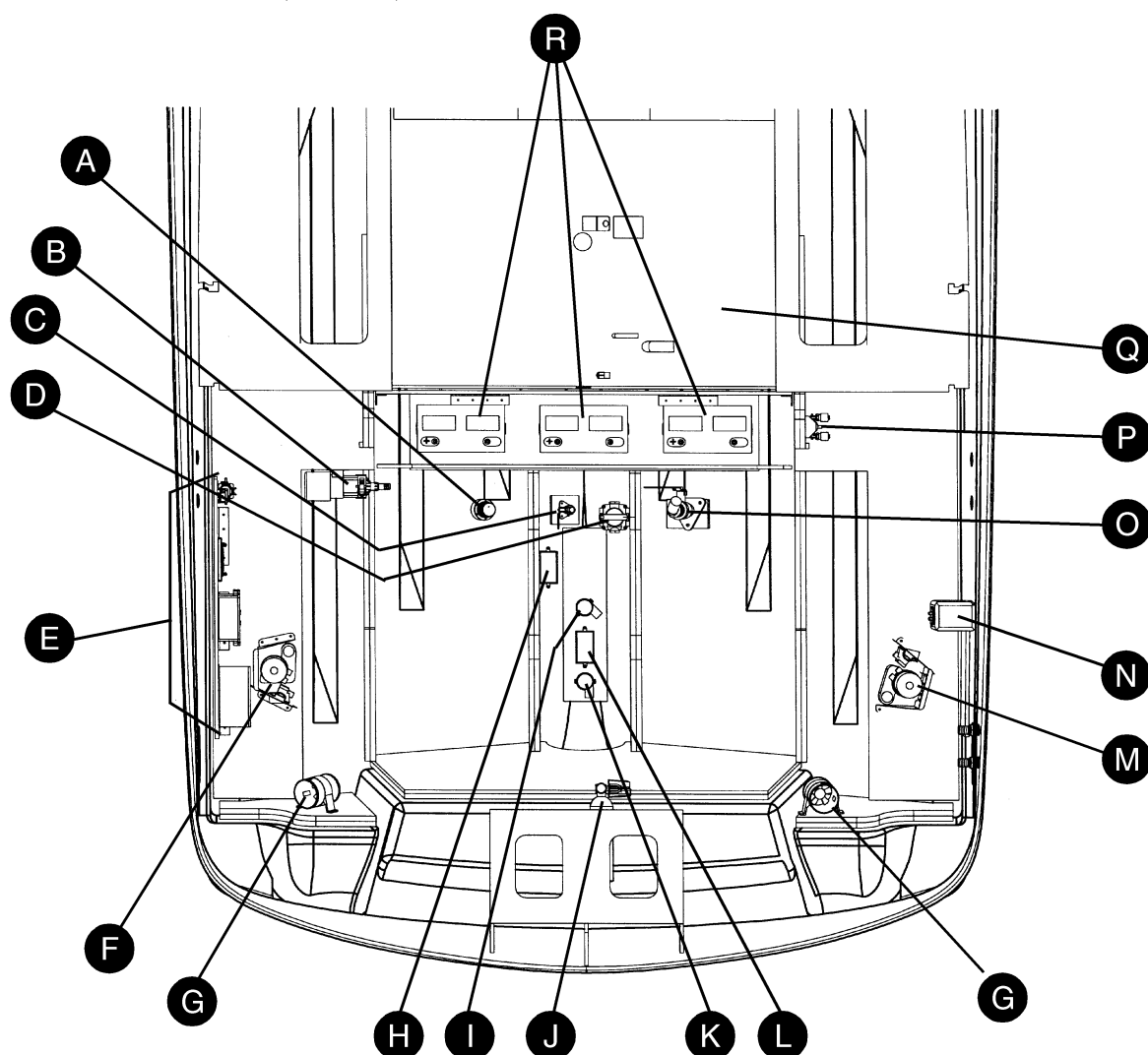
GASOLINE SINGLE ENGINE (FIG. 14.1)



- | | |
|---|---|
| A: TRANSDUCER | I: BILGE PUMP FLOAT SWITCH |
| B: AIR CONDITIONER STRAINER
(OPTION) | J: AUTOMATIC FIRE EXTINGUISHER |
| C: AIR CONDITIONER SEACOCK
(OPTION) | K: HIGH WATER BILGE PUMP |
| D: AIR CONDITIONER WATER PUMP
(OPTION) | L: BILGE PUMP |
| E: BILGE COMPONENT BOARD | M: TRIM TAB PUMP |
| F: STERN DRIVE POWER TRIM PUMP | N: HEAD SYSTEM OVERBOARD DISCHARGE
SEACOCK |
| G: BILGE BLOWER | O: ELECTRIC FUEL VALVE |
| H: HIGH WATER BILGE PUMP FLOAT
SWITCH | P: FUEL TANK |
| | Q: BATTERIES |



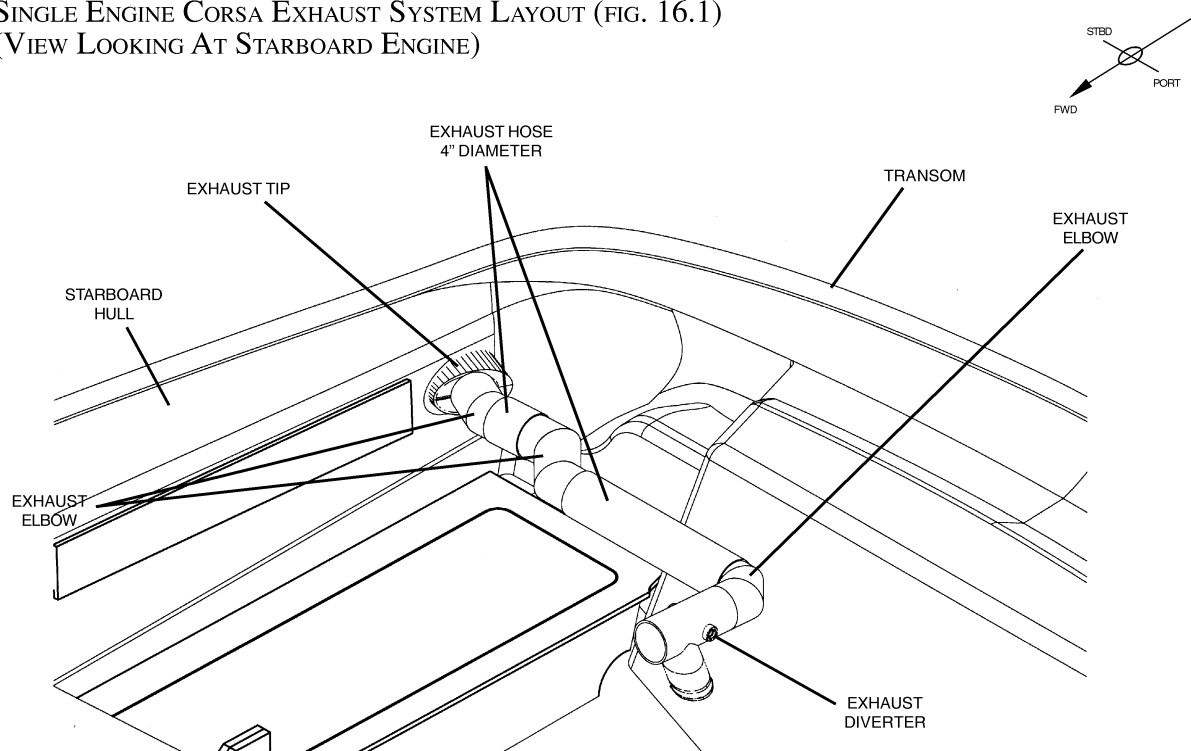
GASOLINE TWIN ENGINE (FIG. 15.1)



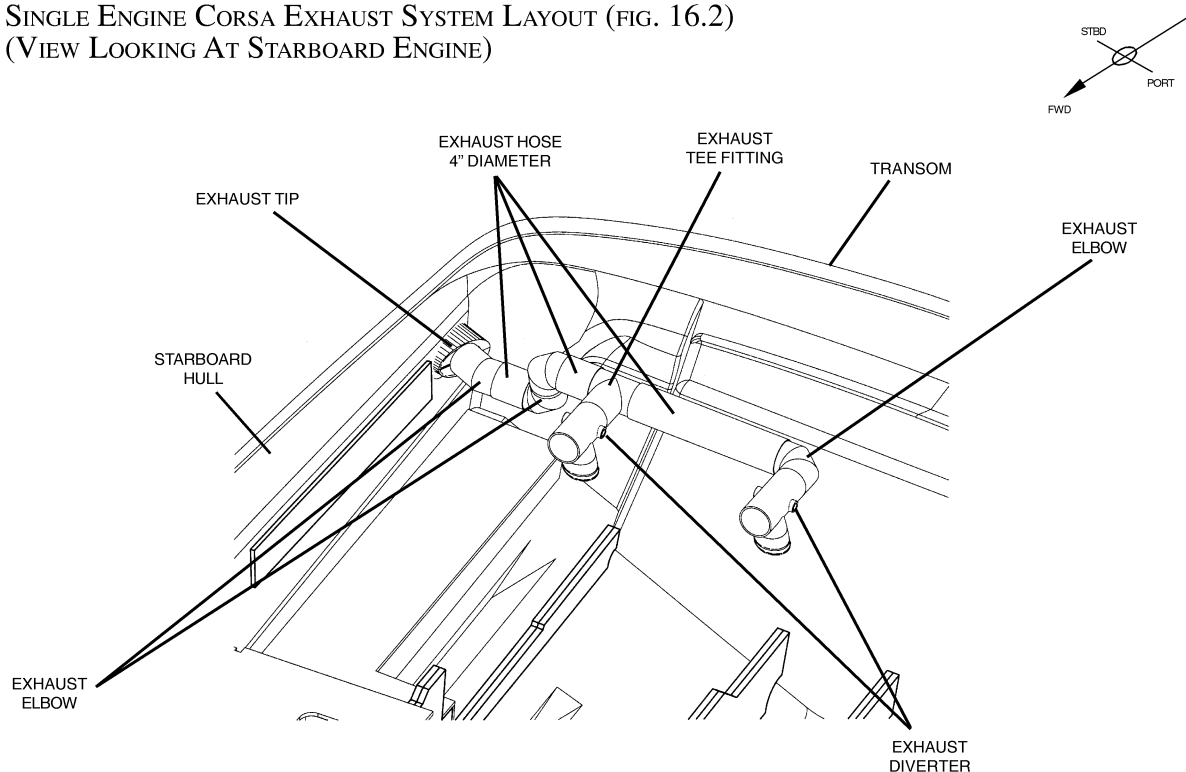
- | | |
|--|--|
| A: TRANSDUCER | I: HIGH WATER BILGE PUMP |
| B: AIR CONDITIONER WATER PUMP (OPTION) | J: AUTOMATIC FIRE EXTINGUISHER |
| C: AIR CONDITIONER SEACOCK (OPTION) | K: BILGE PUMP |
| D: AIR CONDITIONER STRAINER (OPTION) | L: BILGE PUMP FLOAT SWITCH |
| E: BILGE COMPONENT BOARD | M: STARBOARD STERN DRIVE POWER TRIM PUMP |
| F: PORT STERN DRIVE POWER TRIM PUMP | N: TRIM TAB PUMP |
| G: BILGE BLOWER | O: HEAD SYSTEM OVERBOARD DISCHARGE SEACOCK |
| H: HIGH WATER BILGE PUMP FLOAT SWITCH | P: ELECTRIC FUEL VALVE |
| | Q: FUEL TANK |
| | R: BATTERIES |

OPTIONAL CORSA EXHAUST SYSTEM LAYOUT

SINGLE ENGINE CORSA EXHAUST SYSTEM LAYOUT (FIG. 16.1)
(VIEW LOOKING AT STARBOARD ENGINE)



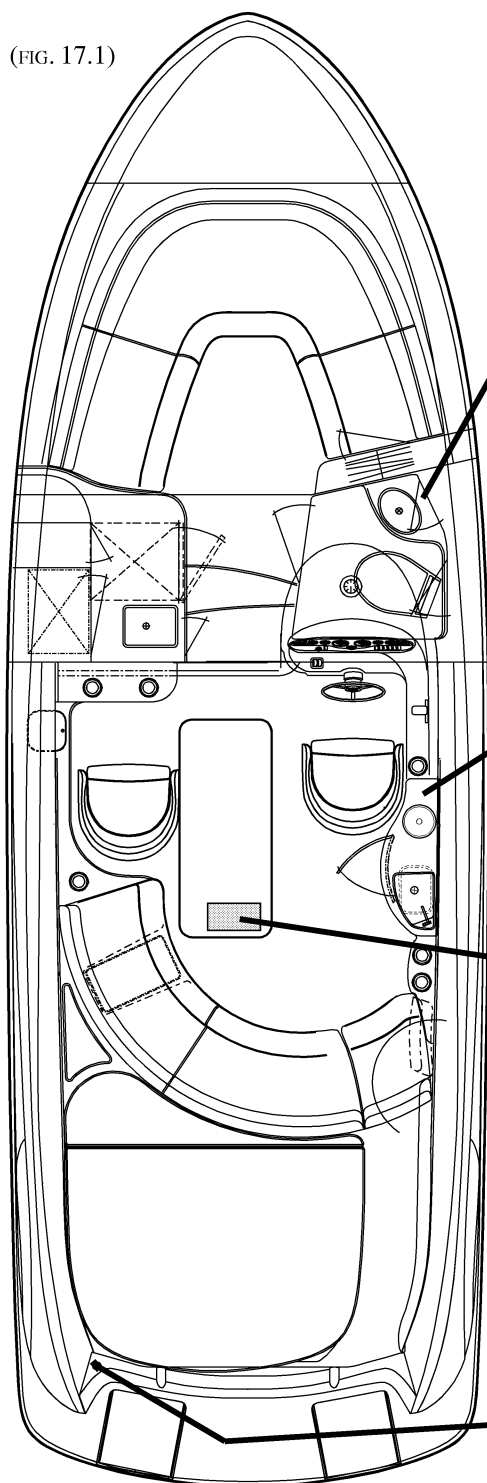
SINGLE ENGINE CORSA EXHAUST SYSTEM LAYOUT (FIG. 16.2)
(VIEW LOOKING AT STARBOARD ENGINE)



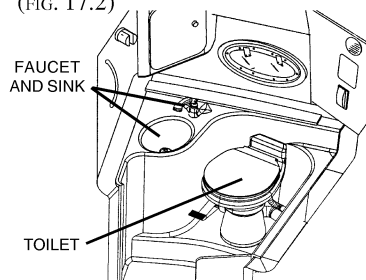
WATER SYSTEM

The water system on your Sea Ray® Sport Cruiser is equipped with a cockpit entertainment center wet bar, transom shower pullout sprayer and freshwater washdown spigot.

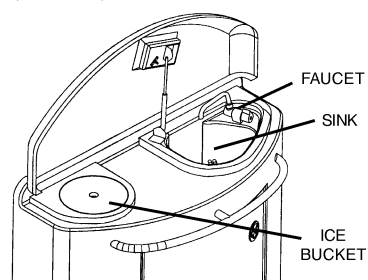
(FIG. 17.1)



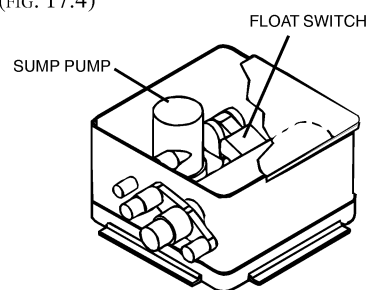
HEAD FAUCET AND TOILET
(FIG. 17.2)



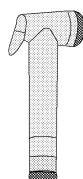
ENTERTAINMENT CENTER WET BAR
(FIG. 17.3)



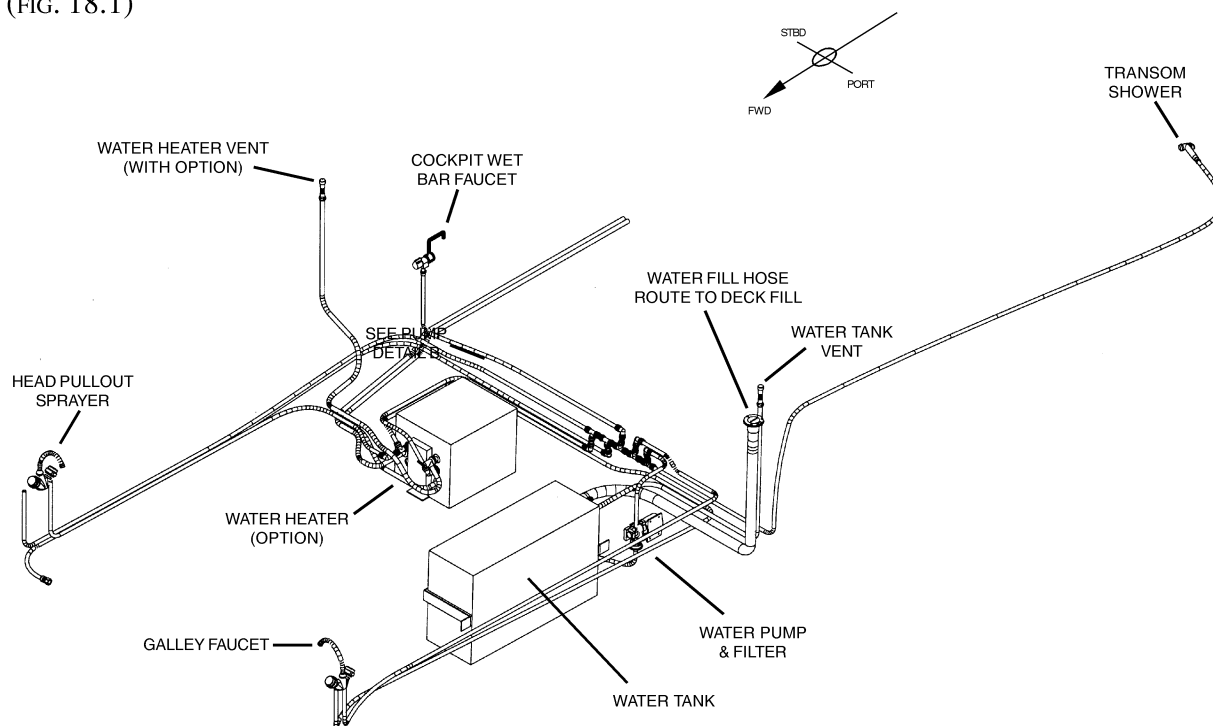
GREY WATER SUMP
(LOCATED BELOW AFT END OF COCKPIT HATCH)
(FIG. 17.4)



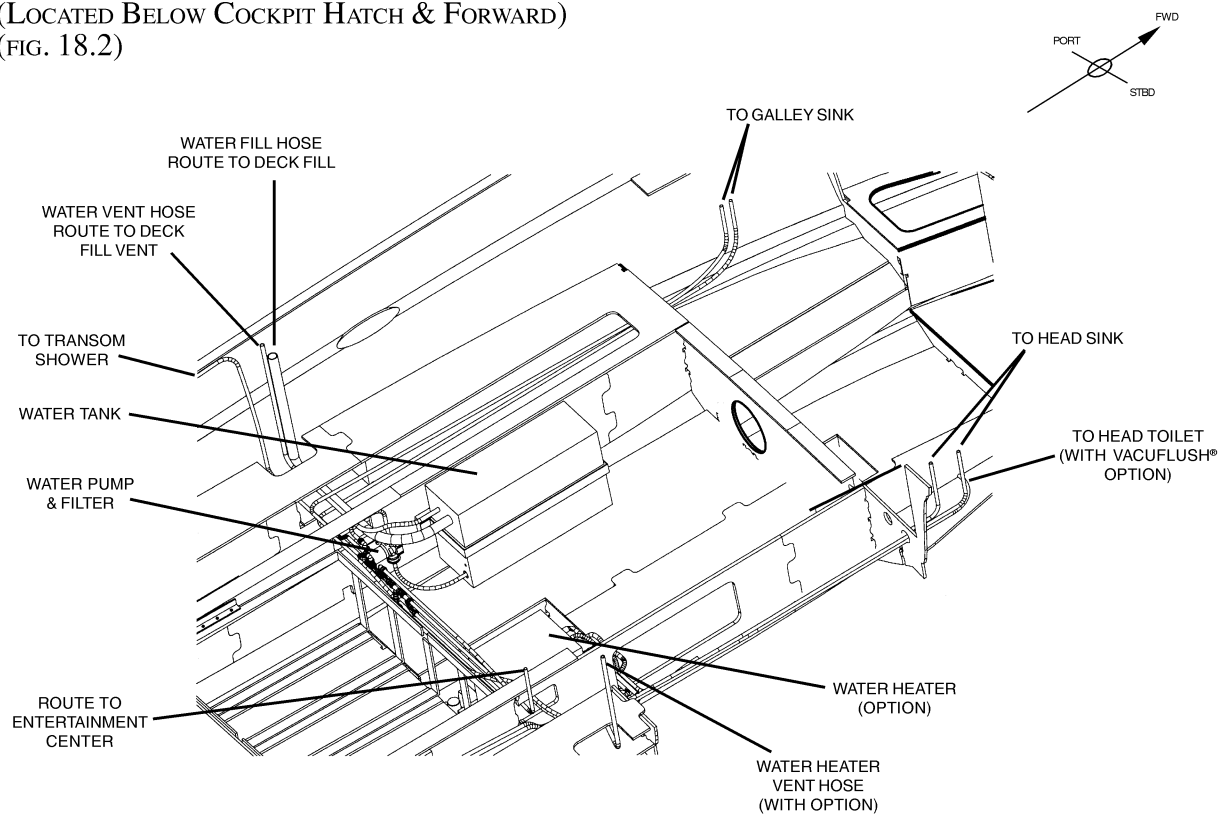
(FIG. 17.5)
TRANSOM SHOWER



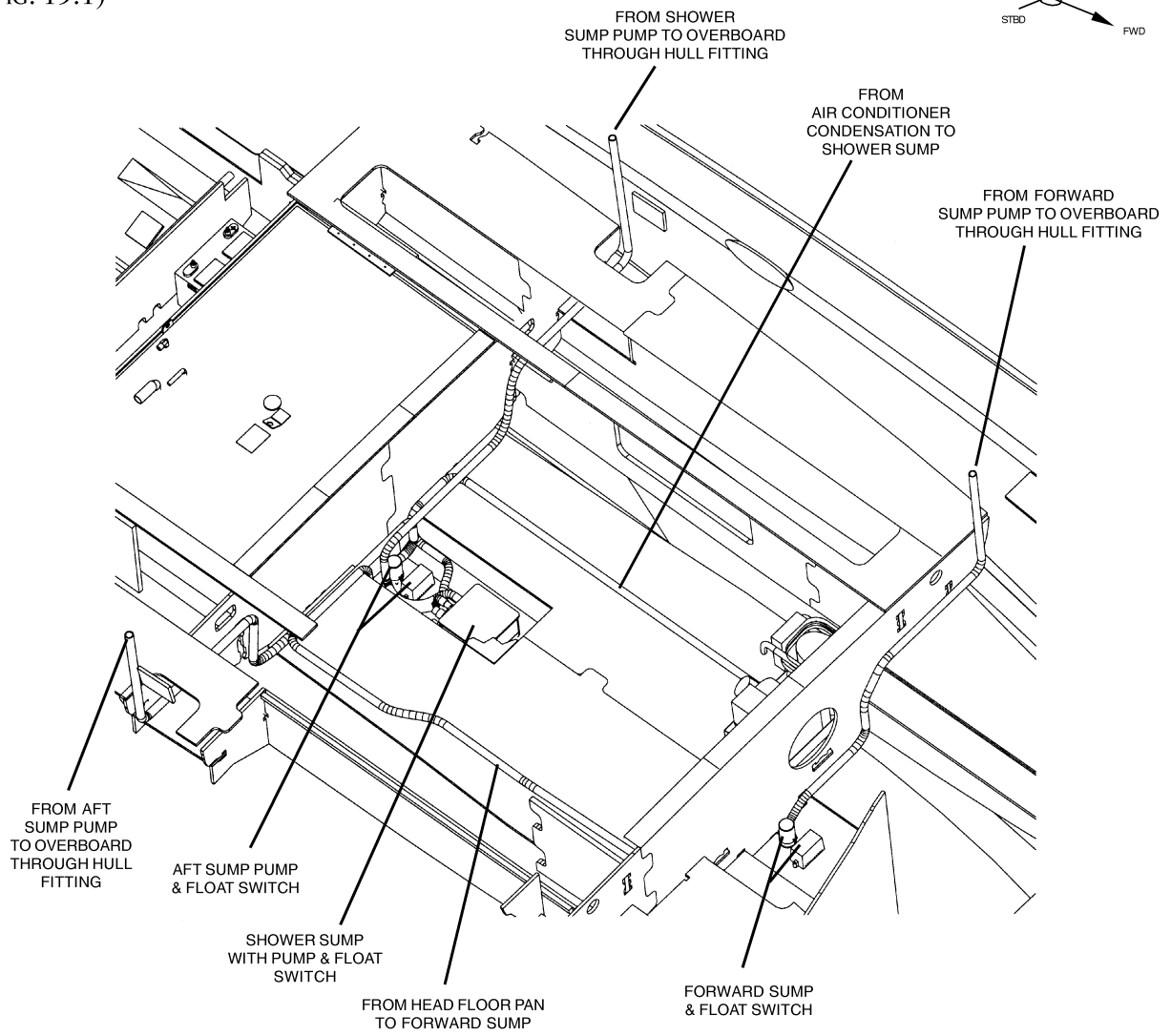
WATER SYSTEM (FIG. 18.1)



WATER SYSTEM TANK LOCATION & HOSE ROUTING (LOCATED BELOW COCKPIT HATCH & FORWARD) (FIG. 18.2)



SUMP HOSE ROUTING
(FIG. 19.1)

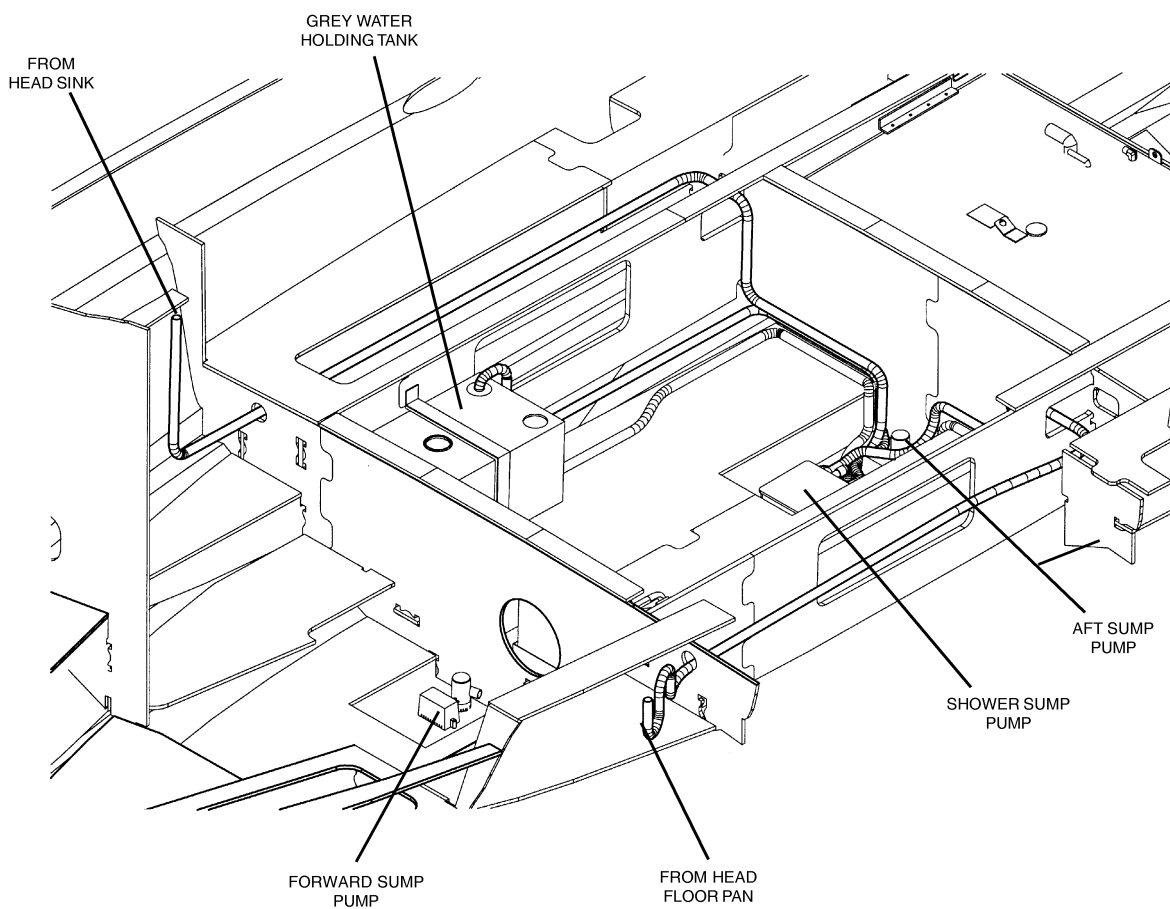


GREY WATER SYSTEM (OPTION)

The grey water system option is available for boats operating in areas with overboard discharge restrictions. The grey water system drains all water into the enclosed sump where it is pumped into a holding tank. If

you are operating your boat in areas with discharge restrictions the holding tank must be emptied at a pump-out station. Refer to the *Grey Water* section in the owner's manual.

GREY WATER SYSTEM LINE ROUTING (OPTION)
(LOCATED BELOW COCKPIT HATCH)
(FIG. 20.1)



HEAD SYSTEM

Carefully read the sections in your Owner's Manual that pertain to your head system. The Owner's Packet in your boat also contains information pertaining to your head system that should be carefully read.

Standard Head System: The standard head system on your Sea Ray® Sport Cruiser is the Vacu-Flush® Head With holding tank.

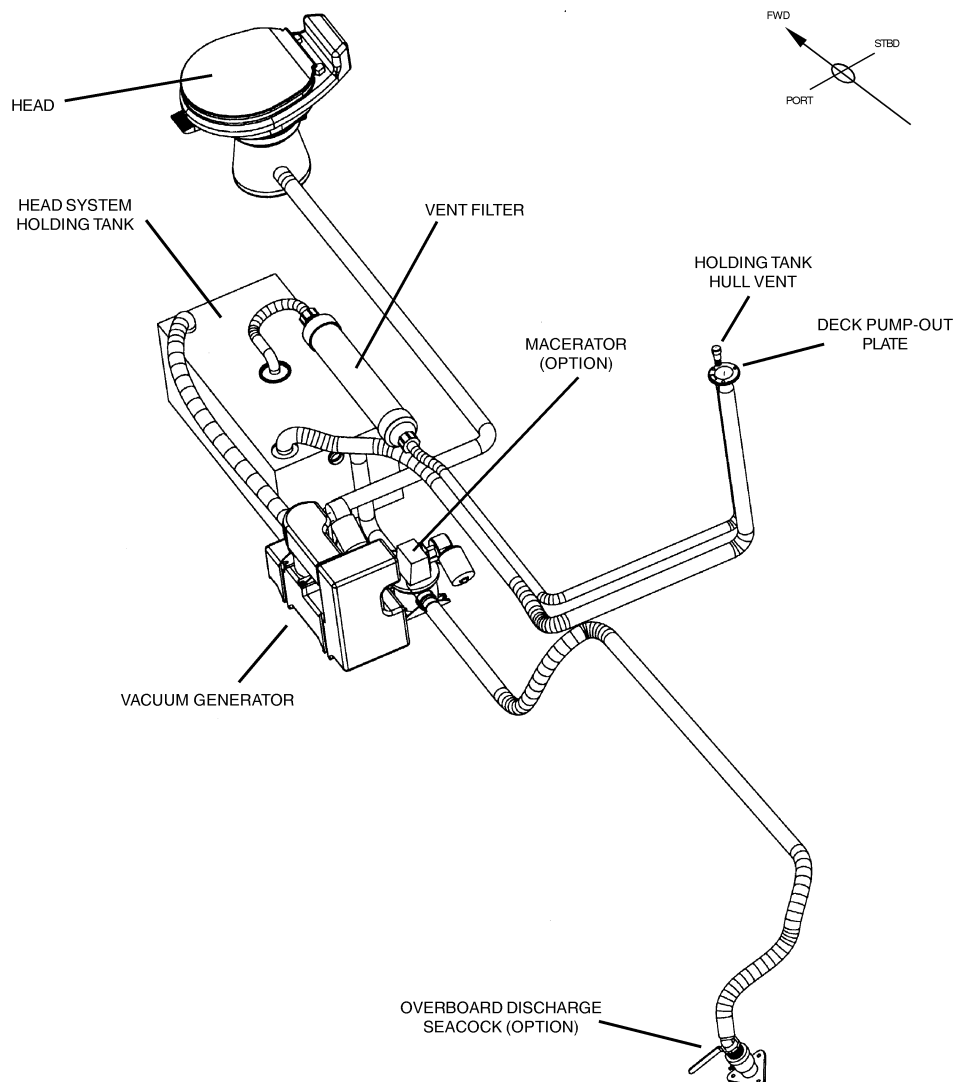
REFER TO OWNER'S MANUAL AND OWNER'S PACKET FOR INSTRUCTIONS AND WARRANTY INFORMATION.



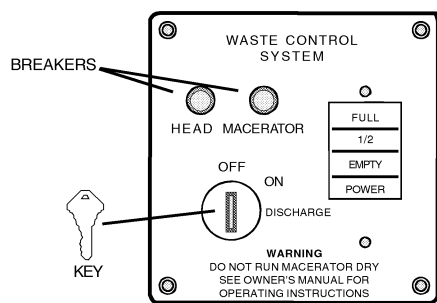
CAUTION

Do not place facial tissue, paper towels or sanitary napkins in head.

HEAD SYSTEM LINE ROUTING
(FIG. 21.1)



WASTE CONTROL SYSTEM PANEL (FIG. 22.1)



2. Turn discharge key on Waste Control System Panel in the head to DISCHARGE position
3. When tank is empty, release the switch and close the macerator seacock.

Seacock Interlock System

The macerator seacock is equipped with an interlock switch. The seacock must be in the opened position for the macerator to operate.

MACERATOR (OPTIONAL)

When the 290 SS is equipped with the optional macerator it is located adjacent to the vacuum generator, (See FIG. 18.1). Refer to *Head System* section of the owner's manual for detailed macerator information.

To Operate The Macerator:

1. Open the overboard discharge seacock on the bilge floor, (See FIG. 19.1).

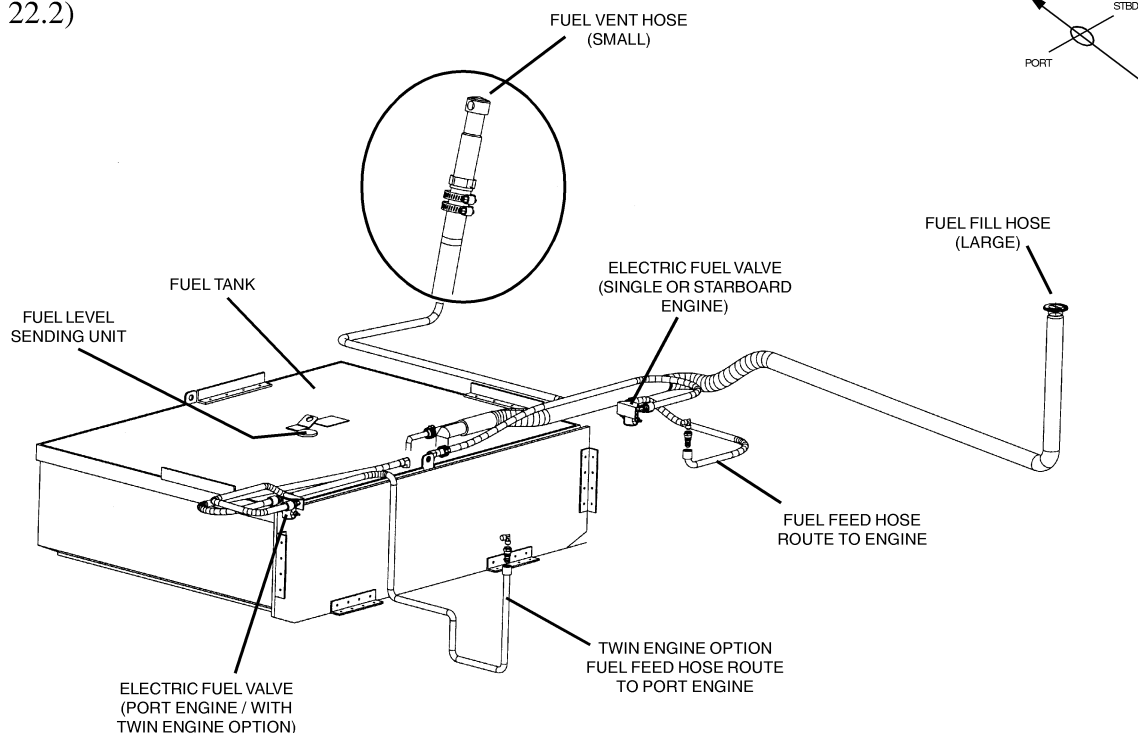
FUEL SYSTEM



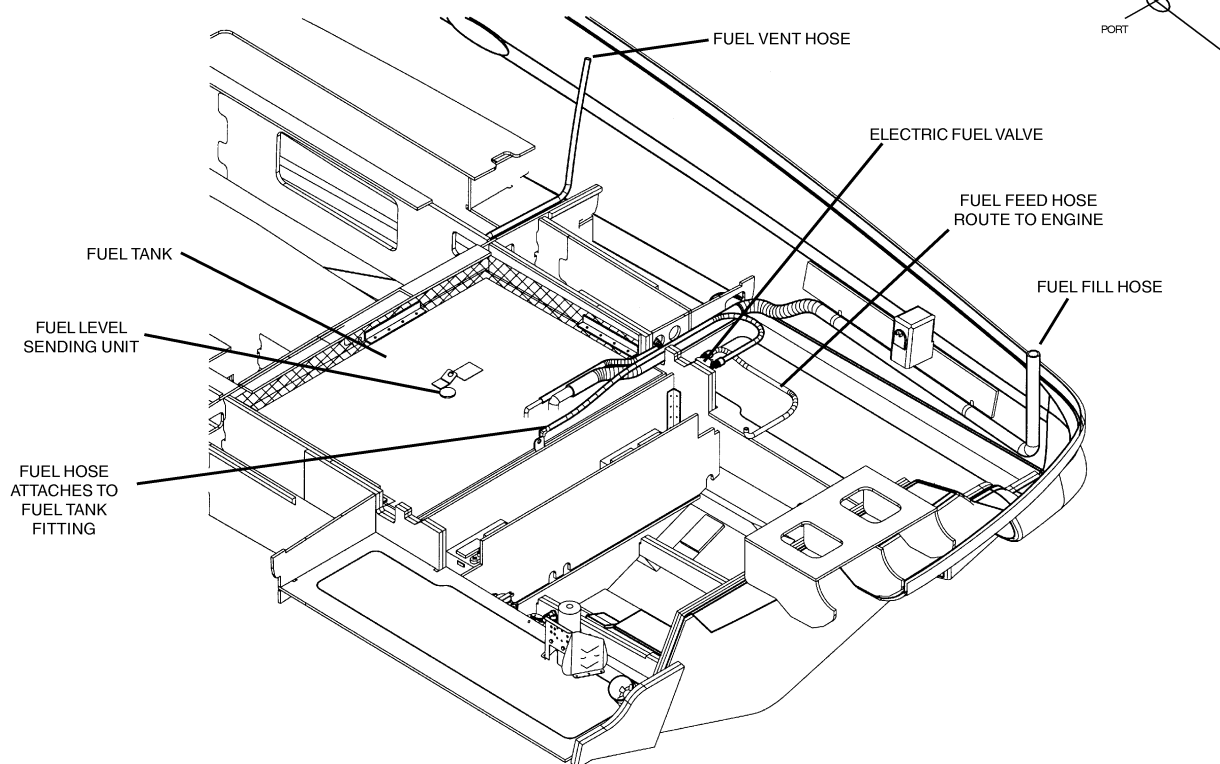
The Owner's Manual contains important fueling information. Take time to read all the fuel related information in the owner's packet.

The 290 SS standard gasoline fuel system consists of a 130 gallon (492.1 liters) fuel tank, fuel tank vent, electric fuel valve, engine fuel supply line and fuel fill (see figs. 22.2, 23.1, 18.2 or 19.1).

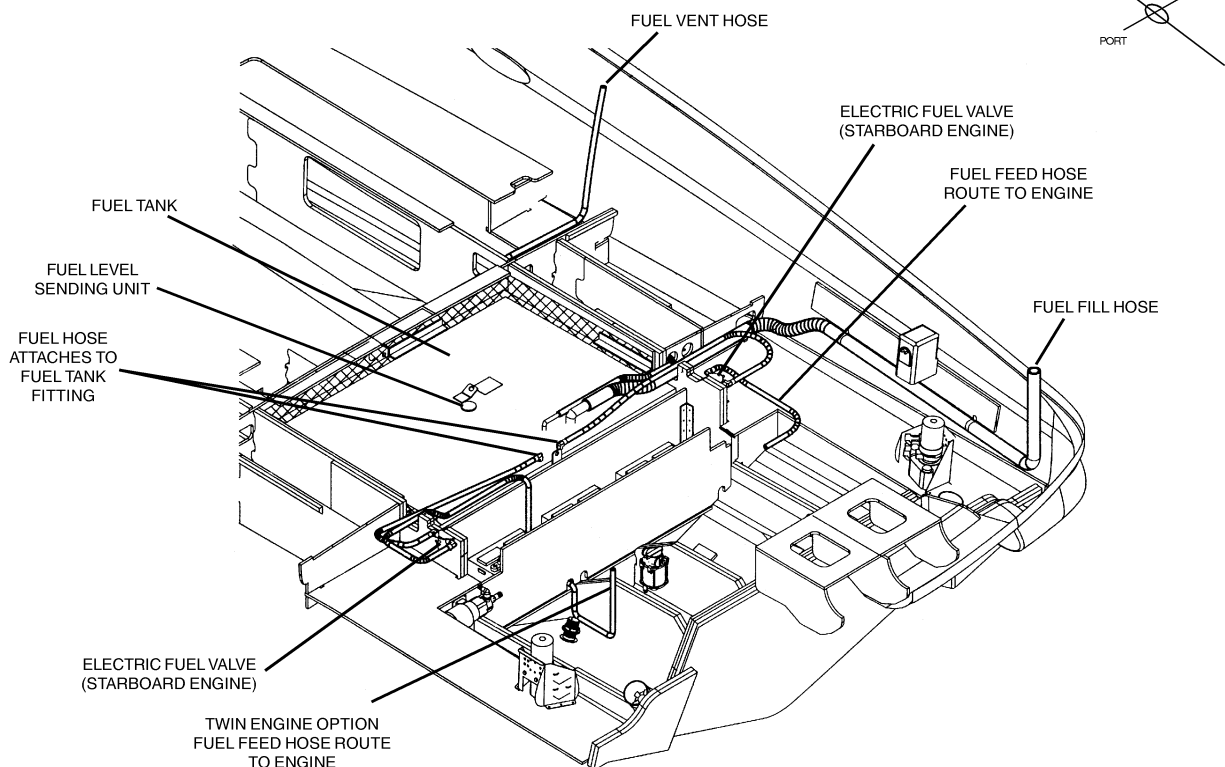
TWIN ENGINE GASOLINE FUEL SYSTEM (FIG. 22.2)



SINGLE ENGINE GASOLINE FUEL SYSTEM INSTALLATION
(FIG. 23.1)



TWIN ENGINE GASOLINE FUEL SYSTEM INSTALLATION
(FIG. 23.2)



VENTILATION SYSTEM / BILGE BLOWERS



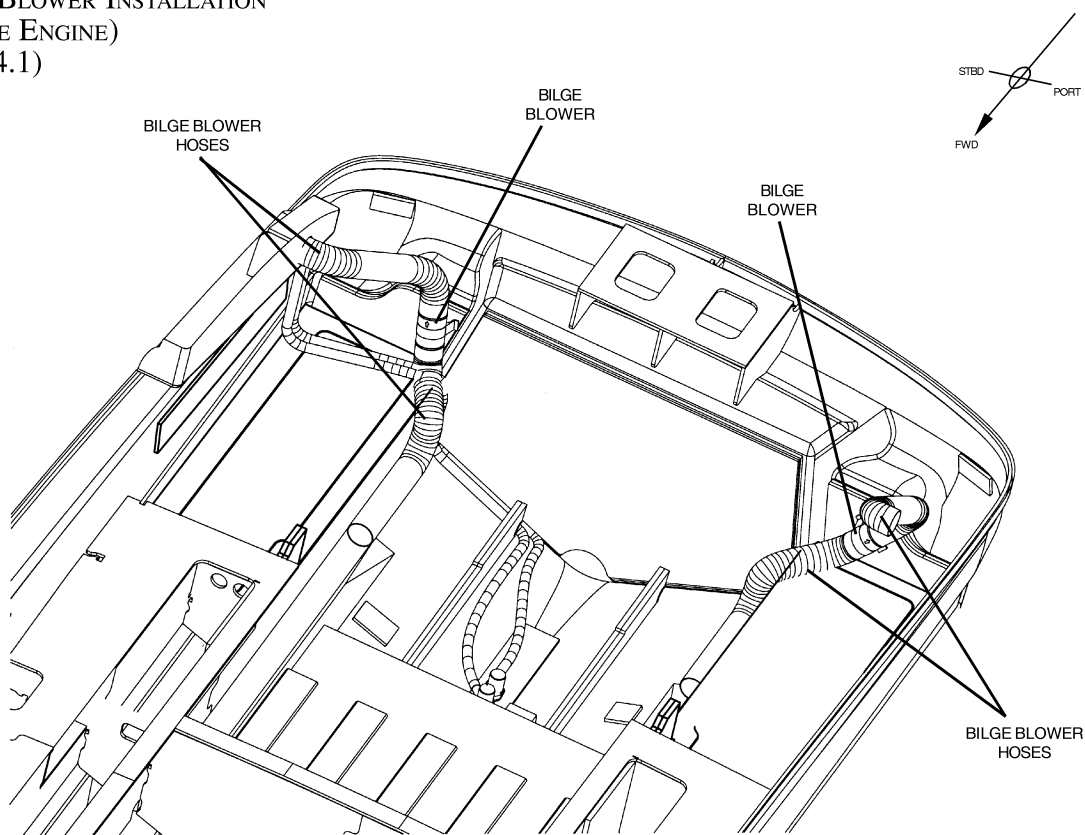
The 290 SS is equipped with electric bilge blowers to remove fumes from the engine compartment and provide ventilation through the deck vents before starting the engine and when operating below cruising speeds. The bilge blowers are located in the engine compartment on the port and starboard sides of the transom.

Bilge blower switches are located on the helm switch

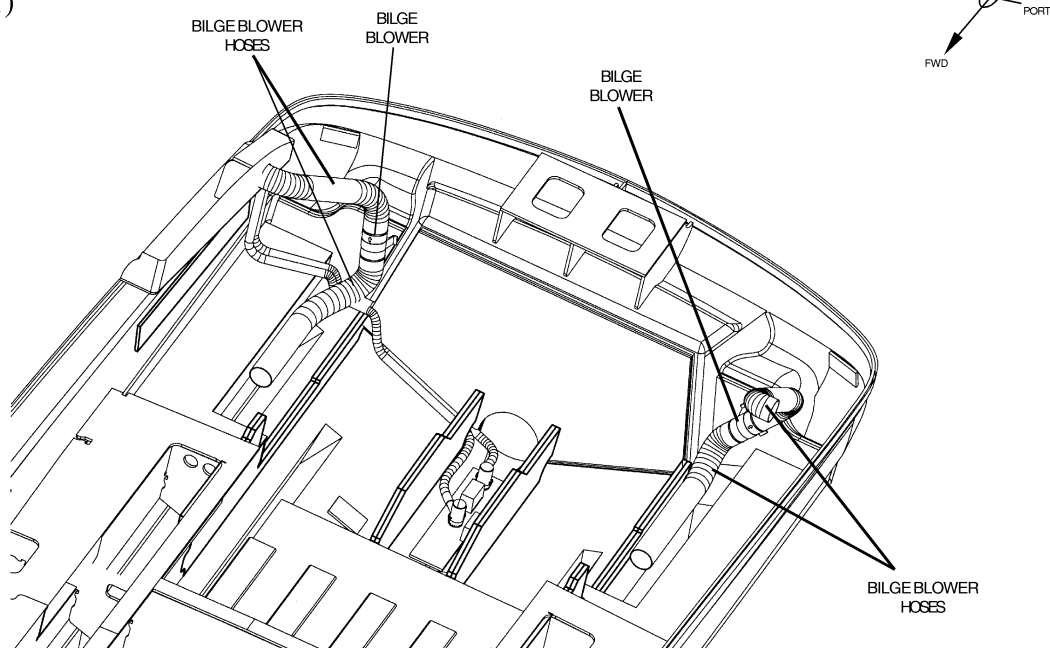
panel and the cabin DC distribution panel. Bilge blower breakers are located on the main DC breaker panel in the engine compartment.

The blower switches have a two way switching capability. The blower module allows the blowers to be turned ON and OFF at either the control station or the cabin DC distribution panel. Also, they can be turned ON at one station and turned OFF at the other.

**BILGE BLOWER INSTALLATION
(SINGLE ENGINE)
(FIG. 24.1)**



BILGE BLOWER INSTALLATION (TWIN ENGINE OPTION) (FIG. 25.1)



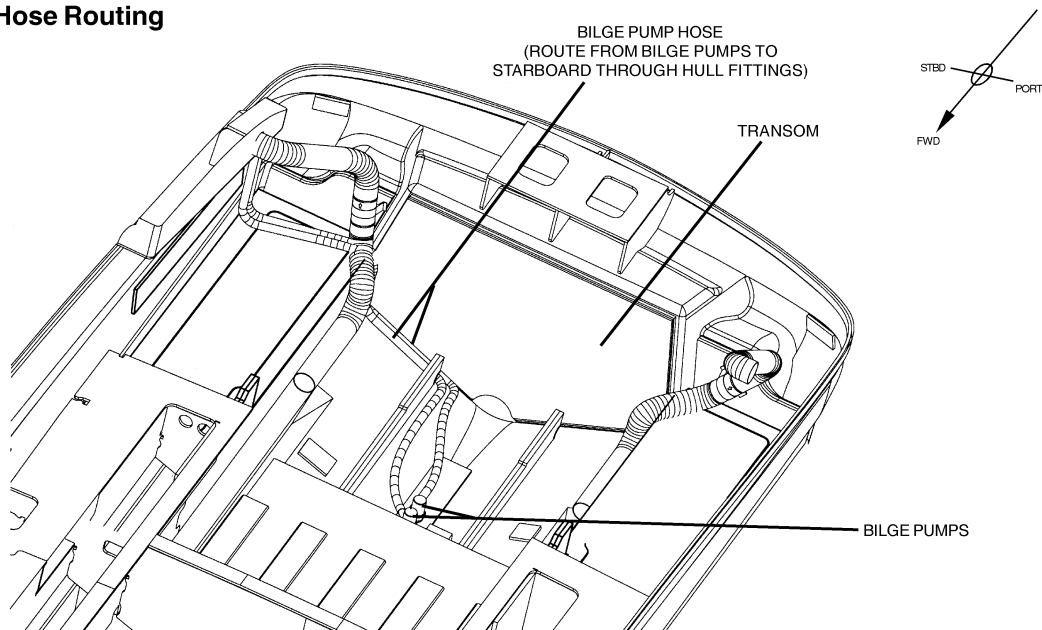
BILGE PUMPING SYSTEM



The 290 SS is equipped with an automatic bilge pump system and high water bilge pump and float switch. Refer to the owner's manual for detailed operating instructions.

REFER TO OWNER'S MANUAL AND OWNER'S PACKET FOR INSTRUCTIONS AND WARRANTY INFORMATION.

Bilge Pump Hose Routing (fig. 25.2)

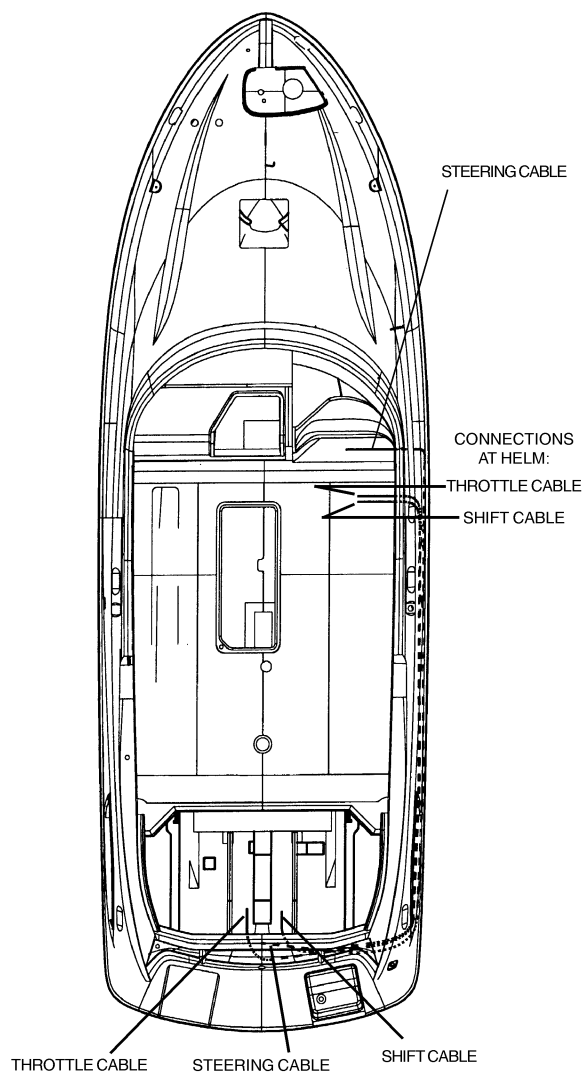


STEERING SYSTEM

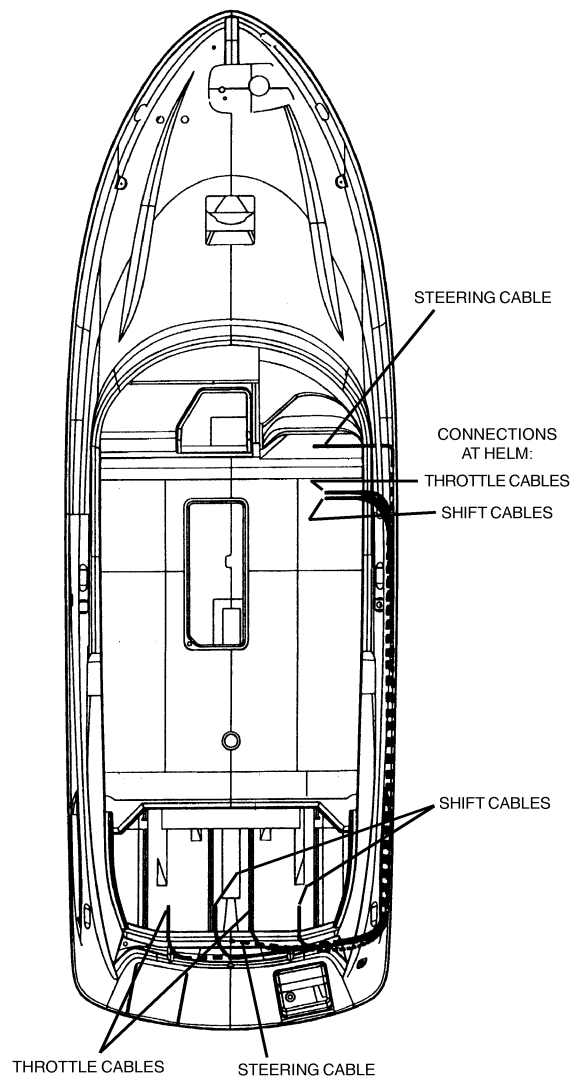
This boat is equipped with power steering.

REFER TO THE ENGINE OWNER'S MANUAL IN THE OWNER'S PACKET FOR INSTRUCTIONS AND WARRANTY INFORMATION.

POWER STEERING & SHIFT/THROTTLE
LINE ROUTING
(WITH SINGLE ENGINE) (FIG. 26.1)

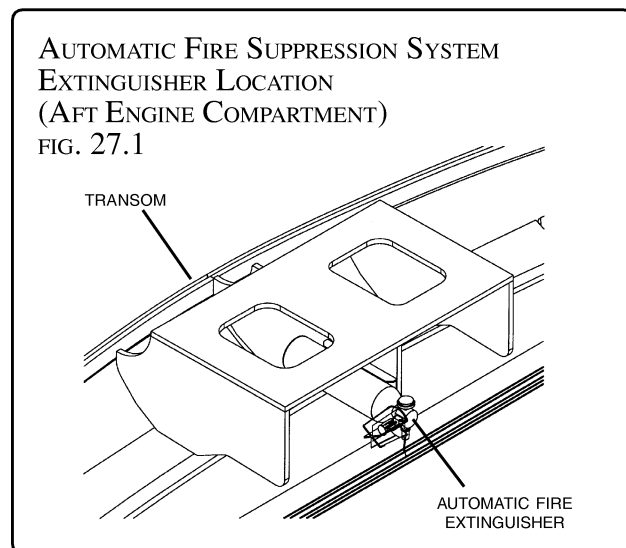


POWER STEERING & SHIFT/THROTTLE
LINE ROUTING
(WITH TWIN ENGINE OPTION) (FIG. 26.2)



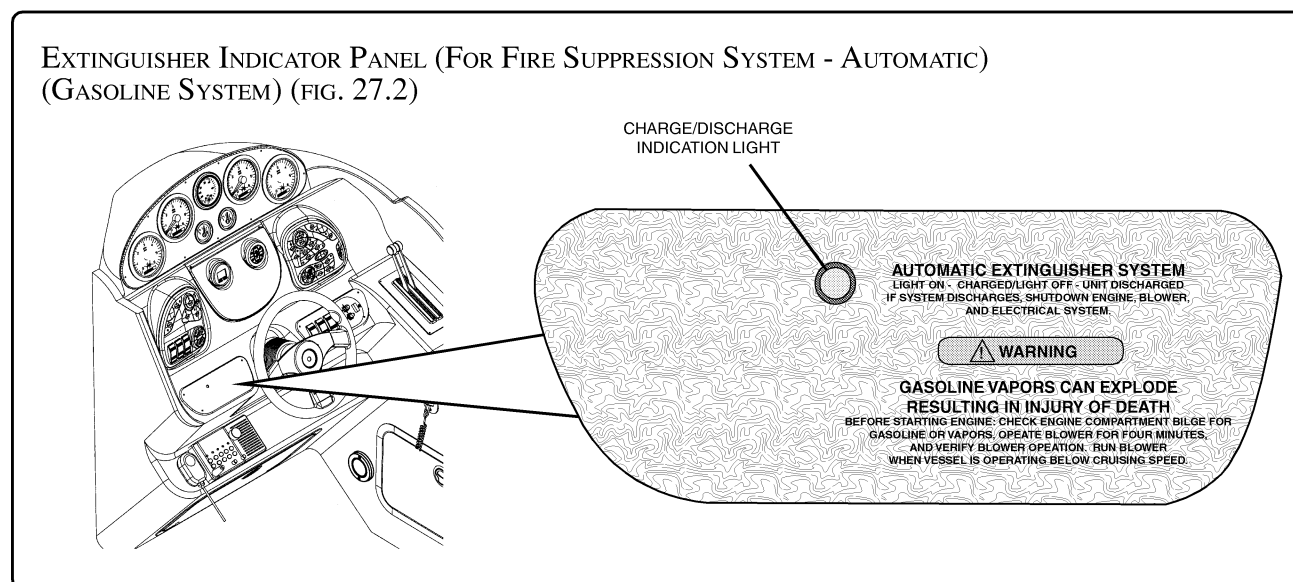
FIRE EXTINGUISHING SYSTEM

The 290 SS is equipped with the automatic fire suppression system. Refer to the owner's manual for detailed operating information.

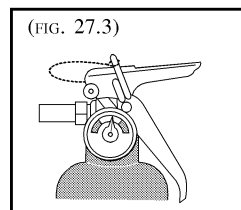


AUTOMATIC FIRE SUPPRESSION SYSTEM INDICATOR PANEL

The system indicator light is wired to the ignition and is turned ON when the ignition is turned ON. The system indicator light is located on the helm instrument panel. Under normal circumstances, when the ignition is ON the indicator light is lit. If the unit discharges, the light will go out. Refer to the *Accessories* section in the *Owner's Manual* for detailed information.



PORTABLE FIRE EXTINGUISHERS:



In addition to the automatic system your boat needs to be equipped with approved portable fire extinguishers. It is your responsibility to equip and maintain fire extinguishers.

U.S. Coast Guard Requirements: Boats equipped with a approved fixed fire extinguishing system are required to carry **1 B-I** type extinguisher. Boats not equipped with a approved fixed fire extinguishing system are required to carry **2 B-I or 1 B-II** type extinguishers.

American Boat & Yacht Council (ABYC):

The ABYC recommends carrying **2 B-I** type extinguishers for open boats over 26 feet (8 meters) but less than 40 feet (12 meters).

Extinguisher Locations: Outside engine compartment, steering position and or passenger cockpit.

Note: To be ABYC compliant Sea-Ray Boats, Inc. follows ABYC construction standards and recommendations.

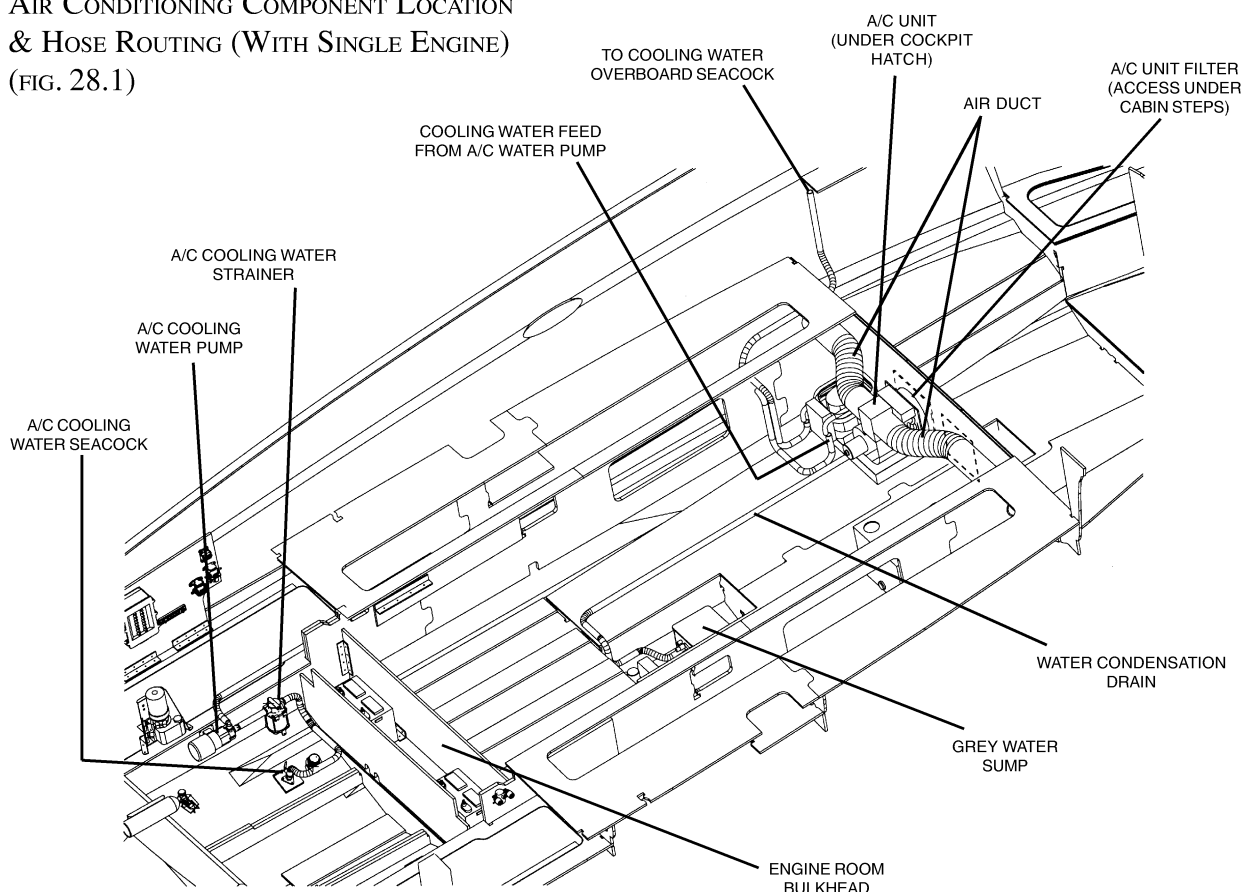
AIR CONDITIONING / HEATING SYSTEM



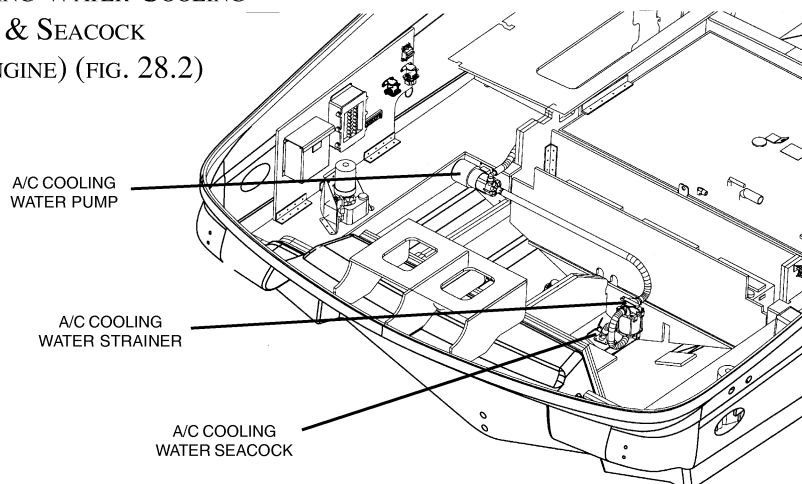
AirConditioning and Heating System information can be found in *Section 8 • Accessories* of the owner's manual.

REFER TO THE OWNER'S MANUAL AND OWNER'S PACKET FOR INSTRUCTIONS AND WARRANTY INFORMATION.

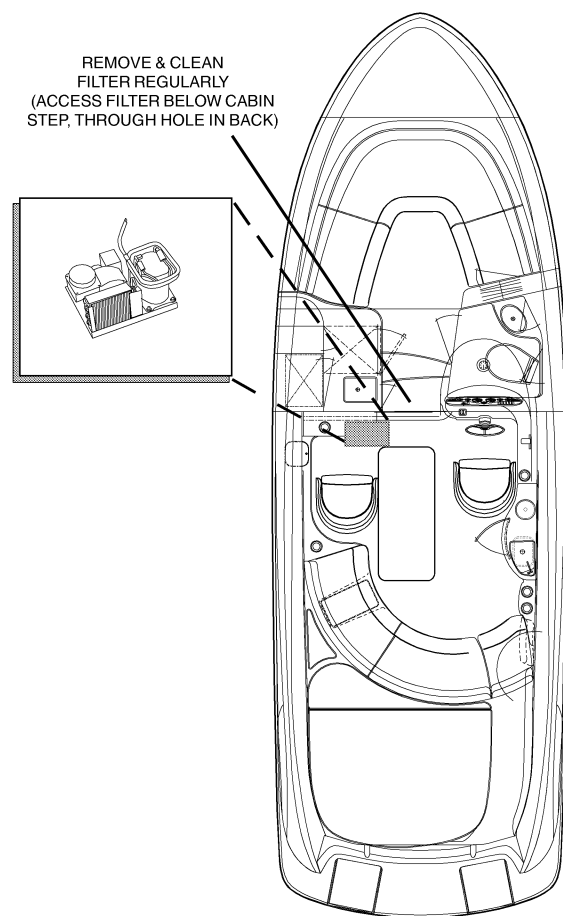
**AIR CONDITIONING COMPONENT LOCATION
& HOSE ROUTING (WITH SINGLE ENGINE)**
(FIG. 28.1)



**AIR CONDITIONING WATER COOLING
PUMP STRAINER & SEACOCK
(WITH TWIN ENGINE) (FIG. 28.2)**



AIR CONDITIONER / HEATER LOCATIONS (FIG. 29.1)



ENGINE COOLING SYSTEM

The engine cooling system is an integral part of the propulsion system.

REFER TO THE ENGINE OWNER'S MANUAL FOR INSTRUCTIONS AND WARRANTY INFORMATION.

ENGINE OIL CHANGE SYSTEM

Your Sport Cruiser is equipped with the oil change system that allows used oil to be drained out the transom through hoses that pull out of the drain plug(s) holes.

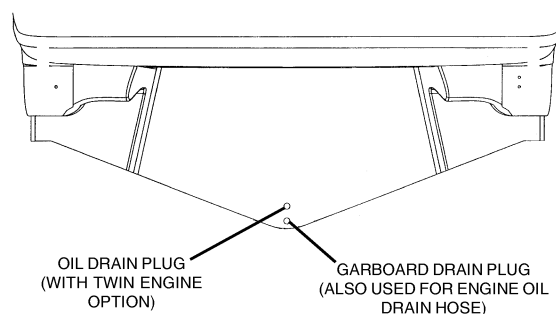
Note: When boat is equipped with one engine there is one plug on the transom. When boat is equipped with twin engine option there are two plugs on the transom.

To Operate:

1. Remove oil fill cap. (To allow ventilation)
2. Remove hull drain plug(s) on transom and pull oil drain hose(s) out of hole.
3. Have enough empty containers at hand to hold all of the used oil. Remove plug in the end of the hose(s). Let oil drain into container(s).
4. When all of the used oil has drained out of the engine(s) reinstall the plug into the hose(s). Push oil drain hose back into hull and reinstall hull drain plug(s).
5. Follow oil change instructions provided by the engine manufacturer.

REFER TO THE ENGINE OWNER'S MANUAL FOR INSTRUCTIONS AND WARRANTY INFORMATION.

OIL CHANGE PLUGS / GARBOARD DRAIN PLUGS (FIG. 29.2)



ANCHORING



To anchor, bring the bow into the wind or current and put the engine in neutral. When the vessel comes to a stop, lower, do not throw, the anchor over the bow. The anchor line should be 5 to 7 times the depth of water. See *Anchoring* Section in the *Owner's Manual, General Information* section.

ANCHORING ARRANGEMENT

Standard:

This Sport Cruiser is equipped with an anchor chute. Store the anchor in the anchor chute when not in use.

To store anchor, pull tightly into chute with rope and secure rope to anchor cleat. **Always attach anchor safety lanyard to anchor eye when not in use.**

Optional Windlass & Anchor Chute:

With this option the windlass is used to raise and lower the anchor and the anchor is stored in the anchor chute.

Note: Before using the windlass, be sure the anchor safety lanyard is removed from the anchor and the anchor is secured to the windlass chain. **Always attach anchor safety lanyard to anchor eye when not in use.**

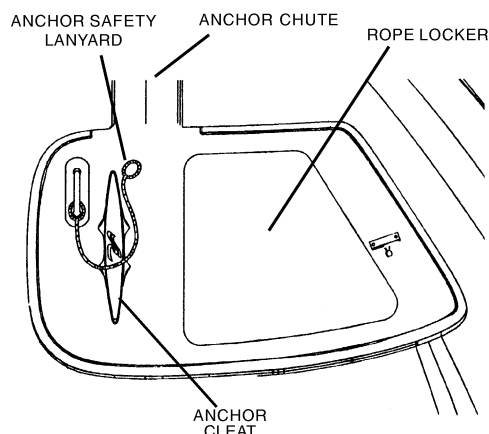
The manual winch handle is stored in the clip forward of the rope/chain storage compartment.

REFER TO THE WINDLASS OWNER'S MANUAL IN THE OWNER'S PACKET FOR INSTRUCTIONS AND WARRANTY INFORMATION.

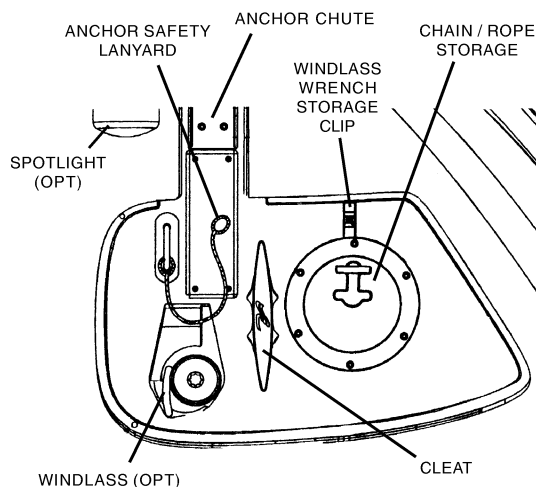
NOTICE

ATTACH THE SAFETY LANYARD TO THE ANCHOR to insure that the anchor is held in place should the windlass fail. DO NOT use the safety lanyard to SUPPORT the anchor in a stored position.

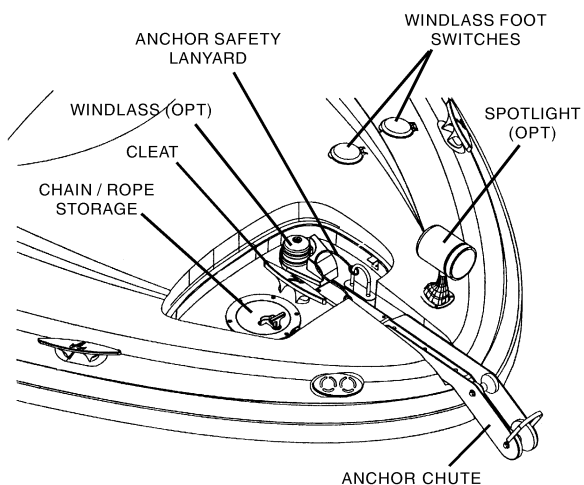
ANCHOR ARRANGEMENT
(STANDARD) (FIG. 30.1)



ANCHOR ARRANGEMENT
(OPTIONAL WINDLASS & ANCHOR CHUTE)
(FIG. 30.2)

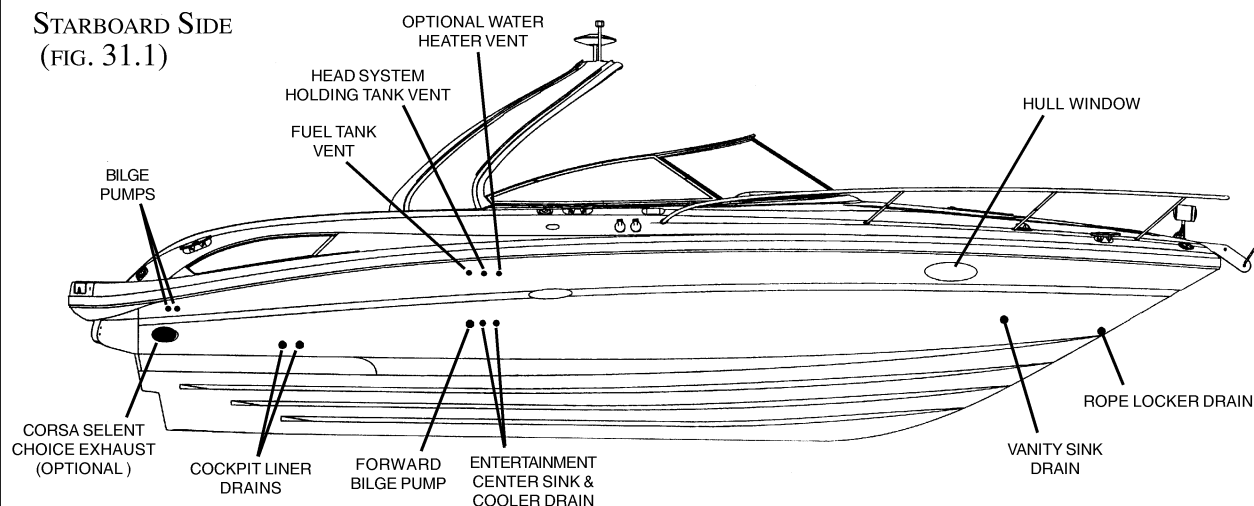


ANCHOR ARRANGEMENT
(OPTIONAL WINDLASS & ANCHOR CHUTE)
(FIG. 30.3)

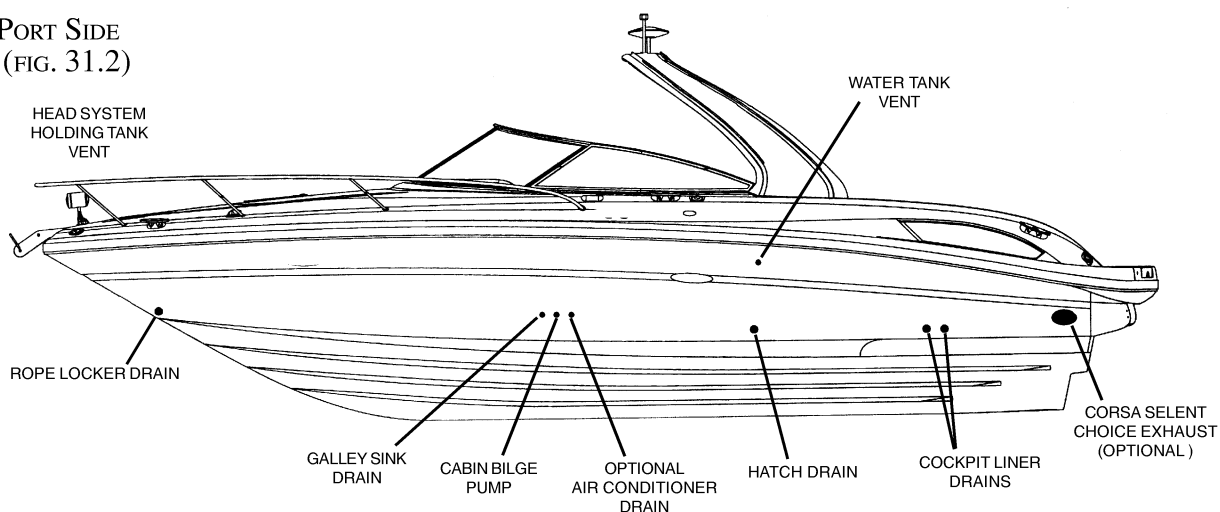


LOCATION OF THROUGH-HULL FITTINGS

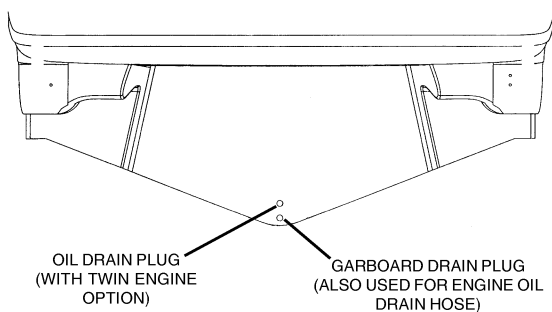
STARBOARD SIDE
(FIG. 31.1)



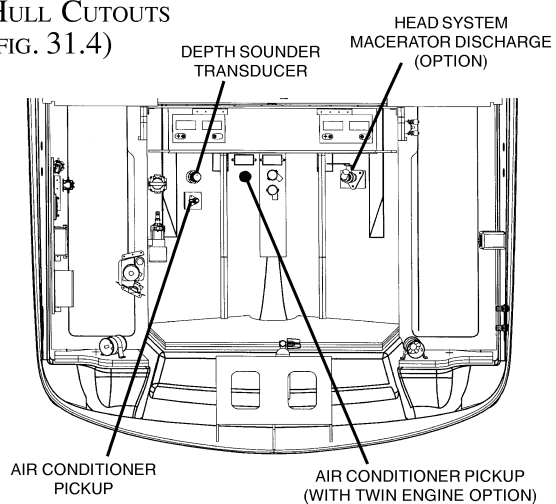
PORT SIDE
(FIG. 31.2)



TRANSOM CUTOUTS
(FIG. 31.3)



HULL CUTOUTS
(FIG. 31.4)



CANVAS INFORMATION

CANVAS

REFER TO OWNER'S MANUAL PACKET FOR CANVAS MANUFACTURER INSTRUCTIONS AND WARRANTY INFORMATION.

Read and understand the effects of carbon monoxide in the Owner's Manual and how to ventilate your Sport Boat to prevent the build-up of this invisible gas.

Attached to the inside of the bimini top is a DANGER tag for Carbon Monoxide Gas (CO) buildup and a WARNING tag for excessive speeds while canvas is installed. The Aft Curtain also has a WARNING tag stating "The Aft Curtain is not designed to be used while engine is running or boat is underway". If your canvas does not have these tags, they become lost or are unable to be read, contact your dealer for replacement labels.

Your Sea Ray® Sport Boat standard canvas set consists of the following pieces:

- Sunbrella® Bimini Top, With Boot

Canvas options available consist of the following pieces:

- Canvas Package:
 - Aft Cover (Not available with CORSA® Exhaust Option)
 - Camper Top With Boot
 - Front Curtains
 - Side Curtains (Bimini & Camper)
 - Tonneau Cover
 - Canvas Storage Bag

! DANGER
EXHAUST FUMES FROM ENGINES
CONTAIN DEADLY
CARBON MONOXIDE GAS (CO).
BOATS WITH CANVAS OR POOR
VENTILATION ARE MOST LIKELY TO
COLLECT FUMES. CO SICKNESS
SYMPTOMS INCLUDE HEADACHE,
NAUSEA AND DIZZINESS. DO NOT
MISTAKE FOR SEA SICKNESS.
VENTILATE BOAT. SEE BOAT OWNER'S
MANUAL FOR MORE DETAILS.

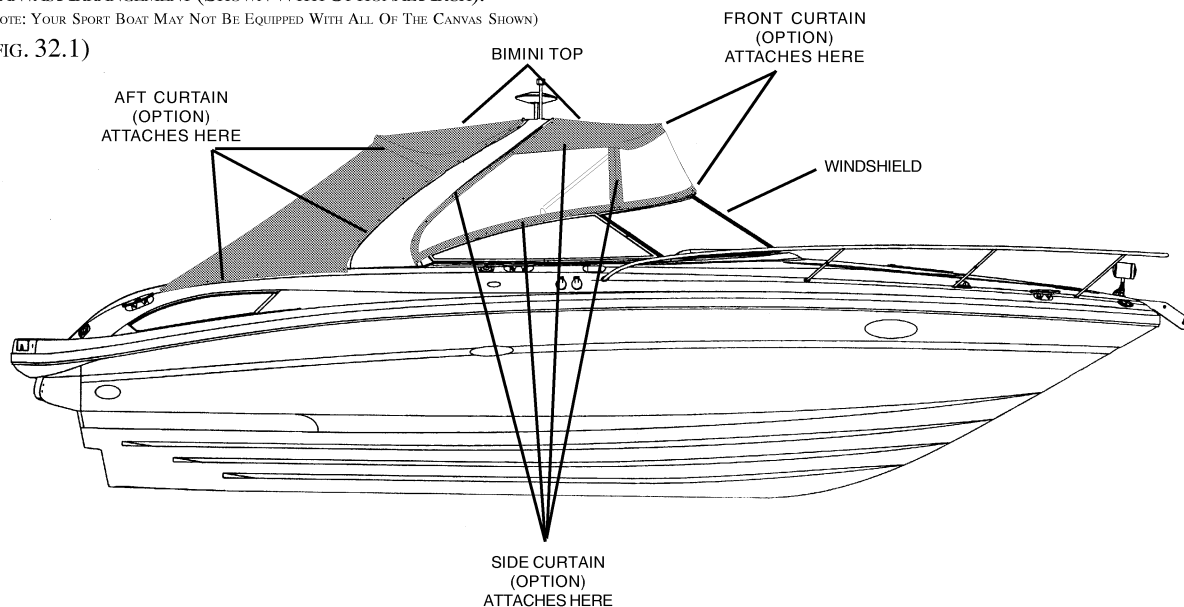
! WARNING
SUNSHADE SHOULD
NOT BE USED WHEN
VESSEL SPEED EXCEEDS
45 MPH

! WARNING
THE AFT CURTAIN IS NOT
DESIGNED TO BE USED
WHILE ENGINE IS RUNNING
OR BOAT IS UNDERWAY

CANVAS ARRANGEMENT (SHOWN WITH OPTIONAL ARCH):

(NOTE: YOUR SPORT BOAT MAY NOT BE EQUIPPED WITH ALL OF THE CANVAS SHOWN)

(FIG. 32.1)

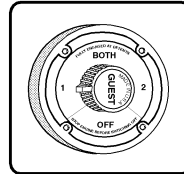


ELECTRICAL INFORMATION

ELECTRICAL INSTALLATION

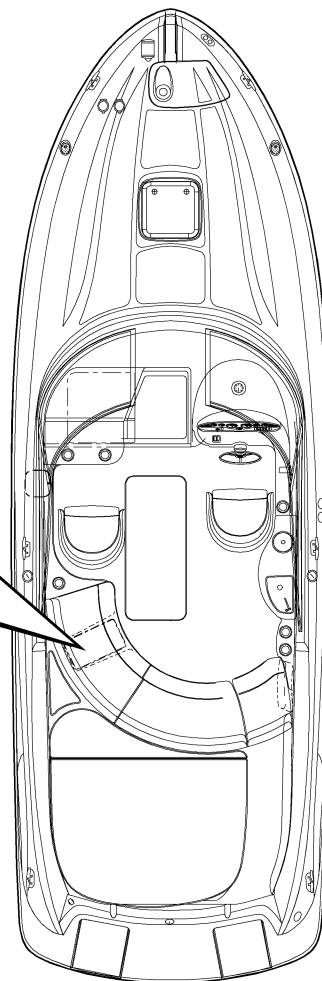
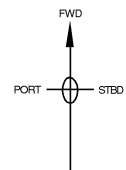
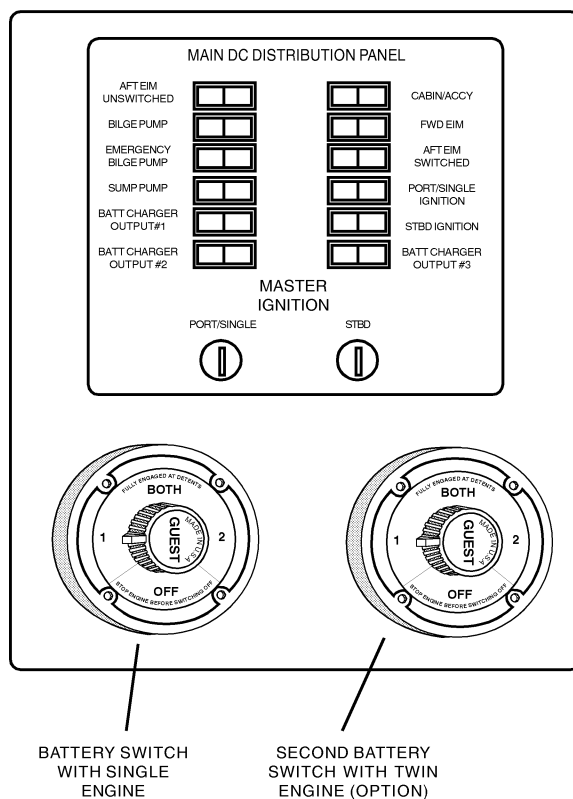
This owner's manual supplement contains electrical schematics for your boat. These electrical schematics were generated by technicians at the engineering division for technical reference and service technicians. Sea Ray® does not recommend that you attempt to work on the boat's electrical system yourself; instead, we recommend that you take your boat to your authorized Sea Ray® dealer for service. Sea Ray® reserves the right to change or update the electrical system on any model at any time without notice to the consumer and is NOT obligated to make any updates to units built prior to changes.

BATTERY SWITCH (OPTION)



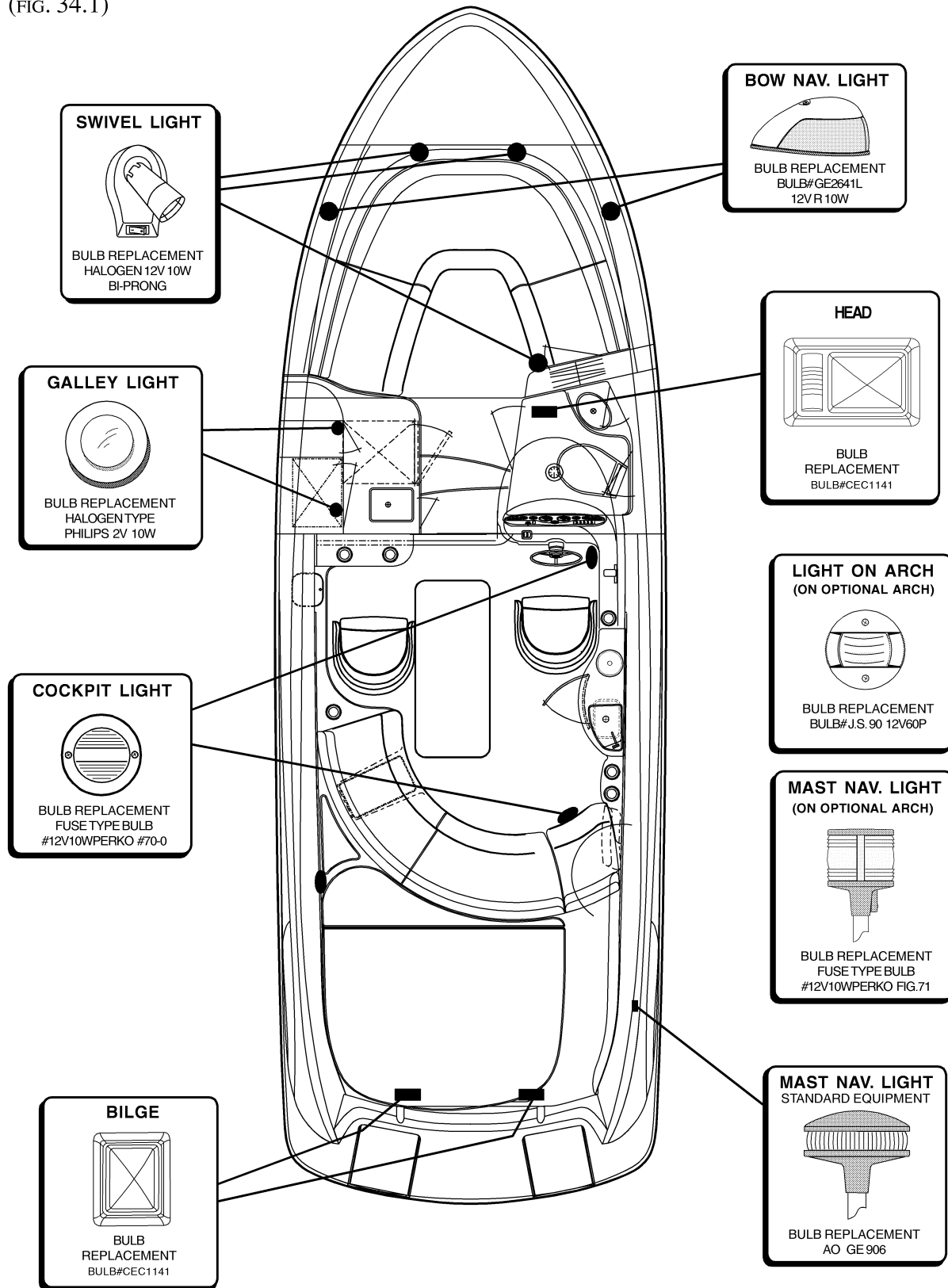
Your boat is equipped with a dual battery on/off switch. The battery switch controls the delivery of DC loads to start the engine(s) and operate accessories.

BATTERY SWITCH & MAIN DC DISTRIBUTION PANEL LOCATIONS
(BELOW PORT SMALL SUN PAD HATCH) (FIG. 33.1)



LIGHTING LOCATIONS

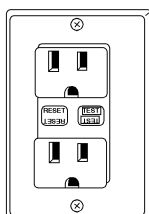
(FIG. 34.1)



GROUND FAULT INTERRUPTER (GFI) OUTLET LOCATIONS & ASSOCIATED LOADS (WITH 120 VOLT SHORE POWER OPTION)

(FIG. 35.2)

**Ground Fault Interrupter
Outlet (GFI) (fig.35.1)**



Refer to the electrical system section of the owner's manual for operation and function information of the GFI's.

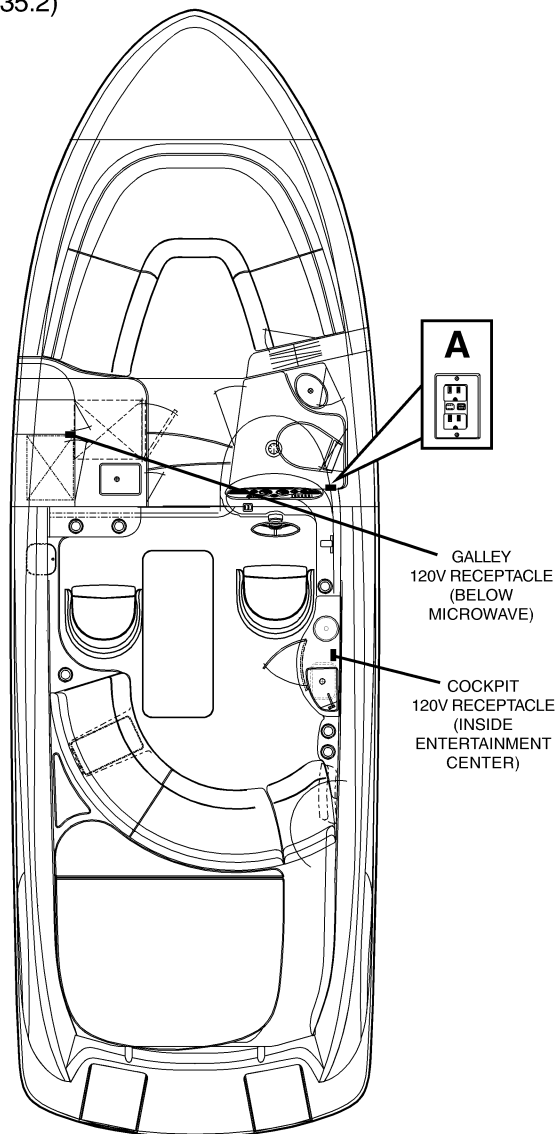
If any of the accessories on your boat fail to turn on, check the associated GFI outlet breaker first.

GFI Location

A: Head

Associated Loads

- Head GFI Receptacle
- TV/VCR (Option)
- Refrigerator 12/120 Volt
- Cockpit Receptacle



ELECTRONIC SWITCH PADS & ELECTRONIC INTERFACE MODULES (EIM)

Electrical equipment illustrated on the switch pads are connected to the Electronic Interface Modules (EIM's).

The 290 SS is equipped with illuminated waterproof electronic switch pads. The individual switch functions are indicated by ISO symbols. (See FIG. 13.2 and 13.3)

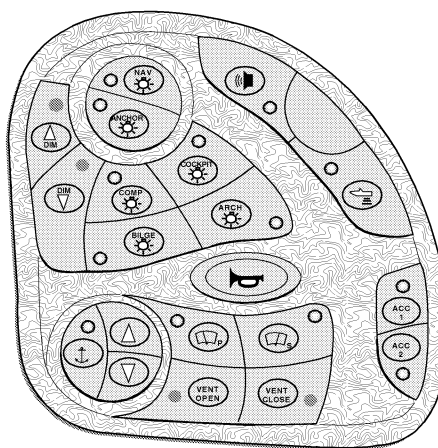
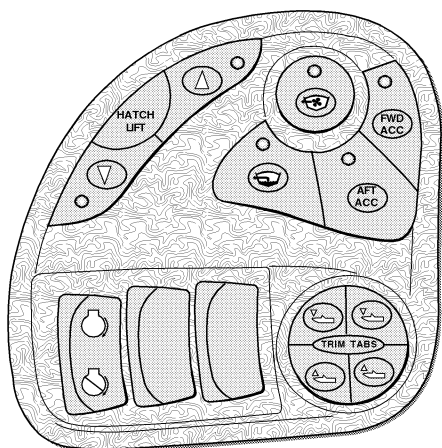
Each EIM is fitted with breakers for each piece of equipment connected to it. If a piece of electrical equipment will not function check its corresponding breaker on the EIM.

ELECTRONIC SWITCH PADS & ELECTRONIC INTERFACE MODULES (EIM) LOCATIONS (FIG. 36.1)

NOTE: Switch pads and EIM's are generic in nature and may be used on more than one Sea Ray® model. Not all accessories shown on switch pads or EIM's are standard equipment or even available as options. Options and accessories subject to change without notice.

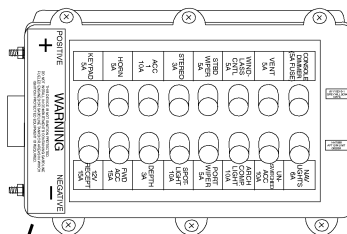
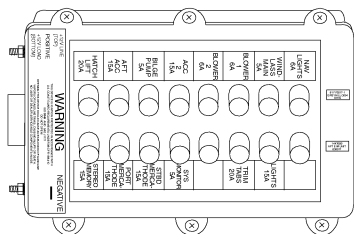
PORT SWITCH PAD

STARBOARD SWITCH PAD

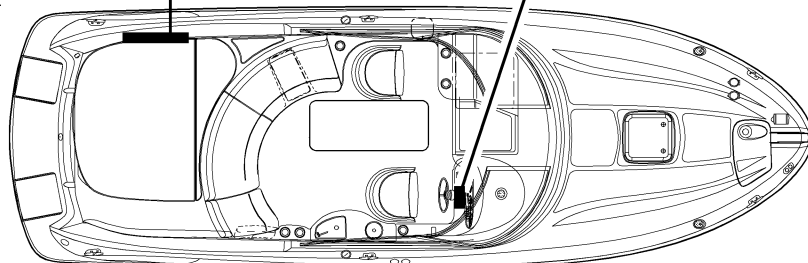


AFT ELECTRONIC INTERFACE MODULE (EIM)
(LOCATED ON THE ACCESSORY BOARD ON THE PORT SIDE OF THE ENGINE COMPARTMENT)

FORWARD ELECTRONIC INTERFACE MODULE (EIM)
(LOCATED AT THE HELM IN THE COMPARTMENT BELOW THE ENGINE SHIFT AND THROTTLE)

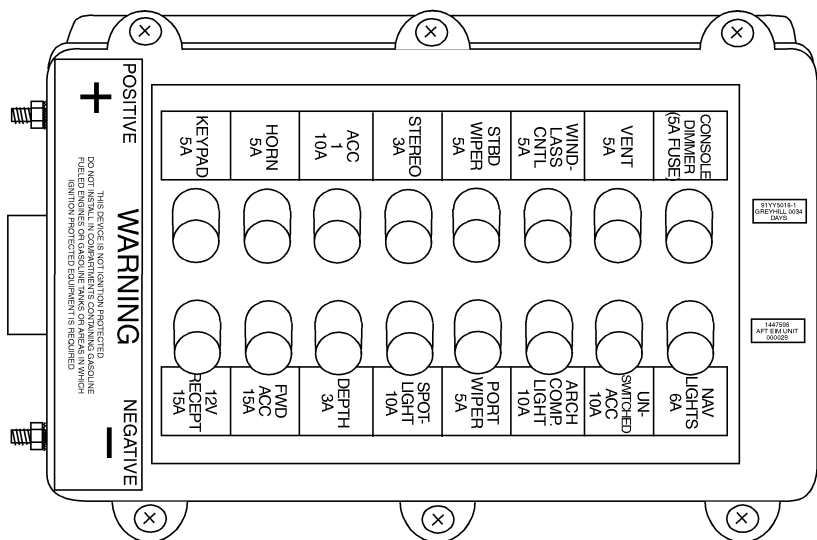


NOTE: THIS BOX IS IGNITION PROTECTED. DO NOT OPEN. READ WARNING ON BOX IN ENGINE COMPARTMENT.



ELECTRONIC INTERFACE MODULES (EIM)
(FIG. 37.1)

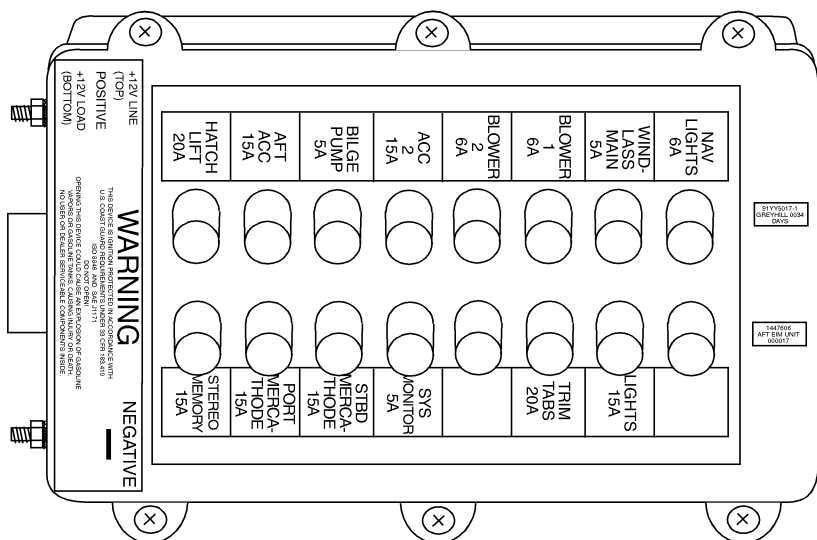
FORWARD ELECTRONIC INTERFACE MODULE (EIM)
(LOCATED AT THE HELM IN THE COMPARTMENT
BELOW THE STEERING WHEEL)



(FIG. 37.2)

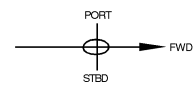
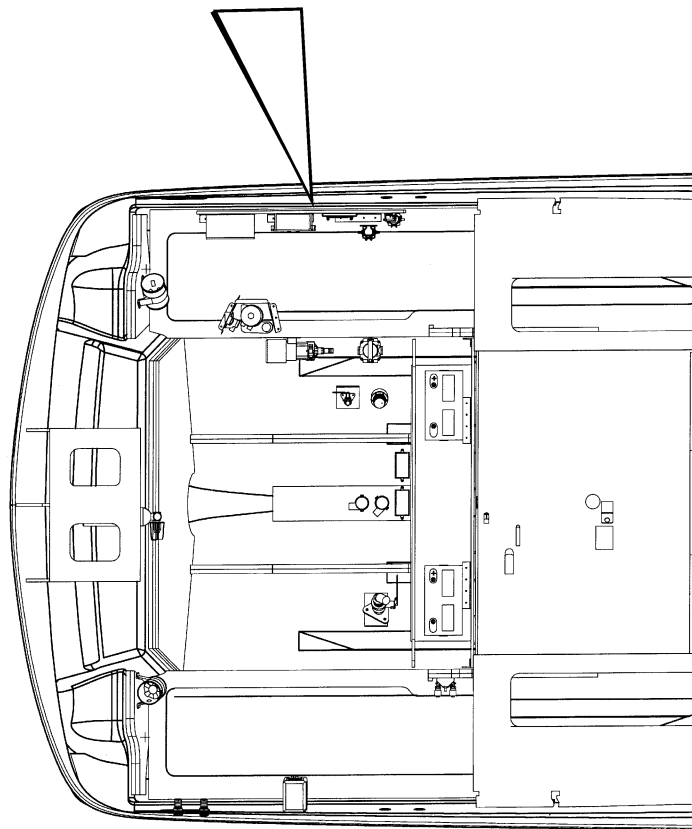
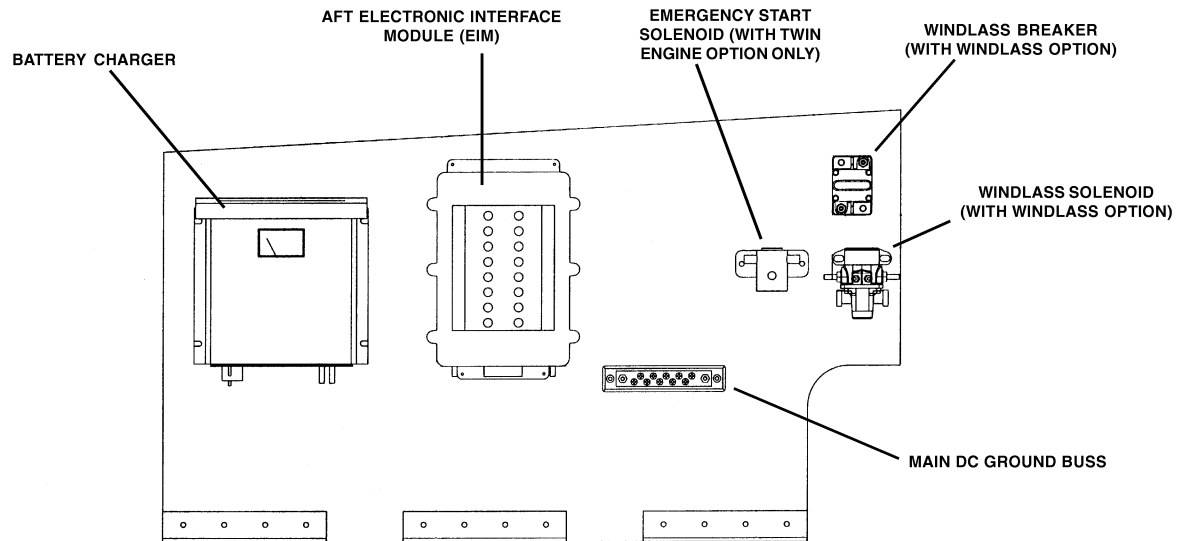
AFT ELECTRONIC INTERFACE MODULE (EIM)
(LOCATED ON THE ACCESSORY BOARD ON THE
PORT SIDE OF THE ENGINE COMPARTMENT)

NOTE: THIS BOX IS IGNITION PROTECTED. DO NOT OPEN!
READ WARNING ON BOX IN
ENGINE COMPARTMENT.



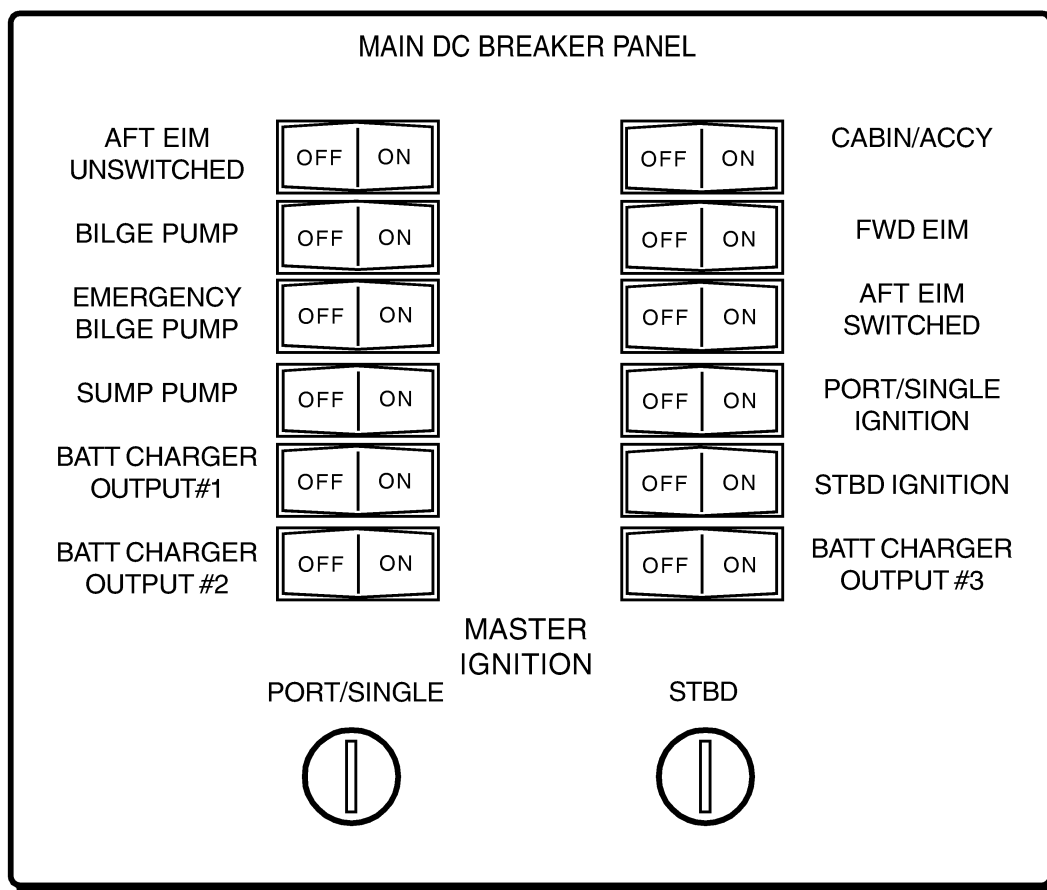
BILGE ACCESSORY BOARD

BILGE ACCESSORY BOARD (LOCATED ON THE PORT SIDE OF THE ENGINE ROOM)
(FIG. 38.1)



MAIN DC BREAKER PANEL

MAIN DC BREAKER PANEL (LOCATED IN THE COCKPIT UNDER SMALL PORT SUNPAD HATCH)
(FIG. 39.1)



12 Volt DC Breakers

Amperage

Aft EIM Unswitched	30
Bilge Pump	6
Emergency Bilge Pump	6
Sump Pump	5
Battery Charger Output #1	20
Battery Charger Output #2	20

12 Volt DC Breakers

Amperage

Cabin/Accessory	50
Forward EIM	50
Aft EIM Switched	50
Port/Single Ignition	10
Starboard Ignition	10
Battery Charger Output #3	20

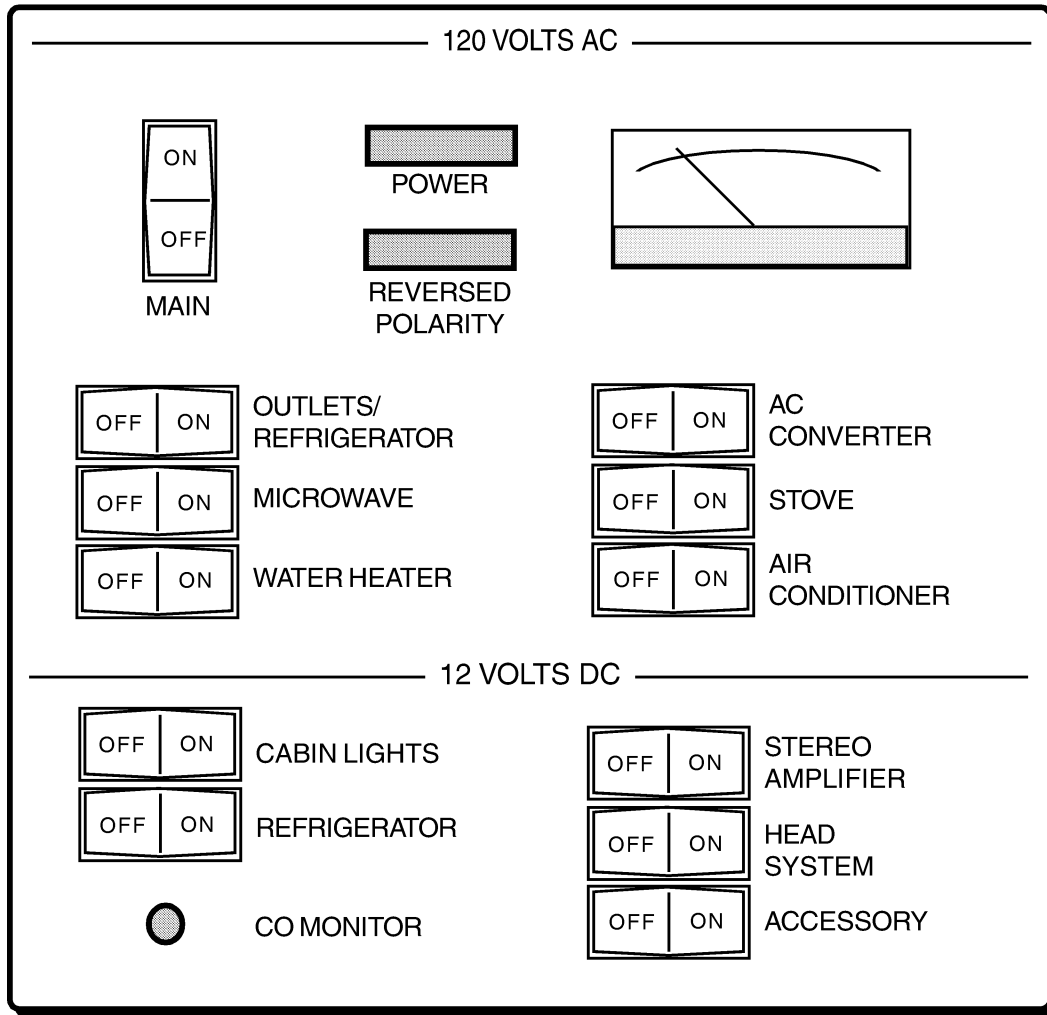


MAIN DISTRIBUTION PANEL

MAIN DISTRIBUTION PANEL

(LOCATED ON THE PORT SIDE OF THE CABIN)

(FIG. 40.1)



120 Volt AC Breakers	Amperage	220 Volt AC Breaker (International)	Amperage	12 Volt DC Breakers	Amperage
Main	30	Main	20	Cabin Lights	15
Outlets/Refrigerator	20	Outlets/Refrigerator	10	Refrigerator	15
Microwave	15	Microwave	10	Stereo Amplifier	25
Water Heater	15	Water Heater	10	Head System	20
AC Converter (Option)	10	AC Converter (Option)	5	Accessory (Dealer Installed)	Plug
Stove (Option)	10	Stove (Option)	5	CO Monitor	1
Air Conditioner (Option)	15	Air Conditioner (Option)	10		

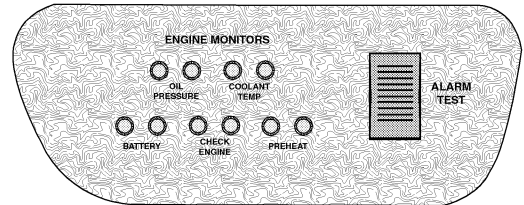


MERCURY[®] DIESEL ENGINE MONITOR (OPTION)

If our Sport Cruiser is equipped with the optional diesel engine monitor, refer to the information provided by the engine manufacture in the owner's packet.

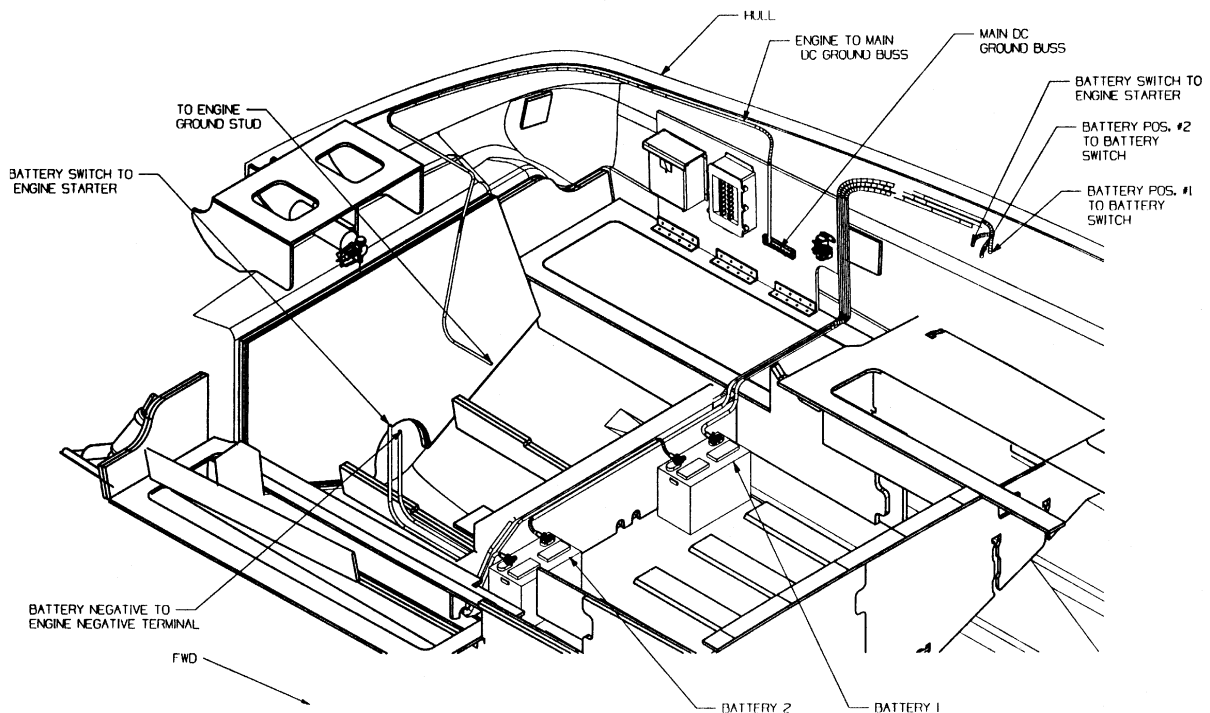
REFER TO OWNER'S MANUAL PACKET FOR INSTRUCTIONS AND WARRANTY INFORMATION.

MERCURY DIESEL ENGINE MONITOR (OPTION)
(FIG. 41.1)



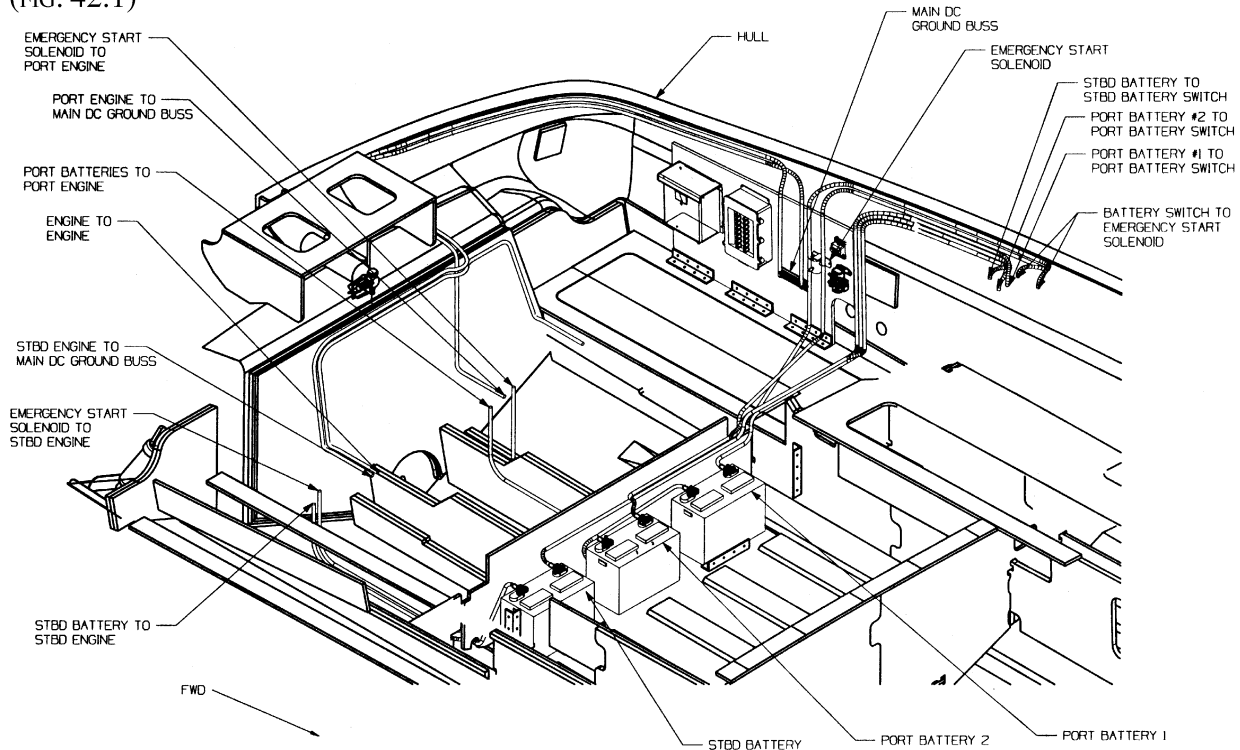
BATTERY CABLE ROUTING

BATTERY CABLE ROUTING (WITH SINGLE GASOLINE ENGINE) (PRINT#09-270, 1 OF 1, REVISION#0)
(FIG. 41.2)

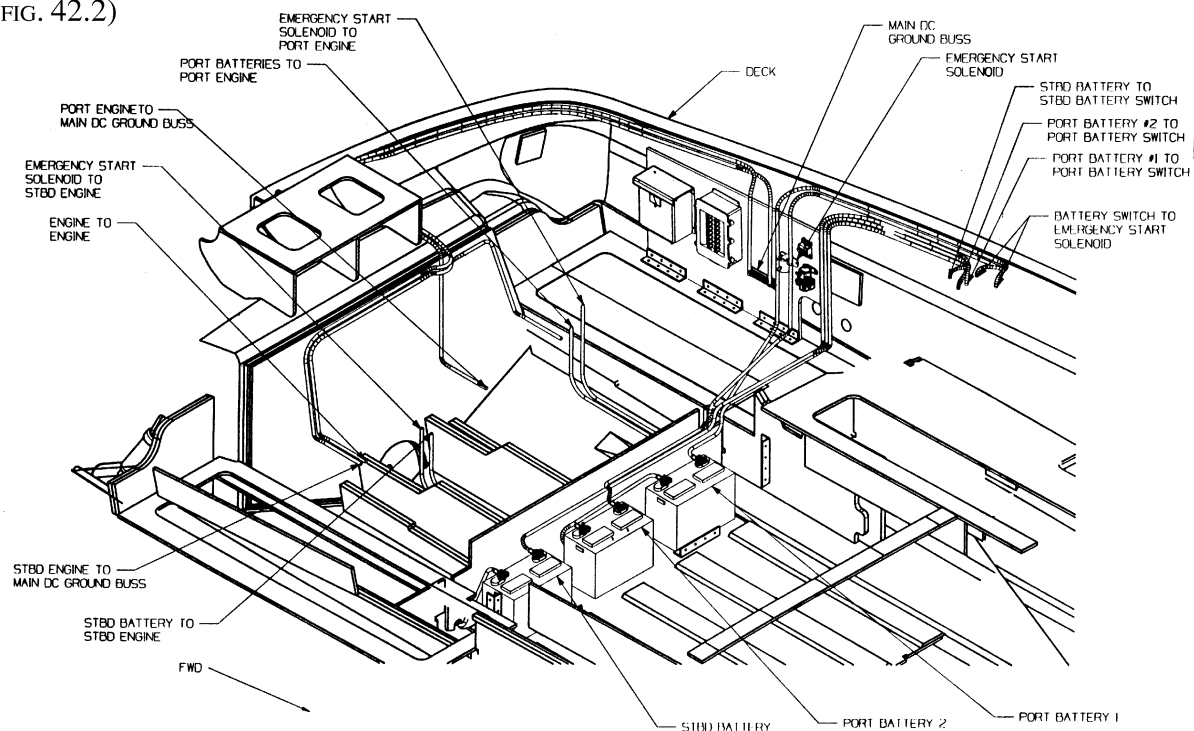


BATTERY CABLE ROUTING (CONTINUED)

BATTERY CABLE ROUTING (WITH TWIN GASOLINE ENGINE OPTION) (PRINT#09-272, 1 OF 1, REVISION#0)
(FIG. 42.1)

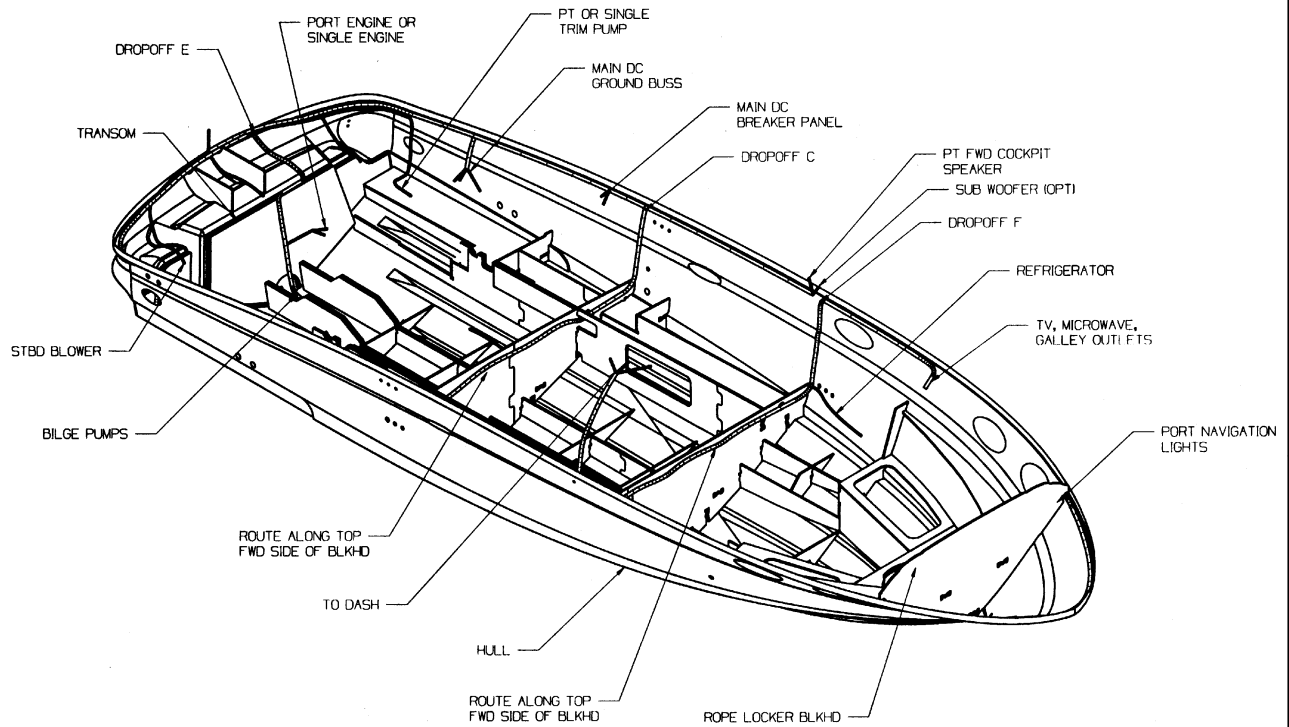


BATTERY CABLE ROUTING (WITH VOLVO DIESEL ENGINE) (PRINT#09-274, 1 OF 1, REVISION#0)
(FIG. 42.2)



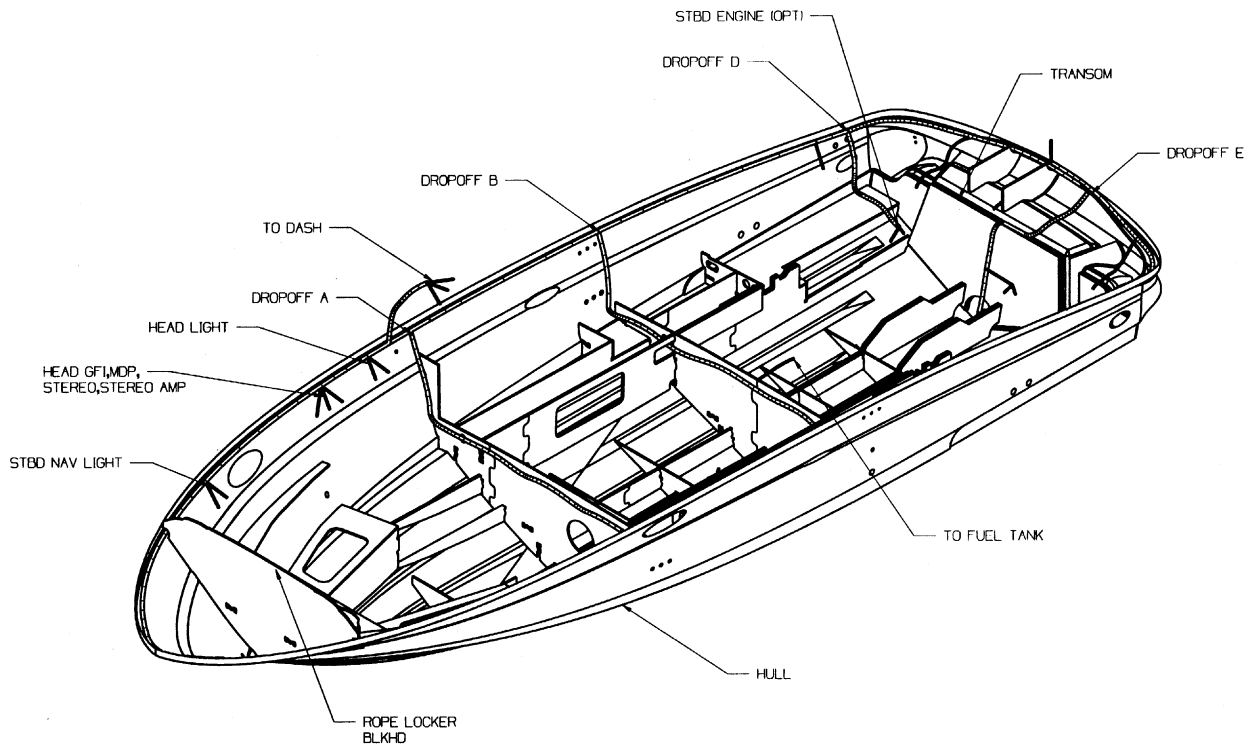
WIRE HARNESS INSTALLATION

WIRING HARNESS INSTALLATION (PRINT #09-861, 1 OF 2, REVISION #0)
(FIG. 43.1)

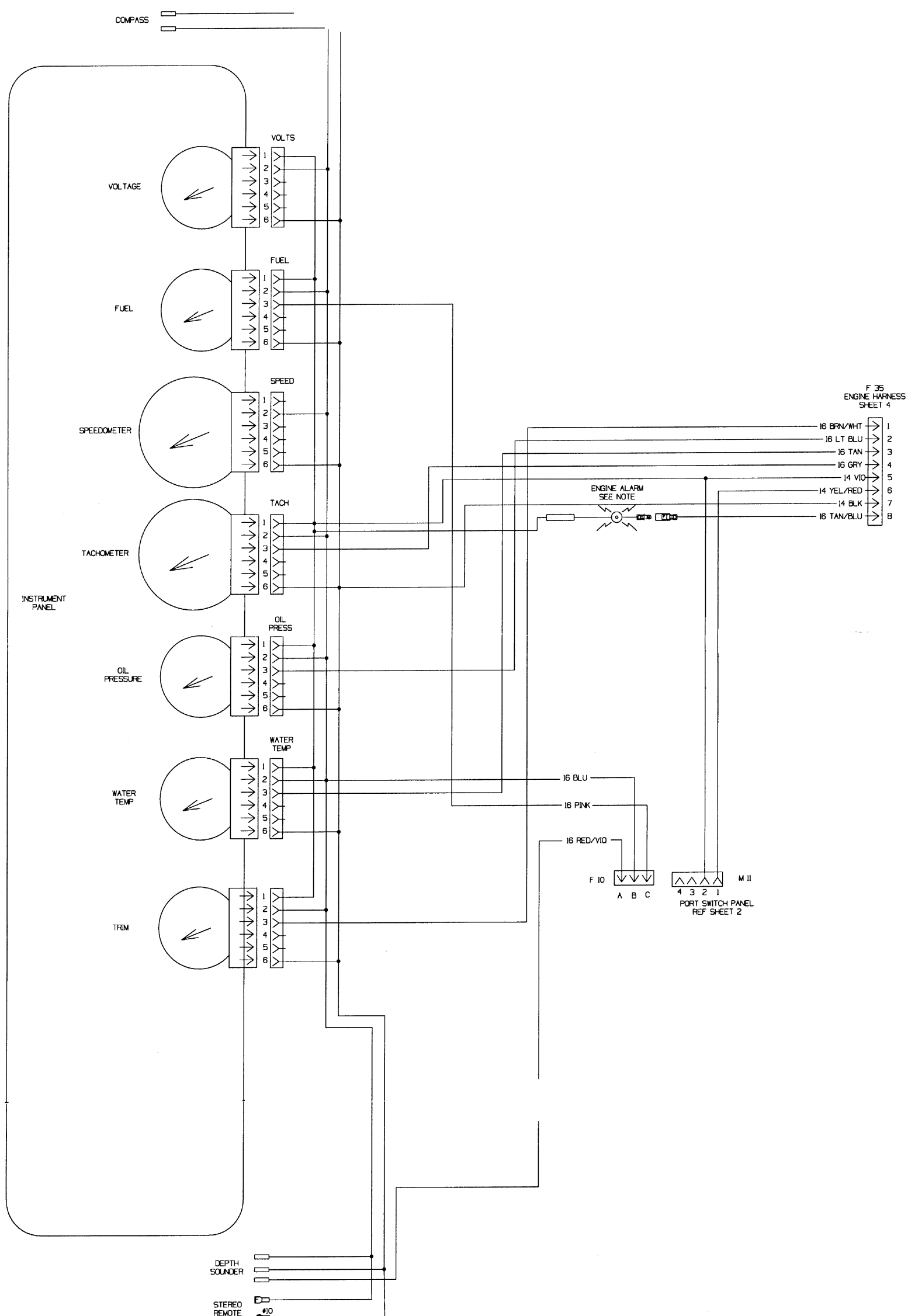


WIRE HARNESS INSTALLATION (CONTINUED)

WIRING HARNESS INSTALLATION (PRINT #09-861, 2 OF 2, REVISION #0)
(FIG. 44.1)



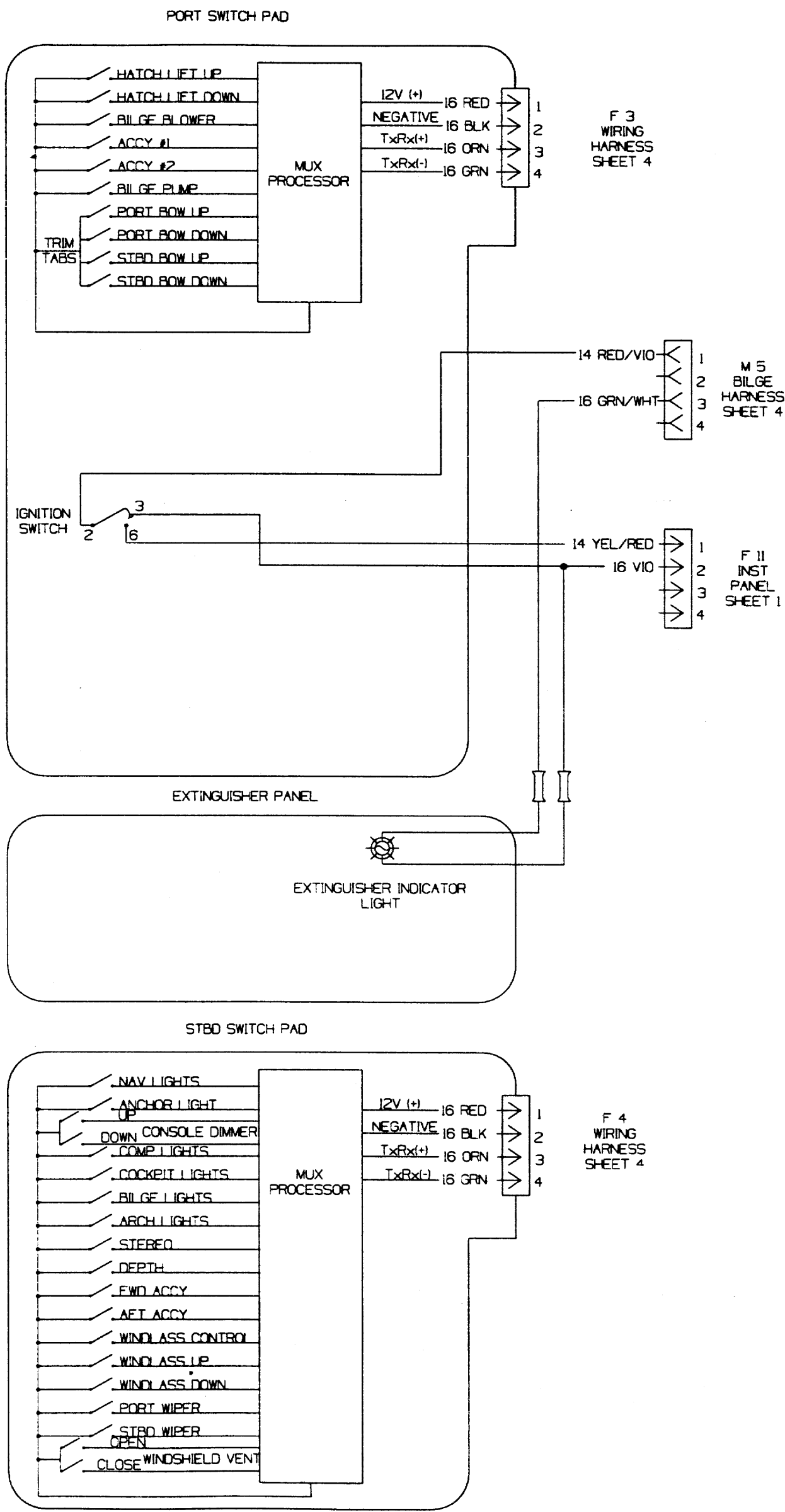
290 SS • DC WIRING SCHEMATIC (1 OF 4)



Print# 09-601, 1 of 4, Revision# 0

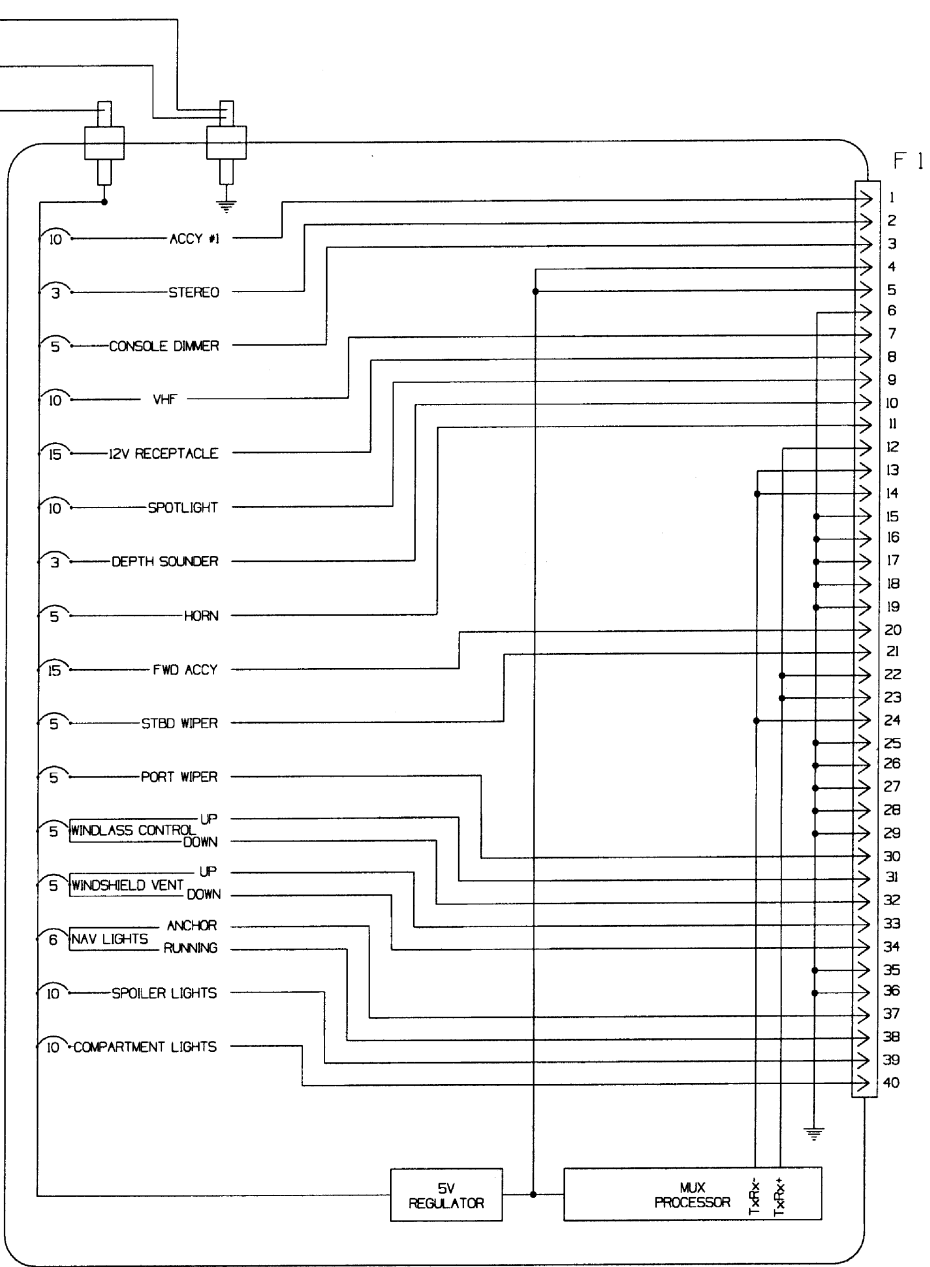


290SS • DC WIRING SCHEMATIC (2 OF 4)

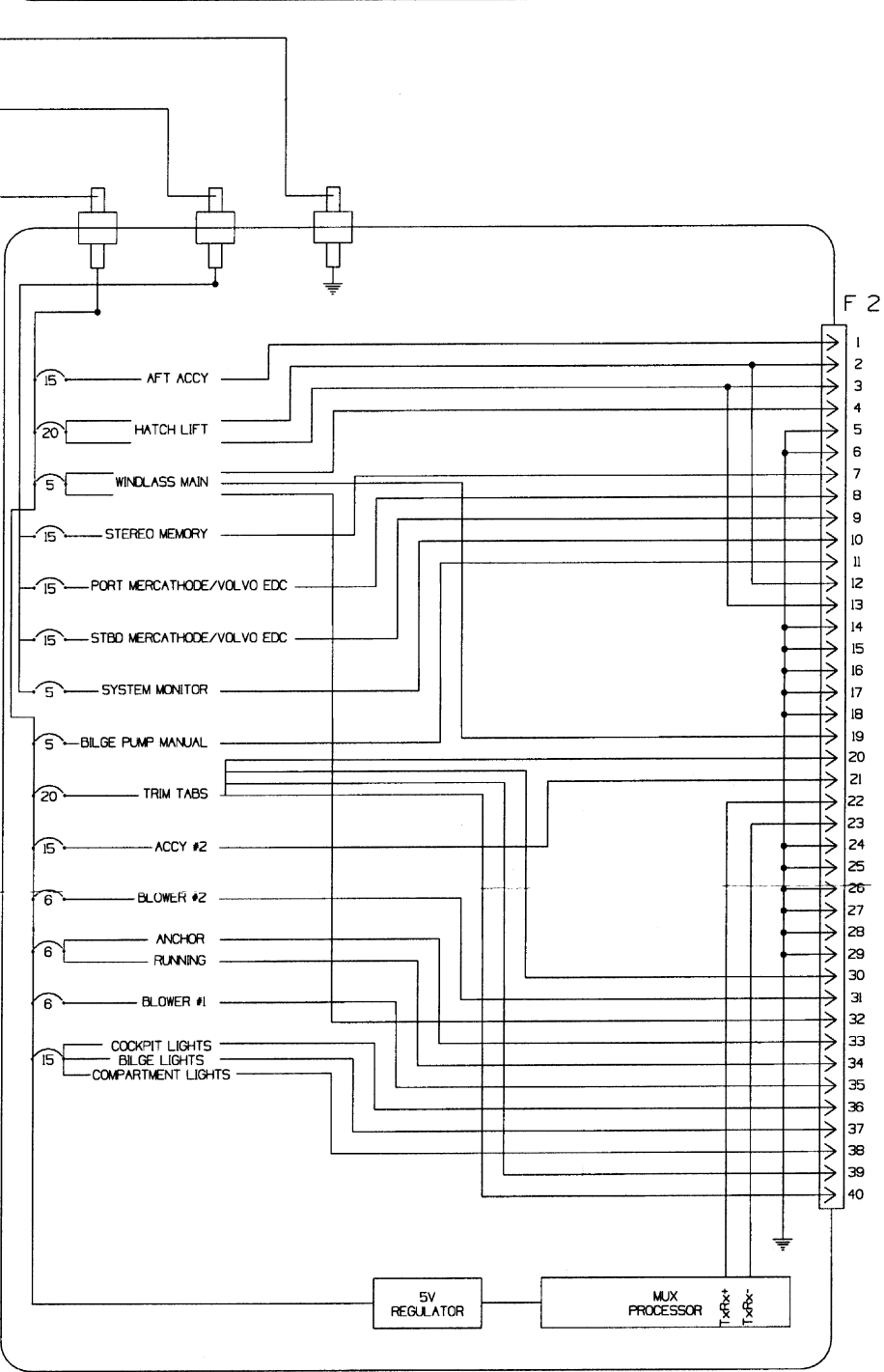


290 SS • DC WIRING SCHEMATIC (3 OF 4)

F 1
WIRING
HARNESS
SHEET 4



REF
WIRING
HARNESS
SHEET 4



REF. SHEET 4

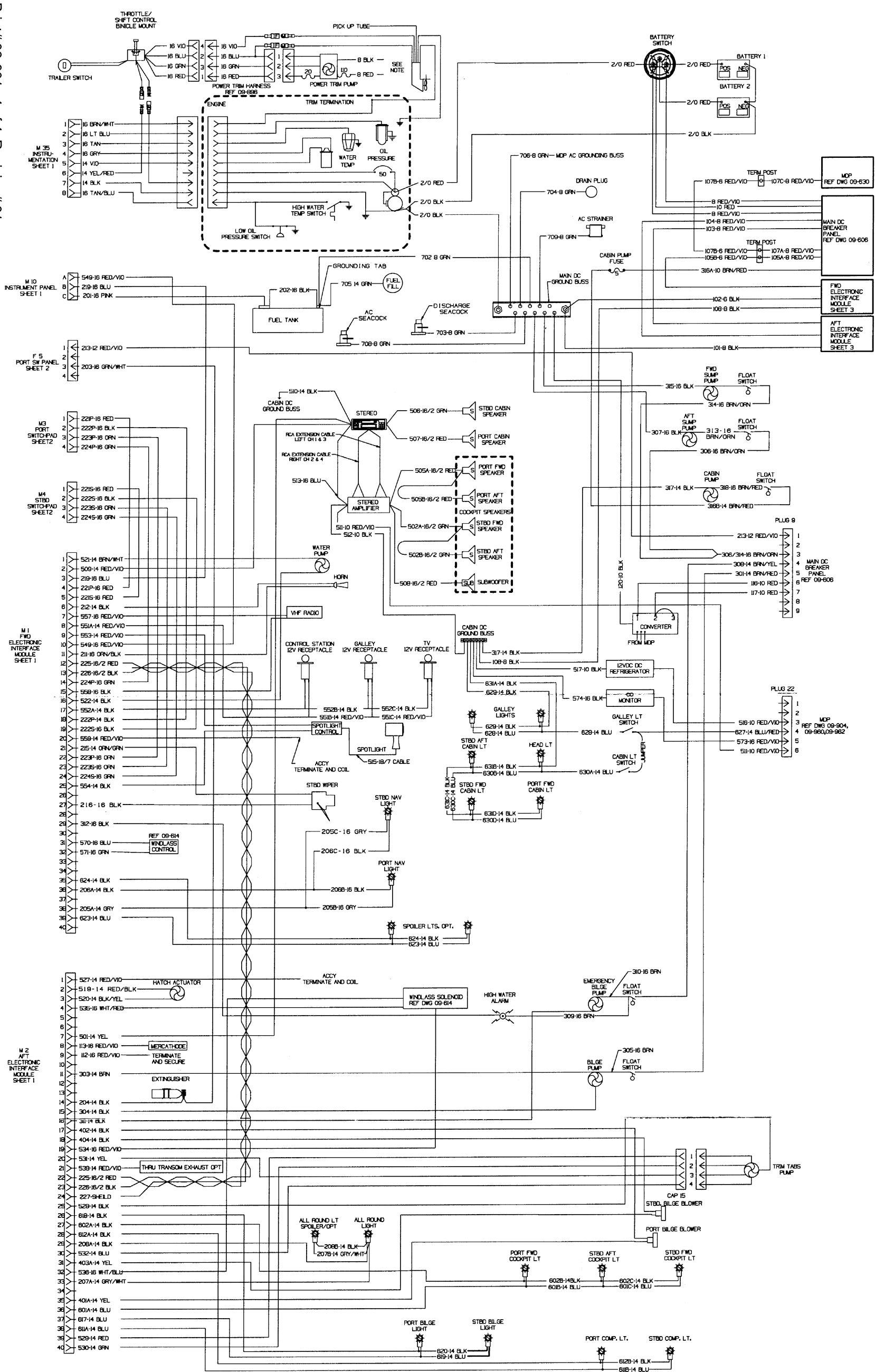
Print# 09-601, 3 of 4, Revision# 0

REF. SHEET 4

AFT
ELECTRONIC
INTERFACE
MODULE
(EIM)

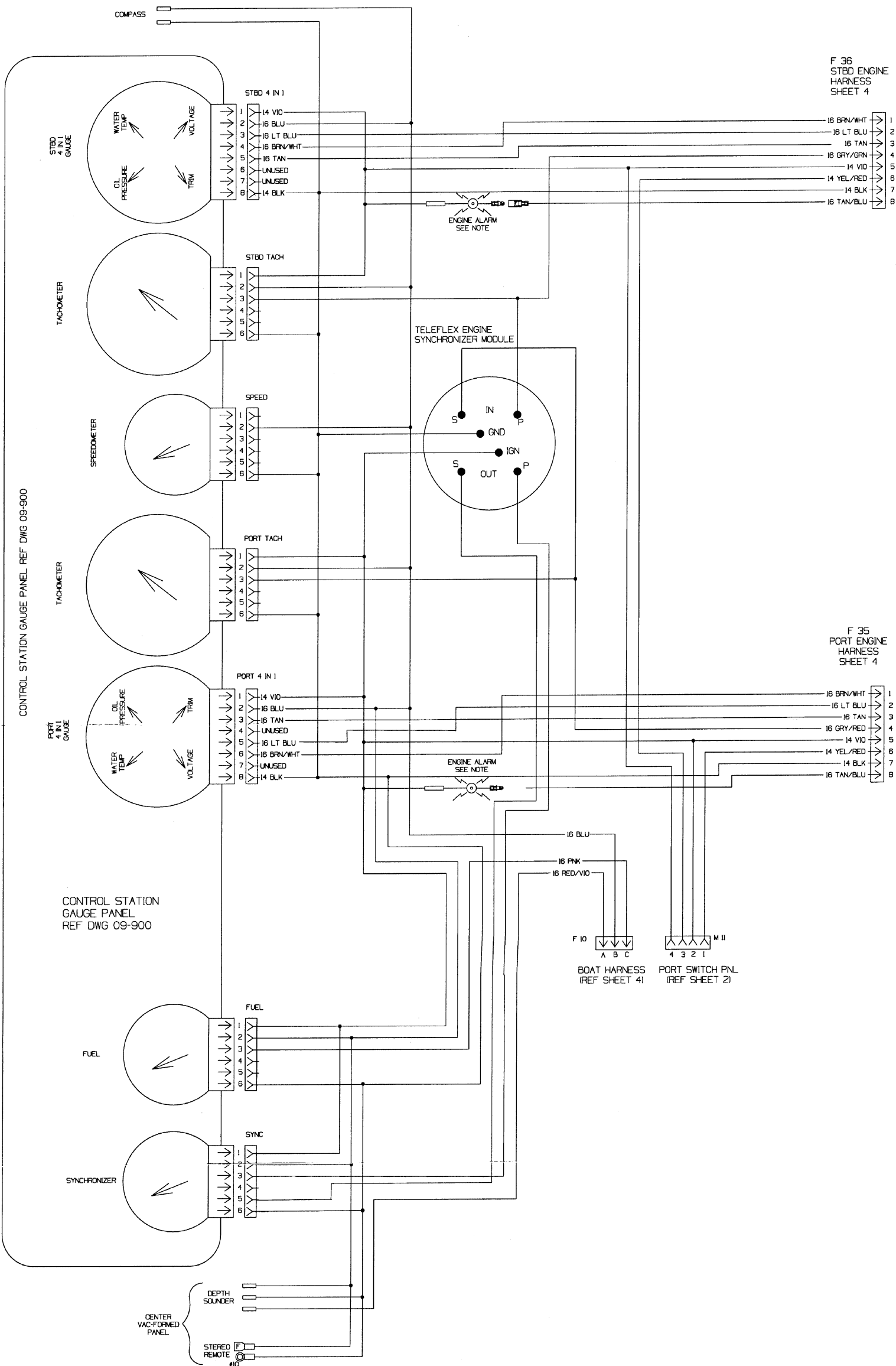


Print# 09-601, 4 of 4, Revision# 01



290 SS • DC WIRING SCHEMATIC (4 OF 4)

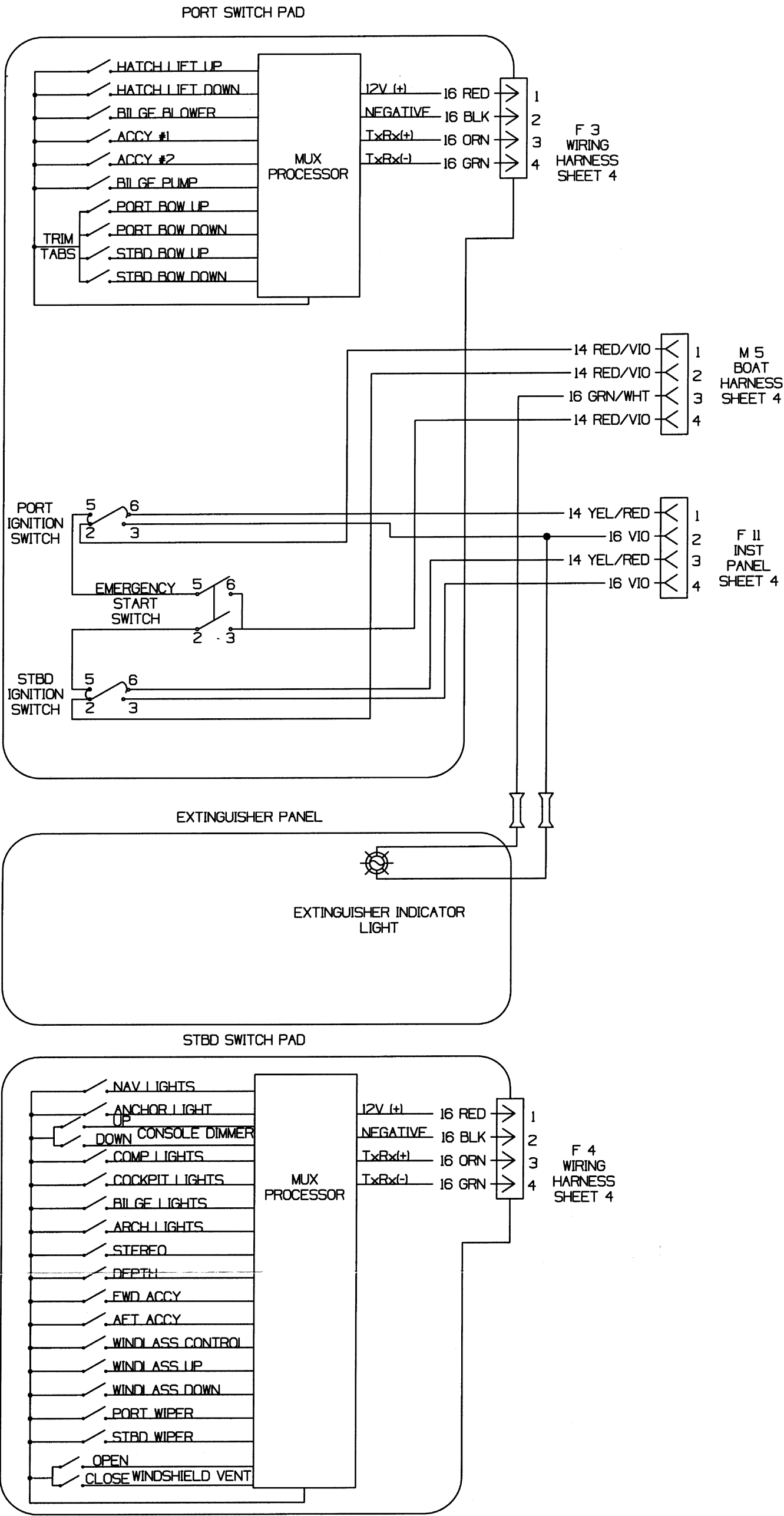
290 SS • DC WIRING SCHEMATIC (TWIN ENGINE OPTION) (1 OF 4)



Print# 09-602, 1 of 4, Revision# 02



290 SS • DC WIRING SCHEMATIC (TWIN ENGINE OPTION) (2 OF 4)

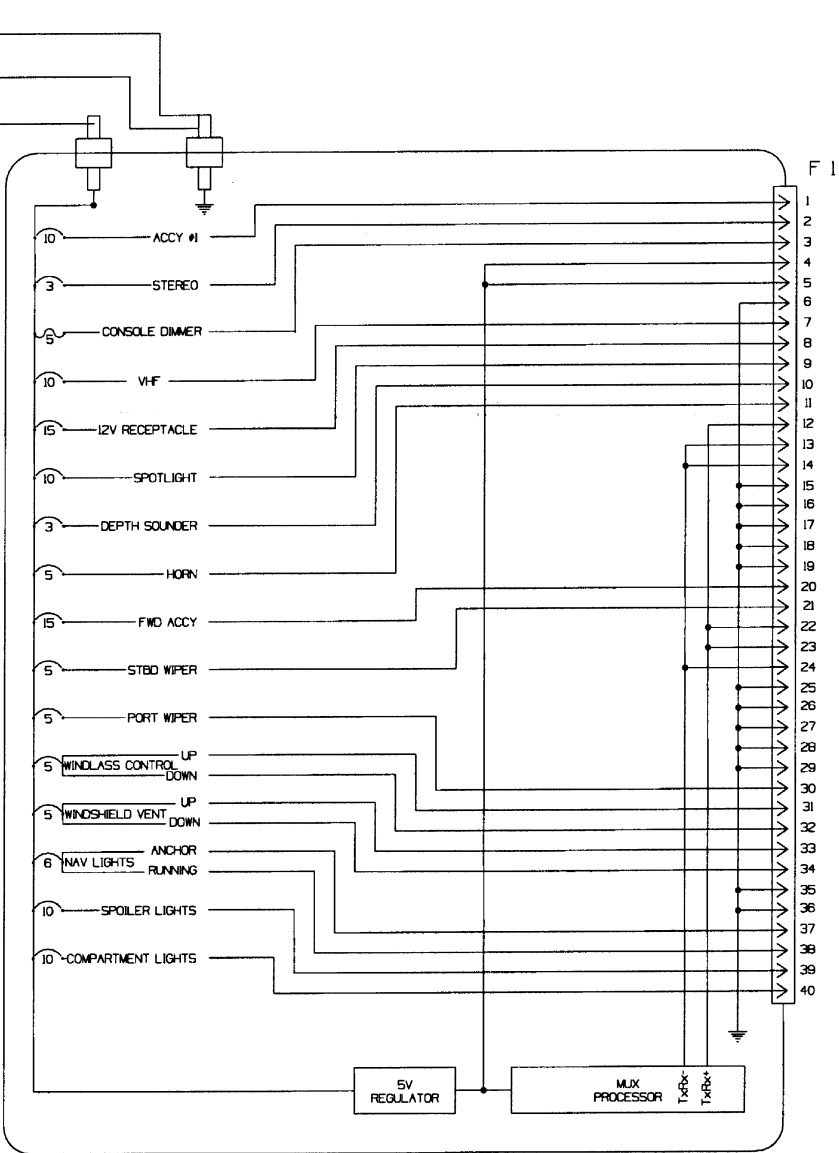


Print# 09-602, 2 of 4, Revision# 0



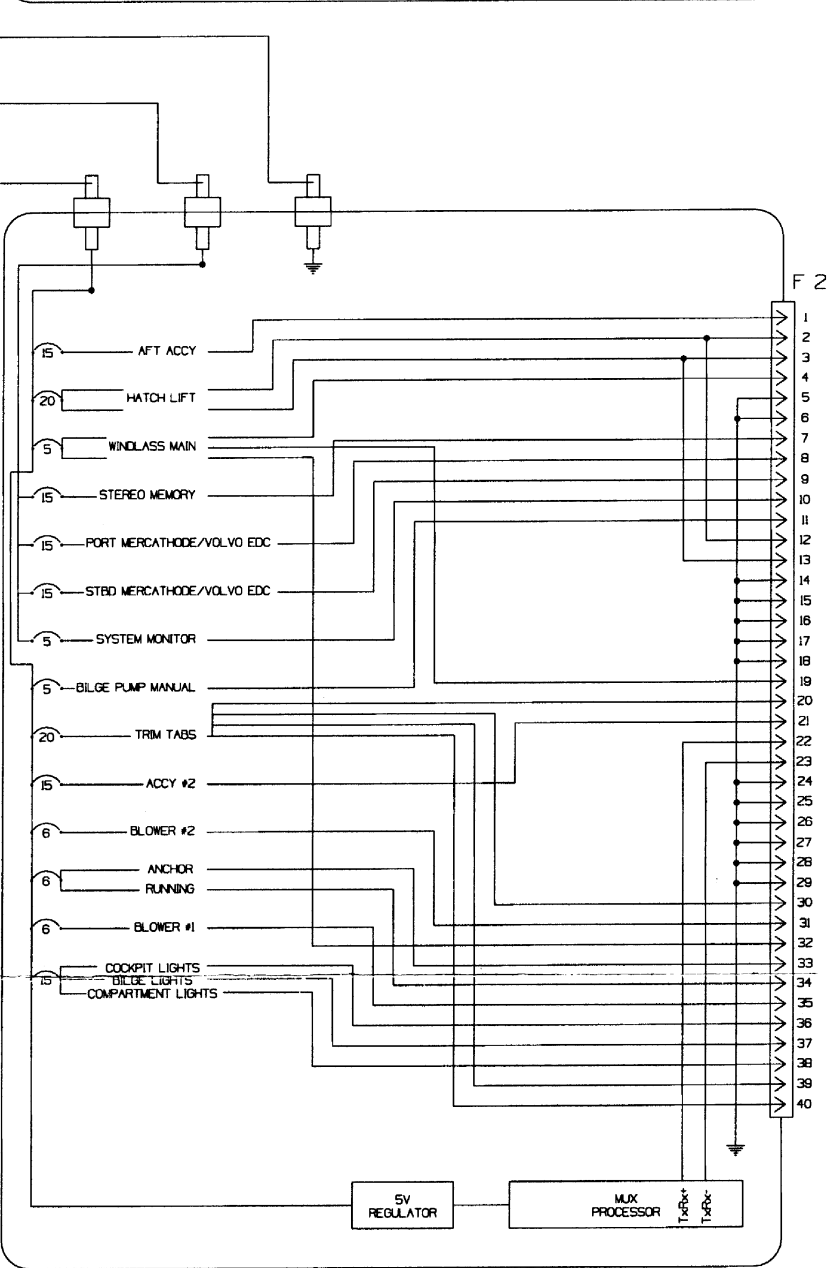
290 SS • DC WIRING SCHEMATIC (TWIN ENGINE OPTION) (3 OF 4)

F 1
WIRING
HARNESS
SHEET 2



FWD
ELECTRONIC
INTERFACE
MODULE

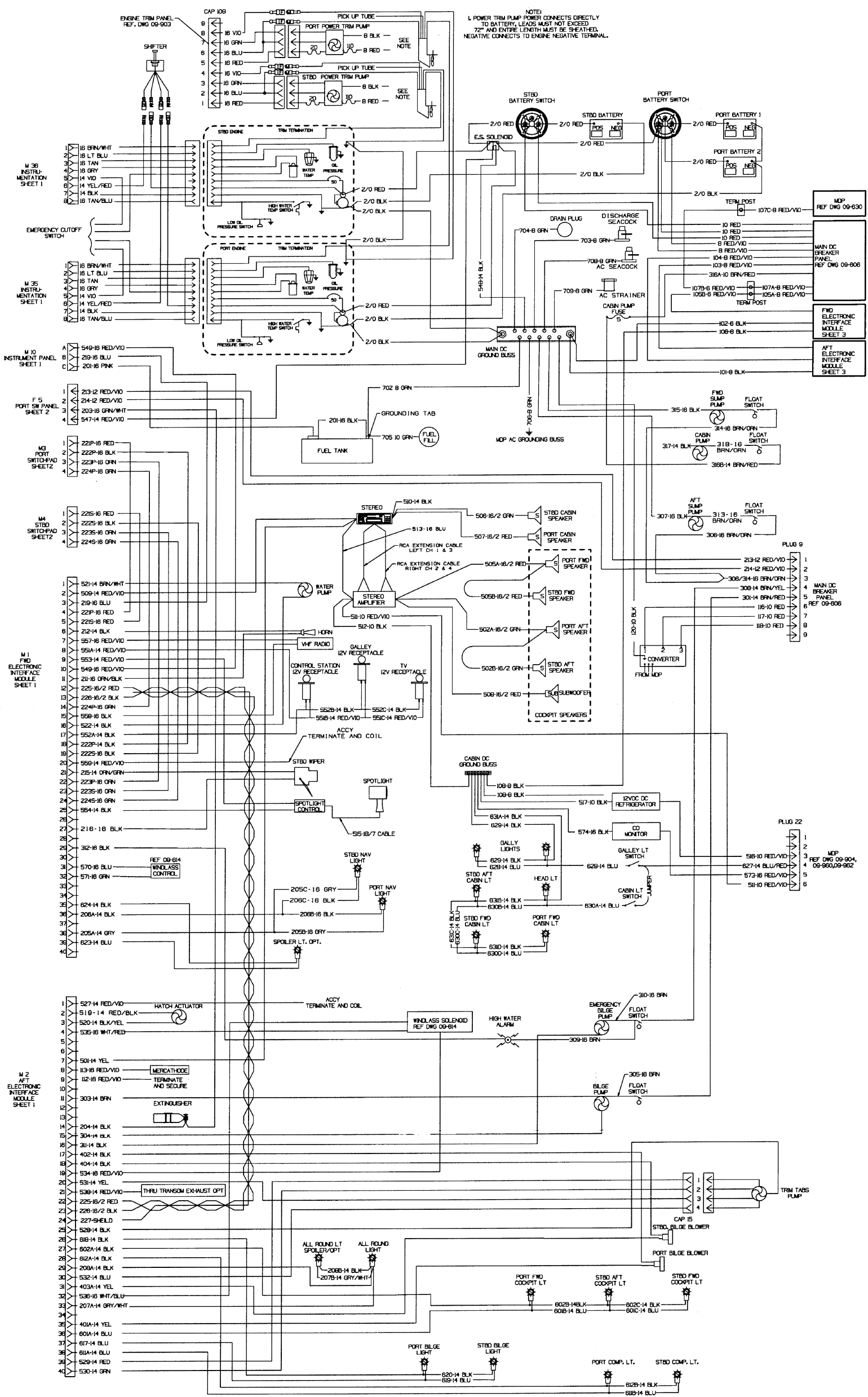
REF
WIRING
HARNESS
SHEET 2



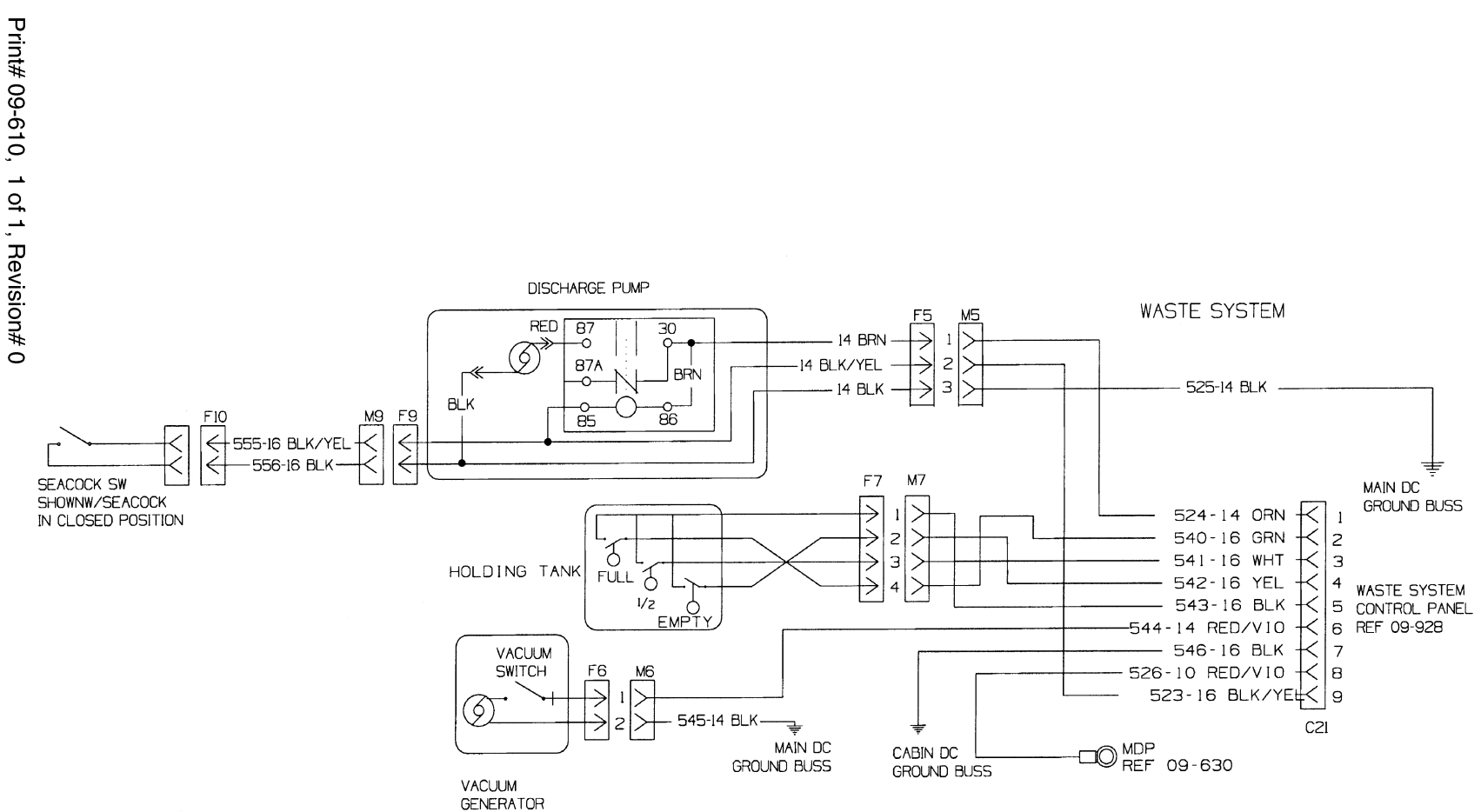
AFT
ELECTRONIC
INTERFACE
MODULE



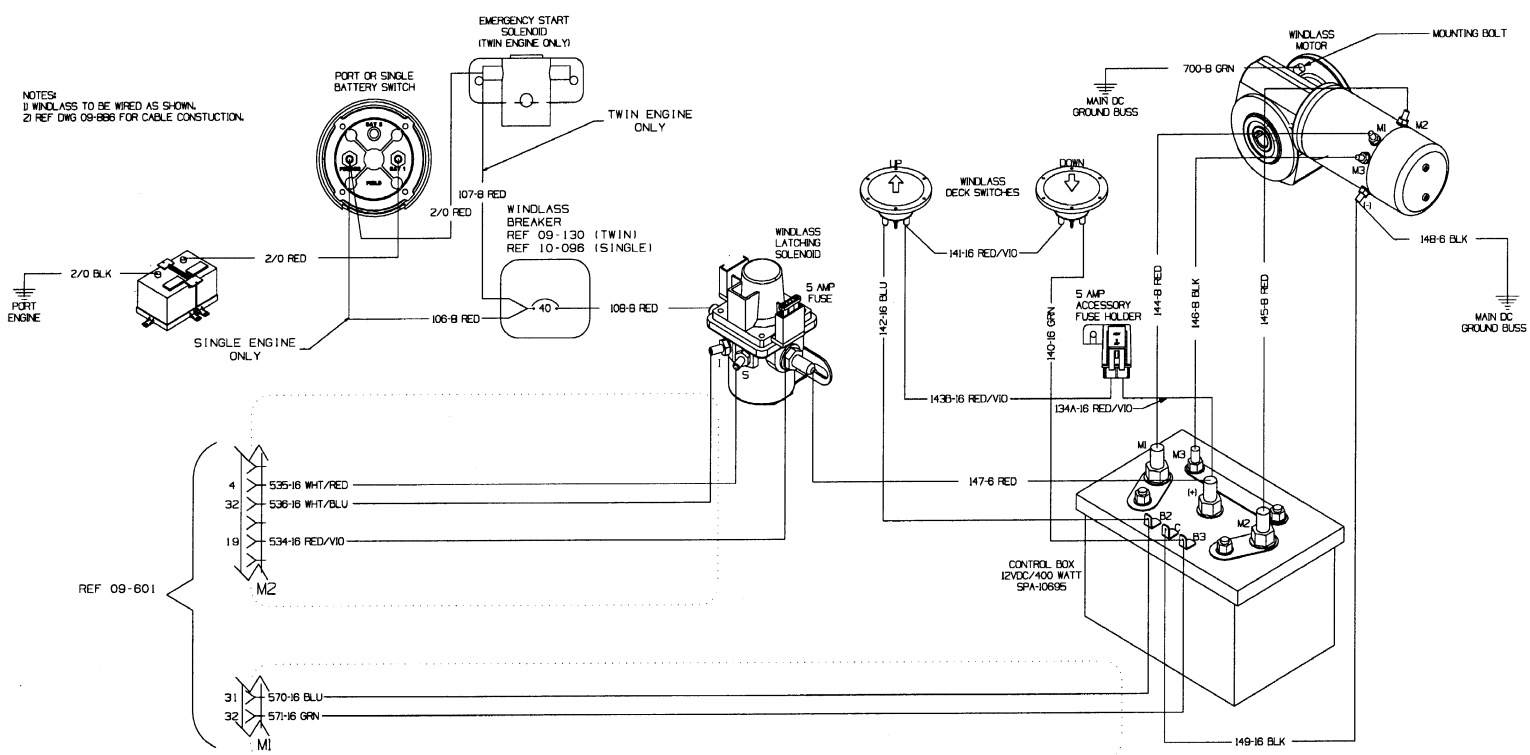
290 SS • DC WIRING SCHEMATIC (Twin Engine Option) (4 OF 4)



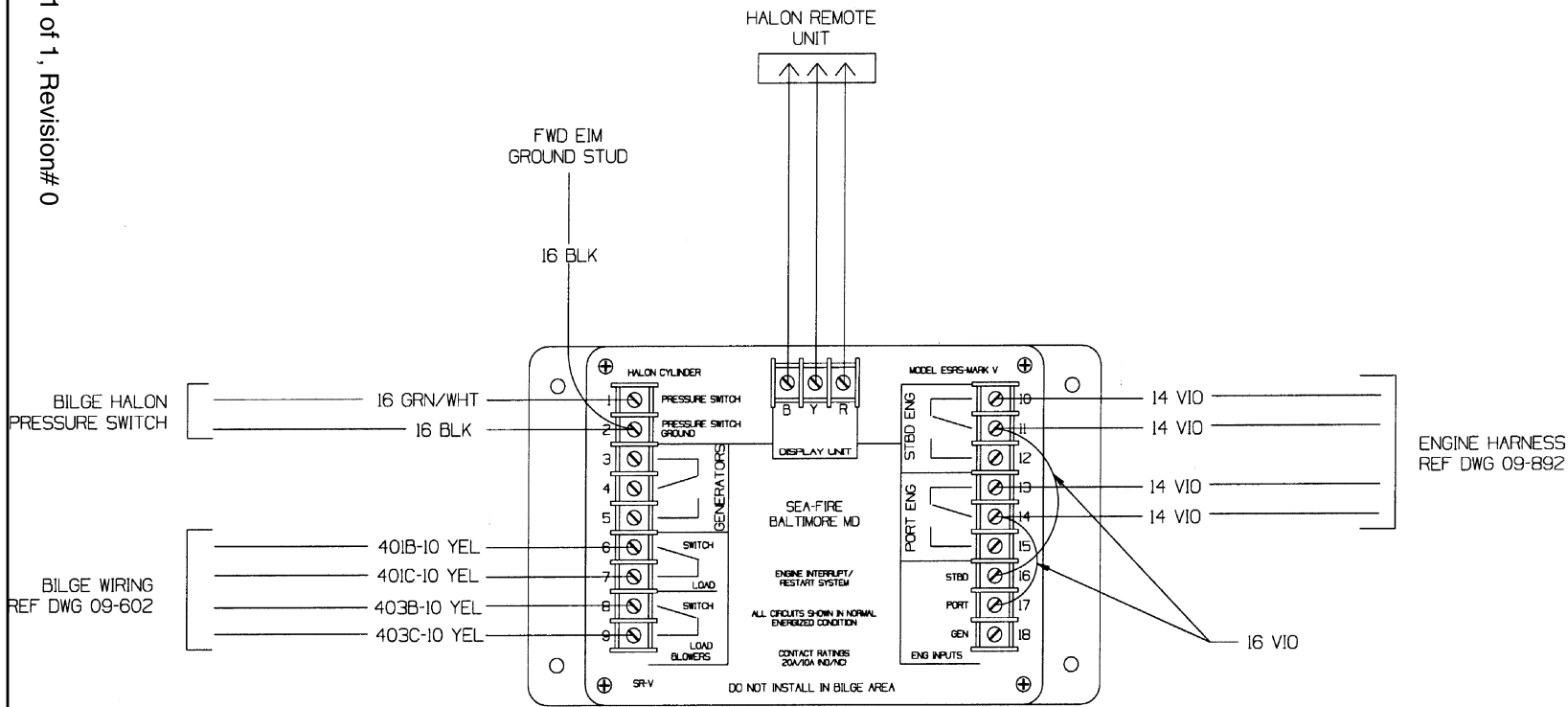
Print# 09-602, 4 of 4, Revision# 0



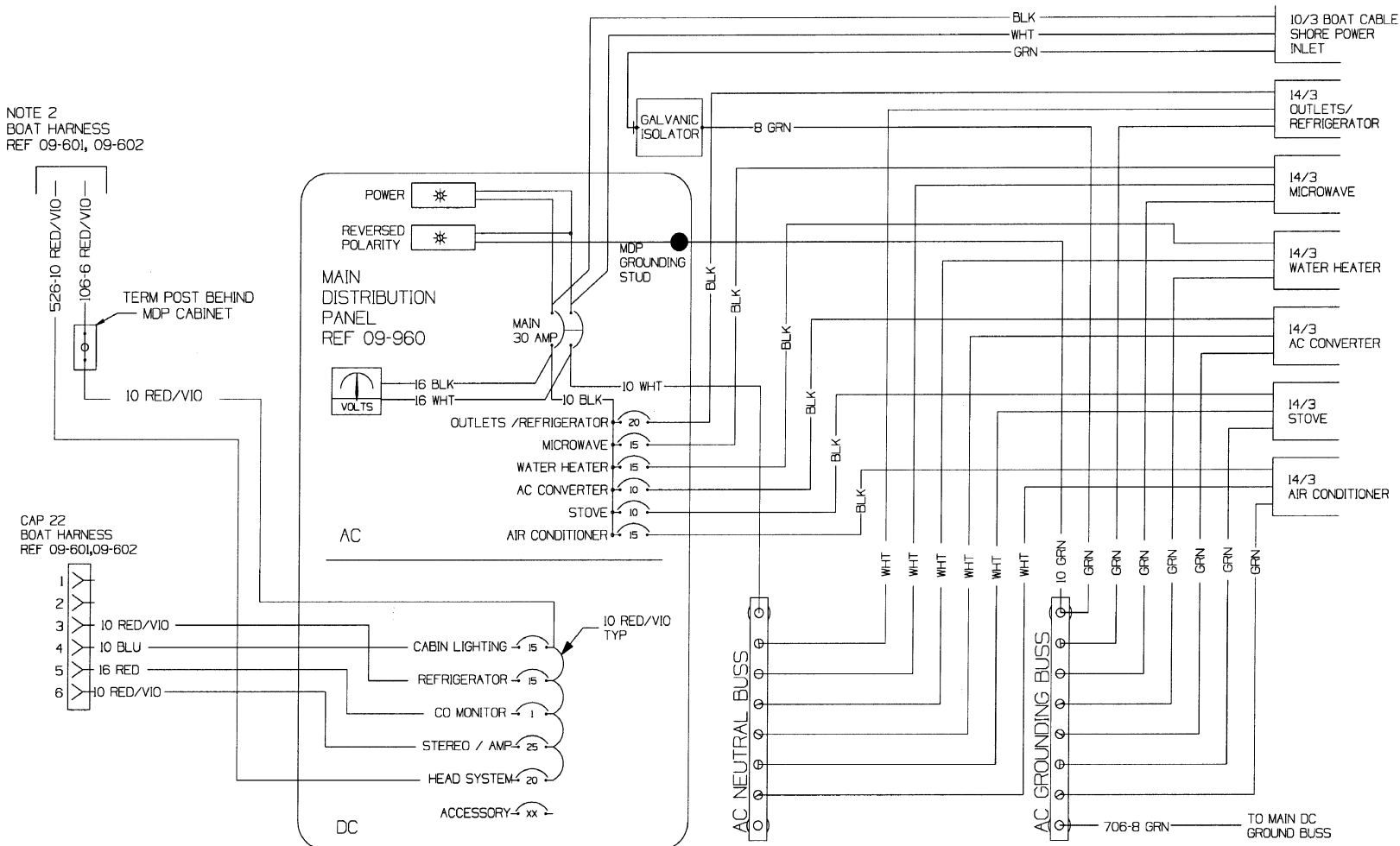
290 SS • WINDLASS WIRING DIAGRAM (OPTION)
(LOFRANS MARLIN)



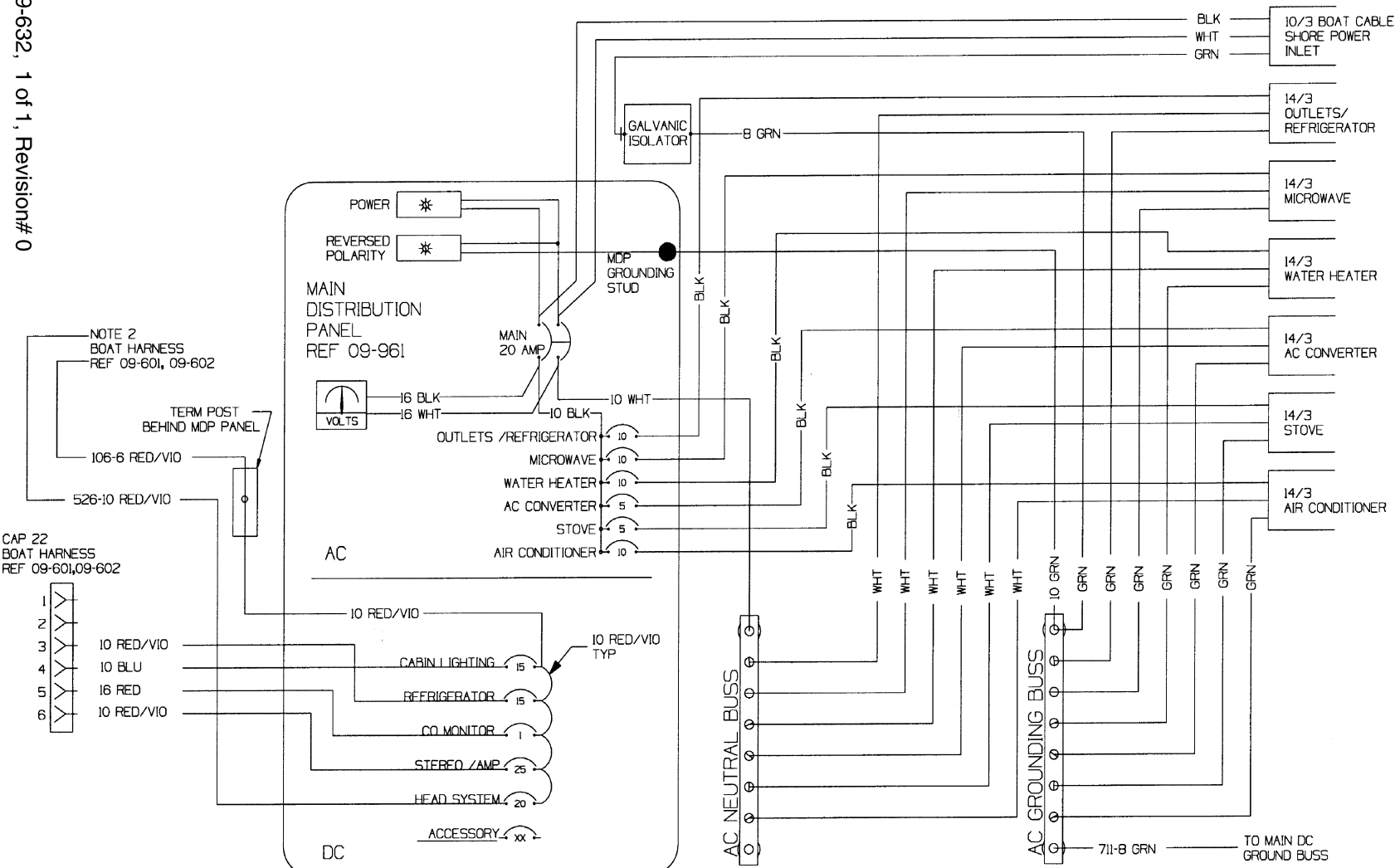
290 SS • DC WIRING SCHEMATIC
(WITH TWIN MERCURY D-TRONIC DIESEL) (OPTION)



290 SS • AC WIRING DIAGRAM (120V / 60HZ) (OPTION)



290 SS • AC WIRING DIAGRAM (220V / 50HZ) (OPTION)



Print# 09-630, 1 of 1, Revision# 01

Print# 09-632, 1 of 1, Revision# 0



SAFETY LABEL LOCATIONS

Figures 56.1 thru 59.1 identify the safety labels and their location on your boat. Make certain they are all on your boat. If any of these labels are illegible or missing, call 1-800-SRBOATS for free replacement labels.

Main Deck

(fig.56.1)

STAINLESS STEEL SLIDING SWIM LADDERS SUGGESTED CARE & MAINTENANCE

AFTER EACH USE:

Fully extend ladder and thoroughly rinse all ladder and slide surfaces with fresh water. Pay special attention to rinsing any seats and salt water from the slide areas.

MONTHLY:

Examine the ladder slide grooves and remove any foreign particles lodged within the grooves.

Wash entire ladder, using **QMC** A deck, seat cloth, and slide areas solution. Do not use harsh detergents or abrasives. **DO NOT USE ABRASIVES OR ABRASIVE CLEANERS!**

Allow ladder to dry after washing. Apply a light coating of spray lubricant or oil to the slide surfaces. Do not use oil or grease. Wipe down deck and hull to assure distribution of lubricant and ease of operation.

CAUTION: TO PREVENT THE POSSIBILITY OF PERSONAL INJURY, ENSURE THAT ANY LUBRICANTS IS CLEANED FROM LADDER RUNGS AND STILES PRIOR TO USE.

Inspect the ladder for damage and check the security of all fasteners. Repair damage and/or tighten any hardware that may have become loose prior to use.

MRP 1573112

SR-505

INSTALLED UNDER SWIM LADDER HATCH

⚠ DANGER

TO AVOID RISK OF SERIOUS INJURY OR DEATH
SHUT OFF ENGINE WHEN NEAR SWIMMERS
OR PRIOR TO USING SWIM PLATFORM AND
BOARDING LADDER.

MRP 1112879

SR-214

⚠ WARNING

USE CAUTION WITH SKIER IN TOW
ASTOW ROPE MAY BACKLASH INTO
COCKPIT WHEN RELEASED

MRP 852525

SR-111

⚠ DANGER

TRANSOM DOOR MUST BE
CLOSED AND SECURE WHEN
ENGINE IS RUNNING

MRP 811000

SR-102

⚠ DANGER

NO SMOKING

GASOLINE VAPORS ARE EXPLOSIVE

NOTICE

GASOLINE RECOMMENDATION
Minimum octane rating of 87 AKI.
Refer to the engine owner's manual for
additional information.

MRP 852533

SR-19A

CAUTION

- TO AVOID INJURY, GLASS DOOR MUST BE SECURED IN A
CLOSED AND LOCKED POSITION WHEN BOAT IS UNDER
WAY. USE BOTH TURN LOCKS TO SECURE DOOR.

ON WINDSHIELD FRAME (MRP NUMBER PROVIDED BY VENDOR)

⚠ WARNING

DOOR MUST BE SECURE WHILE
UNDERWAY

MRP 852640

SR-171

SLING

MRP #221861

SR-27

SLING

MRP #221861

SR-27

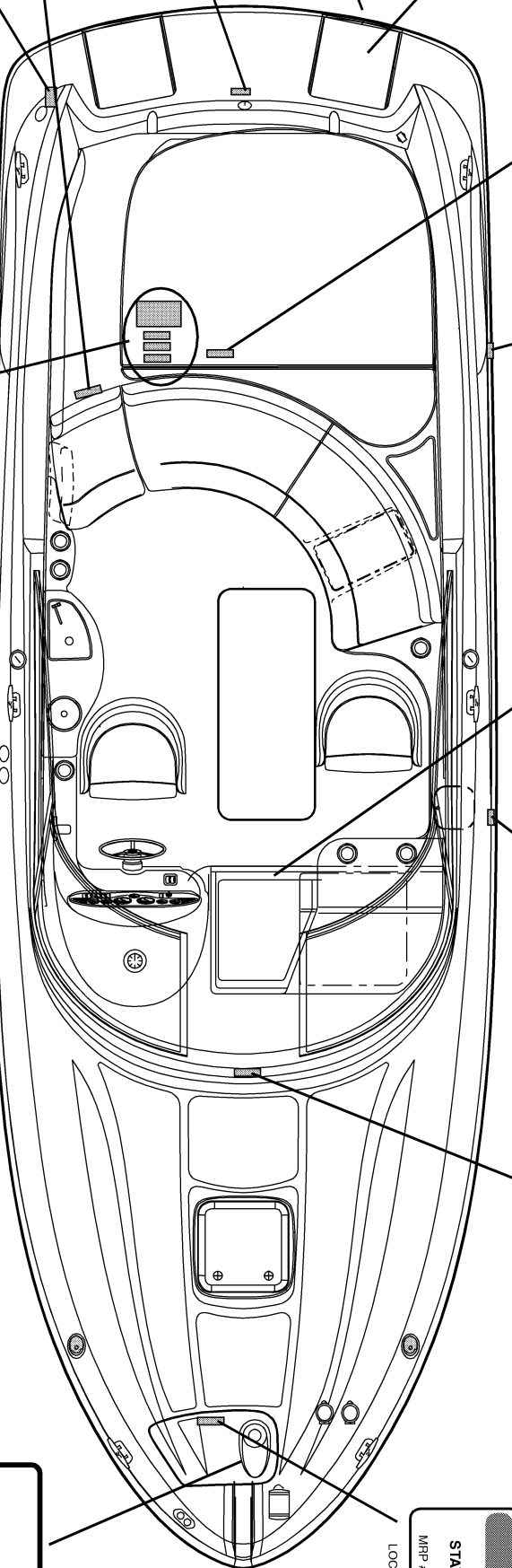
⚠ WARNING

DO NOT STORE FUEL OR
FLAMMABLE LIQUIDS HERE
VENTILATION HAS NOT BEEN
PROVIDED FOR EXPLOSIVE VAPORS

MRP 947820

SR-132

INSTALLED UNDER STORAGE HATCH



SLING

MRP #221861

SR-27

SLING

MRP #221861

SR-27

SHORE POWER

To minimize shock hazard, connect and disconnect cable as follows:

1. Turn off boat's shore power switch.
2. Connect cable at boat first.
3. If equipped with polarity indicator which activates, disconnect and connect polarity.
4. Disconnect at shore outlet first.
5. Close inlet cover tightly.

DO NOT ALTER SHORE POWER CABLE CONNECTORS

ON SIDE OF HULL / WITH SHORE POWER OPTION
(MRP NUMBER PROVIDED BY VENDOR)

WARNING

- READ THE INSTRUCTIONS BEFORE OPERATING THE WINDLASS.
- KEEP HANDS AND FEET AWAY FROM GYPSY AND CHAIN AT ALL TIMES.
- WHEN WINDLASS IS NOT IN USE OR BEFORE USING THE HANDLE, TURN OFF THE WINDLASS AT THE MAIN SWITCH.
- ENGAGE THE CHAIN STOPPER AFTER ANCHORING. WINDLASS MUST NOT BE USED AS SOLE MEANS OF SECURING ANCHOR IN BOW FITTING. ANCHORS MUST BE INDEPENDENTLY SECURED TO PREVENT ACCIDENTLY RELEASE.
- BE SURE THE CLUTCH AND THE CHAIN STOPPER ARE WILL ENGAGED BEFORE SAILING.

NOTICE

CHECK BATTERY CELL FUEL
LEVEL APPROXIMATELY EVERY 4
WEEKS AND MORE OFTEN IN
SUMMER AND HOT ZONES.

MRP # 914341

SR-139

⚠ WARNING

LEAKING FUEL IS A FIRE AND
EXPLOSION HAZARD. INSPECT SYSTEM
REGULARLY. EXAMINE FUEL TANKS FOR
LEAKS OR CORROSION AT LEAST
ANNUALLY.

MRP # 852632

SR-151

PREVENT THE DISCHARGE OF POLLUTANTS

DISCHARGE OF OIL OR OILY WASTE INTO THE WATERS IS
PROHIBITED. IF SUCH A DISCHARGE CAUSES A RIL, SPILL OR
A DISCOLORATION OF THE SURFACE, OR CAUSES A SLUDGE
OR EMULSION BENEATH THE SURFACE OF THE WATER,
VIOLATORS ARE SUBJECT TO PENALTIES.

MRP # 924538

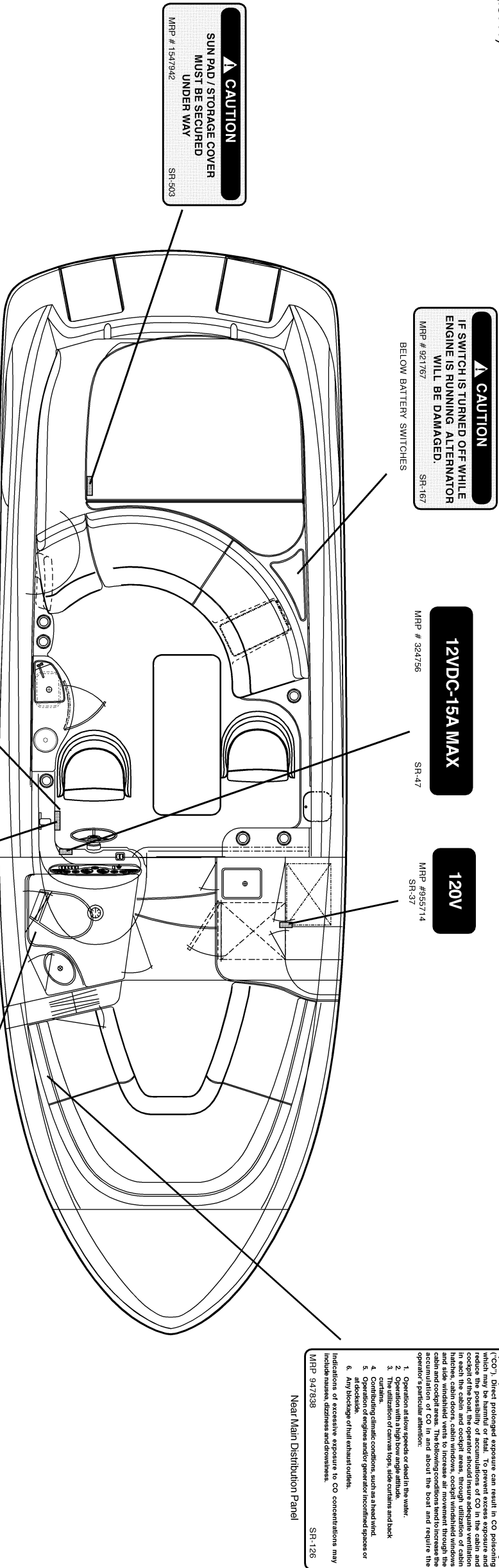
SR-168

This tag replaces "Discharge Of Oil Prohibited"
tag under bilge access hatch when boat is
ordered with CE International option.



SAFETY LABEL LOCATIONS (CONTINUED)

Main Deck
(fig.57.1)



A CAUTION
IF SWITCH IS TURNED OFF WHILE
ENGINE IS RUNNING, ALTERNATOR
WILL BE DAMAGED.
MRP # 921767 SR-167

BELOW BATTERY SWITCHES

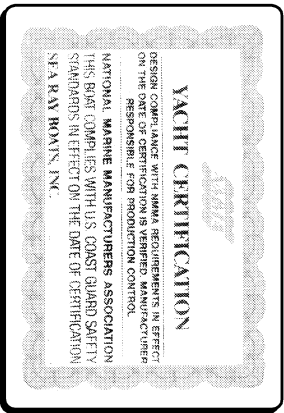
12VDC-15A MAX
MRP # 324756 SR-47

120V
MRP #955714 SR-37

A DANGER
In all gasoline powered boats, engine and generator exhaust systems produce colorless and odorless carbon monoxide gas ("CO"). Direct prolonged exposure can result in CO poisoning and death. To avoid risk of injury or death, please read and understand the following instructions. To reduce the possibility of accumulations of CO in the cabin and cockpit of the boat, the operator should insure adequate ventilation in each the cabin and cockpit areas, through utilization of cabin hatches, cabin doors, cabin windows, cockpit windshield windows and side windshield vents to increase air movement through the cabin and cockpit areas. The following conditions tend to increase the accumulation of CO in and about the boat and require the operator's particular attention:
1. Operation at slow speeds or dead in the water.
2. Operation with a high bow angle attitude.
3. Operation with canvas tops, side curtains and back curtains.
4. Contributing climatic conditions, such as a head wind.
5. Operation of engines and/or generator in confined spaces or
6. Any blockage of hull exhaust outlets.
Indications of excessive exposure to CO concentrations may include nausea, dizziness and drowsiness.
MRP 947938 SR-126

Near Main Distribution Panel

A CAUTION
SUN PAD / STORAGE COVER
MUST BE SECURED
UNDER WAY
MRP # 1547942 SR-903



CE 0609
IMC
Sea Ray Boats
290 SS
MAXIMUM
B 10 ft + 1180 kg

This tag replaces "Yacht Certification" tag on dash when boat is ordered with CE International option.

NOTICE
THIS BOAT IS EQUIPPED WITH
AN OPTIONAL DIRECT OVERBOARD
DISCHARGE VALVE. DISCHARGING
OF SEWAGE DIRECTLY OVERBOARD
IS FOR USE WHERE APPROVED ONLY
MRP 955278 SR-118
(LOCATED INSIDE HEAD
OPTIONAL EQUIPMENT)

A DANGER
LEAVING WINDOW OPEN COULD
INDUCE EXHAUST FUMES
INTO CABIN RESULTING IN SEVERE
PERSONAL INJURY OR DEATH
MRP 862566 SR-136
LOCATED INSIDE HEAD

A DANGER

AVOID COLLISIONS
Maintain look-out as required by the "Rules of the Road".
- Visibility can be limited by high boat trim angles, persons, gear, weather and light conditions. Speed so that you can take proper and effective action to avoid hazardous conditions.
Such issues are considered under the control of the operator!
AVOID RISK OF INJURY OR DEATH. SHUT OFF ENGINE PRIOR TO USING SWIMPADS, SWIM PLATFORM OR BOARDING LADDER.
MRP 987727 SR-187

This tag is used on boats with diesel engines.

A DANGER A

AVOID COLLISIONS -
Maintain look-out as required by the "Rules of the Road".
- Visibility can be limited by high boat trim angles, persons, gear, weather and light conditions. Speed so that you can take proper and effective action to avoid hazardous conditions.
Such issues are considered under the control of the operator!
CARBON MONOXIDE CAN BE FATAL -
In all gasoline powered boats, engine and generator exhaust systems produce colorless and odorless carbon monoxide gas ("CO"). Direct prolonged exposure can result in CO poisoning and death. To avoid risk of injury or death, please read and understand the following instructions. To reduce the possibility of accumulations of CO in the cabin and cockpit of the boat, the operator should insure adequate ventilation in each the cabin and cockpit areas, through utilization of cabin hatches, cabin doors, cabin windows, cockpit windshield windows and side windshield vents to increase air movement through the cabin and cockpit areas. The following conditions tend to increase the accumulation of CO in and about the boat and require the operator's particular attention:
1. Operation at slow speeds or dead in the water.
2. Operation with a high bow angle attitude.
3. Operation with canvas tops, side curtains and back curtains.
4. Contributing climatic conditions, such as a head wind.
5. Operation of engines and/or generator in confined spaces or
6. Any blockage of hull exhaust outlets.
Indications of excessive exposure to CO concentrations may include nausea, dizziness and drowsiness.
DO NOT USE Sun Pads, Boarding Ladder or Swim Platform and Transom Door should be closed when engine is running.
MRP 987719 SR-193

This tag is used on boats with gasoline engines.

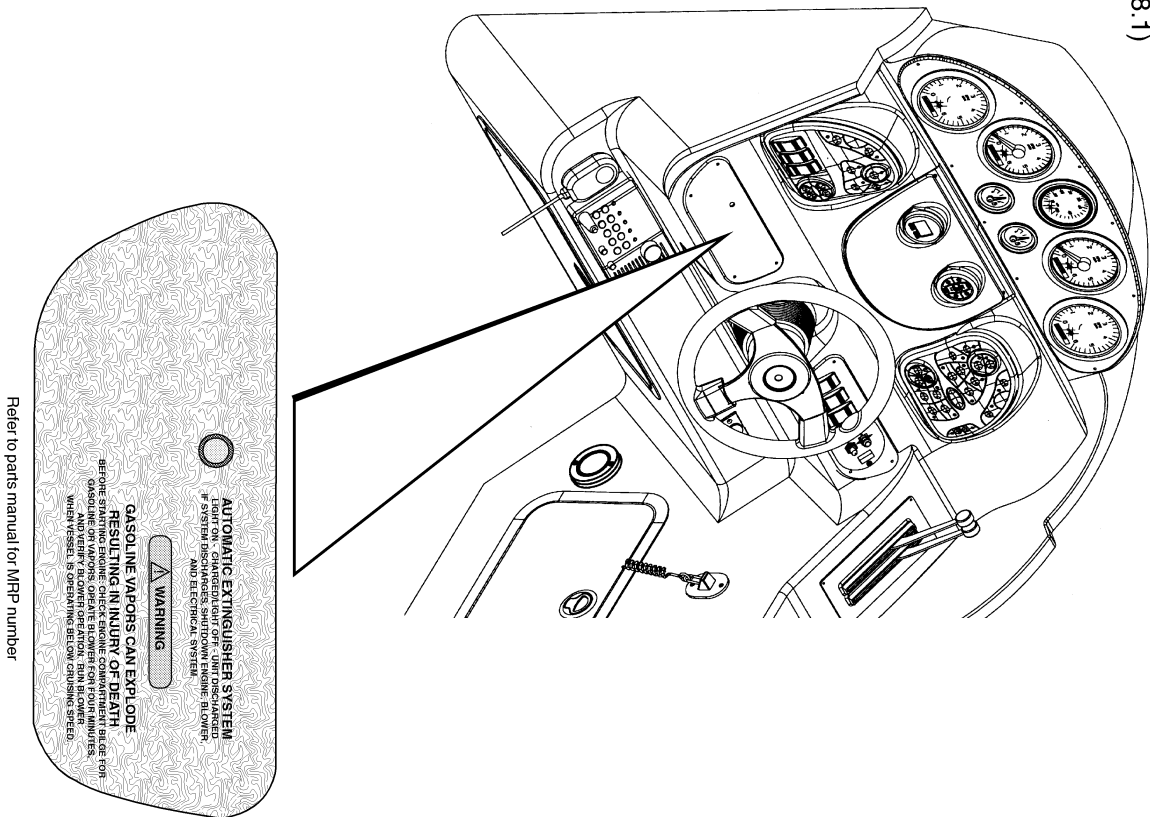
A DANGER

**TO AVOID RISK OF SERIOUS INJURY OR DEATH
SHUT OFF ENGINE WHEN NEAR SWIMMERS
OR PRIOR TO USING SWIM PLATFORM AND
BOARDING LADDER.**
MRP 1112879 SR-214

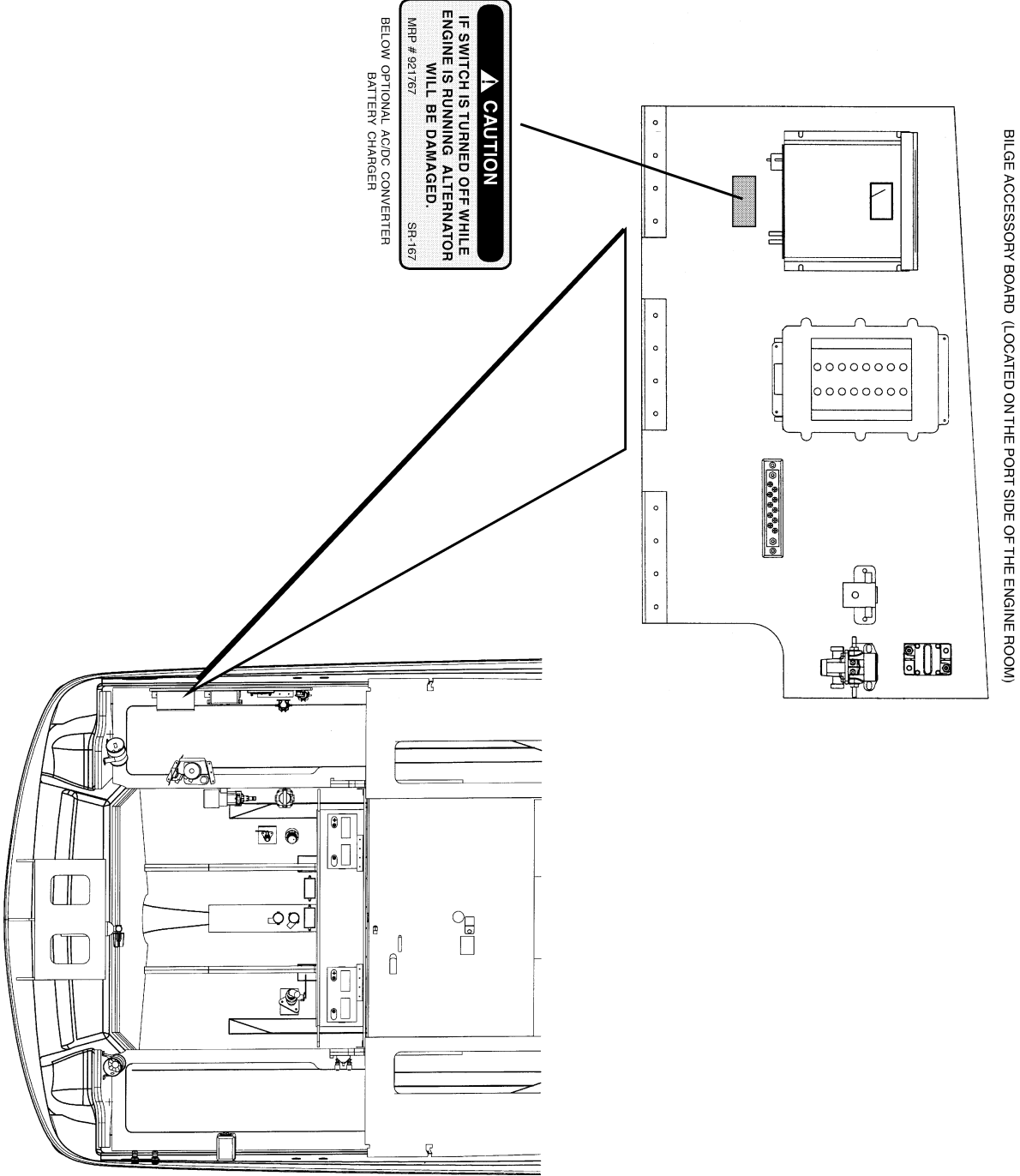


SAFETY LABEL LOCATIONS (CONTINUED)

Dash Area
(fig.58.1)

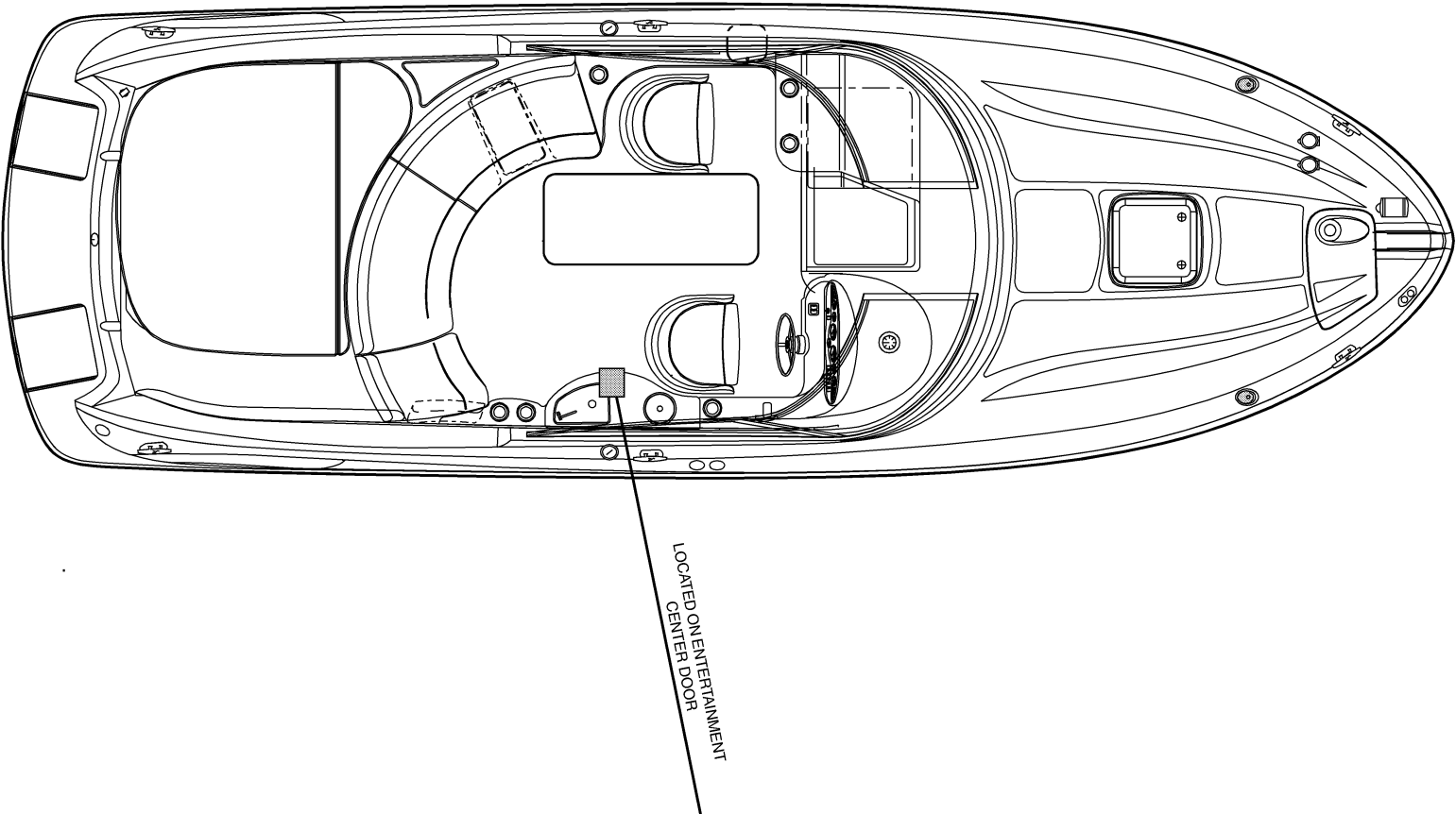


Engine Compartment
(fig.58.2)



Safety Label Locations (Continued)

(fig. 59.1)



Save Our Seas

It is *illegal* to dump plastic trash anywhere into the ocean or navigable waters of the United States. Violation of these requirements may result in civil penalty up to \$25,000, a fine of \$50,000 and imprisonment for up to five years.

<p>PLASTIC - Includes but is not limited to: plastic bags, styrofoam cups and lids, sixpack holders, stirrers, straws, milk jugs, egg cartons, synthetic fishing nets, ropes, lines, and bio or photo degradable plastics.</p> <p>GARBAGE - Means paper, rags, glass, metal, crockery (generated in living spaces aboard the vessel-what we normally call trash), and all kinds of food, maintenance and cargo-associated waste.</p> <p>“Garbage” does not include fresh fish or fish parts, dishwater, and gray water.</p>	
<p>INSIDE 3 MILES (and in U.S. Lakes, Rivers, Bays and Sounds) PLASTICS DUNNAGE, LINING AND PACKING MATERIALS THAT FLOAT ANY GARBAGE EXCEPT DISHWATER/GRAYWATER/FRESH FISH PARTS</p>	<p>DUNNAGE - Material used to block and brace cargo, and is considered a cargo associated waste.</p> <p>DISHWATER- Means the liquid residue from the manual or automatic washing of dishes and cooking utensils which, have been pre-cleaned to the extent that any food particles adhering to them would not normally interfere with the operation of automatic dishwashers.</p>
<p>3 TO 12 MILES PLASTICS DUNNAGE, LINING AND PACKING MATERIALS THAT FLOAT ANY GARBAGE NOT GROUND TO LESS THAN ONE SQUARE INCH</p>	
<p>12 TO 25 MILES PLASTICS DUNNAGE, LINING AND PACKING MATERIALS THAT FLOAT</p>	<p>GRAYWATER - Means drainage from a dishwasher, shower, laundry, bath, and washbasin, and does not include drainage from toilets, urinals, hospitals, and cargo spaces.</p>
<p>12 TO 25 MILES PLASTICS</p>	

MRP # 532820 SR-61



INTERNATIONAL HOMOLOGATIONS

This vessel and its systems have been constructed in accordance with standards and specifications in effect at the time of manufacture as published by the various regulatory authorities listed below.

1. Ministere De La Mer - France
2. Registro Italiano Navale - Italy
3. Det Norske Veritas - Norway
4. Securite des Nauires - Canada
5. J.C.I. (Japan Craft Inspection) - Japan
6. N.K.K. (Nippon Kaiji Kyokai) - Japan
7. B.S.I. (British Standards Institute) - England
8. Ministerio Obras Publicas Y Transporters - Spain
9. EC Directive - European Community

Further information may be obtained from Sea Ray® Customer Service. 1-800-SRBOATS.



Sea Ray 