R-27 | Owner's Manual

Quality Craftsmanship Since 1958

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CONGRATULATIONS

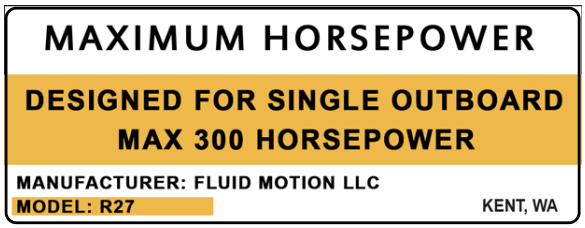
The Ranger Tug family has a passion for boating. We are committed to continuous process improvement in all areas that affect our customer's satisfaction with our products and providing great customer service.

SAFETY

Safety is always a priority at Ranger Tugs. Please read all manuals to ensure that equipment is used in a safe manner. We highly recommend attendance in a Coast Guard approved boating safety course. Such courses are available from the Coast Guard directly or from boating organizations. Owners should have annual inspections to ensure that all safety equipment is current.

⚠ WARNING

Operating, servicing and maintaining a recreational marine vessel can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, service your vessel in a well-ventilated area and wear gloves or wash your hands frequently when servicing this vessel. For more information go to **www.P65warnings.ca.gov/marine**.



SYMBOL GLOSSARY

Attention! – Important Operating or Maintenance Instructions

Attention! – Electrical Shock Hazard

Fresh Water

Black Water

Fuel

STE

Standard Equipment

OPT

Optional Equipment

Hints

SPECIFICATIONS

R-27

Length	27′ 0″	8.2 m
Length Overall – motor up	34′ 6″	10.5 m
– motor down	32′ 9″	10 m
Length Overall on Trailer – motor up	40′ 7″	12.4 m
– motor down	38′ 8″	11.8 m
Beam	8′ 6″	2.6 m
Draft – motor up	21″	.5 m
– motor down	33″	.8 m
Weight, Dry with motor	7,000 lbs	3,175 kg
Water Bridge Clearance (mast down)	8′ 1″	2.5 m
Height on Trailer (mast down) with radar	11′ 5″	3.5 m
Fuel Capacity	150 gal	568 L
Water Capacity (fresh)	40 gal	151 L
Holding Tank Capacity	30 gal	114 L

(Subject to Change Without Notice)

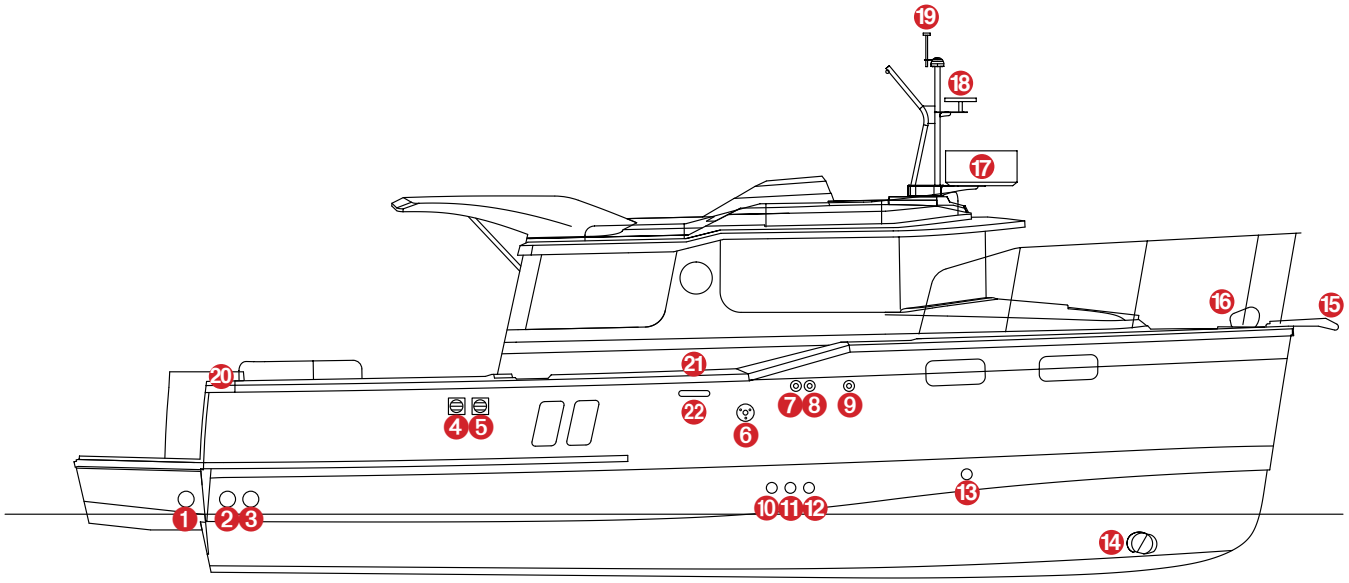
EQUIPMENT LOCATION

STARBOARD FITTINGS

STE 1 2 3 7 8 11 12 13 14 15 16 17 18 19

OPT 4 5 6 9 10

Keep all vents, drains and exhausts clear of any obstructions to ensure proper performance of each system.



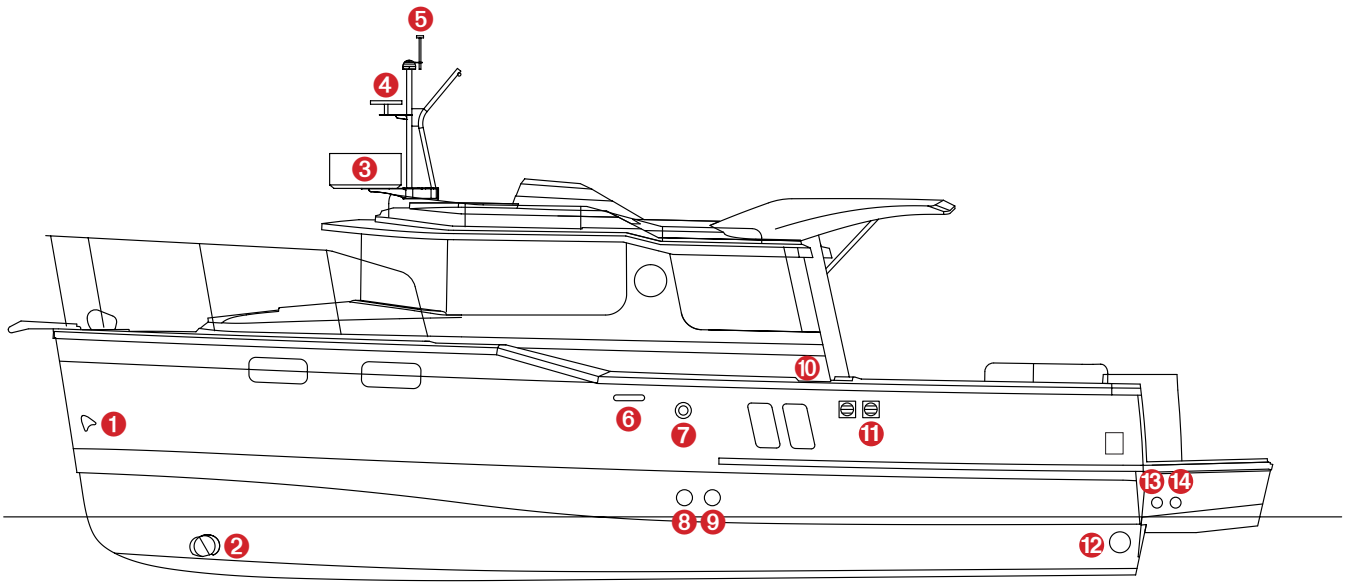
1. Aft Sink, Cooler Drain & Motor Well Drain
2. Aft Bilge
3. Center Bilge
4. Compartment Blower/Exhaust
5. Compartment Blower/Exhaust
6. Webasto Exhaust (NW Only)
7. Water Tank Vent
8. Waste Tank Vent
9. Webasto Fresh Air Intake (NW Only)
10. AC Exhaust (LE Only)
11. Shower Sump
12. Forward Bilge
13. Head Sink Drain
14. Bow Thruster
15. Anchor Roller
16. Windlass
17. Radar
18. TV Antenna
19. Anchor Light
20. Fuel Fill
21. Water Fill
22. Trailering Side Marker Light

PORT FITTINGS

STE 1 2 3 4 5 6 7 8 9 14

OPT 10 11 12 13 15

Keep all vents, drains and exhausts clear of any obstructions to ensure proper performance of each system.

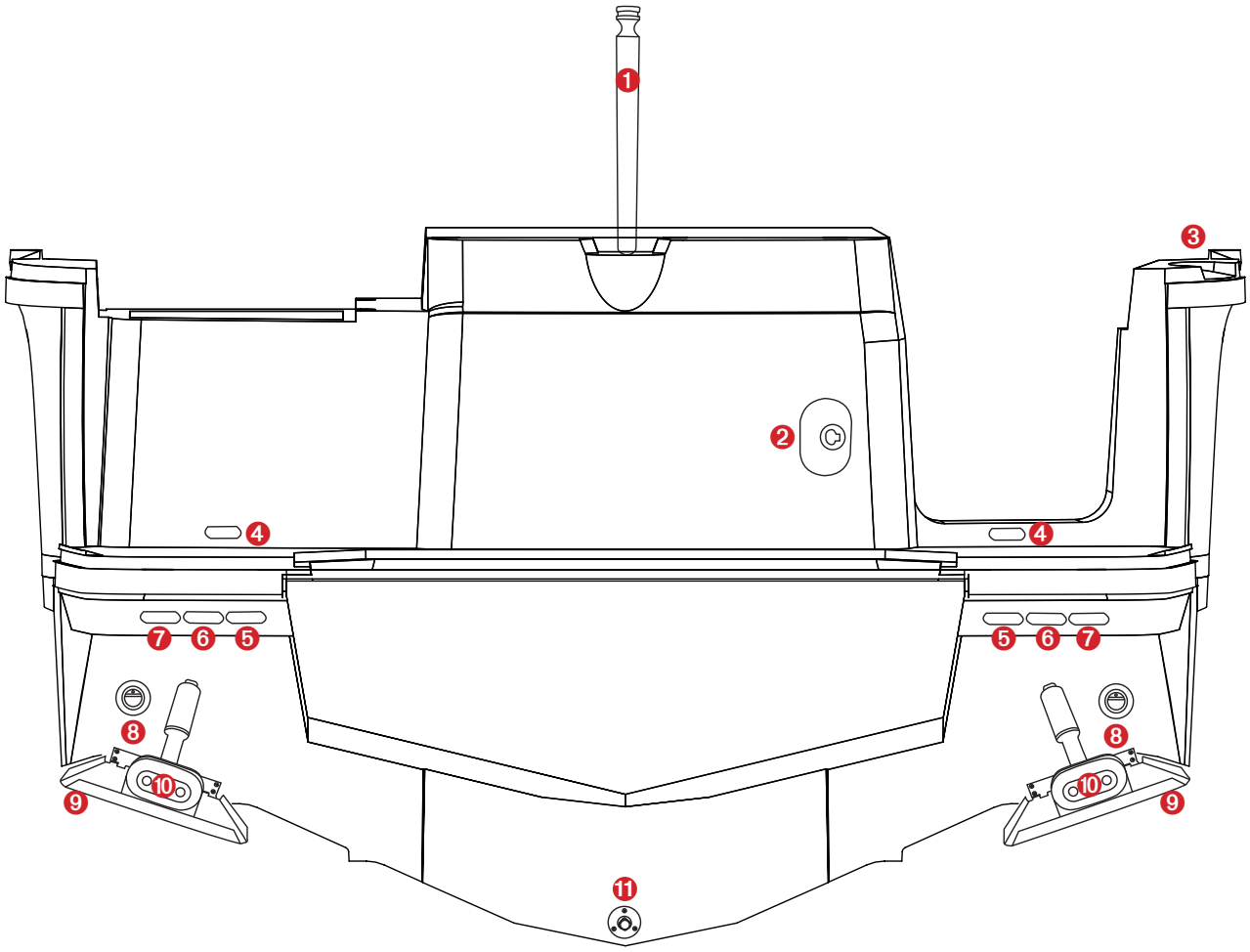


1. Anchor Locker Drain
2. Bow Thruster
3. Radar
4. TV Antenna
5. Anchor Light
6. Trailering Side Marker Light
7. Fuel Vent w/Charcoal Canister
8. Macerator Thru-Hull
9. Cabin Sink Drain
10. Diesel Heater Fill
11. Generator Air Intake (LE Only)
12. Generator Exhaust (LE Only)
13. Propane Locker Drain
14. Strainer Relief Overflow

STERN COMPONENTS

STE

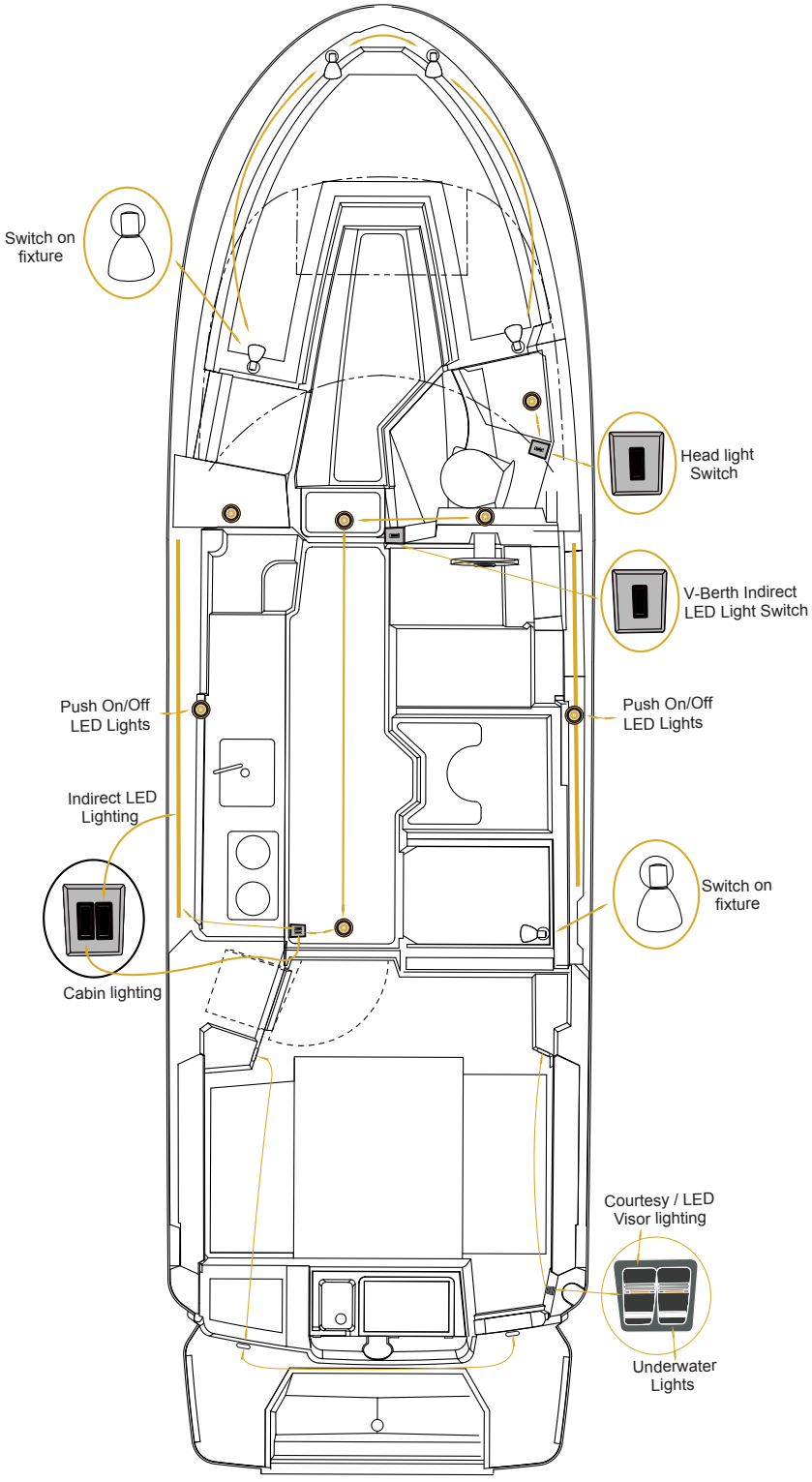
1 2 3 4 5 6 7 8 9 10 11



1. Ski Post
2. Pullout Fresh Water Shower
3. Fuel Fill
4. Swim Platform Courtesy Light
5. Trailer Reverse Lights
6. Trailer Running Lights
7. Trailer Turn/Brake Lights
8. Cockpit Scupper Drains
9. Trim Tabs
10. Underwater Lights
11. Drain Plug

MAIN CABIN AND COCKPIT LIGHTS

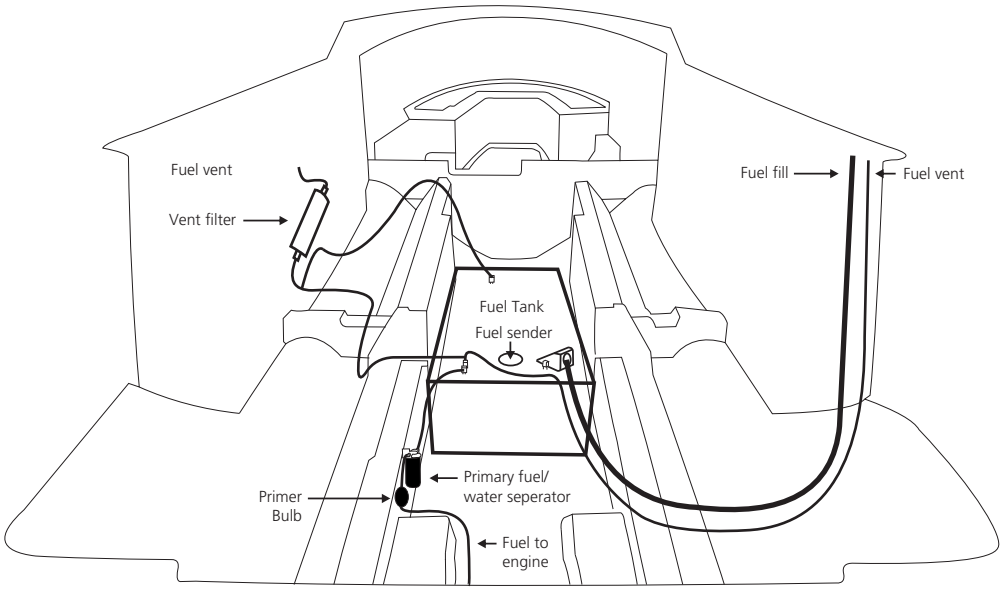
STE



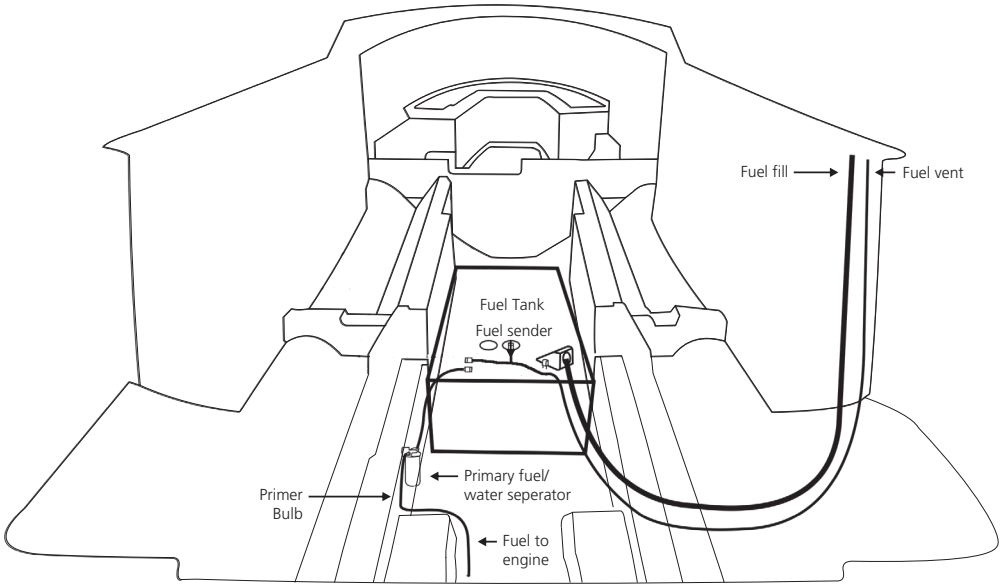
STE

Yamaha 300

There is a secondary on-engine fuel filter that is not shown on this drawing. You will be able to find information about this filter in the engine manual supplied with your boat.



Fuel System with Vent Filter



Pressure Relief Fuel System

RAW WATER / SEA STRAINER SYSTEM

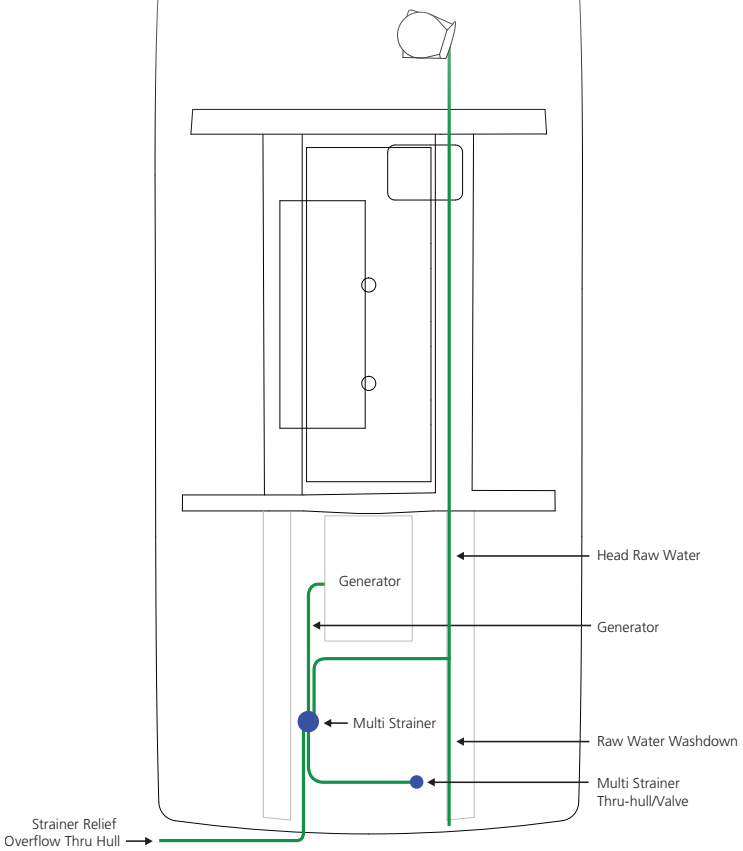
STE

- Multi port sea strainer for head and raw water wash down pump.

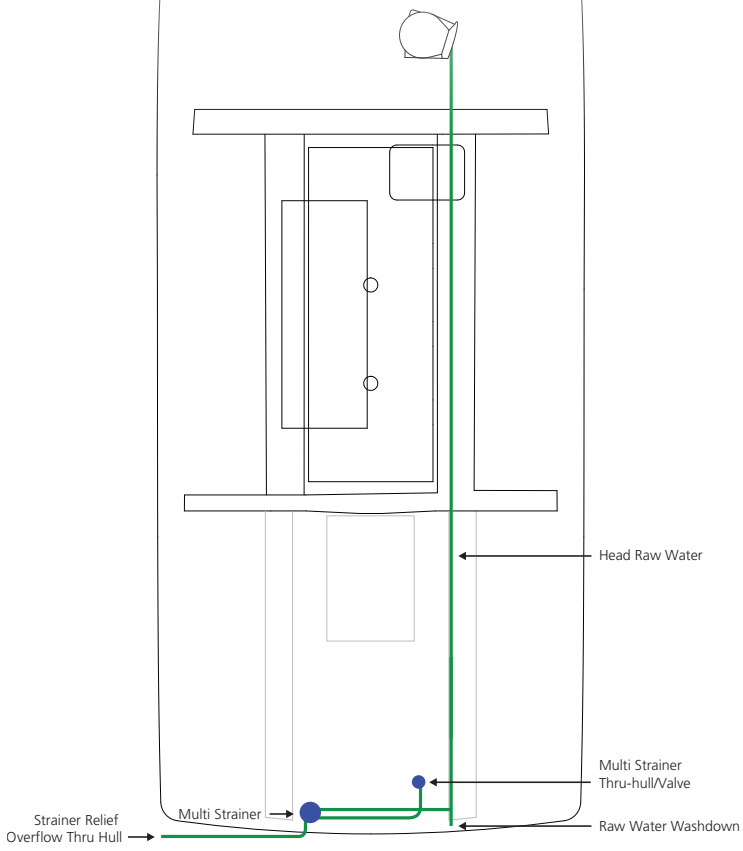
OPT

- A/C Raw Water Input
- Generator raw water thru-hull strainer

R-27 LE



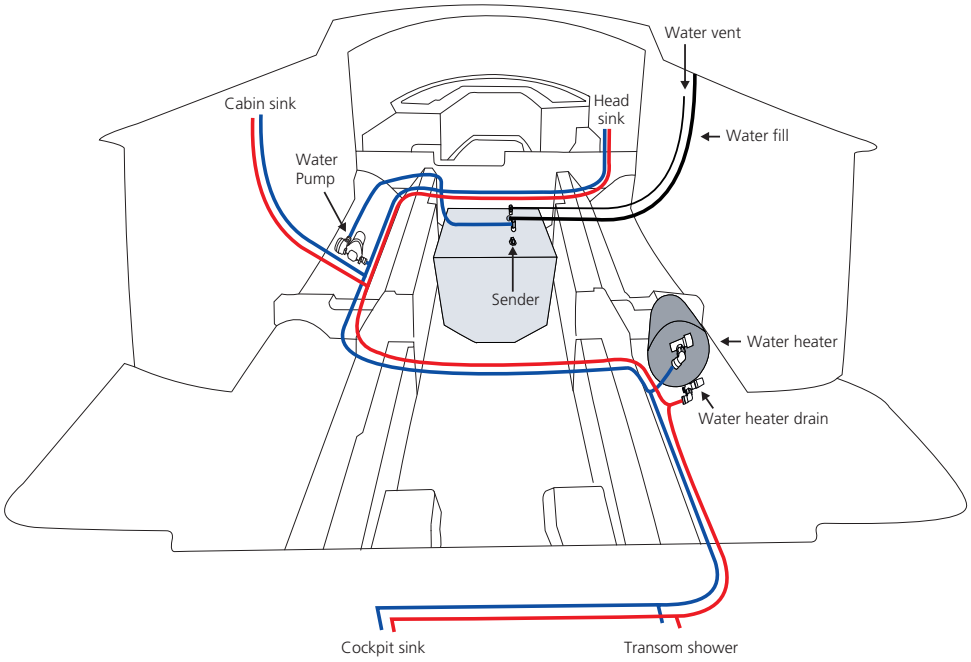
R-27 NW



FRESH WATER PLUMBING SYSTEM

STE

40 Gallon Fresh Water Tank, 5.3 Gallon Hot Water Heater, 3.5 GPM Fresh Water Pump.



Disinfecting The Fresh Water System

The information contained in this appendix provides supplementary data about disinfecting a potable water system.

A SUGGESTED METHOD OF DISINFECTION
Perform the following steps in the order indicated:
a. Flush entire system thoroughly by allowing potable water to flow through it;
b. Drain system completely;
c. Fill entire system with a chlorine solution having a strength of at least 100 parts per million, and allow to stand for one (1) hour. Shorter periods will require greater concentrations of chlorine solution. See Table I
d. Drain chlorine solution from entire system;
e. Flush entire system thoroughly with potable water;
f. Fill system with potable water.
Table I shows how much disinfecting agent is required to make up various quantities of 100 parts per million chlorine solution.

TABLE I – CHLORINE CONCENTRATIONS

Amount of chlorine compound required for 100 ppm solution

Solution (Gallons)	Chlorinated Lime 25% (ounces)	High Test Calcium Hypochlorite 70% (ounces)	Liquid Sodium Hypochlorite 1% (quarts)
5	0.3	0.1	0.2
10	0.6	0.2	0.4
15	0.9	0.3	0.6
20	1.2	0.4	0.8
30	1.8	0.6	1.2
50	3.0	1.0	2.0
100	6.0	2.0	4.0

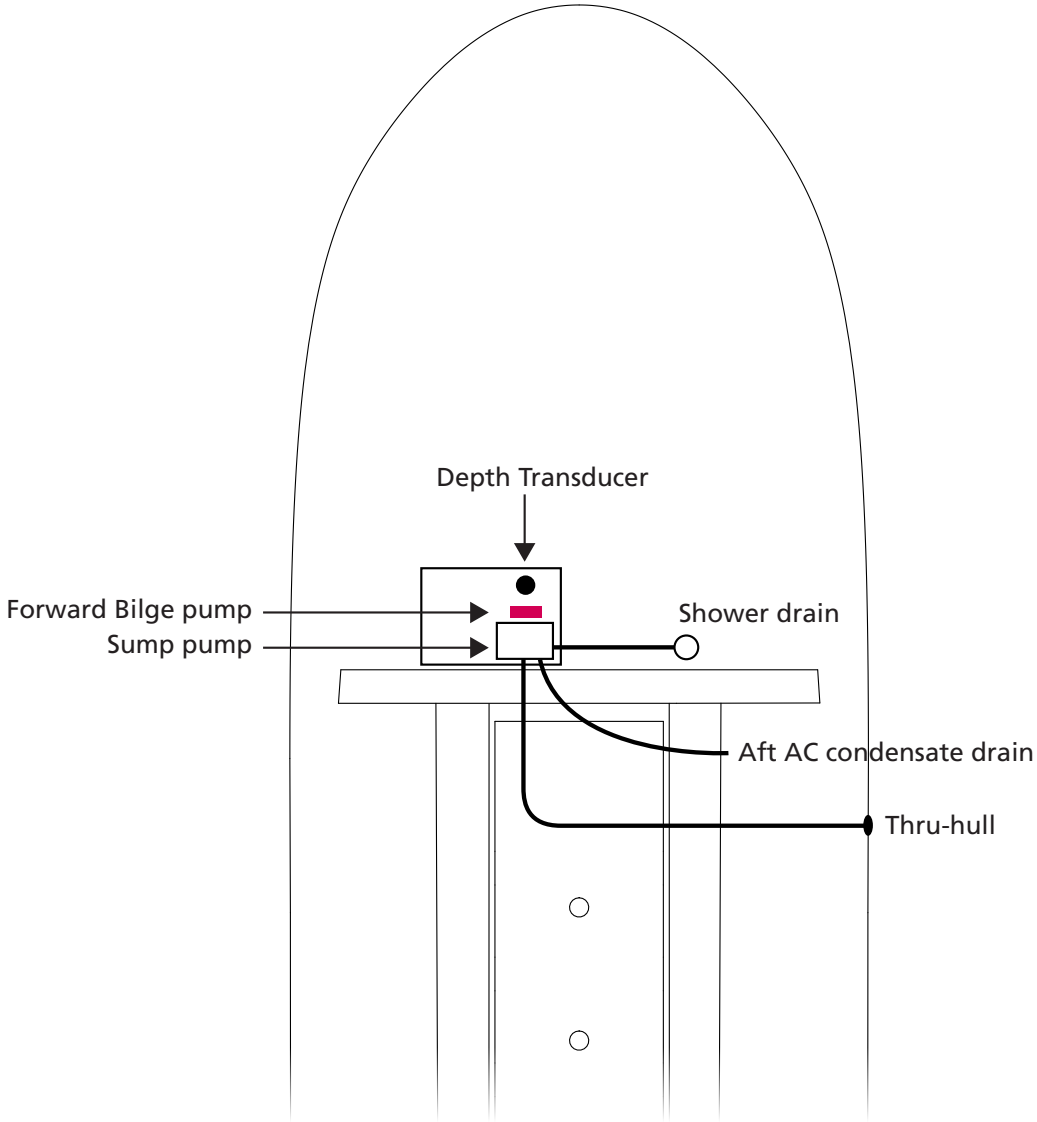
NOTE: This table contains information taken from the Handbook on Sanitation of Vessel Water Points, Public Health Service Publication No. 274 - Reprinted June 1963.

SHOWER SUMP

STE

12V, 800 GPH
(This should be inspected for debris on a regular basis if shower is used frequently.)

The shower sump box is located underneath the removable v-berth step positioned just outside the head door.



BILGE PUMP SYSTEM

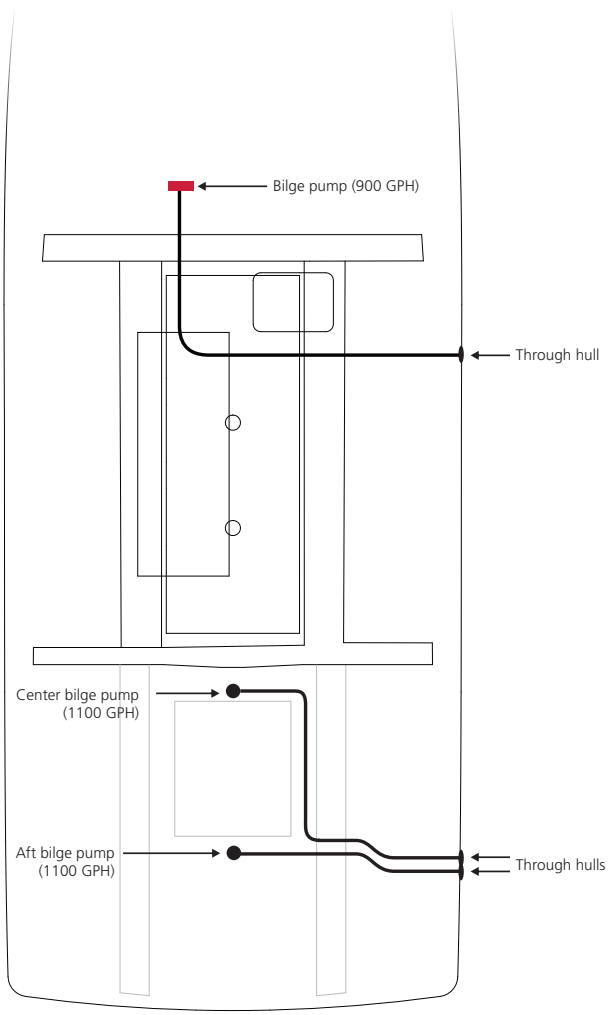
STE

12V 1100GPH (Aft & Center)
12V 900GPH (Forward)

The bilge pumps operate automatically by checking for water every 2.5 minutes even with battery switches and breakers in the OFF position.

However, the BILGE PUMP and BILGE PUMP2 will run continuously once their switches are placed in the on position. Monitor the outflow accordingly. Do not run when dry.

- Manual switches are located at the helm.



WASTE SYSTEM WITH MACERATOR PUMP

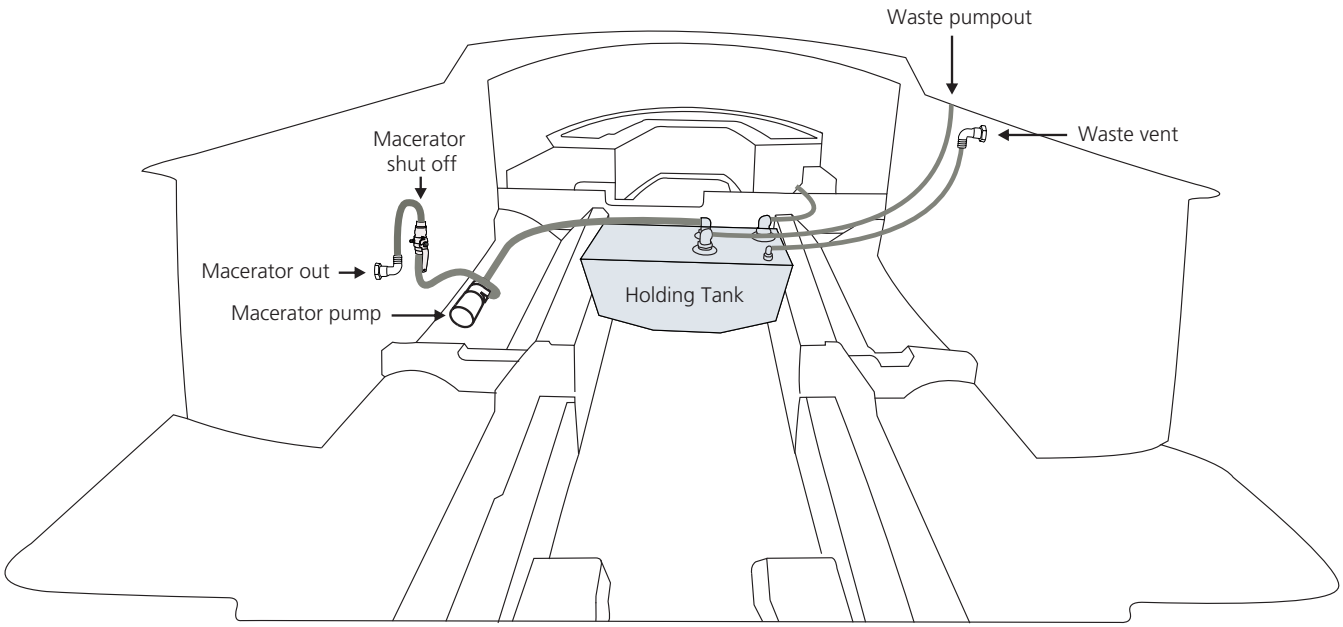
STE  30 Gallon Tank with standard pump out, and vent

STE Macerator pump out

☐ Waste tank pump out stations are widely available.
Please follow the directions carefully for the pump out equipment you are using to avoid damage to the waste system.

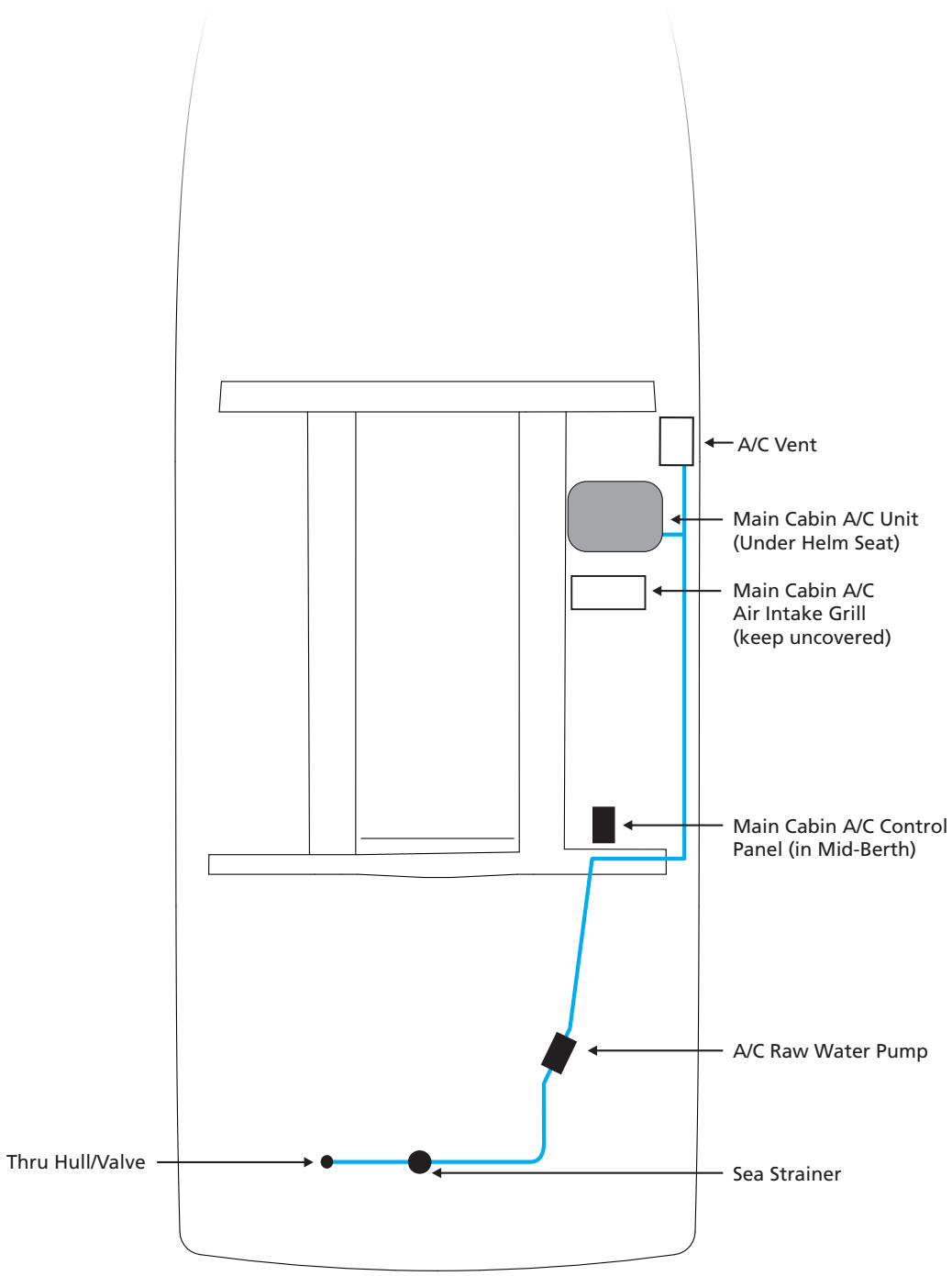
☐ Boat owner is responsible for following all applicable laws when using the macerator system to pump out into the surrounding waters.

☐ Overboard shutoff valve is accessed under the galley sink above the pump area.



AIR CONDITIONING

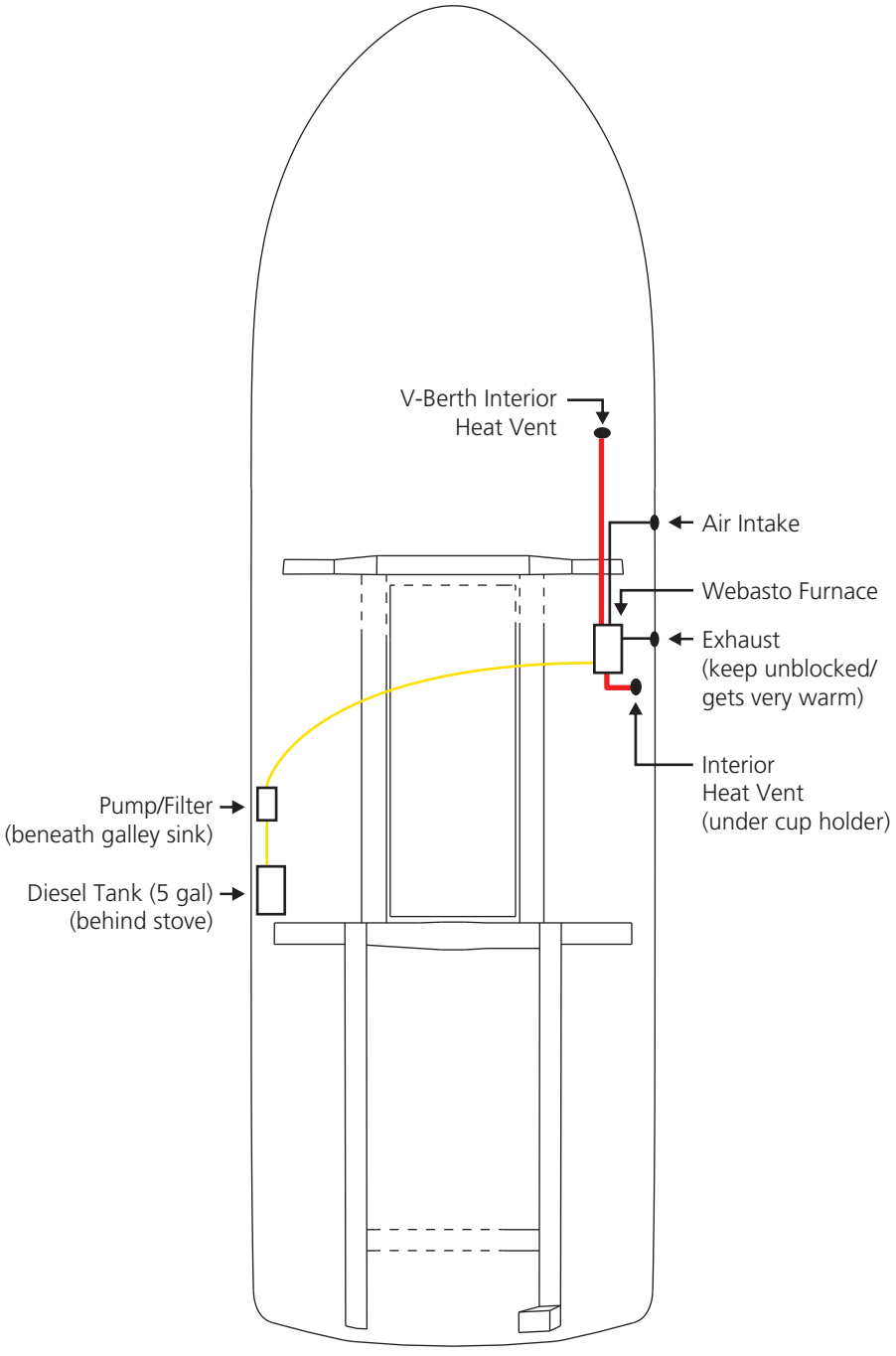
OPT



WEBASTO FURNACE

OPT

Webasto furnace is located under helm seat.
The control panel is located at the quarter berth power management center.
The fuel pump is beneath the galley sink, inside of the black box.



SOLAR PANEL

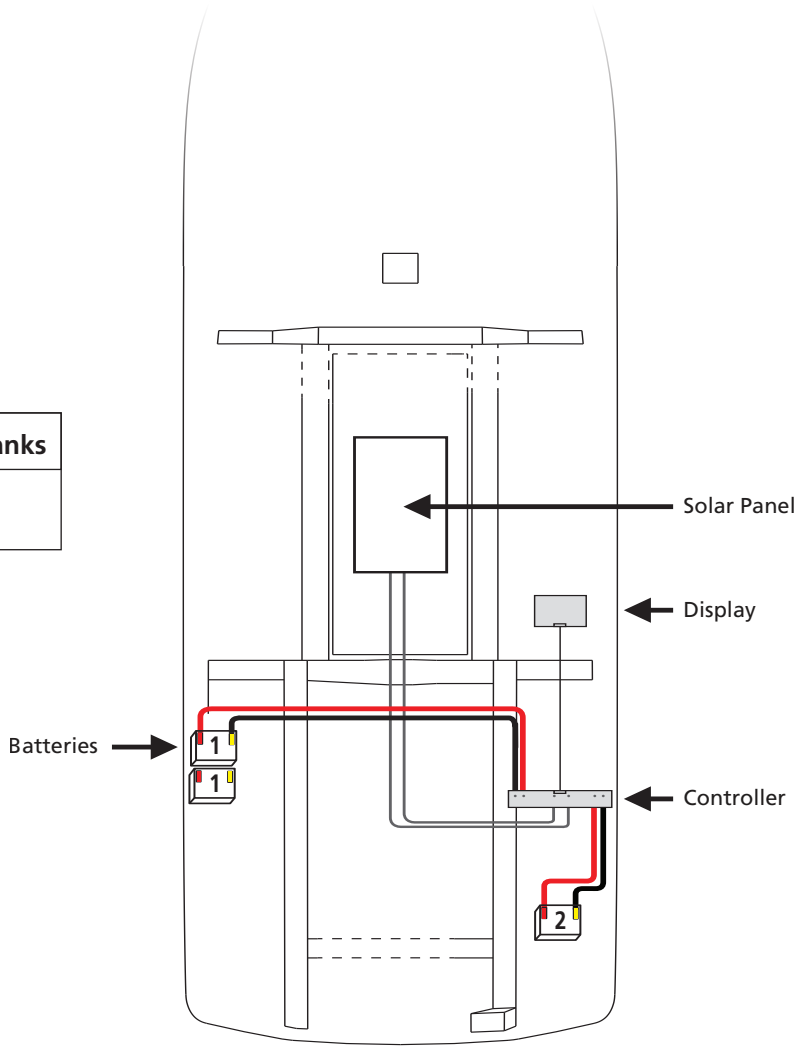
STE

Solar panel 145 watt, with display panel

- The solar panel is designed to provide charging to the house & engine batteries. 90% of its charge is dedicated to the house battery and 10% is dedicated to the engine battery.
- The green light on the solar display indicates proper operation.
- The solar display is located in the mid-berth.
- The controller is located in the starboard aft cockpit locker
  *Keep panel clean and completely uncovered for best results

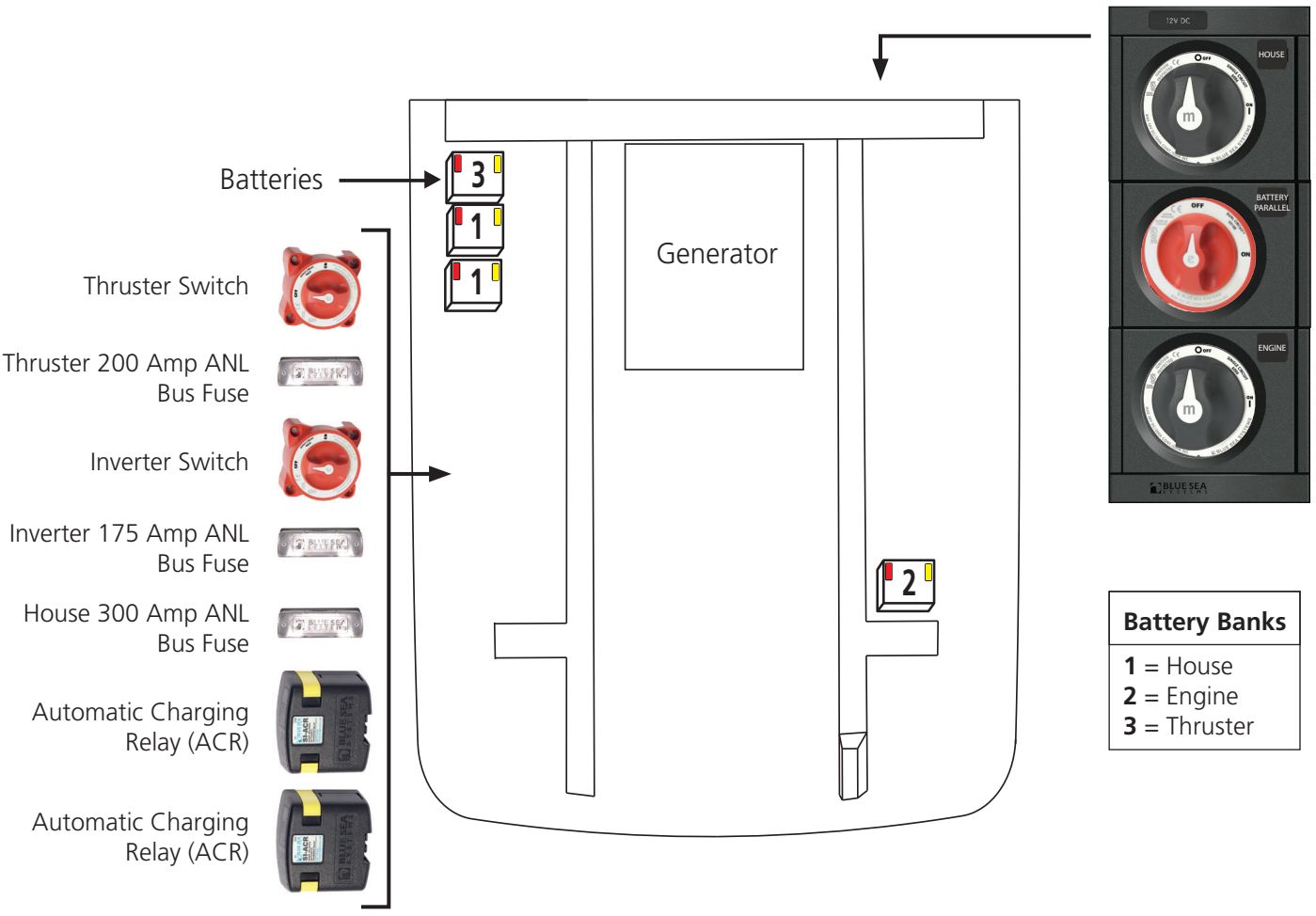
Battery Banks

1 = House
2 = Engine



BATTERY CONFIGURATION

STE	2 House Batteries, 1 Engine Battery, 1 Thruster Battery.
STE	House, engine, & battery parallel switches are located in the midberth.
STE	Thruster battery switch is located in the port side lazarette Inverter battery switch is located in the port side lazarette
☐	Once the EMERGENCY PARALLEL switch is placed in the on position the power from the HOUSE batteries will be transferred to the ENGINE battery. Use only for EMERGENCY starting of the engine.
☐	If the house bank drops below 10.8v you must reset the charging relay by switching on the parallel while the engine is running or while plugged into shore power.



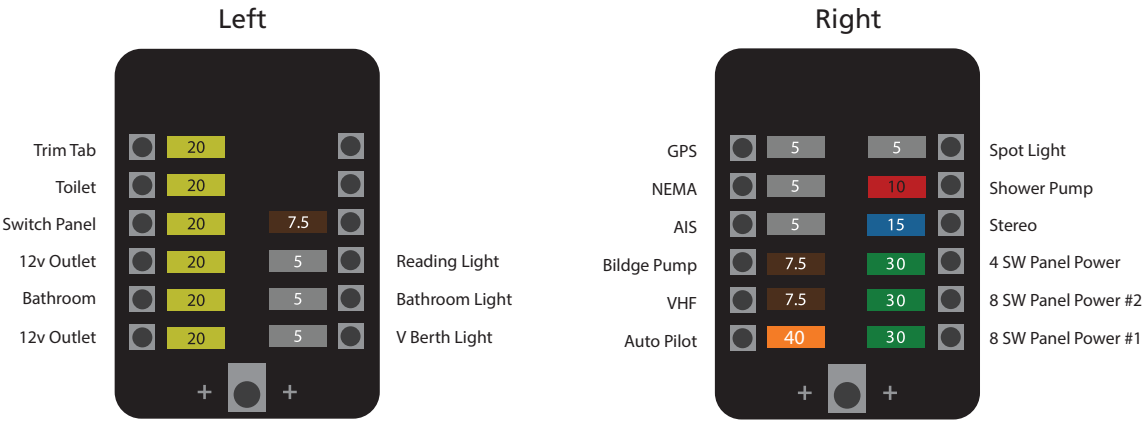
Battery Banks

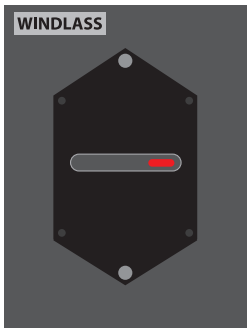
1 = House
2 = Engine
3 = Thruster

FUSE LOCATION & VALUES

STE

These DC fuse blocks and windlass breaker are located behind a hinged access panel on the starboard side in the head behind the mirror. Fuses are automotive blade type and all values shown below are in Amps.





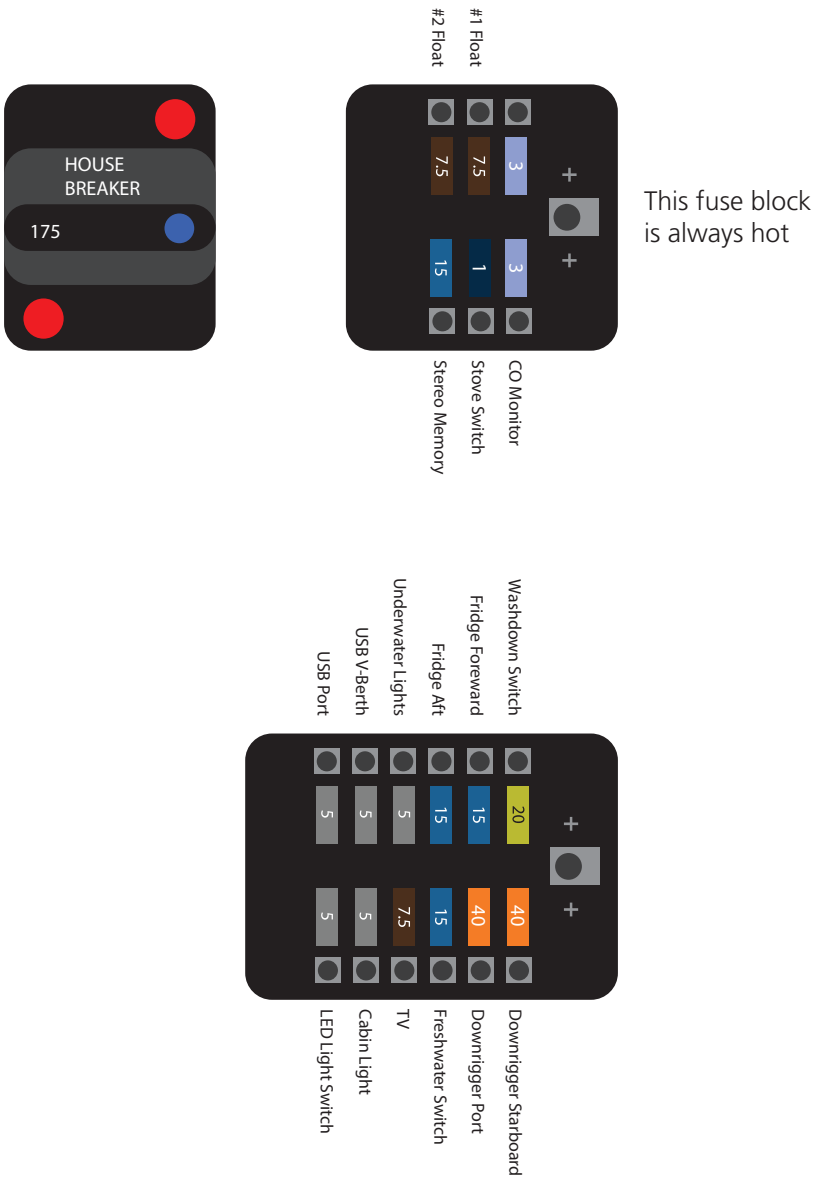
* To reset, reinsert yellow arm "up" into the breaker.

To test, press red button and the yellow arm should flip down.

FUSE LOCATION & VALUES

STE

These DC fuse blocks are located behind the wood hatch in the midberth.
Fuses are automotive blade type and all values shown below are in Amps.



AC DISTRIBUTION PANEL & ROTARY SWITCH

STE	AC Distribution Panel
OPT	AC Rotary Selector Switch (Available with Generator) AC Main Line 2 (with AC)
☐	A/C Main 1 and battery charger breaker must on in order for batteries to charge.
☐	The AC Rotary Switch Selector Switch will determine which source of incoming 120 Volt power to use for your AC Distribution Panel.

STE **AC Distribution Panel**

AC Main 1 AC Main 2

OPT **AC Distribution Panel with Generator**

AC Main 1 AC Main 2

12V HELM CONTROL OPERATION

STE

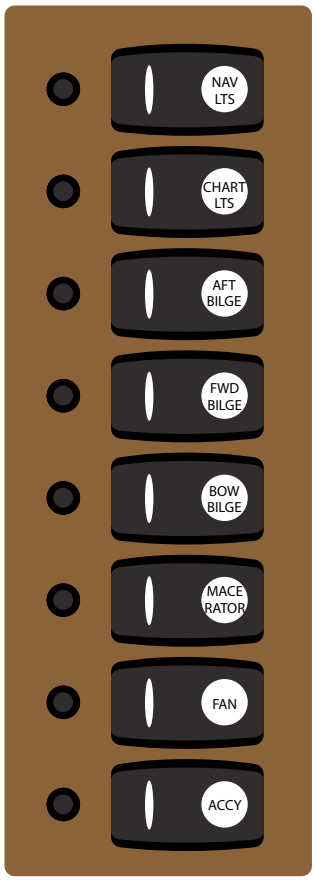
Armed = Red light/audible alarm Off = Red light only.

The bilge pumps operate automatically with electronic float switches regardless of battery switch position.

However, the BILGE PUMP and BILGE PUMP2 will run continuously once their switches are placed in the on position. Monitor the outflow accordingly. Do not run when dry.

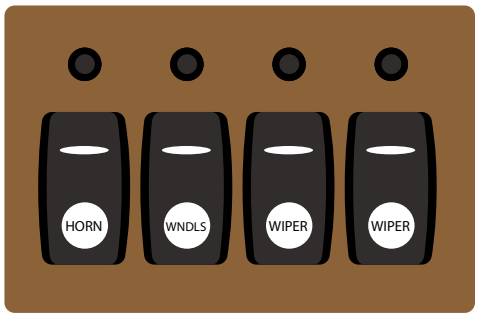
At Helm

Resettable switch breakers

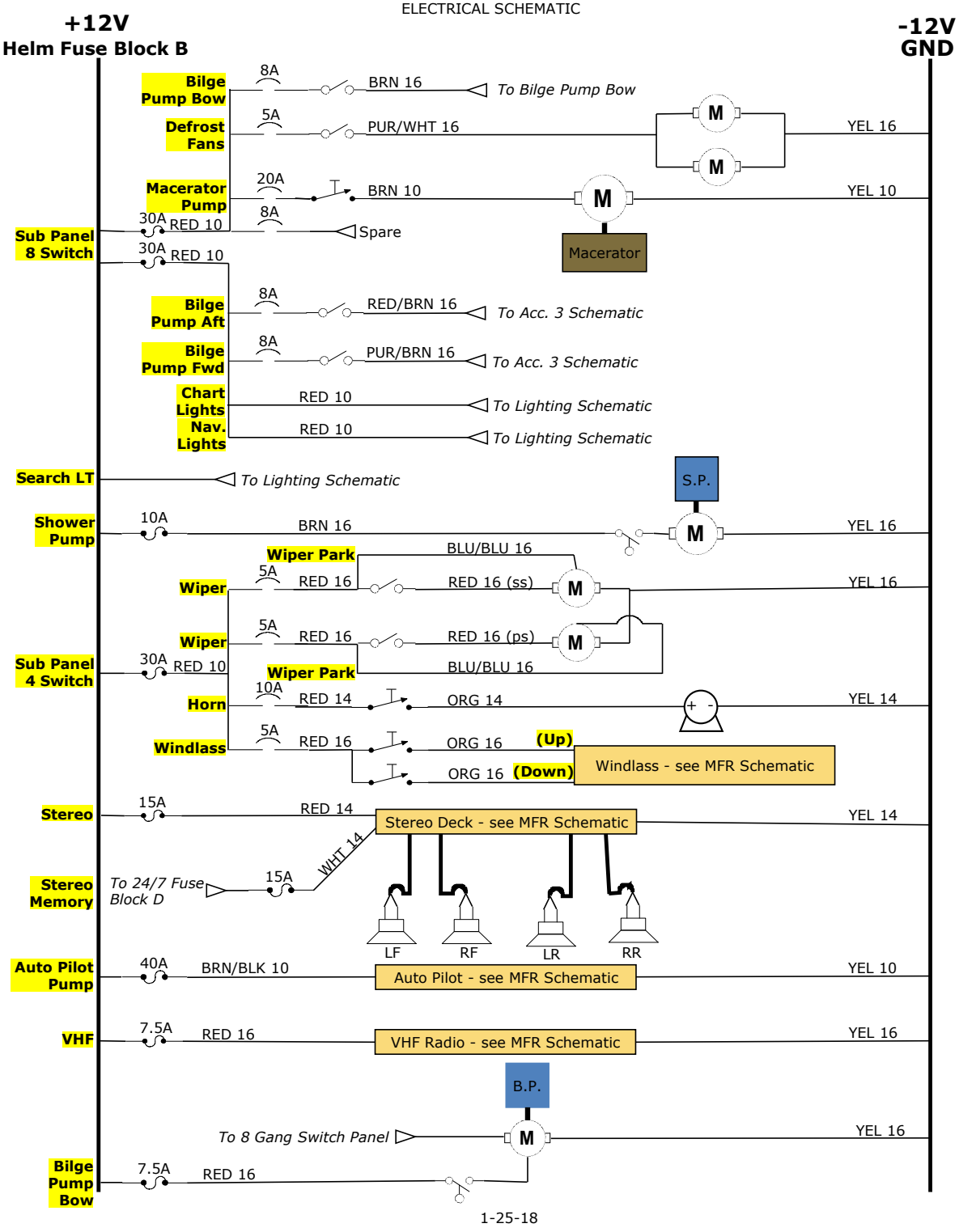


At Helm

Resettable switch breakers



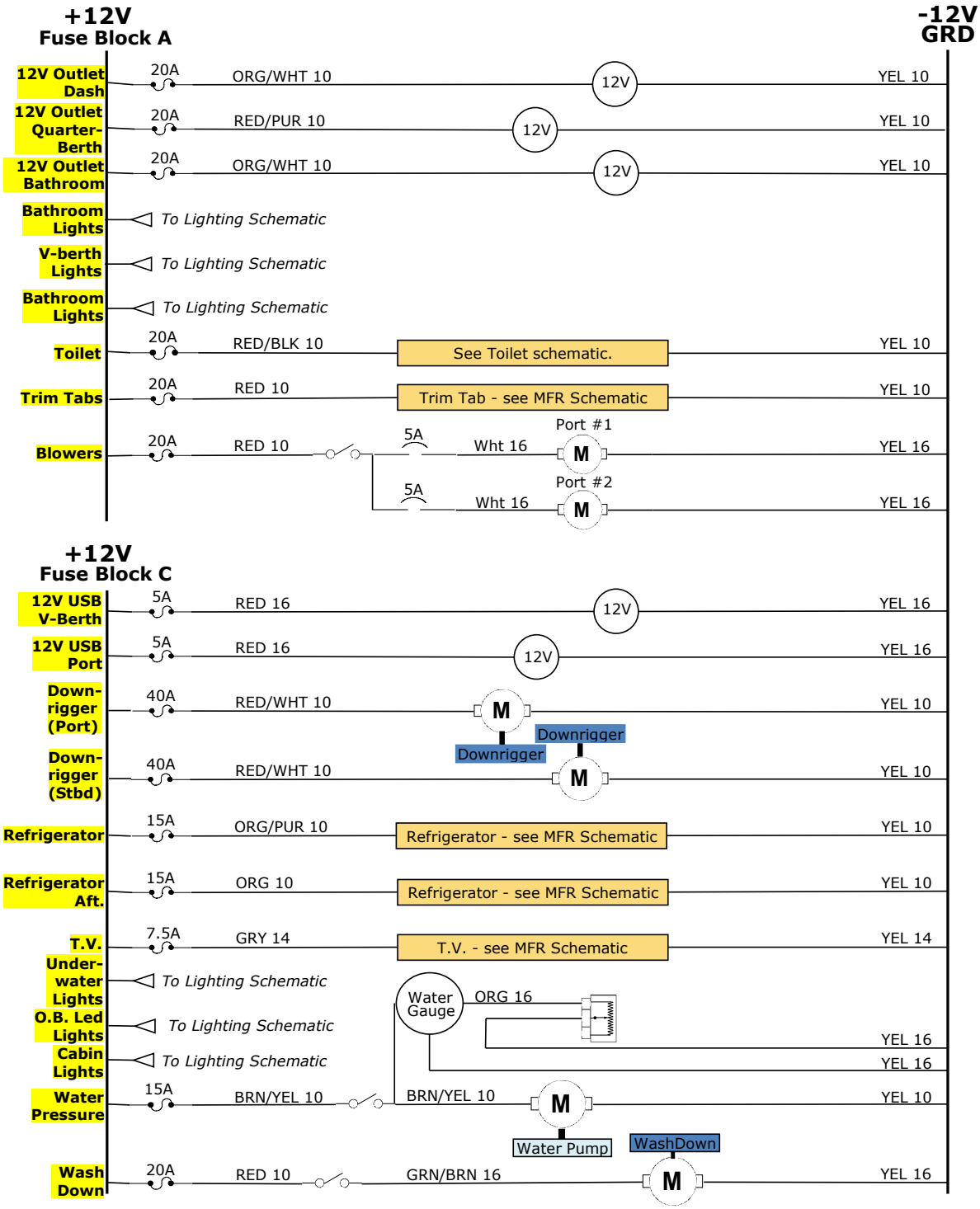
RANGER TUG R-27 WIRING SCHEMATIC (ACC. 1)



RANGER TUG R-27 WIRING SCHEMATIC (ACC. 2)

R-27 Accessories 2

ELECTRICAL SCHEMATIC



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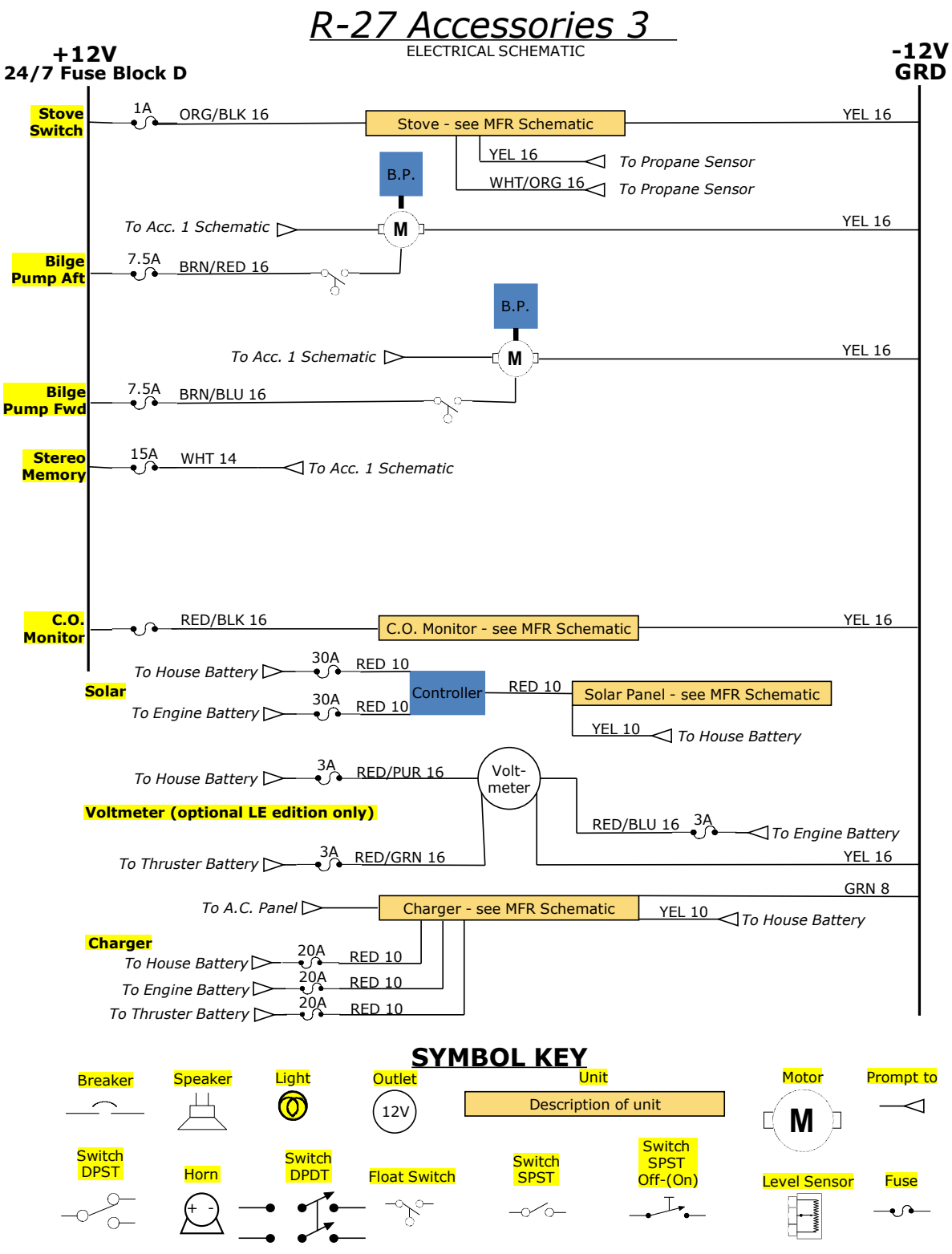
RANGER TUG R-27 WIRING SCHEMATIC (ACC. 3)



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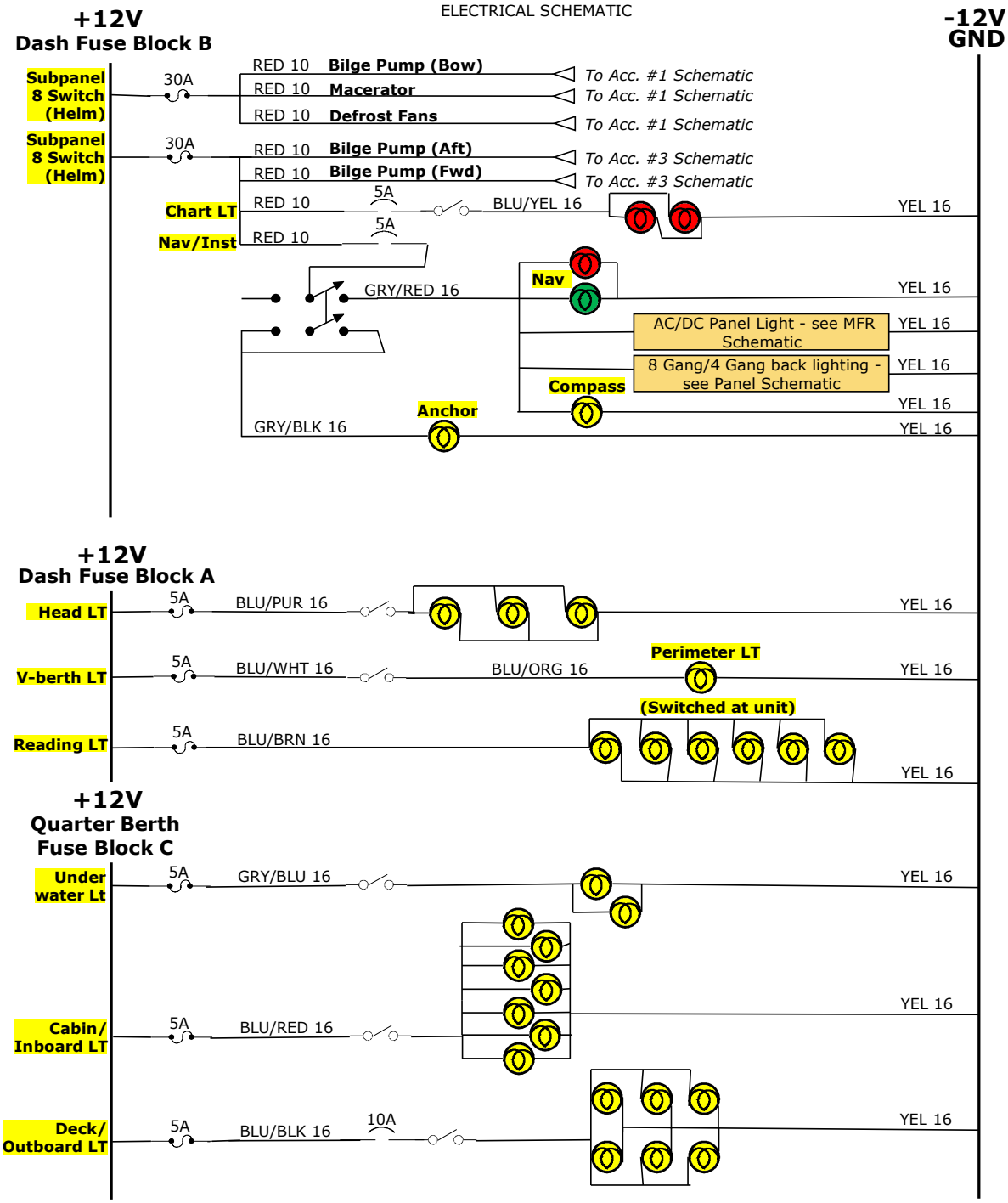
RANGER TUG R-27 WIRING SCHEMATIC (LIGHTING)



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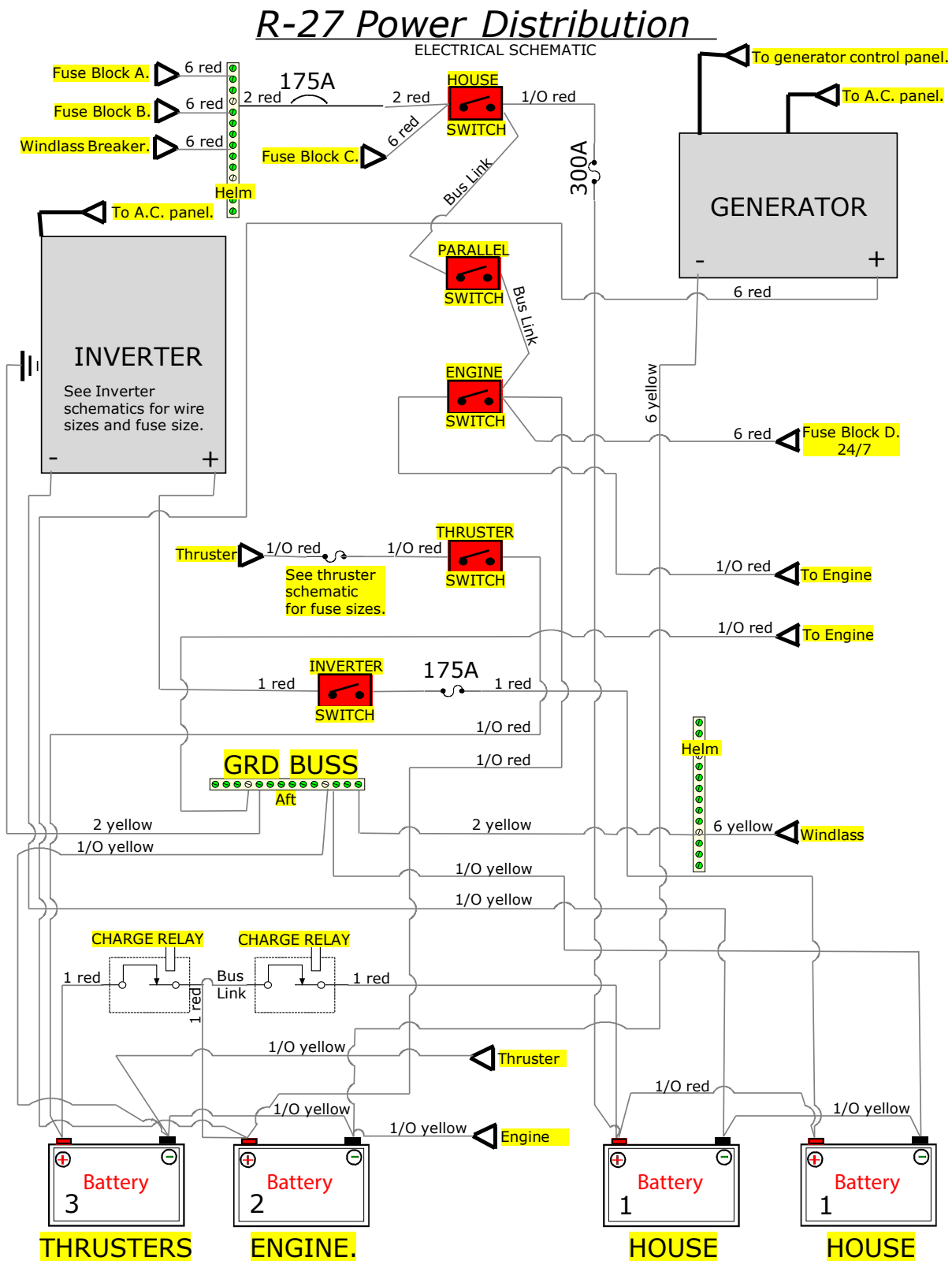
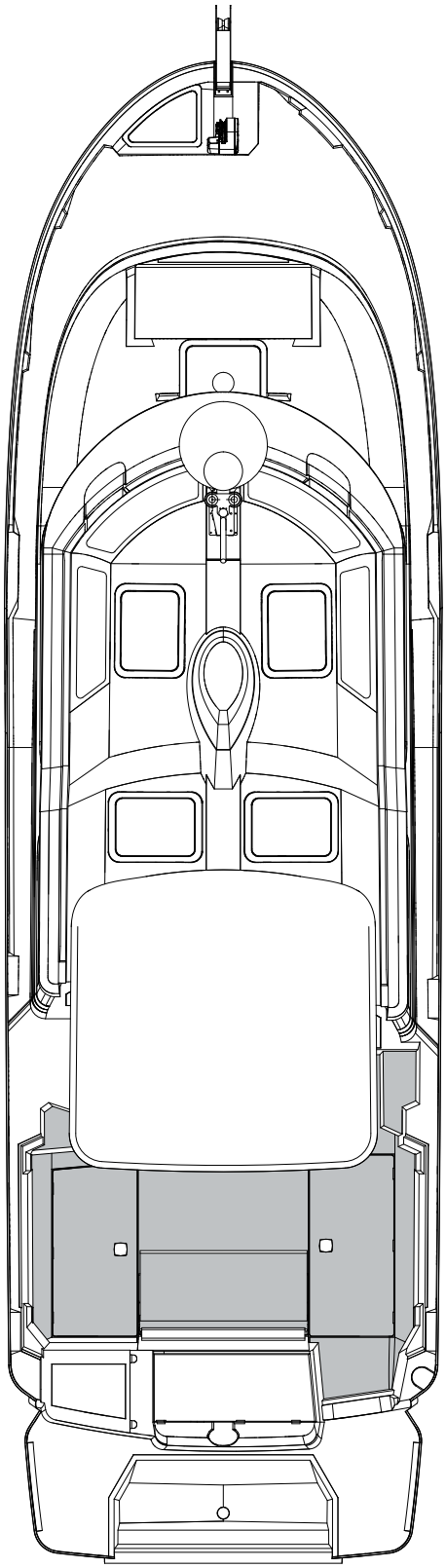
RANGER TUG R-27 WIRING SCHEMATIC (P.D.P.)



RANGER TUG R-27 WORKING DECK

STE



The following checklists are examples and are not all inclusive and are provided only as a guide. Please customize to your personal needs. Consult your engine and trailer user manuals for additional information.

EXAMPLE OF A PREPARATION FOR THE ROAD CHECKLIST

TOW VEHICLE – PRIOR TO USE

- ☐ Test Lights.
- ☐ Check brakes.
- ☐ Check tire pressure and condition.
- ☐ Check hitch related electrical connections.

TRAILER – PRIOR TO USE

- ☐ Check registration
- ☐ Check rollers and bed rails.
- ☐ Check wheel bearings and lubricate as required.
- ☐ Check winch.
- ☐ Test electrical connection and lights.
- ☐ Check tire pressure and condition.
- ☐ Check safety chains.
- ☐ Check boat straps.
- ☐ Check braking system.
- ☐ Check hitch for proper connection and lock down.
- ☐ Install safety chains (cross under hitch).
- ☐ Remove tire blocks.

BOAT – PRIOR TO USE WITH TRAILER

- ☐ Lower mast.
- ☐ Lower VHF antenna.
- ☐ Secure the Bimini awning frame.
- ☐ Raise and secure swim platform ladder.
- ☐ Set all switches and breakers to the OFF position, Including Thruster/Windlass cutoff switch
- ☐ Close and secure all windows, ports and vents.
- ☐ Clear countertops.
- ☐ Lock fridge latch.
- ☐ Check engine is up!
- ☐ Lock cabin.
- ☐ Remove Drain Plug

EXAMPLE OF A SPRING PRE-LAUNCH CHECKLIST

CLEANING

- ☐ Remove debris from scuppers and scupper drains.
- ☐ Clean hull using a mild biodegradable detergent and then wax.
- ☐ Clean topsides and decks using a mild biodegradable detergent and then wax.
- ☐ Clean and polish all bright work.
- ☐ Clean and oil teak.
- ☐ Clean windows, ports, and hatches.
- ☐ Clean bimini cover.
- ☐ Check and clean anchor, rode, and anchor storage compartment.

INSPECTION

- ☐ Check Drain Plug
- ☐ Check spare parts and tools and replace as necessary.
- ☐ Check wiper blades.
- ☐ Check swim platform.
- ☐ Inspect and test trim tabs.
- ☐ Check condition of bottom paint.
- ☐ Check windlass.
- ☐ Verify electronics for correct operation.
- ☐ Check all inside and outside lights.
- ☐ Macerator Valve in proper position and secured.
- ☐ Inspect and verify position of all sea cocks and shut off valves.
- ☐ Check alarms for proper operation.
- ☐ Check fluid levels.

SAFETY EQUIPMENT

- ☐ Sound signaling device.
- ☐ Check flares and their expiration dates.
- ☐ Check personal flotation devices/throw cusions.
- ☐ Check fire extinguishers and their fill dates.
- ☐ Boat hook.
- ☐ Lines/fenders.
- ☐ First aid kits.

GALLEY

- ☐ Check stove for proper operation.
- ☐ Check everyday utensil stock.

DOCUMENTS

- ☐ Registration sticker.
- ☐ Insurance papers and Passports.
- ☐ Boat Inspection sticker.
- ☐ Charts and float plan forms.

EXAMPLE OF WINTER STORAGE CHECKLIST

GENERAL MAINTENANCE

- ☐ Fill Fuel Tank and add a fuel stabilizer.
- ☐ Empty and clean black water tank.
- ☐ Empty fresh water tank use a non-toxic antifreeze per manufacturer's directions, or remove all water from the system.
- ☐ Winterize black and fresh water tanks as necessary based on weather.
- ☐ Check bilge area for oil and for proper operation
- ☐ Check zincs and replace as necessary.
- ☐ Check and clean water strainer.
- ☐ Clear barnacles and debris from hull fittings.
- ☐ Trickle charge batteries every 30-60 days.
- ☐ Vent boat to prevent mildew.
- ☐ Check trailer tire pressure and condition.
- ☐ Check trailer braking system.
- ☐ Check trailer bearings.
- ☐ Remove Drain Plug.
- ☐ Turn off all battery cutoff switches.

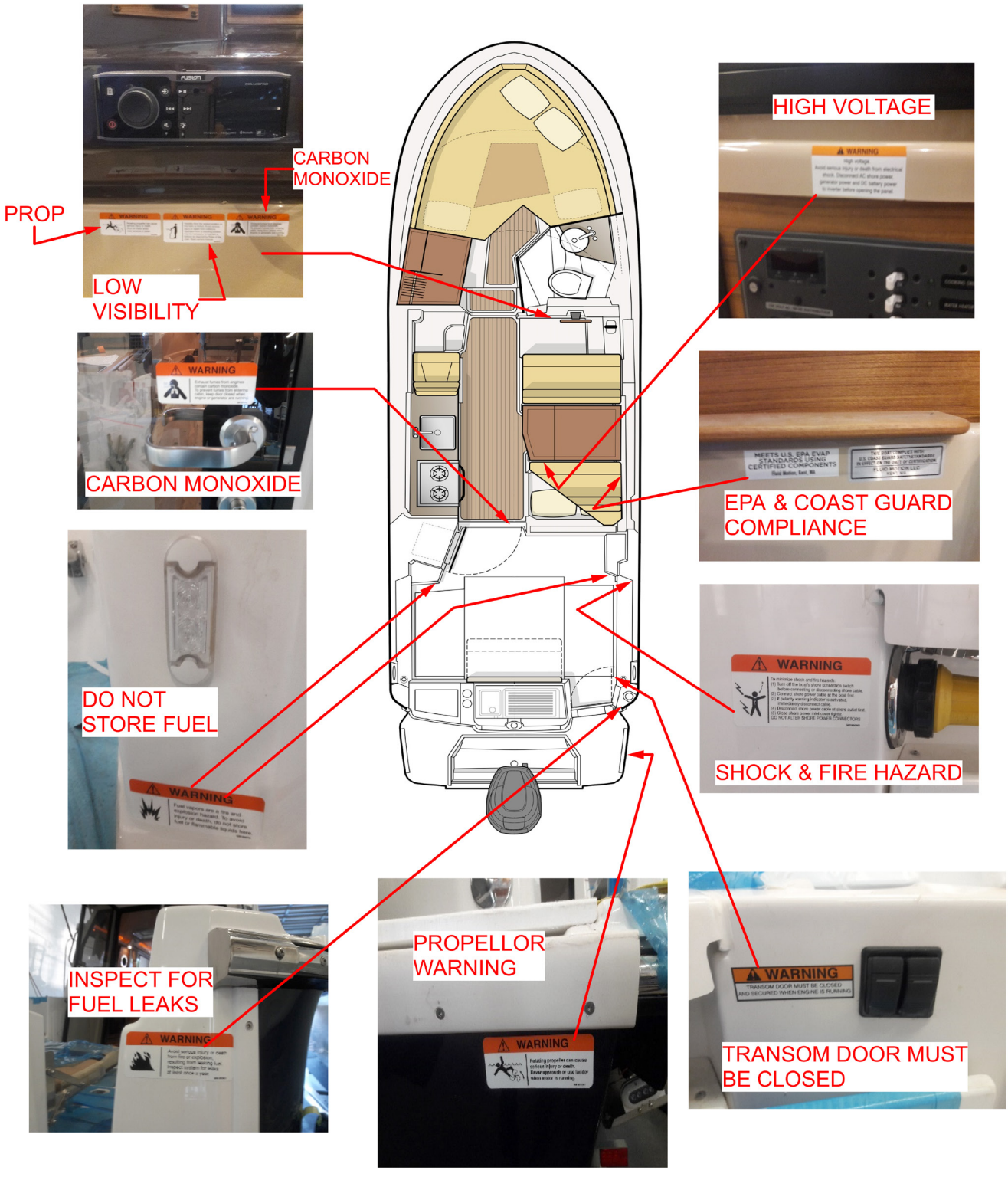
ENGINE

- ☐ Flush engine(s) with fresh water.
- ☐ Check all fluid levels.
- ☐ Check all hose fittings.
- ☐ Check impeller.
- ☐ Check engine maintenance requirements.

GALLEY

- ☐ Empty, clean and freshen refrigerator.
- ☐ Remove all dry food from storage.

WARNING LABEL LOCATIONS



NOTES

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