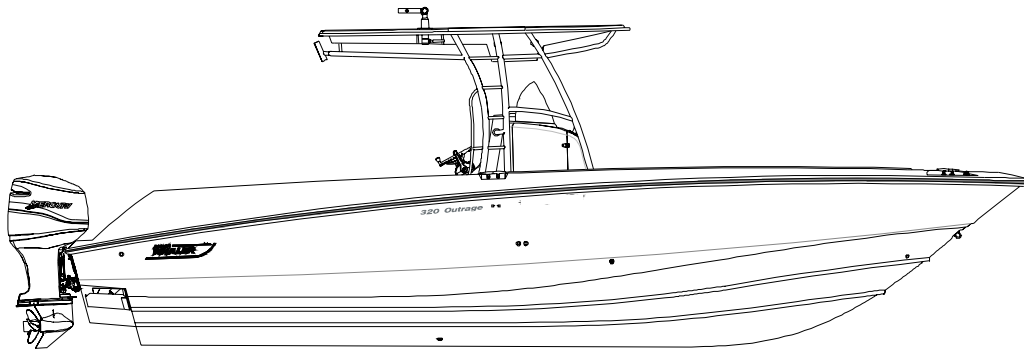


# ***320 Outrage***



**“The mission of Boston Whaler® is to  
provide consumers with the  
safest, highest quality, most durable  
boats in the world”**

Rev G 11/08/05

INFORMATION IN THIS PUBLICATION IS BASED ON THE LATEST PRODUCT SPECIFICATIONS AVAILABLE AT PRINTING, BOSTON WHALER® 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 OR MODIFICATIONS TO THE MODELS BE MADE BOSTON WHALER® IS NOT OBLIGATED TO MAKE SIMILAR CHANGES OR MODIFICATIONS TO MODELS SOLD PRIOR TO THE DATE OF SUCH CHANGES. THE FOLLOWING ARE REGISTERED TRADEMARKS OF THE BRUNSWICK CORPORATION:  
180 DAUNTLESS, BOSTON WHALER®, MRP #1808107

## Introduction

This Owner's Manual has been written to provide specific information about your boat and it should be read carefully. Keep this booklet in the Owner's Manual Packet. The Owner's Manual Packet has been compiled to help you operate your boat with safety and pleasure. It contains details of the boat, the equipment supplied or fitted, it's systems and information on it's operation and maintenance. Please familiarize yourself with the boat and it's operation before using it. If this is your first boat, or you are changing to a type of boat you are not familiar with, for your own comfort and safety, please ensure that you obtain handling and operating experience before "assuming command" of your boat. Your Boston Whaler® dealer or local Yacht Club will be pleased to advise you of marine safety classes and safe boating classes in your area.

## History

In 1958, company founder Richard T. Fisher introduced the first Boston Whaler boat in Braintree, Massachusetts. It featured two significant innovations: first, its twin sponson hull design produced superior stability and a remarkably dry ride; second, its unique foam core construction made the boat not only durable, but unsinkable as well. Fisher took every opportunity to illustrate the unique characteristics of the Boston Whaler. His most famous demonstration was captured in 1961, by *Life Magazine*. The series of photographs showed the boat underway, the boat being sawed in half and ultimately Fisher motoring away in the remaining half of the boat. And through the years many other demonstrations have proved the toughness and durability of the Boston Whaler hull. And though you may never cut your boat in half, this only goes to show one thing, people whose livelihood and lives depend on boats consistently choose Boston Whaler because of their seaworthiness, dependability and the inherent safety of a hull that won't sink even if severely damaged. Boston Whalers are built to last. For over 40 years Boston Whaler® has strived to make each model better, providing you with a safe and fun boating experience. That is the reason we offer a 10 year limited transferable warranty. It is also an excellent reason why you can trust the safety of your family and friends to a Boston Whaler.

**PLEASE KEEP THIS BOOK AND OTHER MATERIALS IN A SECURE PLACE, AND BE SURE TO HAND IT OVER TO THE NEW OWNER IF YOU SELL THE BOAT.**



Boston Whaler founder Richard T. Fisher demonstrating one of the features that has made Boston Whaler the "Unsinkable Legend" in this 1961 LIFE Magazine Photo.

Richard T. Fisher was posthumously inducted into the National Marine Manufacturer's Association (NMMA) Hall of Fame on September 26, 1996 for accomplishments made in marine engineering and construction.

# 320 Outrage-Owner's Manual

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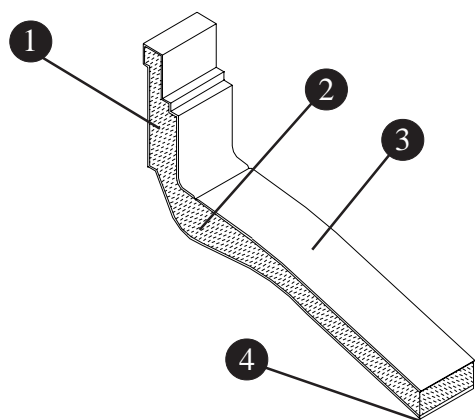
## 320 Outrage-Owner's Manual Construction Standards

### **"THE MISSION OF BOSTON WHALER IS TO PROVIDE CONSUMERS WITH THE SAFEST, HIGHEST QUALITY, MOST DURABLE BOATS IN THE WORLD".**

We are dedicated to creating a superior product providing you with comfort, performance, safety and dependability. All of our boats comply with the safety standards set by the United States Coast Guard and are designed, engineered and manufactured in accordance with applicable recommendations and guidelines of the American Boat and Yacht Council (A.B.Y.C.) and certified by the National Marine Manufacturers Association (N.M.M.A.).

## Our Hull

- ① No air voids
- ② High density closed cell non-absorbent foam
- ③ High quality resins and gelcoats
- ④ Woven glass matting



Boston Whaler® hulls are constructed with our patented Unibond™ construction. This involves shooting high density foam into a closed mold system. The foam expands to fill voids in the hull, and when the finished product is pulled from the mold, the deck and the hull are chemically bonded to form a solid, inseparable unit.

## Servicing your Boston Whaler

When your 320 Outrage needs to be serviced or regular maintenance is needed, it should be taken to an authorized Boston Whaler® dealer.

To find a Boston Whaler® dealer in your area call:  
**1-800-942-5379**

Domestic/International

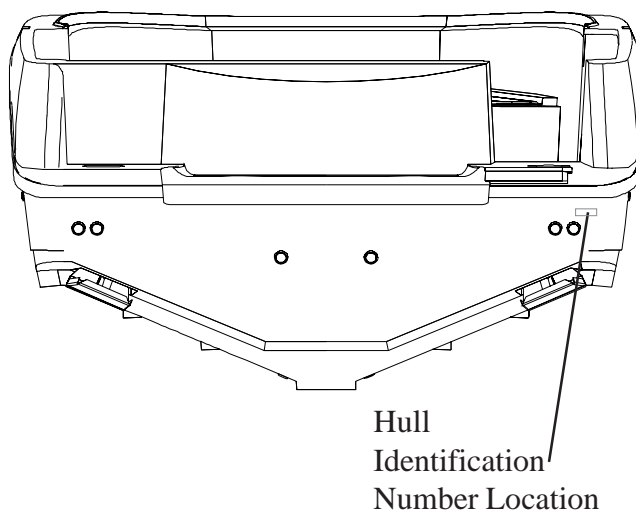
If a problem is not handled to your satisfaction:

Discuss any warranty related problems directly with the service manager of the dealership or your sales person. Give the dealership an opportunity to help the service department resolve the matter for you.

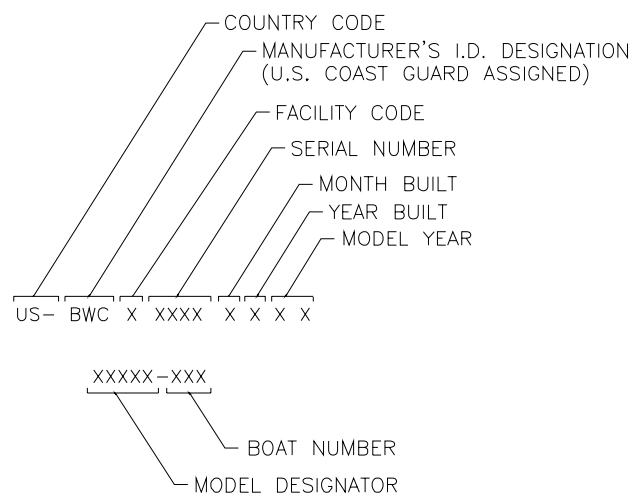
## Hull Identification Number

The "Hull Identification Number" is located on the starboard side of the transom wall.

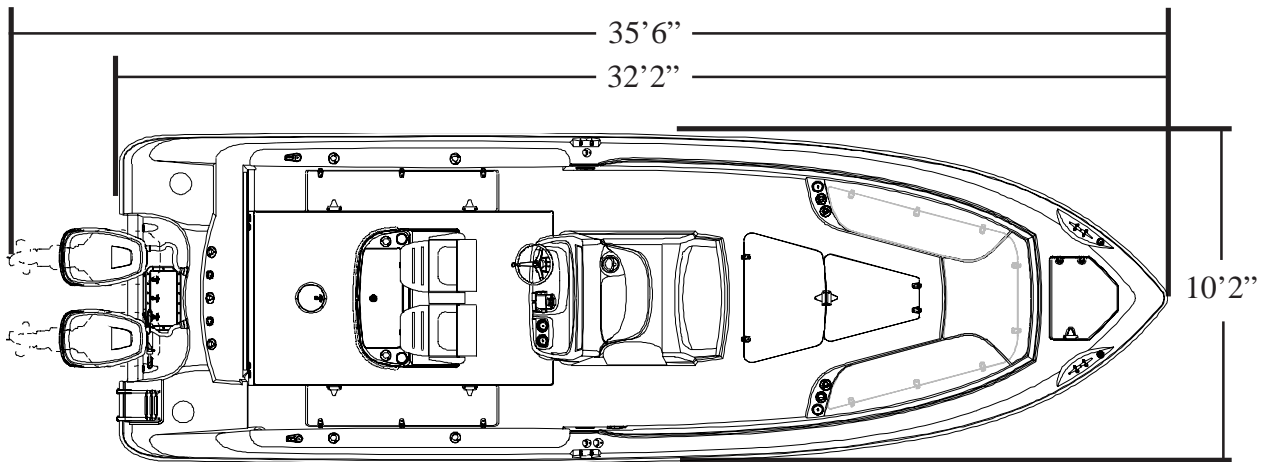
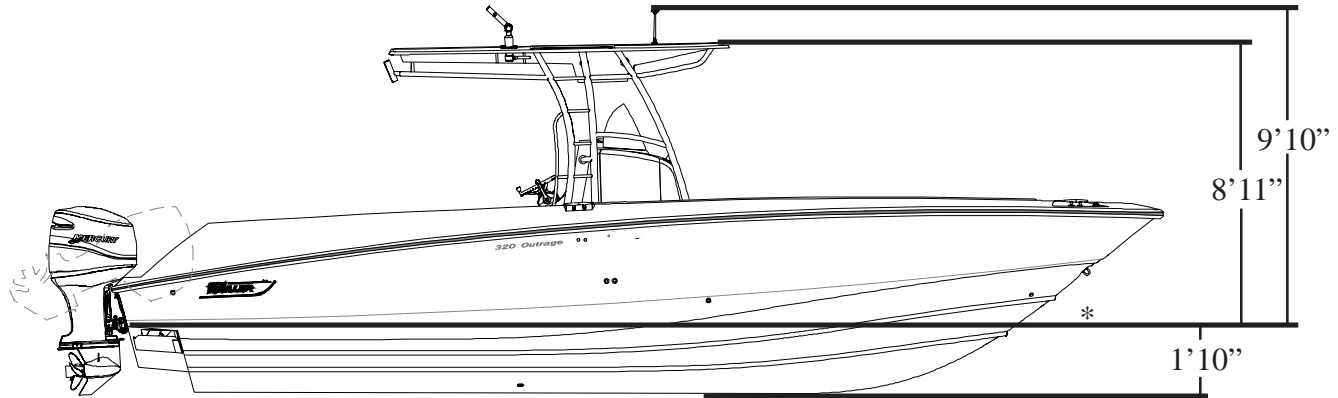
This is the most important identifying factor and must be included in all correspondence related to your vessel. Failure to do so will only create delays. Also of vital importance are the engine serial numbers and part numbers when writing about or ordering parts for your engine.



### Typical H.I.N. Description



## 320 Outrage-Owner's Manual



Hardtop removed for clarity

### Specifications & Dimensions

Overall Length	32'2"	9.80 m
Trailerable Length	35'6"	10.8 m
Bridge Clearance	9'10"	3.00 m
Beam	10'2"	3.10 m
Draft, (Hull Only)	1'10"	.56 m
Weight (dry, no engine)	8500 lbs.	3855 kg
Swamped Capacity	4800 lbs	2177 kg
Maximum Engine Weight	1400 lbs	635 kg
Maximum Weight, (passengers,engine(s), gear,**	4300 lbs	1950 kg
Persons	14	
Maximum Horsepower	600 HP	447 kw
Minimum Horsepower	400 HP	298 kw
Fuel Capacity	300 Gal.(U.S.)	1135 L
Water Capacity	40 Gal.(U.S.)	151 L
Waste Capacity	6.5 Gal.(U.S.)	24 L
*	Waterline	



#### NOTICE

Specified measurements are approximations and are subject to variance.

\*\*



#### NOTICE

Exceeding this weight will affect the boat's performance. DO NOT Exceed the weights listed on the capacity plate.



#### NOTICE

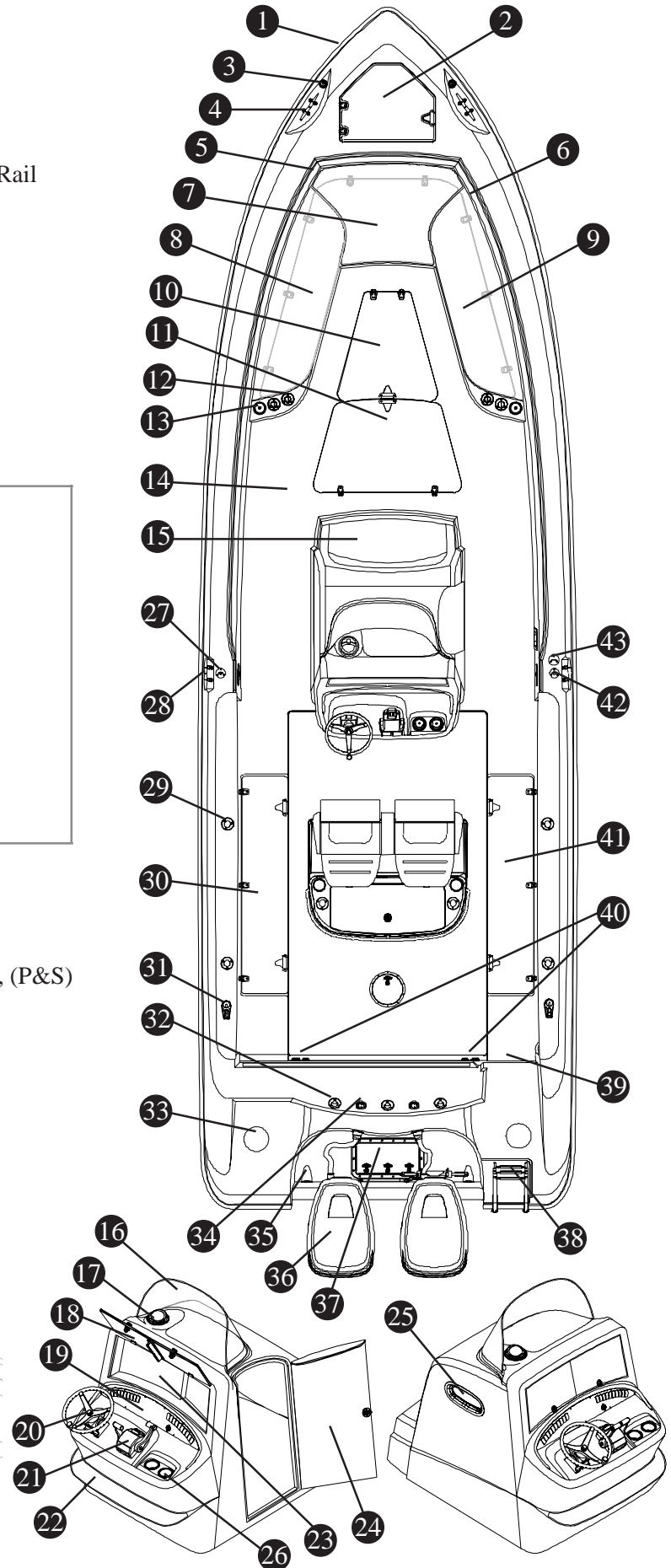
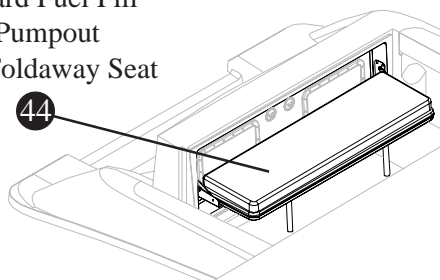
Optional equipment and loading of the boat will affect the draft measurements. Follow the recommendations listed on your capacity plate regarding the maximum amount of weight the boat can safely carry.

## Standard Features

- 1 Heavy Duty Rubrail
- 2 Anchor Locker w/ Drain
- 3 Bow Navigation Lights, (P&S)
- 4 Stainless Steel Fwd. Cleats, (P&S)
- 5 Welded Stainless Steel Low Profile Interior Rail
- 6 Forward Bolsters
- 7 Forward Seat, (Storage Under)
- 8 Forward Port Seat, (Storage Under)
- 9 Forward Starboard Seat, (Storage Under)
- 10 Forward In-Deck Fishbox, Insulated
- 11 Forward In-Deck Storage
- 12 Forward Rodholders, (4-Port/Starboard)
- 13 Forward Cupholders, (2-Port/Starboard)
- 14 Self Bailing Cockpit
- 15 Forward Console Seat

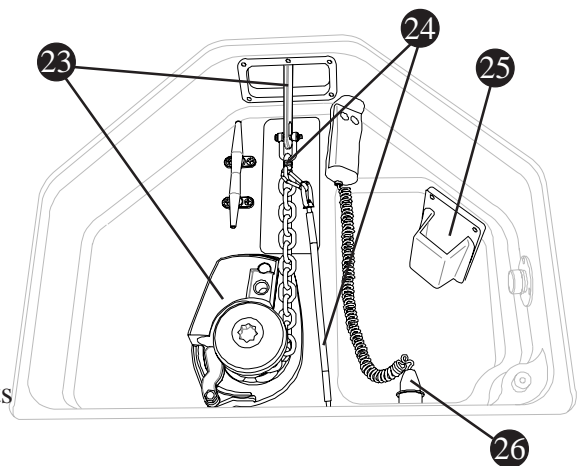
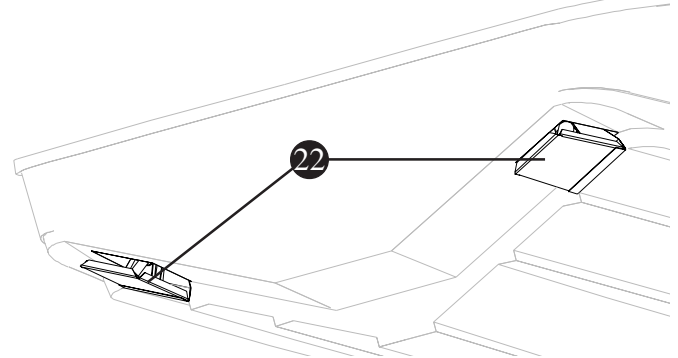
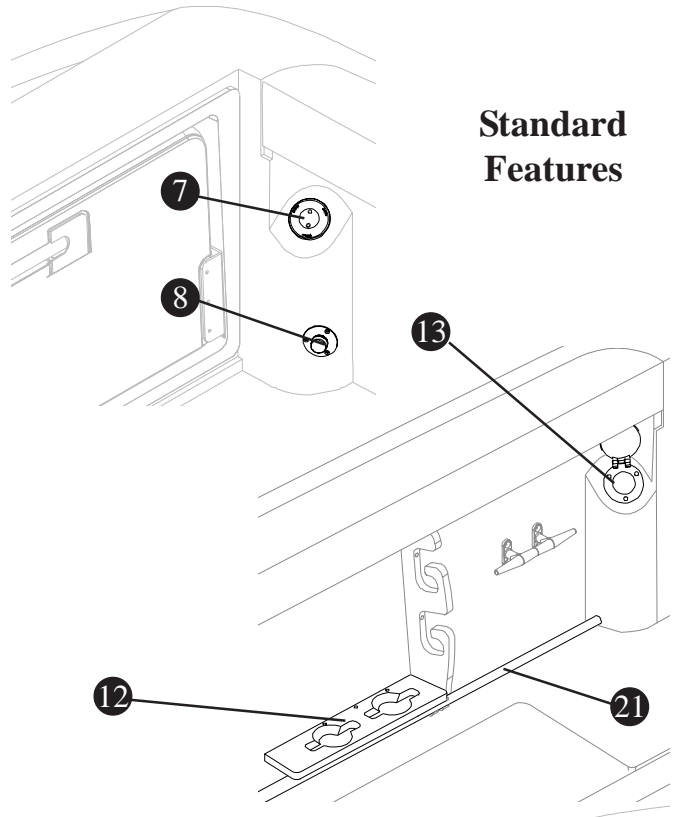
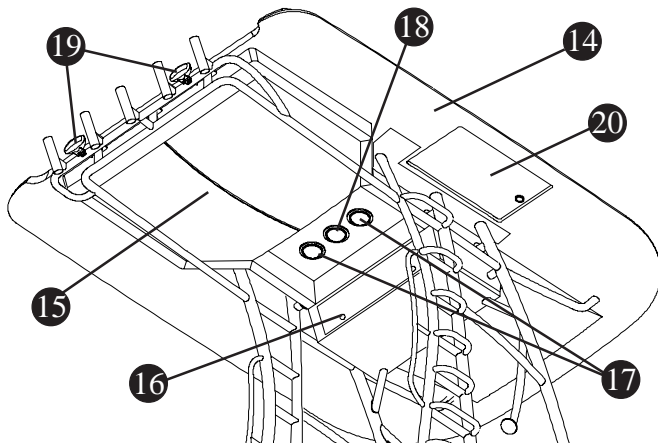
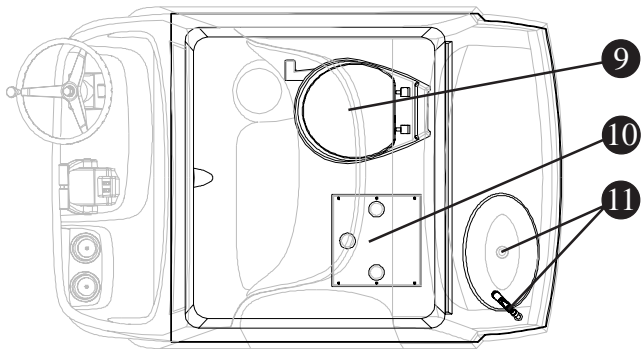
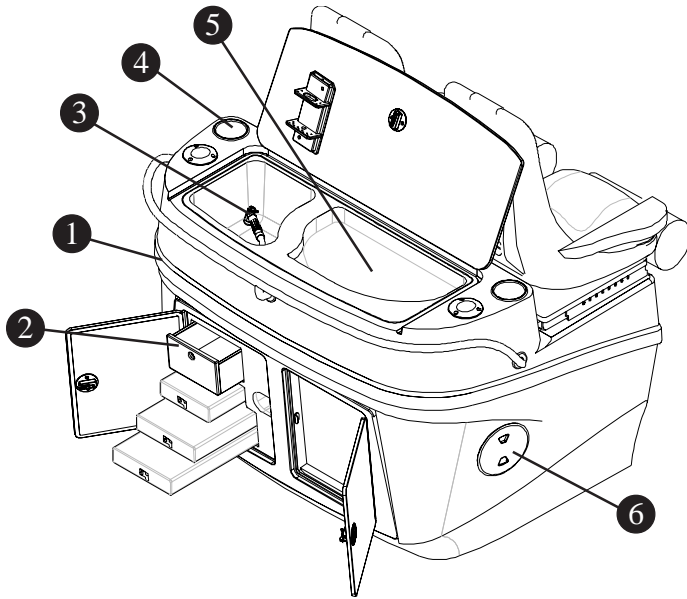
### SEE CONSOLE DETAIL

- 16 Molded Tempered Glass Windshield
- 17 Compass with Light
- 18 Electronics Box Door, Lockable
- 19 Instrument Panel
- 20 Stainless Steel Steering Wheel w/ Knob
- 21 Gear Shift/Throttle Control
- 22 Molded Console Footrests
- 23 Electronics Box Mounting Surface
- 24 Console Door, Lockable
- 25 Portlight w/ Screen
- 26 Console Cupholders, (2)
- 27 Port Fuel Fill
- 28 Stainless Steel Spring Cleat, (P&S)
- 29 Gunwale Mounted Rodholders (2), (P&S)
- 30 Port Fishbox, Insulated
- 31 Stainless Steel Hawse Pipe w/cupholders (2), (P&S)
- 32 Stern Rodholders, (3)
- 33 8 Inch Access Plate, (P&S)
- 34 Transom Oil Fill, (2) (Optional)
- 35 Motorwell Drain, (P&S)
- 36 Dual 250 CXXL DTS Verado 4-stroke Mercury Engines
- 37 Motorwell Access Hatch
- 38 Telescoping Ladder w/ Lid
- 39 Transom Door
- 40 Cockpit Drains
- 41 Starboard Fishbox, Insulated
- 42 Starboard Fuel Fill
- 43 Waste Pumpout
- 44 Stern Foldaway Seat





## Standard Features

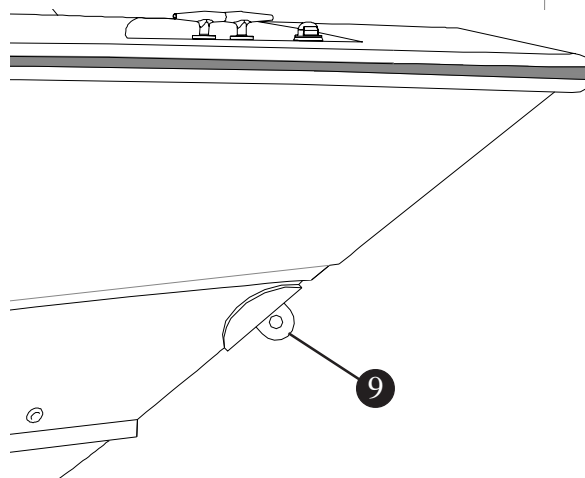
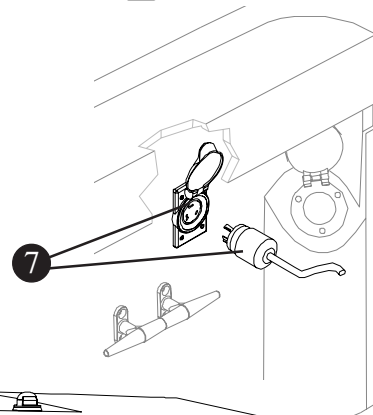
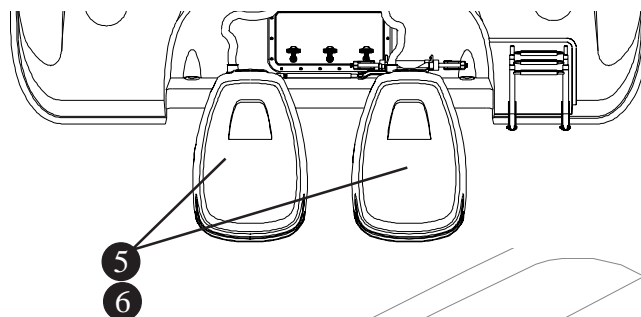
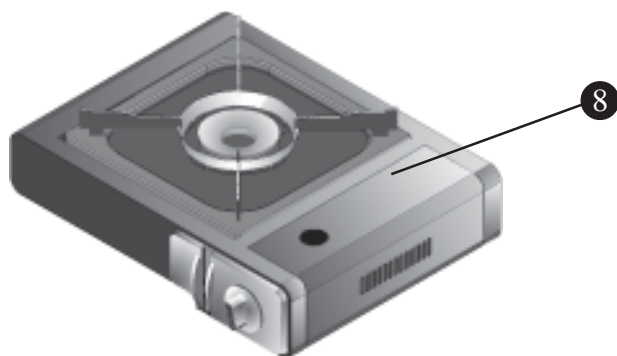
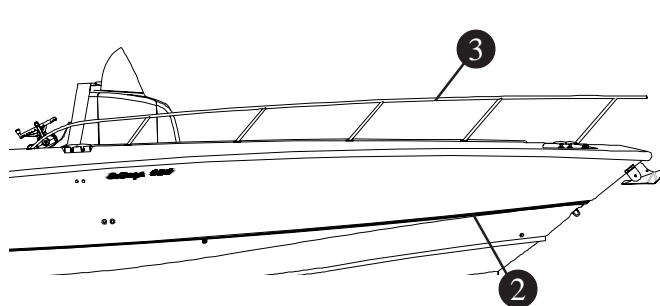
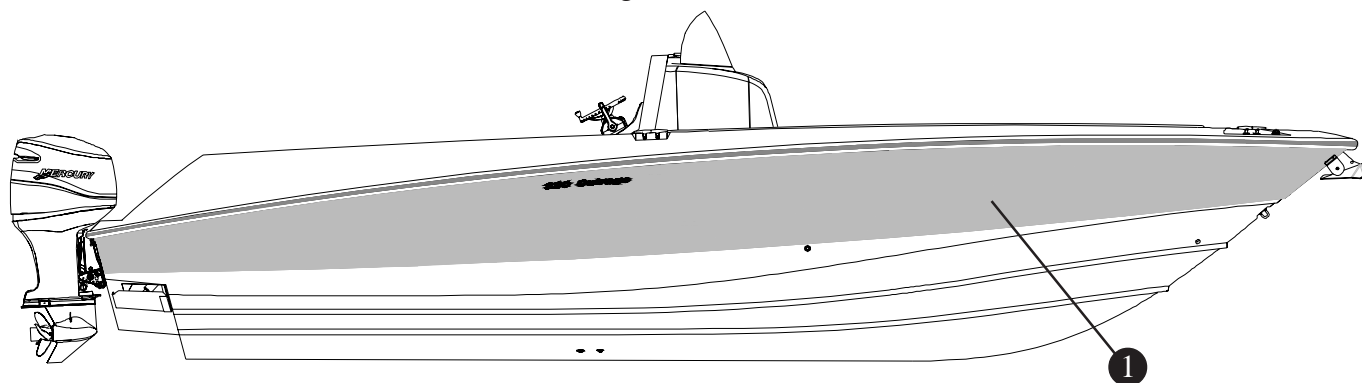


- 1 Prep Station
- 2 Prep Station, Tackle Center
- 3 Pull-out Sprayer with Sink
- 4 Prep Station Rodholder, (2)
- 5 Prep Station Livewell
- 6 Prep Station Livewell Access
- 7 Freshwater Fill
- 8 Raw Water Connection
- 9 Vacu-Flush Toilet
- 10 Vertical Rodholder
- 11 Freshwater Sprayer and Sink
- 12 Downrigger Weight Holder
- 13 Transom Shower
- 14 Hardtop, Fiberglass
- 15 Lifejacket Storage
- 16 Electronics Box
- 17 Hardtop Courtesy Lights
- 18 Map Light (RED)
- 19 Spreader Lights
- 20 Hardtop Hatch
- 21 Stainless Steel Toe Rails, Port/Starboard
- 22 Electric Trim Tabs
- 23 Windlass & Anchor

- 24 Swivel & Lanyard
- 25 Remote Storage
- 26 Remote Connection

## Section 2 - General Arrangement & Specifications

## 320 Outrage-Owner's Manual

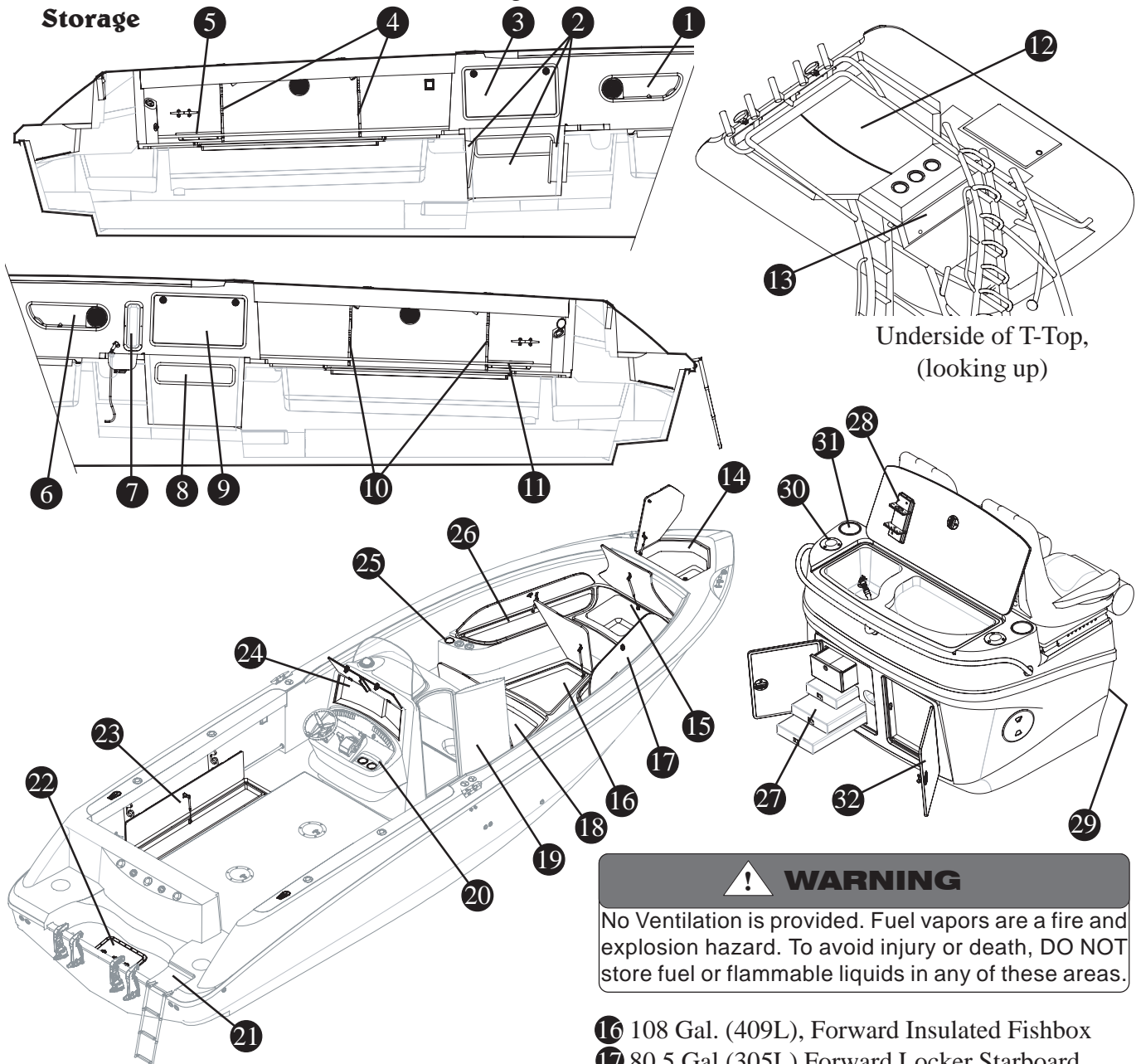


### 320 Outrage. Notable Options

- ① Hull Colors-  
Yellow w/ Black Graphics,  
Fighting Lady Yellow w/ Black Graphics,  
Light Blue w/ Black Graphics  
Wasabi w/ Black Graphics
- ② Red or Blue Graphics, Striping & Logos
- ③ Tall Bow Rail
- ④ Radial Outriggers for Hard-Top (P&S)
- ⑤ 225 CXXL Optimax DTS Dual Engines
- ⑥ 275 CXXL DTS Verado 4-Stroke Dual Engines
- ⑦ 12V Receptacle, port & starboard gunwales-(aft)
- ⑧ Butane Stove, Portable
- ⑨ Bow Tow Eye



**Storage**



Underside of T-Top,  
(looking up)



**WARNING**

No Ventilation is provided. Fuel vapors are a fire and explosion hazard. To avoid injury or death, DO NOT store fuel or flammable liquids in any of these areas.

- |   |  |
|---|--|
| 1 Pocket Storage, Port                              | 16 108 Gal. (409L), Forward Insulated Fishbox      |
| 2 Console Storage, Port                             | 17 80.5 Gal.(305L) Forward Locker Starboard        |
| 3 Gunwale Tip-Out Bin, Port                         | 18 Forward In-Deck locker                          |
| 4 Under Gunwale Rod Storage, Port                   | 19 Console, Lockable                               |
| 5 Downrigger Ball Storage, Port                     | 20 Console Cupholder, (2)                          |
| 6 Pocket Storage, Starboard                         | 21 Swim Ladder Stowage                             |
| 7 Fire Extinguisher Pocket                          | 22 Motorwell Access, Oil Tank Storage              |
| 8 Console Storage, Starboard                        | 23 Port Fishbox, 80 Gal.(302L) (Starboard is same) |
| 9 Gunwale Tip-Out Bin, Starboard                    | 24 Console Electronics Box, Lockable               |
| 10 Under Gunwale Rod Storage, Starboard             | 25 Forward Cupholder, (Starboard is Identical)     |
| 11 Downrigger Ball Storage, Starboard               | 26 80.5 Gal. (305L)Forward Locker, Port            |
| 12 Lifejacket Storage, Hardtop                      | 27 Tackle Storage                                  |
| 13 Lockable Electronics Box, Hardtop                | 28 Knife Storage                                   |
| 14 Anchor Locker with Drain                         | 29 Storage Bin (in front)                          |
| 15 24 Gal. (91L) Storage Well, (under forward seat) | 30 Rodholder, Prep Station                         |
|   | 31 Cupholders (2), Prep Station                    |
|   | 32 Knife/Tool Holder in Door                       |

**Section 2 - General Arrangement & Specifications**

## 320 Outrage-Owner's Manual



### NOTICE

The deck drain provides self-bailing capabilities while the boat is static in the water and no passengers on board. This feature prevents the accumulation of water in the cockpit. the drain must be in place when underway.



### NOTICE

Depending on the type of boat you have, you may have underwater fittings that need drain plugs. Garboard drain plugs and fishbox drain plugs need to be in place before the boat goes into the water. Any fitting that will be underwater needs to be plugged or the seacock needs to be closed



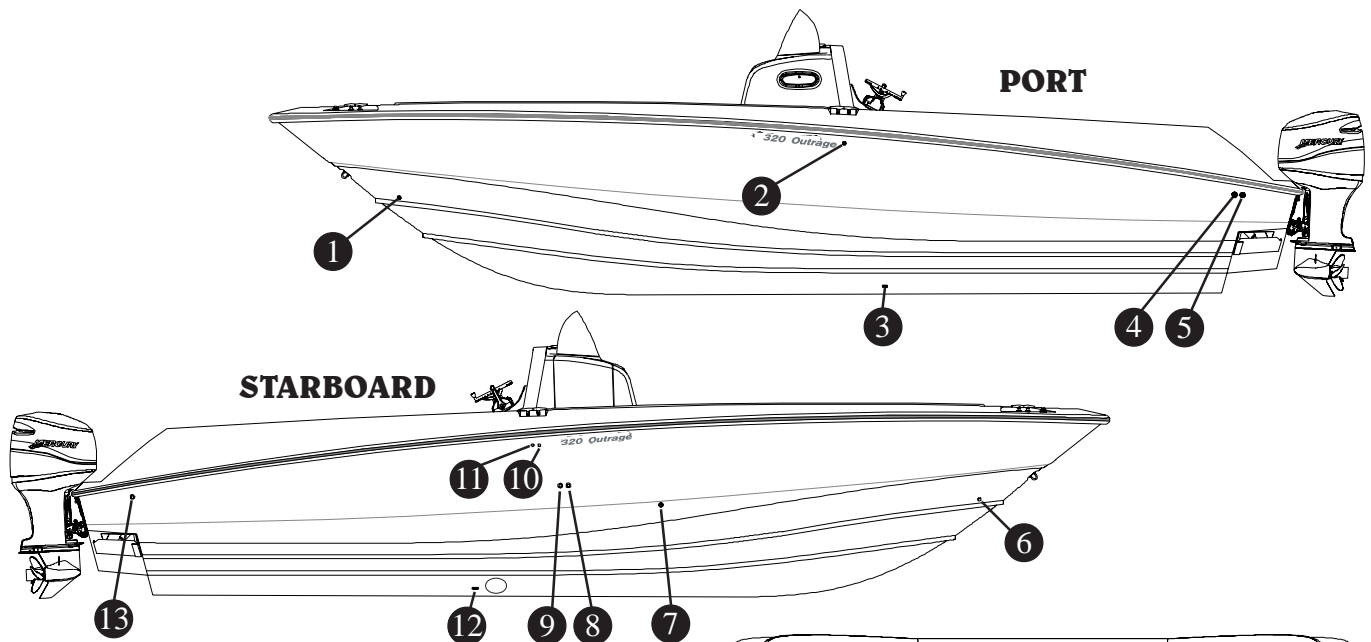
### NOTICE

Through hull fittings should be checked for proper seal annually. When the boat is in the water the underwater fittings can be checked for dripping. It is recommended that the underwater fittings be removed, cleaned and resealed every other year.



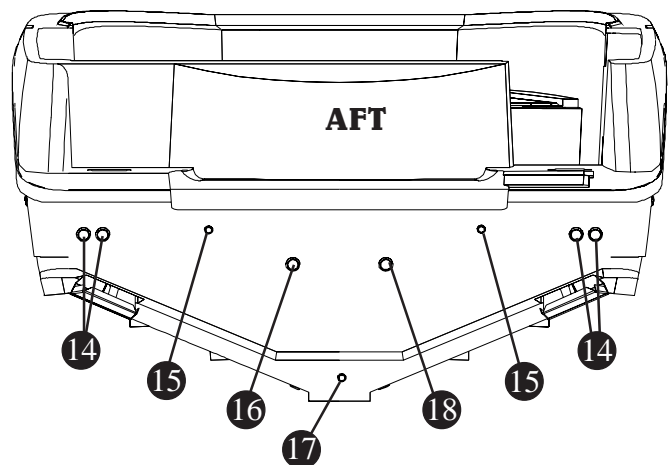
### NOTICE

If the through hull fittings need to be replaced, it is recommended that an authorized Boston Whaler® dealer perform this type of repair. Through hull fittings that are improperly installed can cause premature hull failure and may void the Boston Whaler® limited warranty.



### 320 Outrage, Through-hull Fittings

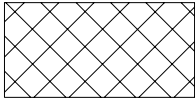
- ① Anchor Locker Drain, Port
- ② Fuel Tank Vent, Port
- ③ Raw Water/Livewell Inlet
- ④ Bilge Pump Outlet
- ⑤ Fishbox Pump Outlet, Port
- ⑥ Anchor Locker Drain, Starboard
- ⑦ Sink/Deck Drain
- ⑧ Bilge Pump Outlet
- ⑨ Fishbox Pump Outlet, Forward
- ⑩ Waste Vent
- ⑪ Fuel Vent, Starboard
- ⑫ Macerator Discharge
- ⑬ Fishbox Pumpout, Starboard
- ⑭ Deck Drains
- ⑮ Motorwell Drains



- ⑮ Livewell Drain
- ⑯ Garboard Drain
- ⑰ Active Deck Suspension System (ADSS) pan drain, (Optional)

## Deck Occupancy

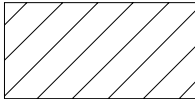
### Accommodation deck:



This area of the boat is inside the cockpit and includes helm seating. Movement in this area should be done with extreme caution while the boat is underway. A sudden shift

in boat direction can cause a loss of balance and lead to injury or death.

### Working deck:



This area is intended for occupation ONLY while mooring, anchoring, loading/unloading or when the boat is at rest. NEVER operate the engine while loading or unloading

swimmers/divers from the swim platform/ladder.



### **DANGER**

Be aware of your footing while the boat is underway, slipping or falling could result in serious injury or death, especially if the boat is in motion or in rough water. Keep the accommodation deck clean, so if movement is necessary it will be free of obstruction.



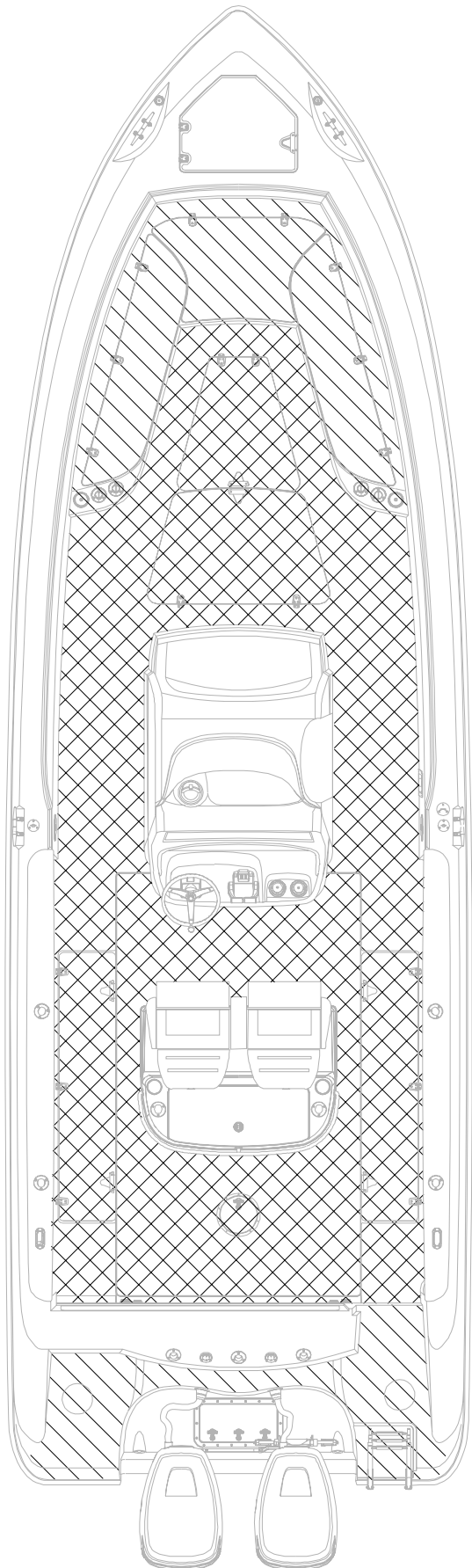
### **WARNING**

Gelcoat surfaces are slippery when wet. Use extreme caution when walking on wet surfaces. Use care when waxing to ensure that walkways are not made dangerously slippery.



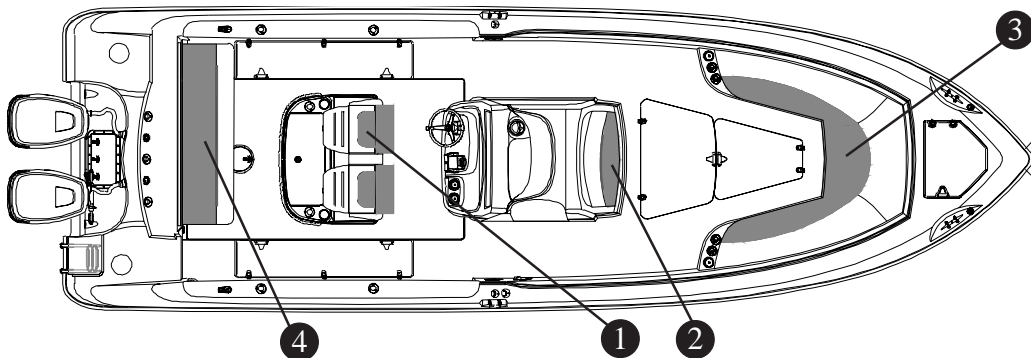
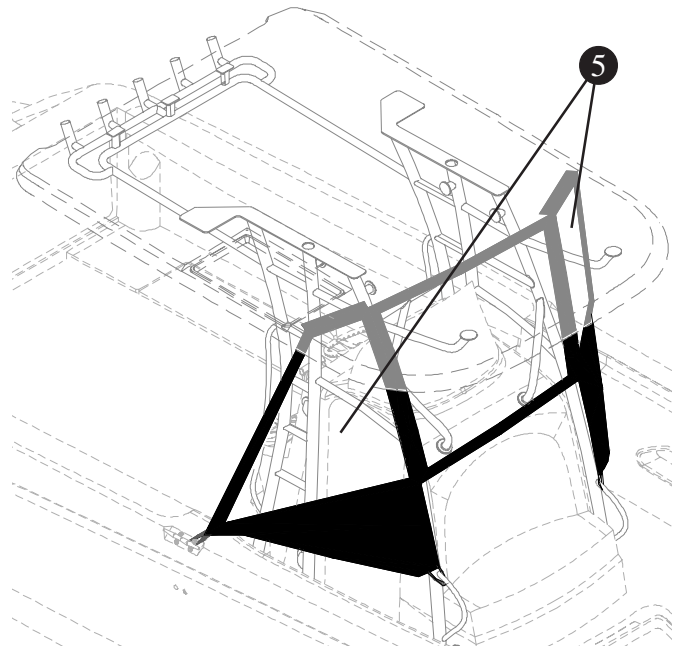
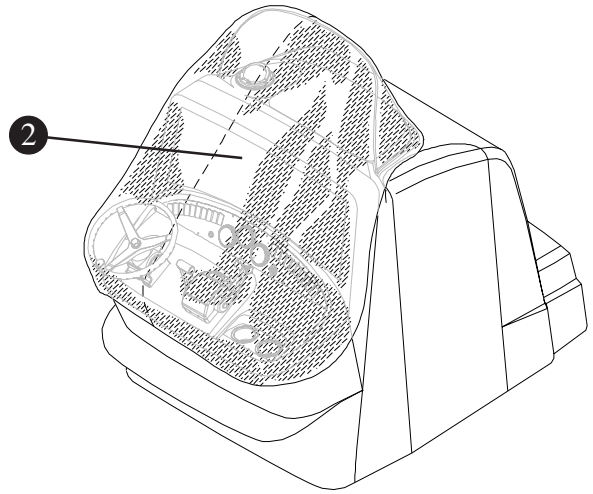
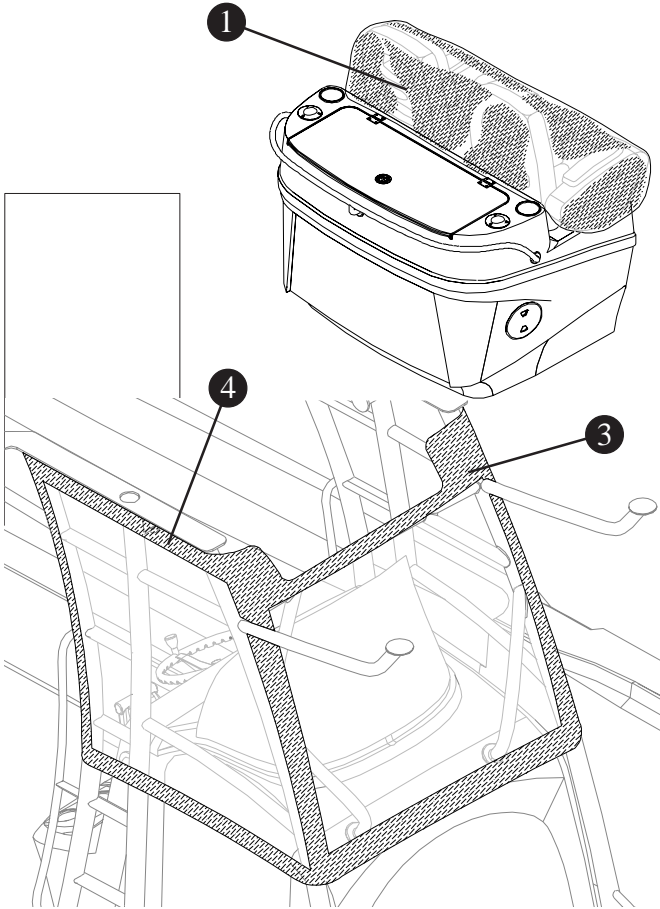
### **WARNING**

Never occupy the working decks while the boat is underway. NEVER sit on the gunwales (vertical sidewalls), while the boat is moving.



## 320 Outrage Canvas Arrangement

- ① Bait Prep Station Cover, Black
- ② Console Cover, Black
- ③ Weather Curtain Visor, Black or White
- ④ Weather Curtain Sides, Black or White
- ⑤ Weather Curtain Wing, Black or White



### DANGER

Injury and possible death can occur while sitting in areas of the boat that are not designated for seating. Gunwales, sterndeck and portions of the bow should not be used for sitting while underway. Movement of passengers on the deck should be limited to decrease the chances of slipping or falling while underway.

### Standard Seating Arrangement

- ① Helm & Companion seats with snap-on cushions, (adjustable port seat).
- ② Forward Console Seat
- ③ Forward Seating
- ④ Stern fold-away seat



## 320 Outrage-Owner's Manual

### 320 Outrage, Label Locations

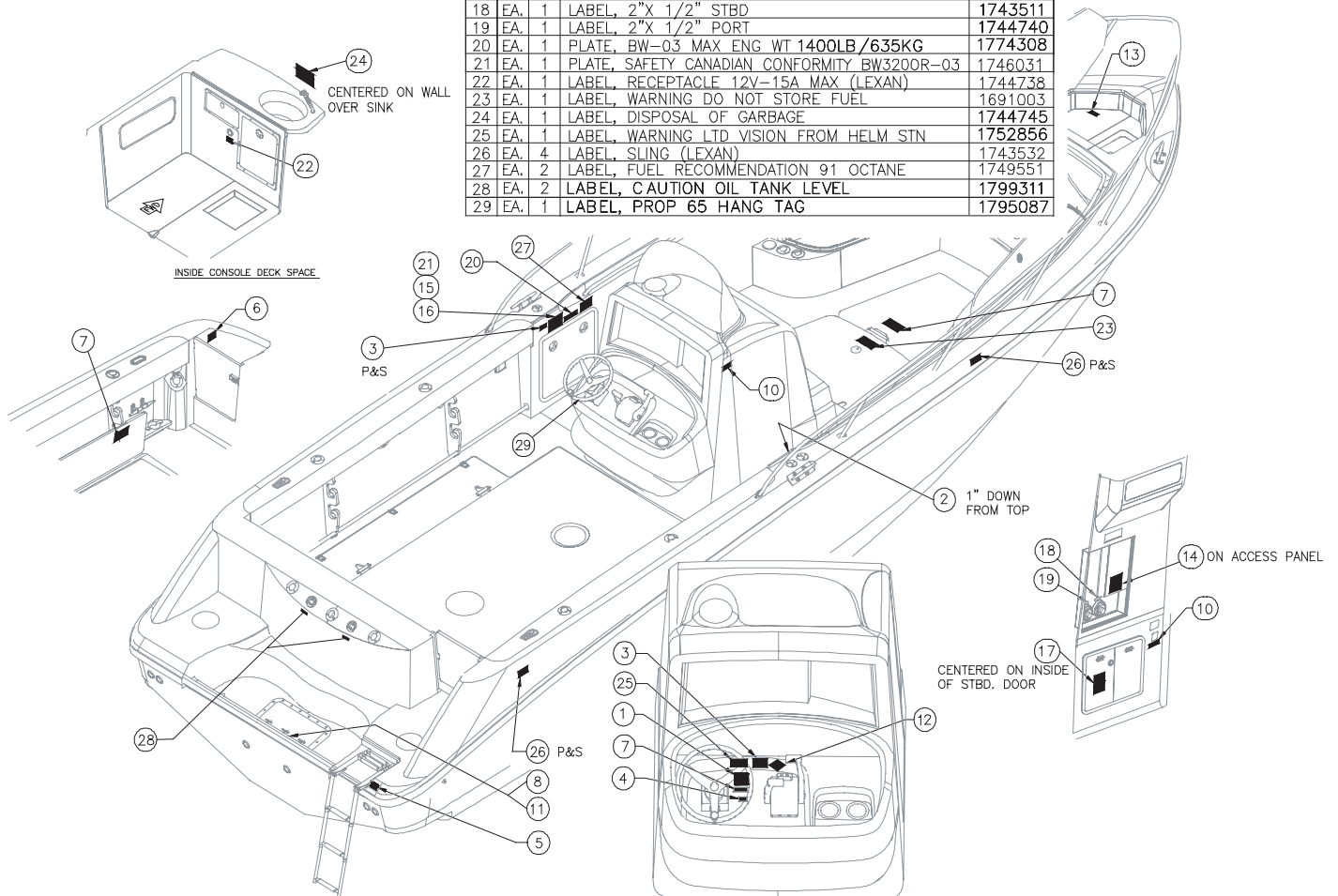


#### NOTICE

If your labels become worn or unreadable contact your nearest Boston Whaler® dealer for replacement labels. The part numbers are provided below.

#### PARTS LIST

ITEM	U/M	QTY.	DESCRIPTION	B.W.J. NO.
1	EA.	1	LABEL, BW SAFETY HI-PERF BOAT	1017136
2	EA.	2	PLATE, WARNING FUEL HAZARD	995704
3	EA.	1	LABEL, WARNING CO HELM	1811368
4	EA.	1	LABEL, BW WARNING FUEL GAUGE READ	1016534
5	EA.	1	LABEL, DANGER CO TRANSOM	1811367
6	EA.	1	LABEL, BW WARNING TRANSOM DOOR	1017144
7	EA.	4	LABEL, BW CAUTION FISHWELL DRAIN PLUG	1743504
8	EA.	1	LABEL, DISCHARGE OF OIL (LEXAN)	1744737
9	EA.	1	LABEL, DOOR SECURED CLOSED WHILE UND.	1754632
10	EA.	1	LABEL, NOTICE OVERBOARD DISCHARGE (LEXAN)	1745156
11	EA.	1	LABEL, PREVENT DISCHARGE OF POLLUTANTS	1745514
12	EA.	1	DECAL, MERC SMARTCRAFT NETWORKED	1743323
13	EA.	1	LABEL, DANGER STAY CLEAR OF MOVING PAR	1746896
14	EA.	1	PLATE, BW230CQ-97 BATT PARALLEL DET	1051762
15	EA.	1	PLATE, BUILDERS CF 03-BW3200R	1738303
16	EA.	1	PLATE, NMMA YACHT CERT GAS	125062
17	EA.	1	PLATE, SEACOCK LOCATIONS BW3200R-03	1742660
18	EA.	1	LABEL, 2"X 1/2" STBD	1743511
19	EA.	1	LABEL, 2"X 1/2" PORT	1744740
20	EA.	1	PLATE, BW-03 MAX ENG WT 1400LB/635KG	1774308
21	EA.	1	PLATE, SAFETY CANADIAN CONFORMITY BW3200R-03	1746031
22	EA.	1	LABEL, RECEPTACLE 12V-15A MAX (LEXAN)	1744738
23	EA.	1	LABEL, WARNING DO NOT STORE FUEL	1691003
24	EA.	1	LABEL, DISPOSAL OF GARBAGE	1744745
25	EA.	1	LABEL, WARNING LTD VISION FROM HELM STN	1752856
26	EA.	4	LABEL, SLING (LEXAN)	1743532
27	EA.	2	LABEL, FUEL RECOMMENDATION 91 OCTANE	1749551
28	EA.	2	LABEL, CAUTION OIL TANK LEVEL	1799311
29	EA.	1	LABEL, PROP 65 HANG TAG	1795087



## Fuel System



### DANGER

Check for leaks in tubing, connections and hoses. Correct the cause of the leaks and ventilate the area to insure that no fumes remain, prior to energizing any electrical equipment and/or starting the engines.



### DANGER

Static electricity can ignite gasoline vapors causing serious injury/death and/or destruction of property.



### CAUTION

Use of improper gasolines can damage your engine seriously. Engine damage resulting from use of improper gasoline is considered misuse of engine and will void the warranty. Follow engine manufacturer's recommendations regarding the types of fuel and oil to use.



### CAUTION

Leaking fuel is a fire and explosion hazard, inspect the system regularly. Examine fuel tanks and exposed lines for leaks and corrosion.



### CAUTION

Oil and fuel spills can be dangerous and can subject offenders to severe penalties



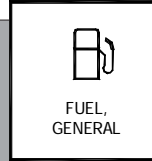
### NOTICE

Remove portable tanks from boat and fill from shore. When fueling is complete, secure tanks to deck with straps provided.



### NOTICE

Fuel tanks should never be filled to capacity, allow 2% for expansion.



The 320 Outrage is equipped with a gasoline fuel system. Please take time to read and understand all the fuel related information and warnings in the engine owner's packet. The diagrams below show the location of the fuel fill, routing of fuel supply hose and the location of the fuel tank vent.

### Fuel Tank

The 320 Outrage comes with 2-150 Gal. (568L) aluminum fuel tanks. The tanks are located under the aft section of the cockpit. Access to the fuel level senders for each tank is through a plate on the aft section of the cockpit floor.

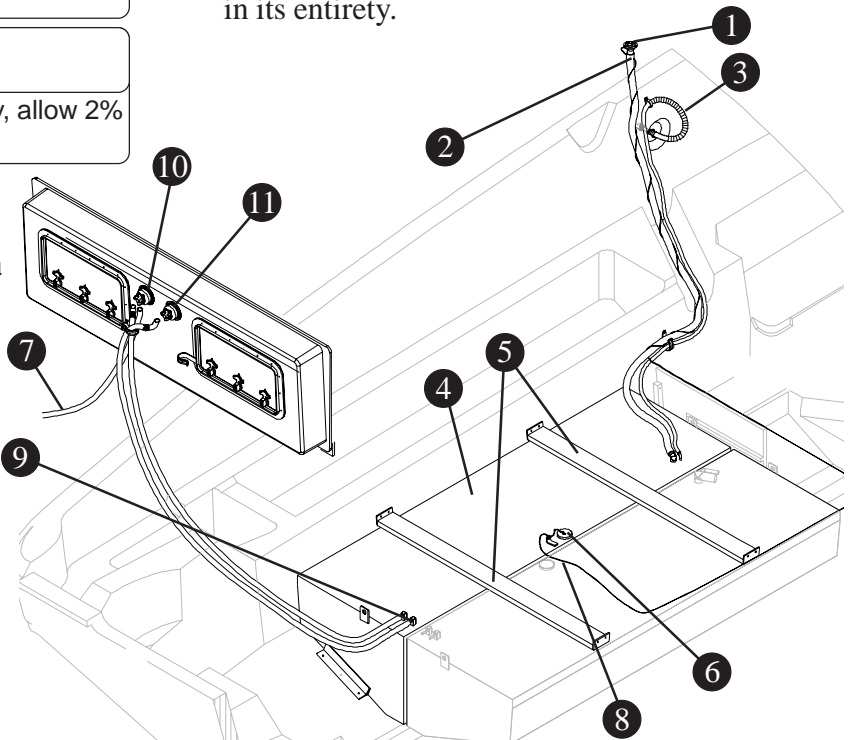
### Fuel Fill

The 320 Outrage has fuel fills for each tank, located on the port/starboard sides amidship on the gunwales, each is marked "GAS", and is opened by use of a special key that is included with the owner's manual packet. Follow the engine manufacturer's recommendation for the types of fuel to use.

The starboard fuel tank is similar in assembly and is not shown in its entirety.

### 320 Outrage Fuel System

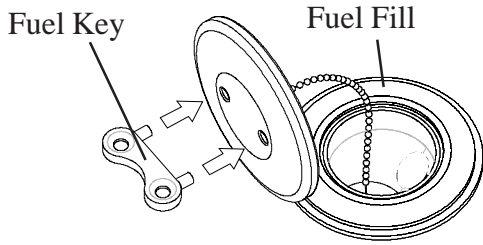
- ① Fuel Fill, Port tank
- ② 1-1/2" Fuel fill hose to deck plate
- ③ 5/8" Fuel vent line
- ④ 150 Gal. (568L) Aluminum fuel tank, Port
- ⑤ Aluminum bracket, forward/Aft
- ⑥ Fuel sender, Port tank
- ⑦ Engine fuel supply
- ⑧ Ground wire, Port tank
- ⑨ Fuel pick-up
- ⑩ Port fuel selector valve
- ⑪ Starboard fuel selector valve





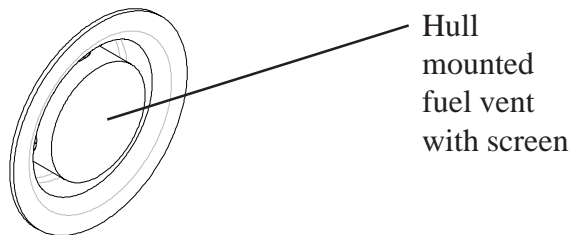
## 320 Outrage-Owner's Manual

### Tank Selection



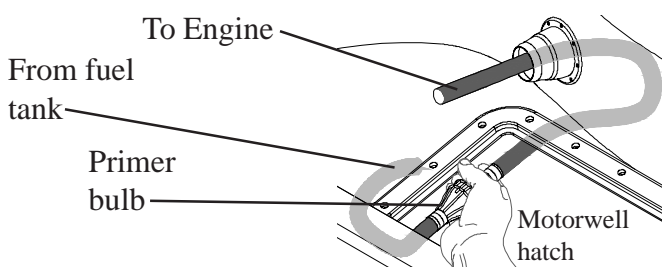
### Fuel Vent

The fuel tank(s) have a fuel tank vents located amidship, 7-9" inches below the rub rail directly below the fuel fill cap. The fuel tank vent serves as a pressure/vacuum release, safety overflow and flame arrestor. Access to the vent fittings is through twist-out plate located inside the cockpit opposite the fuel tank vent. Check the vent assembly regularly as part of a maintenance schedule for continued safe operation of your boats fuel system. The Vent assembly consists of a backshell, starwasher, nut and hose clamp. Remove the hose clamp, nut, starwasher and backshell and push the fuel vent fitting out. The fuel vent has four screens that are held in by a ring. Use a small pick to dislodge the ring to remove the screens and clean as required.

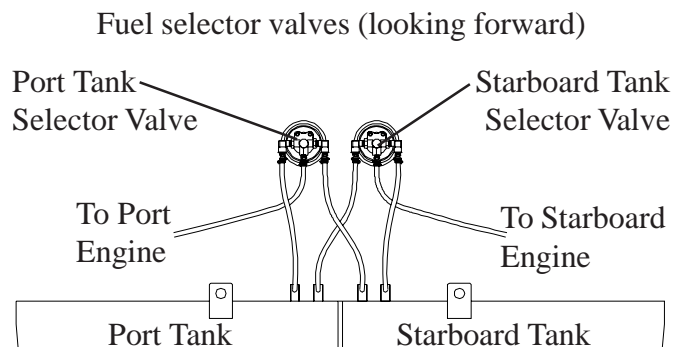
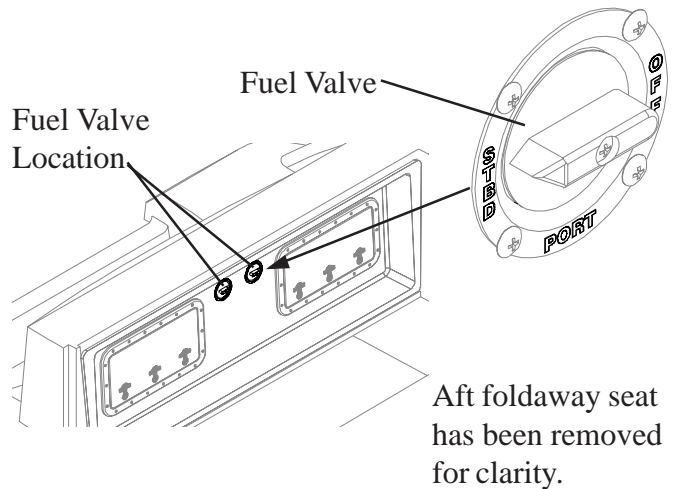


### Primer Bulb (Optional)

If equipped, a pair of primer bulbs can be accessed under the port and starboard sides of the motorwell hatch. The primer bulbs are used to draw fuel from the tank to the engine, usually after the fuel has been drained from the entire system. There are also instructions regarding proper use of the primer bulb in the engine manufacturers handbook.



There are a pair of 3-way gasoline valves that control the flow of fuel to the engines. The fuel system is designed to have the port engine supplied by the port fuel tank and the starboard engine by the starboard tank. The valves can be used so both engines can be supplied by either tank. (If both engines will be run from one fuel tank, the boat will eventually list to the opposite side of the tank being used). The valves have PORT, STARBOARD, OFF clearly marked on the perimeter of each valve. Turn the valve handles to the desired position for the appropriate tank. Be sure to always check the level of each fuel tank and position of fuel valves to prevent the boat from becoming unbalanced while underway. The tank selector gasoline valves are located on the aft wall of the stern foldaway seat.



### EMPTY TANK:

A fuel tank with levels less than 1/4 full can cause problems by stalling an engine due to fuel starvation or by allowing sediment and dirt to enter the fuel supply lines. Keeping the tank filled will reduce the chance of this occurrence; since the residue will most likely settle to the bottom of the tank. Monitor the fuel level often to prevent this from happening.

### HOSES AND FITTINGS:

Hoses and fittings should be inspected at least every 100 hours. Check the hoses for cracks, abrasions and deterioration and the strong smell of fuel prior to starting the engine(s). If the hoses or fittings are damaged or worn, replace them with only marine grade replacement parts. Your authorized Boston Whaler® dealer will have all the parts information you will need.

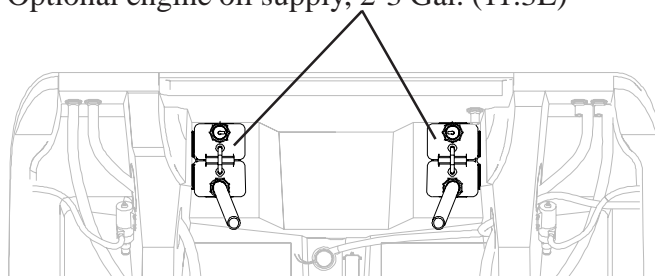
### TANK CLEANING:

Excessive water and sediment may force you to consider having the tank professionally cleaned. If you are frequently changing fuel filter/water separators and notice a loss in power, consult a professional tank cleaning contractor regarding this procedure and proper disposal of residue and water.

## Remote Oil System (Optional)

The 320 Outrage may be equipped with a remote oil system. This system consists of two 3-Gal.(11.3L) reservoir tanks and hoses which contain and meter lubricating oil to the engine(s). The tanks have an external fill located on the aft side of the cockpit transom wall. Access to the tanks is through the motorwell access hatch. When recapping the fill make sure that it is secure to prevent spills and to prevent the intrusion of water into the system. Your remote oil tank is secured by a nylon strap and quick release clip. Little maintenance is required for the remote oil system, aside from checking the hoses for abrasions and cracks and hose clamps for proper tightness. The tank should not be exposed to ultra-violet light, rain or seawater for extended periods of time.

Remote Oil Tank Location  
(sterndeck has been removed)  
Optional engine oil supply, 2-3 Gal. (11.3L)



**Static Electricity and the Fuel System**

There is a danger that static electricity can ignite gasoline vapors that have not been ventilated outside an enclosed area. Use extreme caution when fueling your boat from a source outside the regular venues, (e.g. marinas, fuel service stations.)

Your boat has safety features that can be circumvented by not adhering to standard fueling practices. Your boat's bonding system protects it from creating and discharging static electricity.

Your boat must be in contact with the water or a land based grounding system. Here are some helpful suggestions to keep you safe from static electricity while refueling your boat.

- NEVER fuel your boat in unsafe conditions such as: suspended on a sling or in a situation that increases the likelihood of static discharge.
- NEVER use homemade containers to fill your fuel tanks.
- Fuel carried on-board outside of a fixed fuel system should be stored in an approved container or in a portable tank such as provided for outboard engines and be stowed safely outside of the engine or living compartment(s).
- Shut down the engine(s), motors and fans prior to taking on fuel. Any ignition sources should be extinguished before filling the fuel tank(s).
- Close all ports, windows, doors and hatches.
- Fueling should never be done at night except in well-lighted areas.
- Always keep the fuel nozzle in contact with the fuel fill plate or the edge of the fuel tank opening throughout the filling process.
- Allow areas where gasoline vapors could collect to be ventilated before starting the engine(s).
- Wipe any spillage completely and dispose of rags or waste on shore.
- Secure the fill cap tightly.
- Fuel tanks should never be filled to capacity. allow 2% for expansion.
- Portable tanks should only be filled while on the ground; never on-board the boat.

## DC Electrical System

### **! DANGER**

Batteries contain sulfuric acid which is dangerous and can cause serious injury. AVOID contact with skin, eyes and clothing. If contact occurs, immediately flush the affected area with large quantities of water and call for medical assistance.

### **! CAUTION**

- Never use an open flame in the battery storage area.
- Avoid striking sparks near the battery
- A battery will explode if a flame or spark ignites the free hydrogen given off during charging.
- The battery should always be disconnected before doing any work or maintenance on the electrical system.

### **! CAUTION**

Never reset a breaker without first determining and correcting the cause of the trip. Should a circuit repeatedly trip, have a qualified electrician determine and correct the cause.

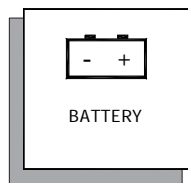
### **! CAUTION**

If equipped with a battery switch, you will need to stop the engine before moving the switch to the "OFF" position.

### **! NOTICE**

Always store the battery in the the battery box. Use the straps and clamp to keep the box secure while underway.

## Battery Information



Your 320 Outrage is equipped with a Direct Current (DC) electrical system. All power to the boats systems are provided by the batteries. The batteries are continuously charged by the engines alternator while the engines are running. The following are powered directly from the batteries.

- Engine ignition
- Engine tilt trim system
- Helm switch panel & helm instrument panel
- Lighting/Navigation system
- Livewell system
- Add-on accessories and electronics

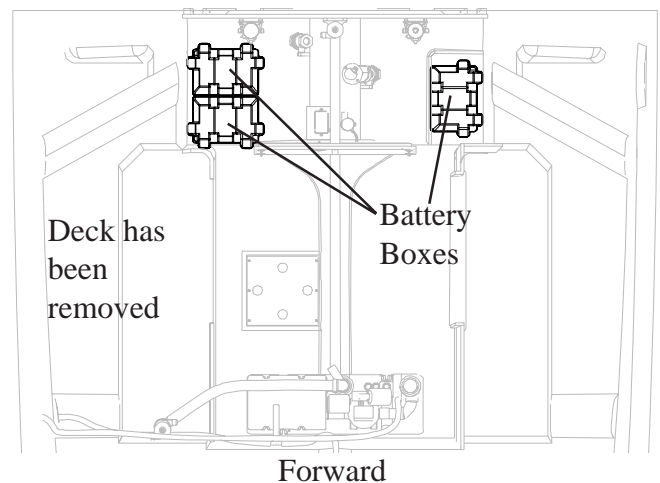
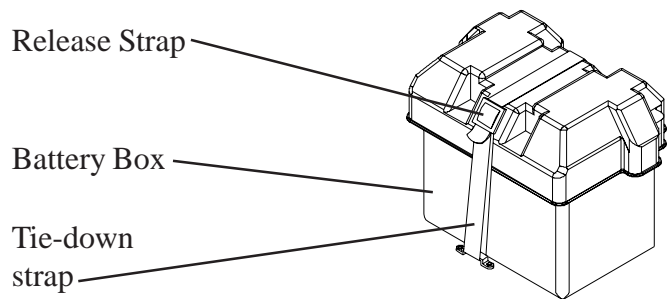
The system consists of the following components:

- Battery boxes, (3 standard)
- Battery switches
- Main & Branch circuit breakers
- Helm Ignition, Switch & Instrument Panel

Batteries should always be enclosed in the covered battery boxes provided with your boat. The box will contain any spilled acid, as well as protect the battery terminals from damage or inadvertant shorting from coming in contact with metal objects. Each battery box should always be secured in place by using the straps and clamps provided, the straps will ensure that while underway the battery will not move around, causing damage to components stored in the same area.

### BATTERY BOX LOCATION:

The 3 standard battery boxes can be accessed through a door in the aft section of the console interior.



## Battery Maintenance

Battery maintenance should include:

- Inspect each battery and charging system before use; for loose connections or wiring.
- If not using a sealed battery, check & maintain the water level. USE distilled water ONLY.
- Coat the terminals with dielectric grease.
- Keep the batteries dry.
- Remove the batteries from the boat during cold weather or long term storage.

The most life shortening experience for the battery is to be drained to zero charge before recharging.

When a battery discharges, the active material on both positive and negative plates converts to lead sulfate, causing the plates to become more alike in an electrical charge. The electricity conducting battery acid becomes weaker and the voltage drops. As the battery remains discharged, the process continues until recharging the battery becomes impossible.

If the battery does become run down be sure to re-charge it as soon as possible. Over charging the battery can be just as detrimental to its life as running it down too far.

### Dual Battery Switches

#### **WARNING**

Do not operate boat with batteries in parallel, serious engine electrical damage may result.

#### **WARNING**

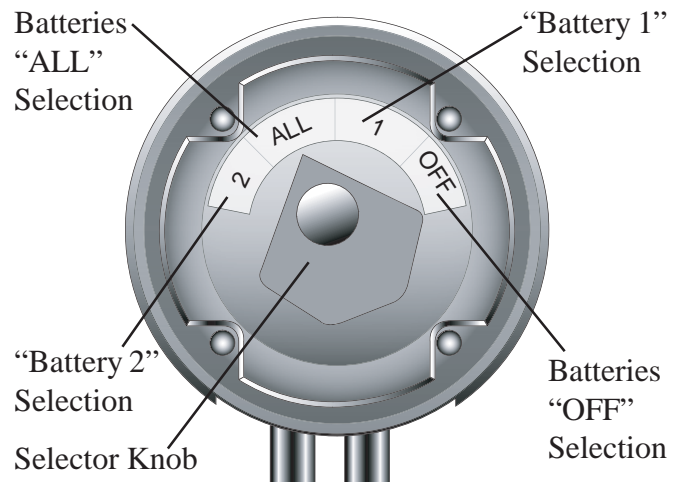
The bilge pump will still draw power from the batteries, even if the switches are set to "OFF".

Your 320 Outrage uses a battery selector switch to control delivery of DC power from two batteries. The battery switches are located below the breaker panel on the aft bulkhead inside the console.

The dual battery switches have four (4) settings:

- "OFF", you will have no power to the engine(s).
- "ALL", you will have power from both batteries at the same time. This parallels the batteries to assist you in starting the engine(s), once the engine is started the battery switch should be taken off of the "ALL" setting, and set to charge either battery.
- "1", you will have power from the port battery only.
- "2", you will have power from the starboard batteries only.

When the engines are shut down or not providing a charge, the system will draw power from the starboard batteries. This will allow you to run all the boats functions without affecting the port battery. You can run the starboard batteries down and still start the engines by moving the selector knob on the battery switches to the "ALL" position. The battery switches are located below the breaker panel on the aft bulkhead inside the console. When looking at the panel, the switch on the left is for the port battery and engine, the right switch is for the starboard battery and engine.



### Dual Engine Battery Switch Configuration

PORT ENGINE



STARBOARD ENGINE



Both batteries un-connected, preferred position when boat is not in use.



Normal position while engaging in normal engine operations.



To parallel batteries, set both switches to the "ALL" position.

**Return to normal operating positions after starting.**

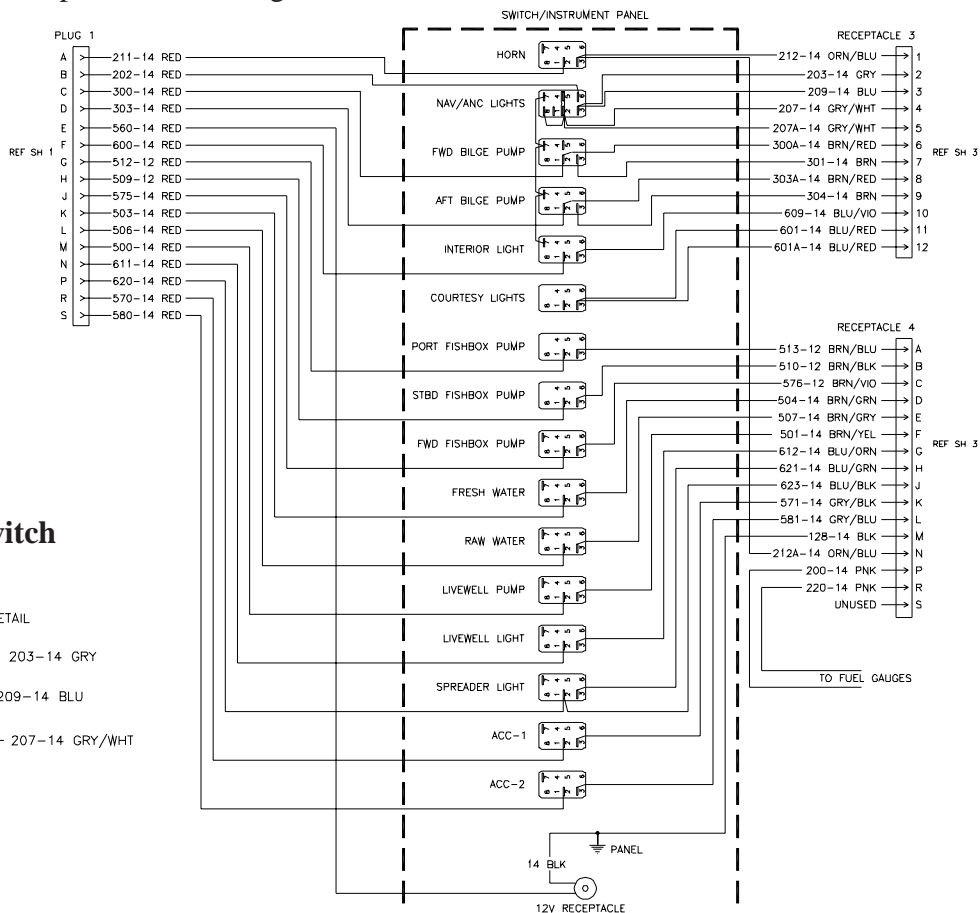


## 320 Outrage-Owner's Manual

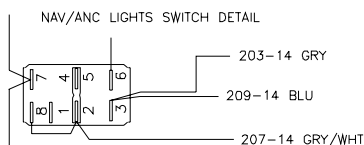


This owner's manual contains schematics for your boat. These electrical schematics were generated by technicians in our Engineering Department and are for reference and to be used by service technicians. Boston Whaler® does not recommend that you attempt to work on the electrical system yourself, instead we suggest that you take it to an authorized Boston Whaler® dealer for electrical service. Boston Whaler® 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 the changes.

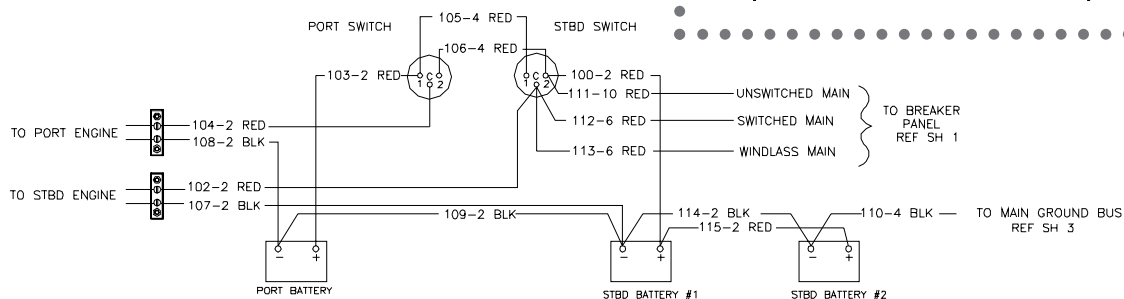
### Instrument Panel



### Navigation Switch Detail



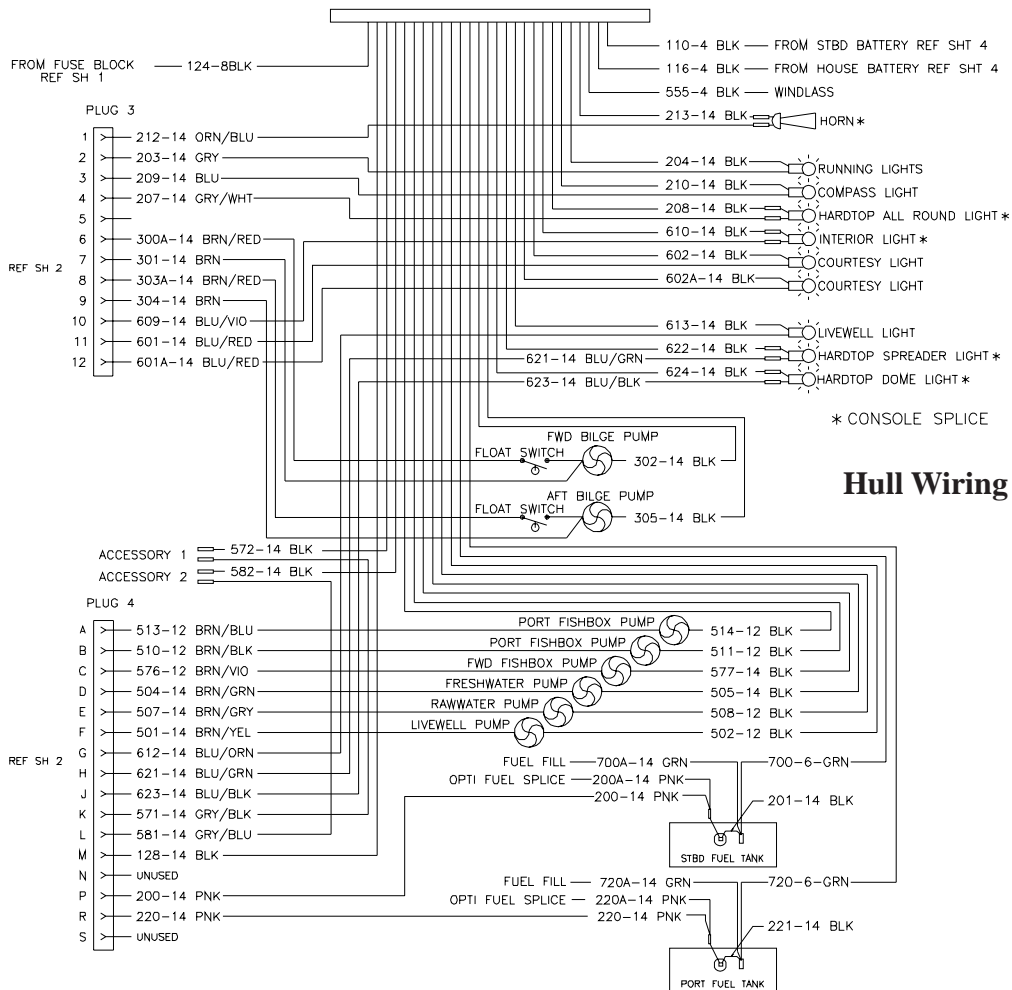
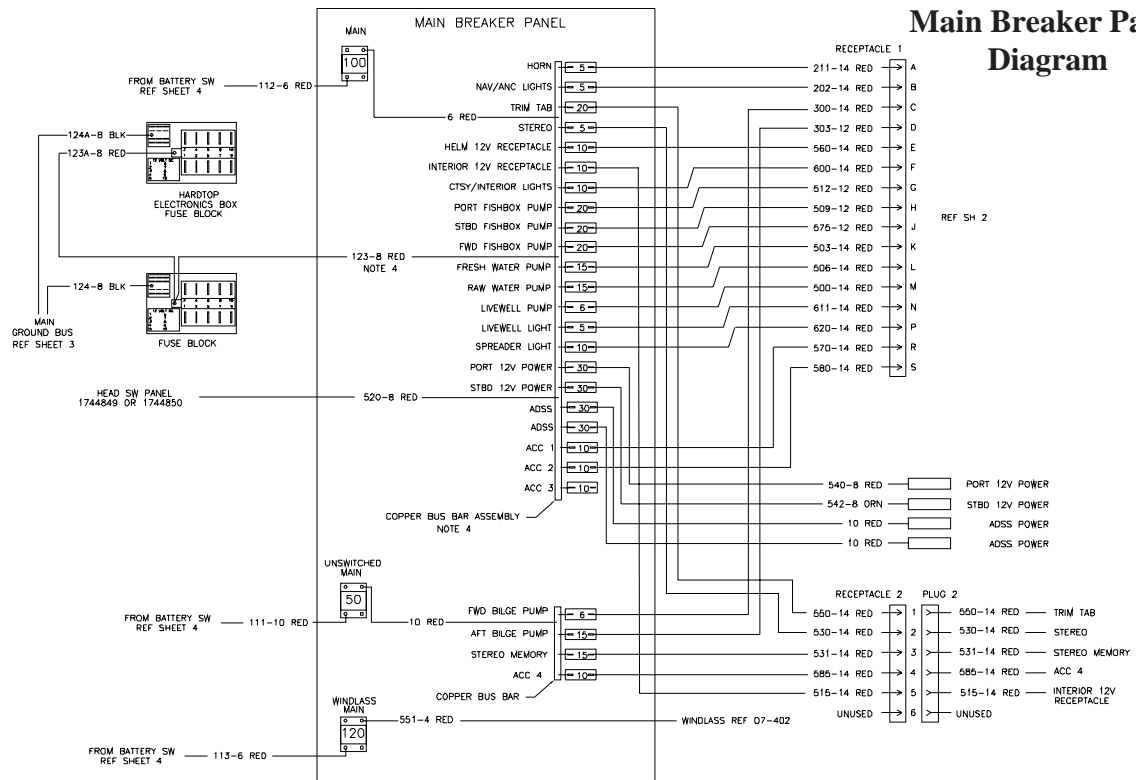
### Battery and Switch Diagram





# 320 Outrage-Owner's Manual

## Main Breaker Panel Diagram

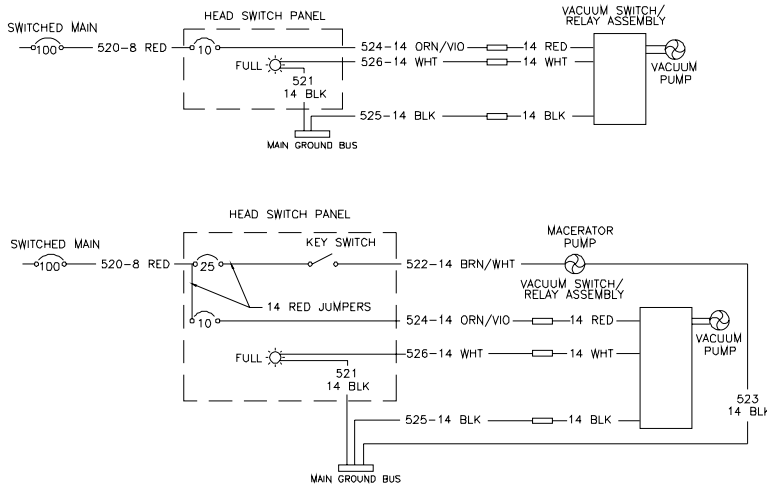
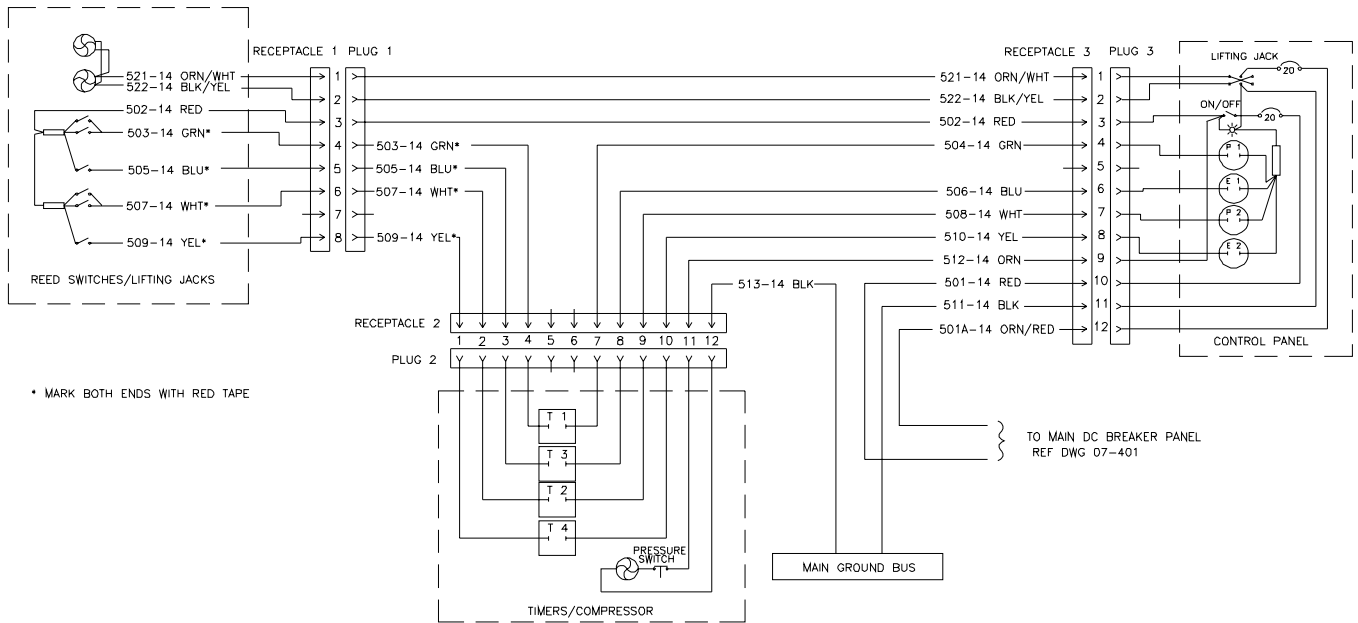


## Section 4 - Electrical System

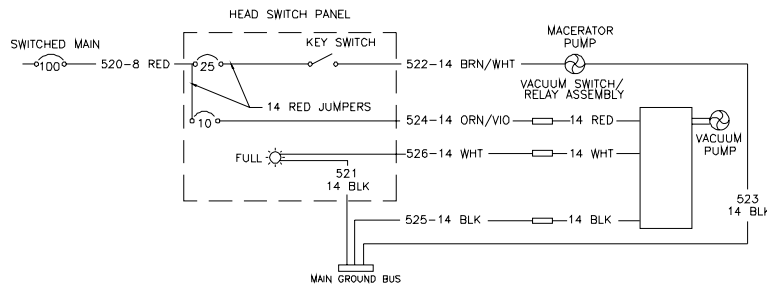
# 320 Outrage-Owner's Manual

## Active Deck Suspension System(ADSS)

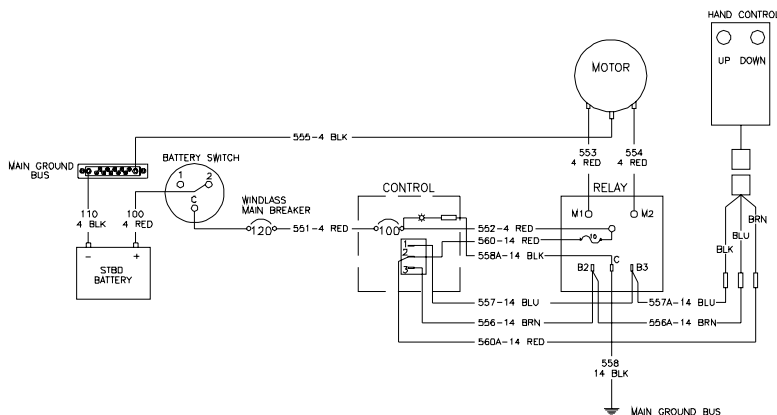
### Wiring Diagram



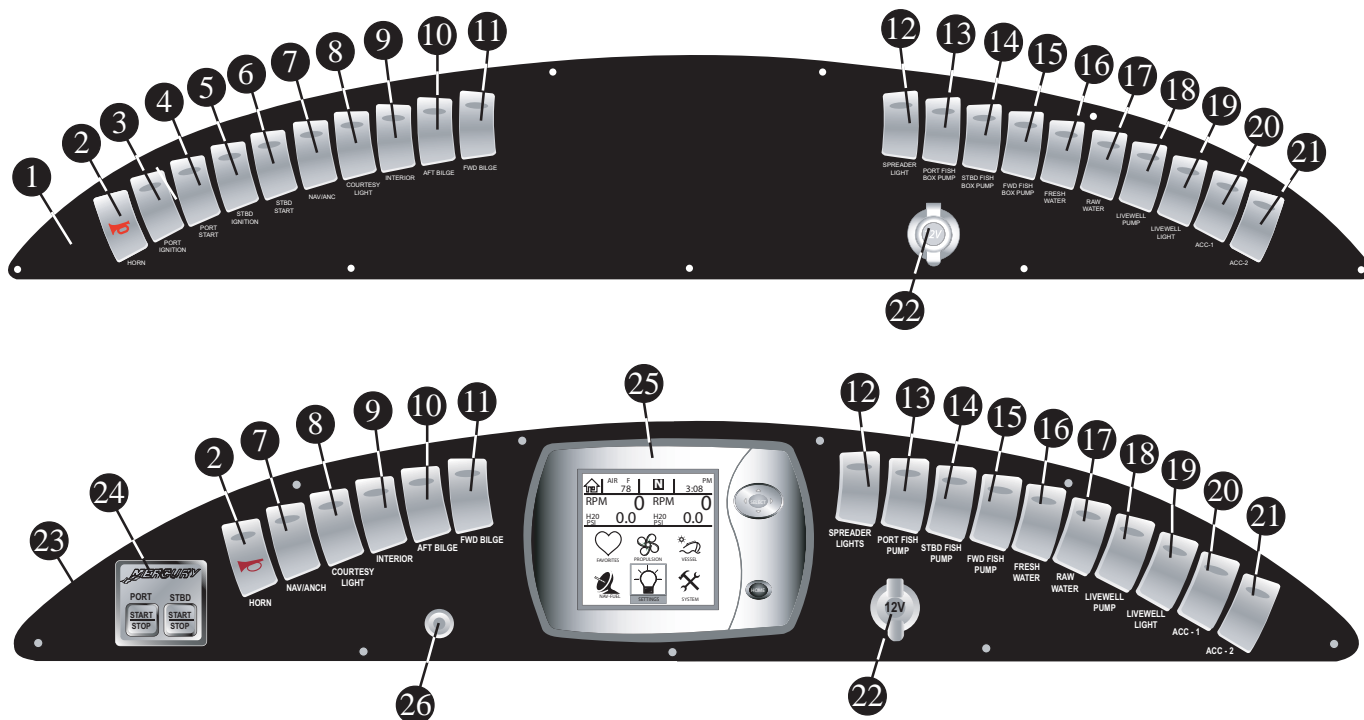
Waste System-Inland  
Waters Diagram



Waste System-Overboard  
Discharge Diagram



Anchor Windlass Wiring Diagram



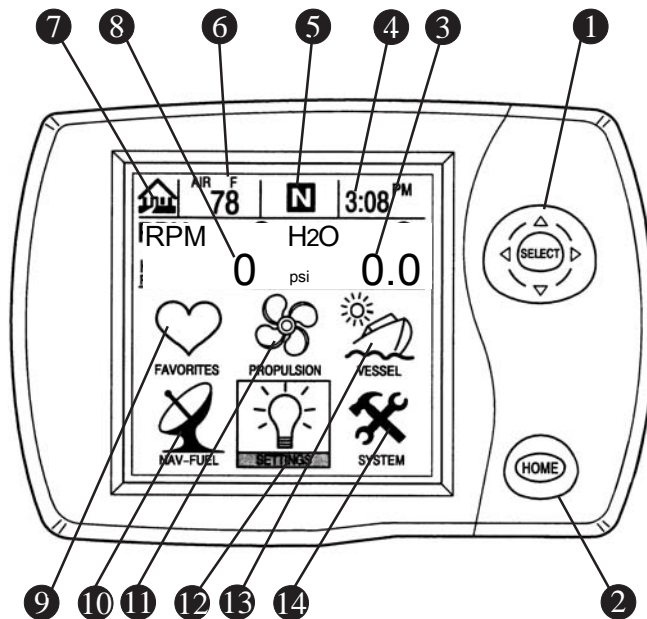
**320 Outrage, Instrument Panel Arrangement**

- 1 Instrument Panel, Blank
- 2 Horn
- 3 Port Ignition
- 4 Port Start
- 5 Starboard Ignition
- 6 Starboard Start
- 7 Nav/Anc
- 8 Courtesy Light
- 9 Interior Light
- 10 Aft Bilge Pump
- 11 Forward Bilge Pump
- 12 Spreader Light
- 13 Port Fishbox Pump-out

- 14 Starboard Fishbox Pump-out
- 15 Forward Fishbox Pump-out
- 16 Freshwater Pump
- 17 Raw Water Pump
- 18 Livewell Pump
- 19 Livewell Light
- 20 Acc-1 Switch
- 21 Acc-2 Switch
- 22 12V Accessory Plug
- 23 Instrument Panel, Standard
- 24 Engine Start/Stop
- 25 Smartcraft® System View Display
- 26 Air Temperature Sensor

## System View Monitor

- ➊ Arrow Trackpad/Select Key
- ➋ Home Key
- ➌ Water Pressure Indicator
- ➍ Clock
- ➎ Engine Gear Position
- ➏ Air Temperature Indicator
- ➐ Home Page Directory Symbol
- ➑ Engine RPM Indicator
- ➒ Favorites Directory
- ➓ Navigation/Fuel Directory
- ➔ Propulsion Directory
- ⚙ Settings Directory
- 🚤 Vessel Directory
- 🔧 System Directory



*Note-To get the most out of your System View, you must read the manual provided by the manufacturer. The manual will give you information to properly operate the various features of the system.*

## Ignition Shutdown Switch

### CAUTION

It is advised that you wear your lanyard at all times while operating the boat. It is for emergency stopping only. Do not use it to shut off the engine during normal operation. The lanyard should be long enough to prevent inadvertent activation.

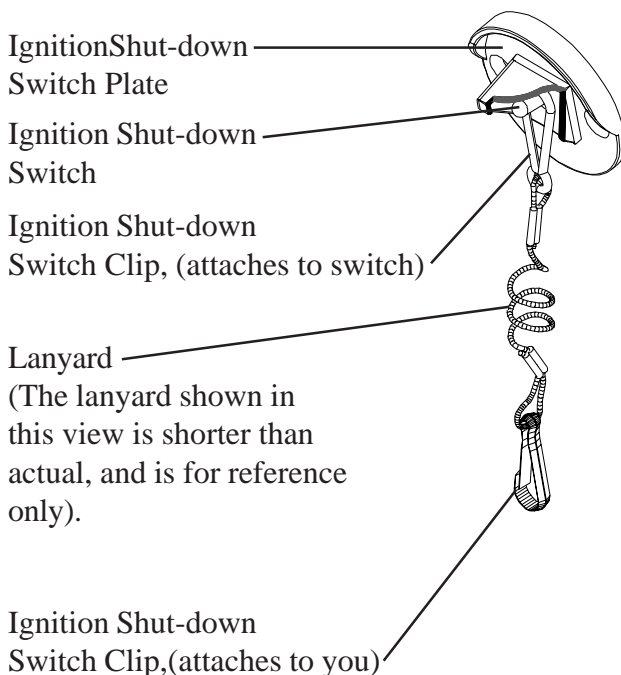
### NOTICE

The decision to use the safety switch is up to you, the owner/operator.

The 320 Outrage is equipped with an ignition shut-down safety switch. It is located on the lower center section of the console. The ignition shut down safety switch incorporates a shut-off switch, switch clip, lanyard and lanyard clip, which is clipped to the operator. If an emergency arises where the engine(s) must be shut down, a pull on the cord to release the clip from the shut-off will shut down the engine.

This switch is designed to shut the engine(s) off when the operator of the boat leaves the control station, either accidentally by falling into the boat, or by being ejected overboard. This would most likely occur as a result of poor operating practices.

**This switch only works when properly used. The decision of whether to use an ignition safety switch or not rests with you, the owner/operator.**



## Electric Downrigger Receptacles, (Optional)

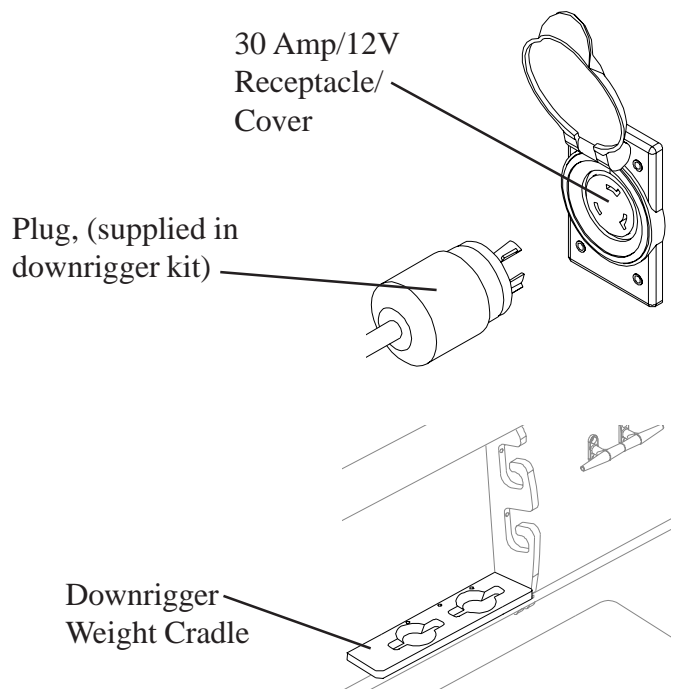
### CAUTION

The location for mounting of the downrigger base is important, refer to the wood location diagram for areas on the gunwales that are specifically designed for withstanding the stress generated by a downrigger. There are a variety of downrigger mounting base plates that can be used, it is important that you consult with your salesperson to find the mounting base that will best suit your application.

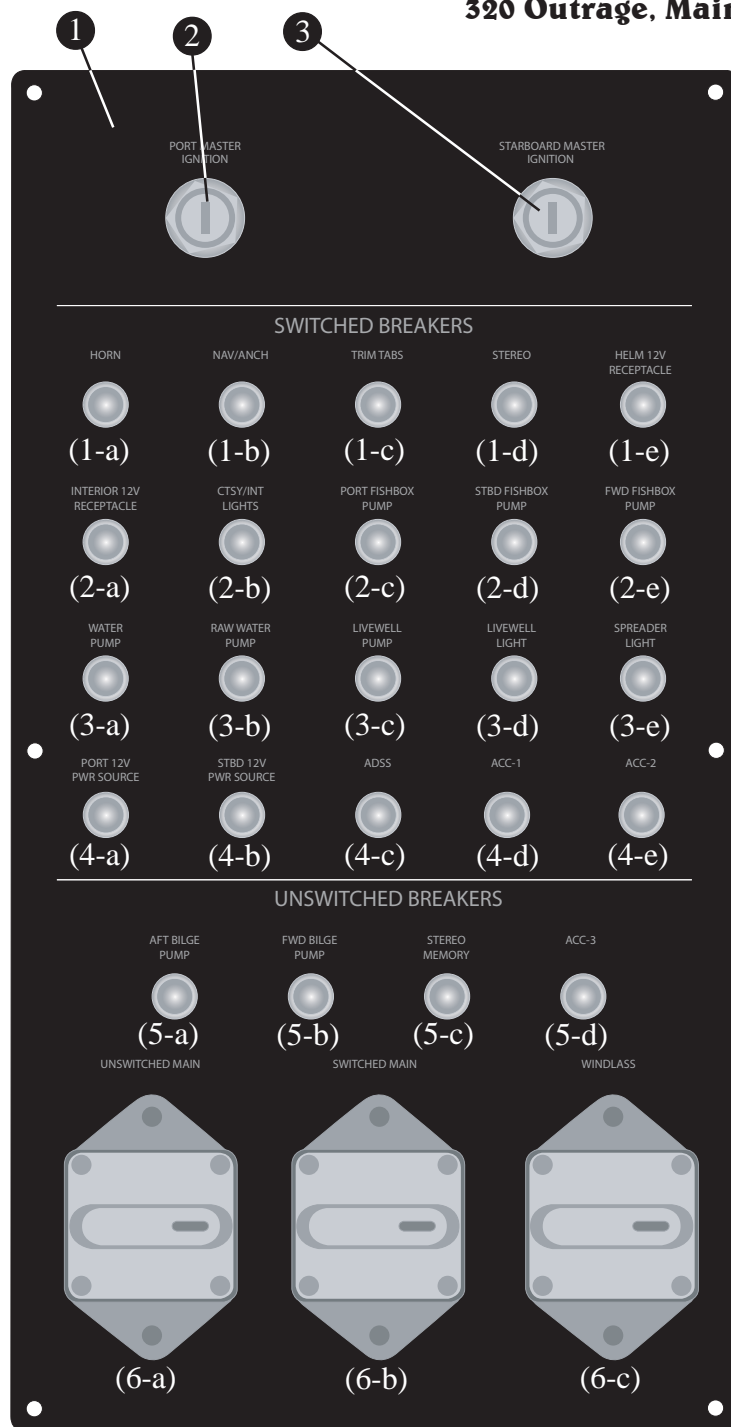
### NOTICE

There are storage cradles designed for holding the downrigger weights when not in use. Because of the variety of weights available these cradles are designed to hold the most common weights used.

The 320 Outrage can be fitted with two (2) electric receptacles for powering electric downriggers. The receptacles are located inside the cockpit on the aft section of the port and starboard gunwales and are rated to 30 Amps. Push the plug into the receptacle and turn clockwise to secure the connection. There is a "Port 12V Power" and Starboard 12V Power" breaker on the Main Distribution Panel(MDP) in the console interior. Should there be any interruption in power, check here first. The receptacles are protected by a weatherproof cover. There are areas on the gunwales that are designed specifically for downrigger mounting bases. See your "Wood Location Diagram" for proper mounting.



## 320 Outrage, Main Breaker Panel



- 1 Breaker Panel
- 2 Port master Ignition Switch
- 3 Starboard Master Ignition Switch
- 1a 5 Amp Breaker for Horn switch
- 1b 5 Amp Breaker for Nav/Anch Switch
- 1c 20 Amp Breaker for Trim Tabs Switch
- 1d 5 Amp Breaker for Stereo
- 1e 10 Amp Breaker for Helm 12V Receptacle
- 2a 10 Amp Breaker for Interior 12V Receptacle
- 2b 10 Amp Breaker for Courtesy Interior Lights
- 2c 20 Amp Breaker for Port Fishbox Pump
- 2d 20 Amp Breaker for Stbd Fishbox Pump
- 2e 20 Amp Breaker for Fwd Fishbox Pump
- 3a 15 Amp Breaker for Water Pump
- 3b 15 Amp Breaker for Raw Water Pump
- 3c 6 Amp Breaker for Livewell Pump
- 3d 5 Amp Breaker for Livewell Light
- 3e 10 Amp Breaker for Spreader Light
- 4a 30 Amp Breaker for Port 12V Power Source
- 4b 30 Amp Breaker for Stbd 12V Power Source
- 4c 30 Amp Breaker for ADSS
- 4d 10 Amp Breaker for Accessory-1 Switch
- 4e 10 Amp Breaker for Accessory-2 Switch
- 5a 15 Amp Breaker for Aft Bilge Pump
- 5b 6 Amp Breaker for Fwd Bilge Pump
- 5c 15 Amp Breaker for Stereo Memory
- 5d 10 Amp Breaker for Accessory-3 Switch
- 6a 50 Amp Unswitched Main Breaker
- 6b 100 Amp Switched Main Breaker
- 6c 120 Amp Windlass Breaker



## Engine Starting Procedure



### NOTICE

The gear shift/throttle control will not allow engine starting if the control levers are in any other position than NEUTRAL. Check the levers for neutral position before starting the engines.

The 320 Outrage is equipped with dual outboard engines for propulsion.

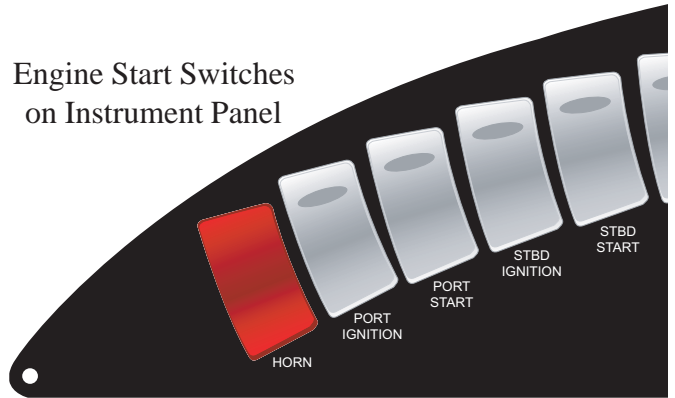
The 320 Outrage engines starting procedure is as follows:

- Make certain that the lower units of the engines are in the water.
- Insert the keys into Ignition switches, (located on the aft wall of the console cabin).
- Turn keys clockwise.

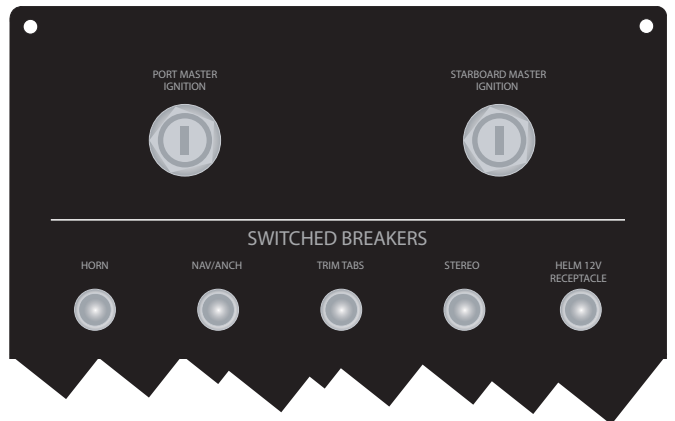
**Note:** *Turning the keyswitches on from this location will not start the engines.*

- There are switches on the helm instrument panel marked “Port Ignition” & “Starboard Ignition”. The upper section of the switches will need to be pushed forward.
- There is a momentary switch located to the right of the ignition switch marked “Start”. Pressing these switches will start the engine the switch has been designated for.
- Shutting down the engines requires just pushing lower portion of the “Port Ignition” & “Starboard Ignition” switches forward.

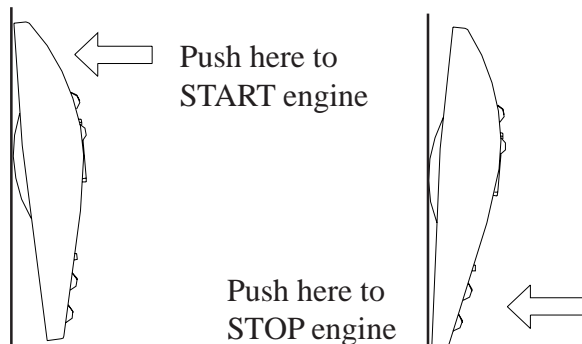
Engine Start Switches on Instrument Panel



Dual Engine Key Switch Panel



Profile view of the Port/Starboard Ignition button.



## Navigation Lighting



### NOTICE

The more lights a vessel has, the larger it is and the more important it is for you to avoid it.



### NOTICE

The navigation light located on the hard-top can be adjusted to lay down flat. Be sure that it is in the upright position when that light is in operation.

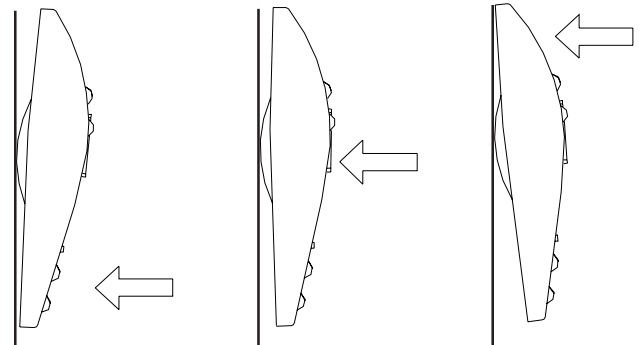
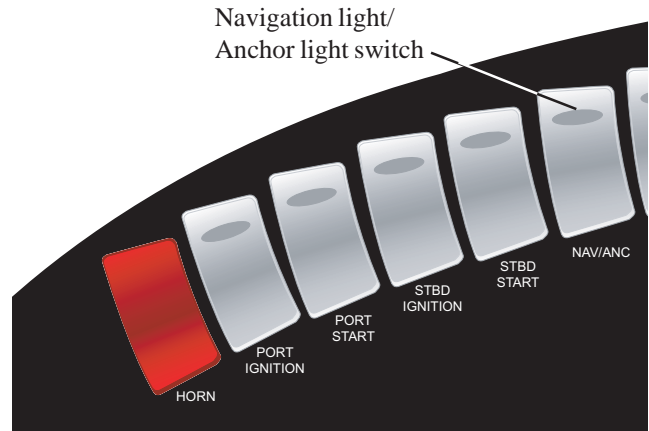


### NOTICE

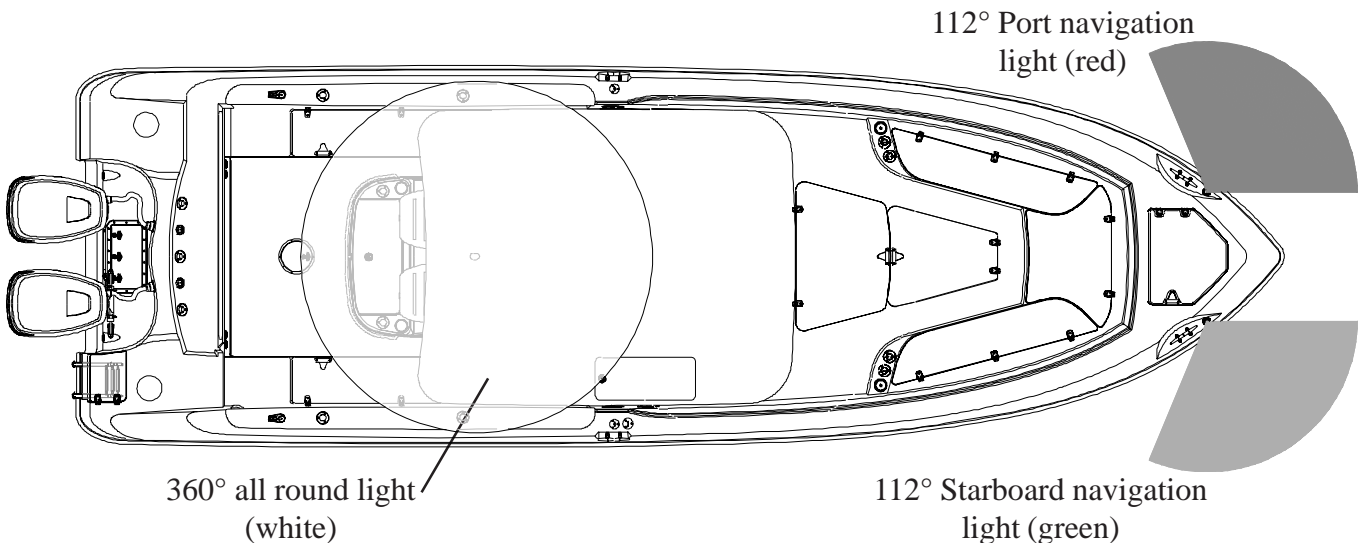
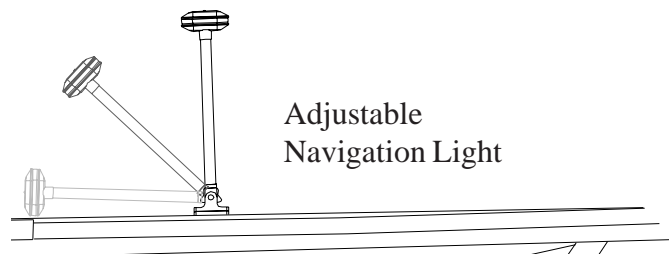
Installing after market accessories such as: radar domes, arches, dishes etc. will obstruct the navigation light and decrease its effectiveness. It is the responsibility of the boat owner to comply with regulations regarding the normal operation of the navigation lights.

Your 320 Outrage comes equipped with navigation lighting for your safety. Regulations state that all boats no matter the size must display navigation lights.

**OPERATION:** Control of the navigation lighting is a switch on the instrument panel that is marked "NAV/ANC". The switch has 3 positions to operate the Navigation/Anchor lighting. The lights let other vessels know the approximate size of your boat and the direction your boat is traveling, depending on which lights they can see, they also show other boaters your location while at anchor. The lights must be displayed at night or in low visibility conditions. It is the responsibility of the owner/operator to ensure that the navigation lights are in good working order and that the proper lighting is shown



"Off" "Anchor Lights" "Navigation Lights"





### CAUTION

To minimize shock hazard, follow these instructions:

- Turn off boat's shore connection switch before connecting the Power cord corset.
- Connect the cordset to the boat inlet first, then to the shore outlet. Close boat inlet cover tightly to prevent water intrusion.
- **NEVER** alter the powercord cordset connectors.

### SHORE POWER:

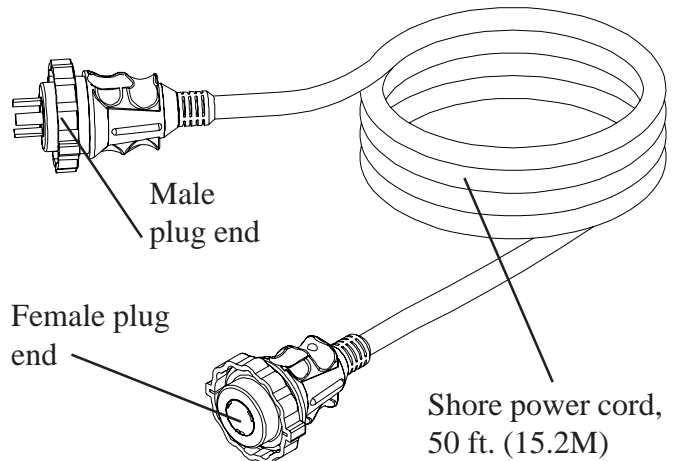
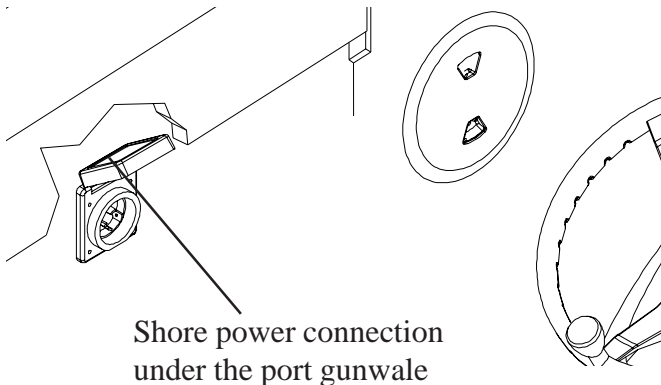
The shore power system is rated to 120V/30 Amps. Ship to shore power gives you energy to run all your boat's electrical systems and charges your batteries. Connection to shore power is made by means of a 50 ft. weather-tight electrical plug that secures to a screw-on electrical outlet. The shore power outlet is located below the portside gunwale board, forward of the under gunwale rodholders. Once the power cords are connected they are held in place by an outer ring that secures both connectors in place and provides a watertight connection. There is an electrical panel located next to the battery switches on the aft console bulkhead that shows the status of the shore power system.

The indicator panel shows:

- Power status
- Reverse polarity

### OPERATION:

Make certain the boat is properly moored before making shore power connection. Connect the female end of the plug to the boat first, then the dockside male connection, check the panel for reverse polarity before switching the shore power main/battery charger switch to the "ON" position. The battery charger is energized and will charge the batteries automatically when the shore power main/battery charger switch is activated.



Shore Power Panel



### BATTERY CHARGER:

With the battery charger you will have the ability to charge your batteries (without engines running) while connected to shore power ONLY. The system is automatic and little or no maintenance is required. The battery charger is located in the console cabin and can be reached through the starboard storage access. The batteries can be charged regardless of the battery switch settings. Read all applicable information regarding the battery charger systems operation and maintenance.

## Freshwater System



### NOTICE

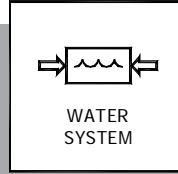
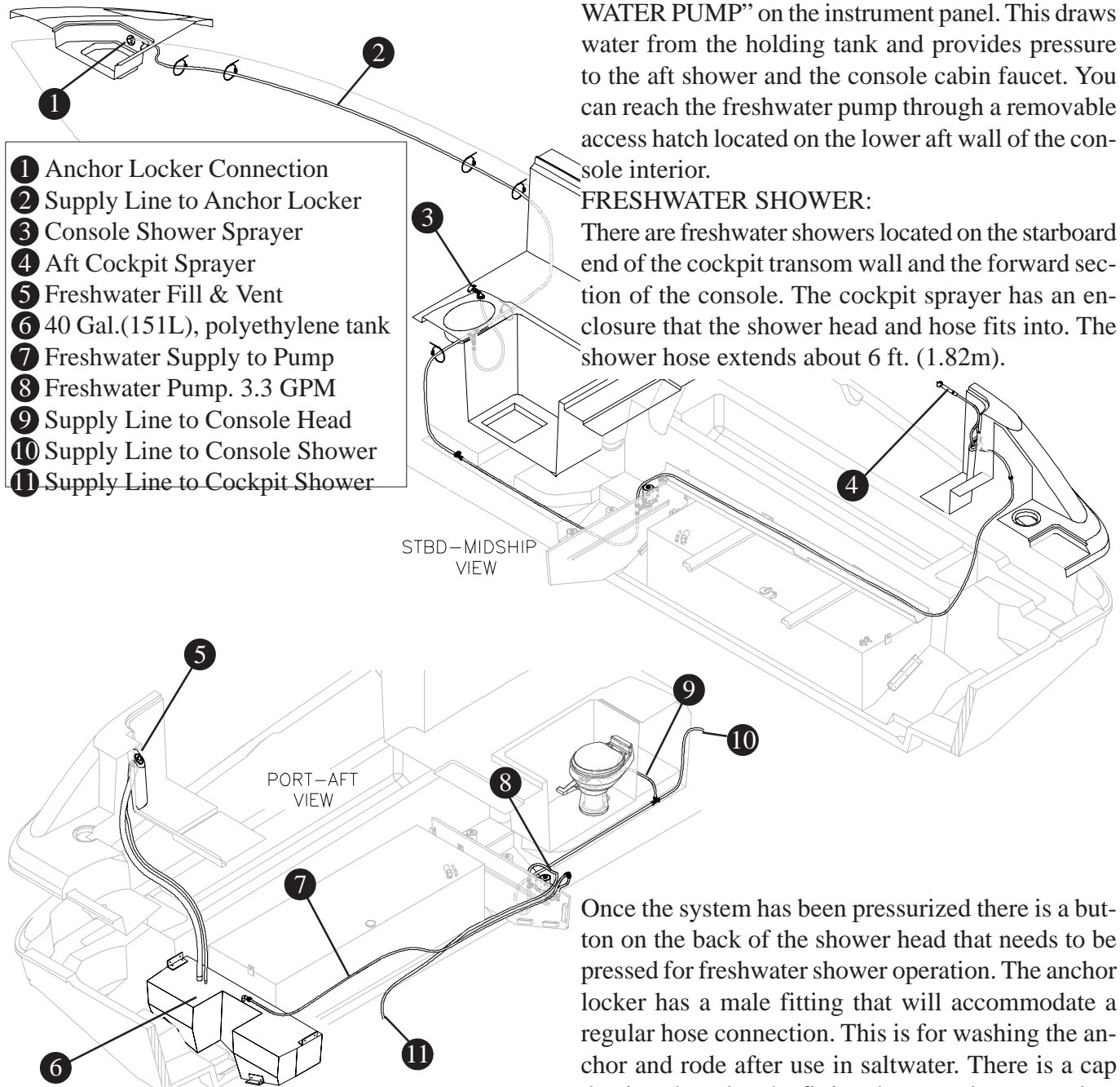
Be sure to fill the water tank from a source known to provide safe, pure drinking water.



### NOTICE

If you do not use the freshwater system for long periods of time, or only use it seasonally. It is recommended that you follow the disinfecting practice before using it.

### Freshwater System Diagram



Your 320 Outrage is fitted with a 40 Gal. (151L) freshwater tank. The freshwater system includes: Pump, plumbing, holding tank and connections for water service to the aft cockpit shower, console and anchor locker.

#### FRESHWATER PUMP:

The freshwater pump will need to be activated to provide pressure to the system. The freshwater pump is operated by pressing the switch marked "FRESHWATER PUMP" on the instrument panel. This draws water from the holding tank and provides pressure to the aft shower and the console cabin faucet. You can reach the freshwater pump through a removable access hatch located on the lower aft wall of the console interior.

#### FRESHWATER SHOWER:

There are freshwater showers located on the starboard end of the cockpit transom wall and the forward section of the console. The cockpit sprayer has an enclosure that the shower head and hose fits into. The shower hose extends about 6 ft. (1.82m).

Once the system has been pressurized there is a button on the back of the shower head that needs to be pressed for freshwater shower operation. The anchor locker has a male fitting that will accommodate a regular hose connection. This is for washing the anchor and rode after use in saltwater. There is a cap that is tethered to the fitting that must be screwed on the connection when it is not in use.

### MAINTENANCE:

Very little maintenance is required for the freshwater system, other than annual disinfecting and winterizing. Periodically check the entire system to assure that the hose connections, tube fittings, electrical connections and mounting bolts are properly secured, and free of chafing

### DISINFECTING THE SYSTEM:

Before you fill the freshwater system it is vital that it be properly disinfected. The following procedure is recommended to disinfect the freshwater system:

- Flush the entire system thoroughly by allowing potable water to flow through it.
- Drain the system completely.
- Fill the entire system with an approved disinfecting solution (check with your dealer for recommendations).
- After disinfecting, drain the entire system.
- Flush the entire system thoroughly several more times with potable water.
- Now the system is ready for use, fill with potable water.

Ask your dealer if this has been done and what procedures are needed to accomplish this. This should be done annually or before using the system if it has been laid up for an extended amount of time.

### WINTERIZING THE SYSTEM:

If the water system will not be used for an extended amount of time it is recommended that it be drained. Draining the freshwater system will require you energize the freshwater pump switch on the instrument panel, press the button on the freshwater shower head and empty the freshwater tank. Next disconnect the hoses to and from the water pump to allow as much water as possible to drain out. De-energize the freshwater pump switch. Some service facilities may recommend filling the freshwater system with a non-toxic, non-freezing solution. This procedure should be completed by an authorized service center.

## Raw Water



### NOTICE

The seacock **MUST** be in the OPEN position. Running the pump dry may cause damage to the unit.

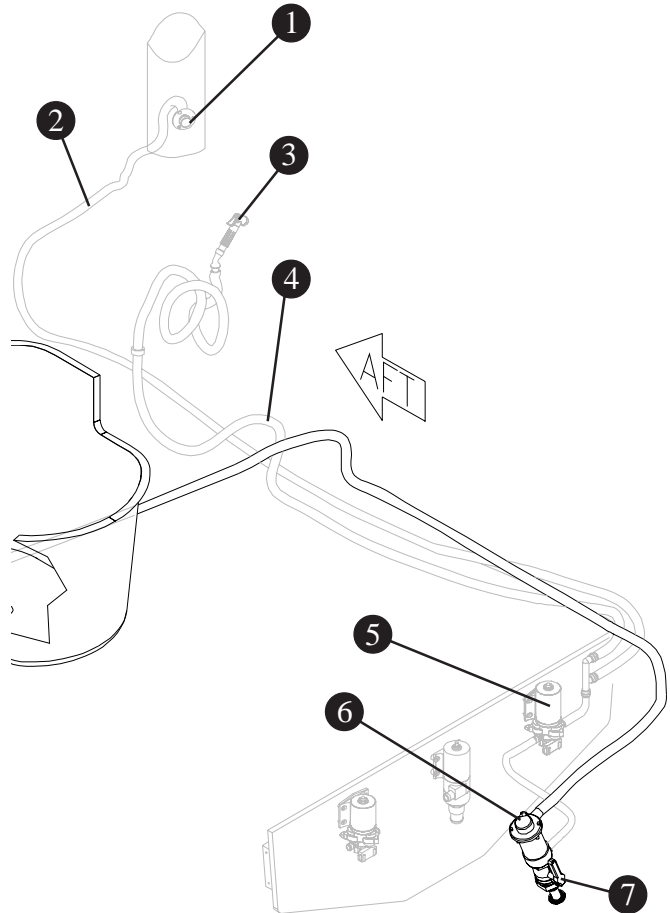
The Raw water system includes the pump, seacock and connections that will service the livewell and raw water connection port. The raw water connection is located on the forward section of the port gunwale below the freshwater fill. The connection is supplied by a 3.5 GPM pump. The fitting allows for connection of a common garden hose. There is a cap that is tethered to the fitting and must be screwed onto the connection when it is not in use.

#### OPERATION:

The raw water pump has a seacock that needs to be set in the OPEN position. The seacock can be accessed through the lower aft wall inside the console. The RAW WATER switch on the instrument panel controls pump operation.

#### MAINTENANCE:

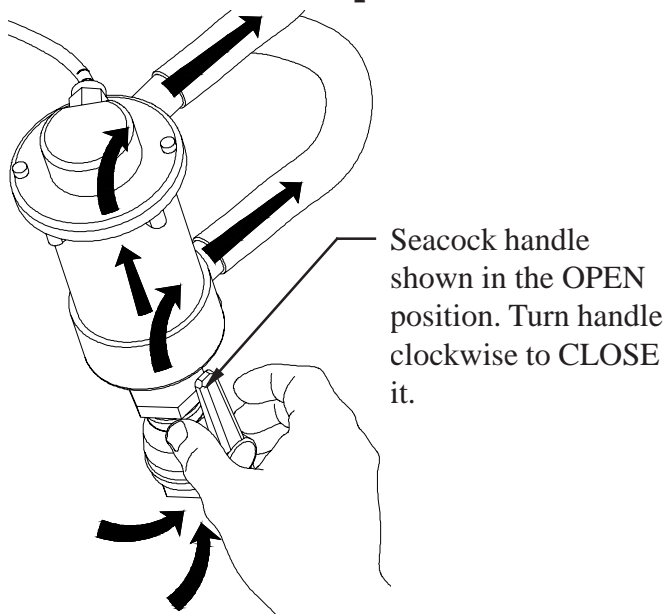
Maintenance of the raw water system will require you to check the fittings and hoses for system integrity to prevent leaks. The system should be run at least every other month to keep the pumps impellers in good condition. The Livewell and raw-water washdown fitting is fed by the same pump. Access to the pump is through the aft access door in the console. **The seacock for the pump must be in the OPEN position before using.**



**Raw Water System Diagram**

- ① Raw water deck fitting, (aft port)
- ② Supply line from pump
- ③ Prep Station Sink Sprayer
- ④ Prep Station Supply Line
- ⑤ 3.5 GPM Raw water pump
- ⑥ 1100 GPH Raw-water/Livewell pump
- ⑦ Seacock

### Seacock Operation





## Head System

### CAUTION

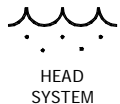
The discharge seacock should always be in the closed position when the toilet is not in use. Failure to do so could result in flooding, property damage and loss of life.

### NOTICE

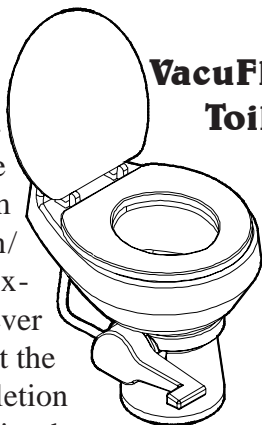
This boat is equipped with a direct discharge valve. Discharging of sewage directly overboard is for use where approved only. Damage to the system could occur if the discharge seacock is not open during operation.

### NOTICE

There are severe state and federal penalties for discharging raw sewage and solid waste in waters where it is not permitted. Check with local authorities on where this is permissible, if possible employ the use of a shore side discharge.



Your 320 Outrage has a head compartment located in the console. It is fitted with a VacuFlush® waste containment system that includes: The VacuFlush® toilet, vent, holding tank- (6.5 Gal.25L), vacuum pump and associated hoses and clamps. Complete operating and maintenance instructions can be found in the VacuFlush® operations manual. Note: Prior to using either method of discharging sewage; de-energize the vacuum pump by depressing the push button/switch on the waste panel. The stem of the push button/switch should be extended. Depress the lever on the toilet to deplete the vacuum. After completion of the discharge, energize the vacuum pump by depressing the push button/switch a second time.

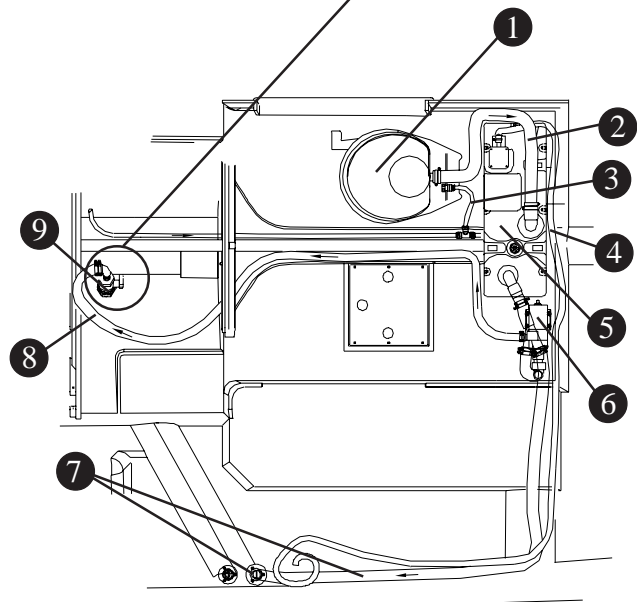
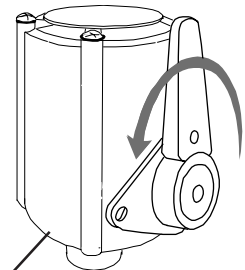


**VacuFlush® Toilet**

### DOCK-SIDE DISCHARGE:

The Dock-side discharge deck plate for the 320 Outrage is located on the starboard side of the gunwale and is marked "WASTE". Access to the port is gained by use of a special key that is included in the owners manual packet. The dockside facility will have a connection to fit your boat. **Shore side discharge is a preferred method of waste disposal.**

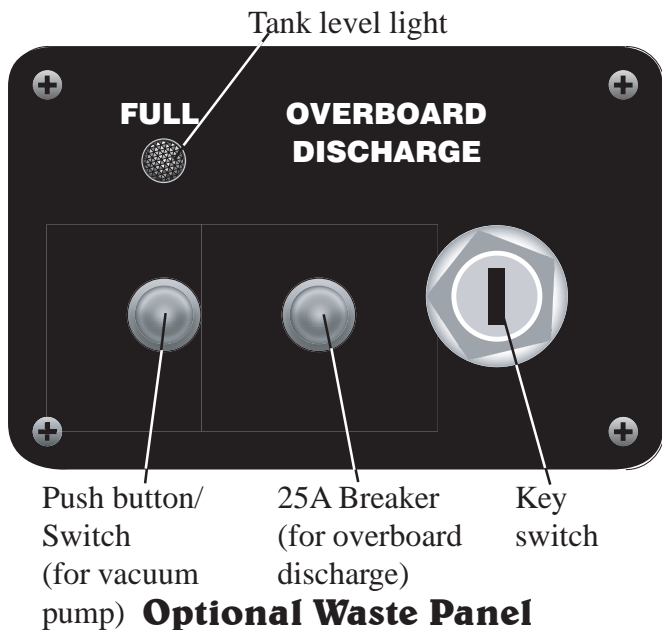
Overboard discharge seacock, (Shown in the OPEN position. Turn handle counter-clockwise to CLOSE). Lock with padlock (not supplied).



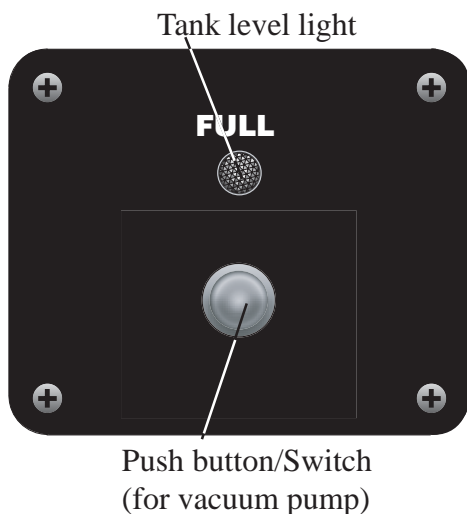
**Waste System Diagram**

- 1 VacuFlush® Toilet
- 2 Waste Discharge Hose to Holding Tank
- 3 Freshwater Supply Line from Tank
- 4 Vent from Holding Tank
- 5 VacuFlush® Holding Tank
- 6 Macerator
- 7 Shoreside Discharge Hose & Deck Fitting
- 8 Discharge Line from Macerator
- 9 Lockable Discharge Seacock

### Standard Waste Panel



### Optional Waste Panel



### MACERATOR

The 320 Outrage waste system also incorporates the use of a macerator. The macerator pump draws solid and liquid waste from the holding tank of the unit and processes it prior to discharging it overboard through a lockable seacock. The pump is designed to handle waste, toilet tissue and facial tissue and will not pump solid objects. **There are bodies of water where discharge of raw sewage is prohibited. Keep seacock lock engaged when in waters where discharge is not permitted.** The dockside facility will have a connection to fit your boat. It is important that you close your macerator discharge seacock on the 320 Outrage prior to using the

shoreside discharge function.

Contact your dealer or Coast Guard station for information on overboard discharge and its penalties.

### MACERATOR OPERATION:

The macerator key switch panel is located on the lower section of the electrical panel. The key switch controls the macerator pump. The overboard discharge seacock must be in the OPEN position prior to operation. The key must be turned and held for the macerator to operate properly.

### MAINTENANCE:

After long periods of non-use, the macerator pump may not turn freely. Regular use of the system will reduce the chances of this occurring. If the system does require maintenance contact your nearest dealer for more information. Because your waste system is a low water use device, there is special paper that must be used to prevent clogs. The manufacturer has provided information regarding the type of paper that must be used. **NEVER** use residential tissue paper in your marine waste system.

### ENVIRONMENTAL CONSIDERATIONS:

The Environmental Protection Agency (EPA) standards state that in freshwater lakes, reservoirs, impoundments whose inlets or outlets are such as to prevent the ingress or egress by vessel traffic subject to this regulation, or in rivers not capable of navigation by interstate traffic subject to this regulation. Marine sanitation certified by the United States Coast Guard (U.S.C.G.) installed on vessels shall be designed and operated to prevent the overboard discharge of sewage, treated or untreated or any other waste derived from sewage. The EPA standards further state that this shall not be construed to prohibit the carriage of Coast Guard certified flow through treatment devices which have been secured so as to prevent such discharges. They also state that the waters where a Coast Guard certified marine sanitation device permitting discharge is allowed include: Coastal waters, Estuaries, The Great Lakes and Intercoastal waterways, Freshwater lakes and Impoundments accessible through locks and other flowing waters that are navigable interstate by vessels subject to this regulation. (40CFR 140.3)

# Bilge Pump



## NOTICE

The bilge pump is wired directly to the battery. Be sure that the bilge pump float switch is clear of debris to prevent continuous operation and subsequent discharge of the battery.



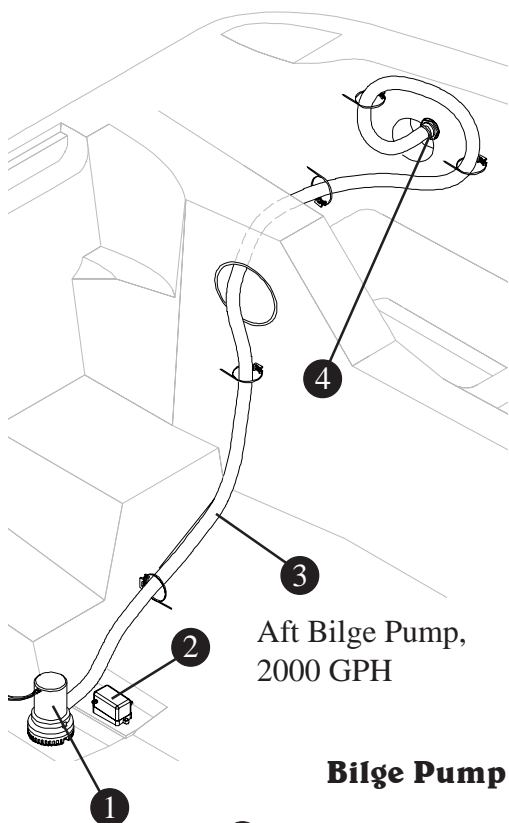
The 320 Outrage bilge pump system consists of: (1)-1100 GPH pump and (1)-2000 GPH bilge pump that are each operated by a float switch that will activate automatically when water in the bilge reaches a certain level. The 1100 GPH pump is located forward of the fuel tank and can be accessed through the console interior. The 2000 GPH pump is located aft of the freshwater tank and can be accessed through the motorwell hatch.

## OPERATION:

There is a switch marked "AFT BILGE" and "FWD BILGE" on the switch panel. Depressing the switch will energize the pump regardless of the position of the float switch. Each pump discharges water overboard via a thru-hull fitting.

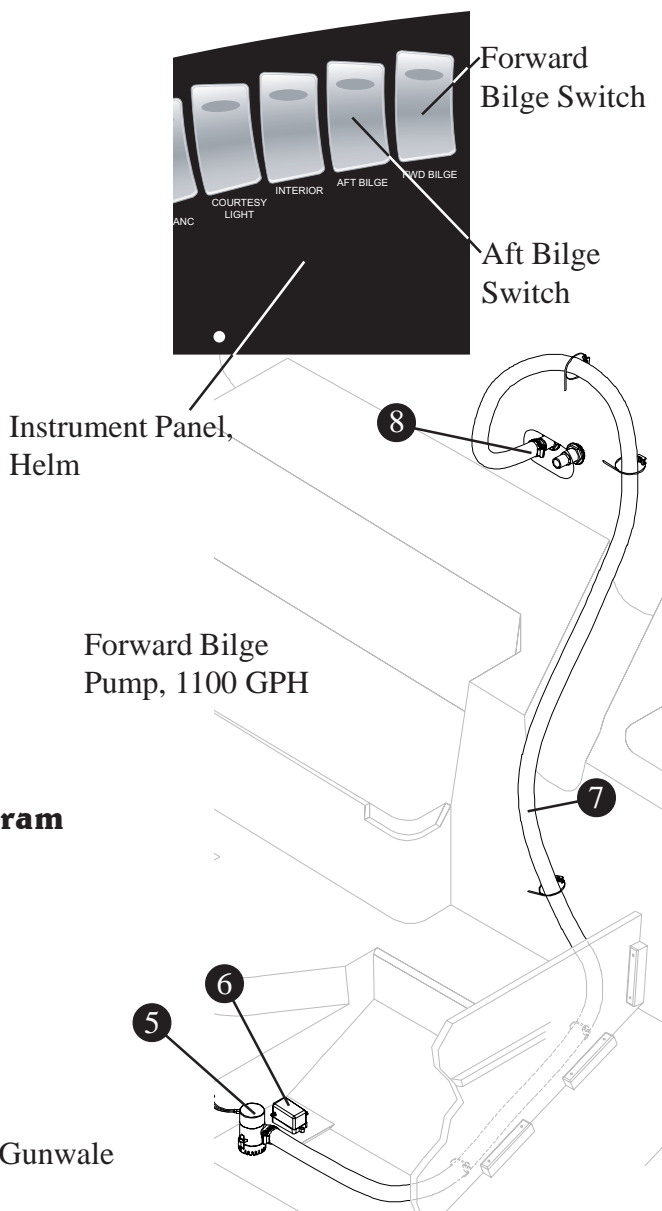
## MAINTENANCE:

The bilge pump is a completely sealed unit and maintenance is very simple, but it will require you to check around the float switch for debris and gummy bilge oil that could impede the bilge pump from working properly. Check the bilge pump and hoses for wear; clean and repair if necessary.



**Bilge Pump System Diagram**

- 1 2000 GPH Bilge Pump, Aft
- 2 Float Switch, Aft
- 3 Bilge Pump Hose, Aft
- 4 Bilge Pump Thru-Hull, Aft
- 5 1100 GPH Bilge Pump, Forward
- 6 Float Switch, Forward
- 7 Bilge Pump Hose, Forward
- 8 Bilge Pump Thru-Hull, Starboard Gunwale



## Livewell



### NOTICE

The livewell seacock located behind the lower doors in the aft section of the console interior, must be in the OPEN position before using the livewell. Damage to the pump could occur if it is closed when operating.



The 320 Outrage is equipped with an 45 Gal. (170L) livewell bucket that is located aft of the helm pilot seat. The livewell system's primary function is to keep baitfish alive by circulating seawater into the livewell bucket. The raw water pump, seacocks and plumbing that service the system can be reached through the access doors located on the aft wall inside the console. Fittings connected to the livewell bucket and the livewell flow control valve can be reached through an access panel located on the starboard side of the prep station base.

#### OPERATION:

The livewell can be filled by using the switch marked "LIVEWELL" on the instrument panel. Before filling the livewell, you must make certain the hull seacock and the livewell flow control valve are in the open position. The livewell also has a pair of drain plugs that are used to adjust the amount of water that stays in the livewell. There is a plug that will drain the entire livewell located in the base of the livewell, the other plug can be used between the two overflow fittings on the starboard side of the livewell, they can be used to adjust the level of water in the livewell.

#### Flow Control Valve:

The flow control valve does exactly that, it allows you to control the flow of water into the tank. access to the flow control valve is from the twist out plate on the starboard side of the prep station base.

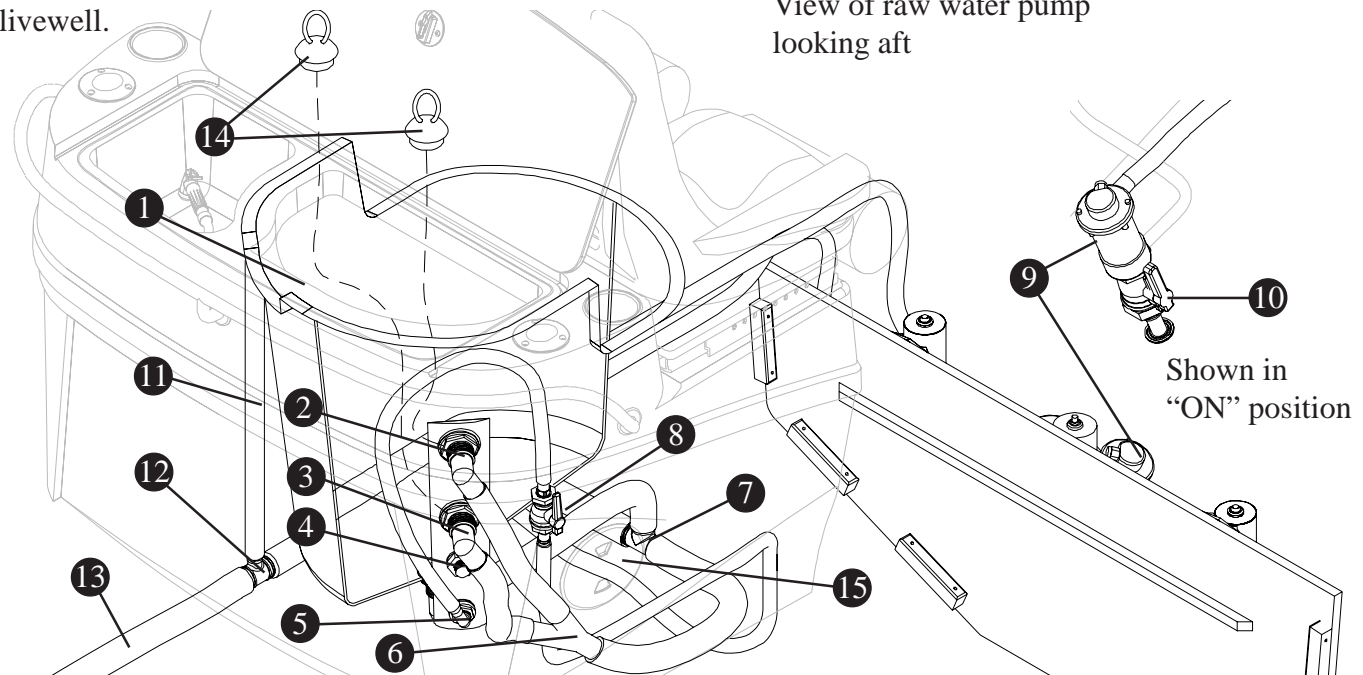
#### MAINTENANCE:

Maintenance of the livewell system will require periodic inspection of the raw water intake strainer, (when boat is in drydock). All connections from the hull to the livewell need to be checked for tightness.

#### Standard Livewell System Diagram

- ① Livewell, 45 gal. (170.3L)
- ② Livewell Bucket Upper Overflow
- ③ Livewell Bucket Lower Overflow
- ④ Livewell Light
- ⑤ Livewell Fill
- ⑥ 1.5 inch, "Y" Coupling
- ⑦ 1.5 inch, "T" Coupling
- ⑧ Flow Control Valve
- ⑨ 12V/1100 GPH Raw Water Pump
- ⑩ Raw Water Pump Seacock
- ⑪ Sink Drain Hose
- ⑫ 1 inch to 1.5 inch "T" Coupling
- ⑬ To Drain Fitting on Transom
- ⑭ Livewell Tank Drain Plugs, (There are two plugs to control the level of water in the livewell).
- ⑮ Twist-out access plate to flow control valve

View of raw water pump looking aft



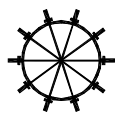


## Hydraulic Steering Information (Optional)



### CAUTION

Continuous kinking, chafing, rubbing and twisting may eventually weaken hose(s) to a point of rupture during normal steering operation. Visually inspect all hoses and fittings for wear and/or damage.



Your 320 Outrage may be equipped with a teleflex, hydraulic steering system. The hydraulic steering system consists of:

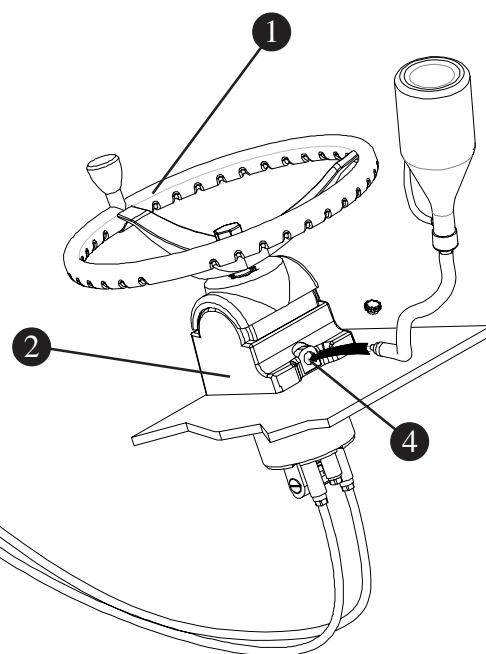
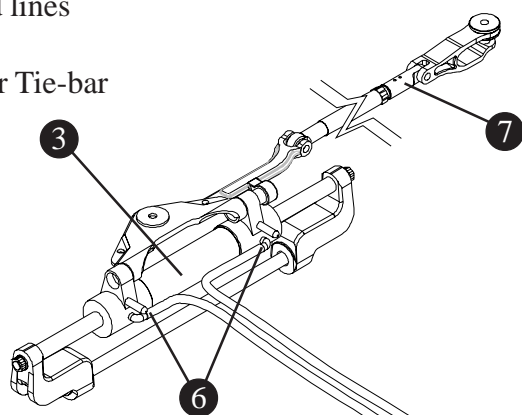
- Steering wheel and helm pump unit
- Engine hydraulic cylinder
- Hydraulic hoses and fittings

For your convenience there is a lever at the base of the steering wheel that can be pushed to adjust the tilt angle of the steering wheel.

### OPERATION:

When turning the steering wheel either clockwise or counterclockwise, the helm pump forces hydraulic fluid through hoses to and from the engine cylinder which is connected to the tiller arm. The engine cylinder moves the tiller arm to port and starboard.

- 1 Steering wheel
- 2 Helm pump
- 3 Engine mounted steering cylinder
- 4 Hydraulic pump fluid fill
- 5 Hydraulic fluid lines
- 6 Bleeder valves
- 7 Single Cylinder Tie-bar



This view is not to scale, and is meant to reference the various parts that make up the steering system. See your owner's manual packet for more information regarding the steering system.

### MAINTENANCE:

Proper maintenance of this system will ensure worry-free usage for the life of your boat. Steering system integrity is imperative when engaging in recreational water activities. Special care and attention must be taken to ensure proper performance of the steering system and should include the following:

- After the first few hours of operation and at regular intervals, check all fasteners and the complete steering system for security and integrity.
- Check all moving parts to be sure they are free of salt build-up and other foreign material.
- Inspect for corrosion. Any part affected by corrosion must be replaced.
- When replacing parts, self locking hardware must be used.
- Check the fluid level in the helm pump unit.
- Lubricate slides on the engine cylinders.

All steering systems whether mechanical or hydraulic require regular inspections, periodic adjustment and occasional replacement may be necessary.

Your owners manual kit has a fill tube that can be used to replenish the hydraulic oil for the hydraulic steering system. Read the manual for complete information..



## Power Steering Information

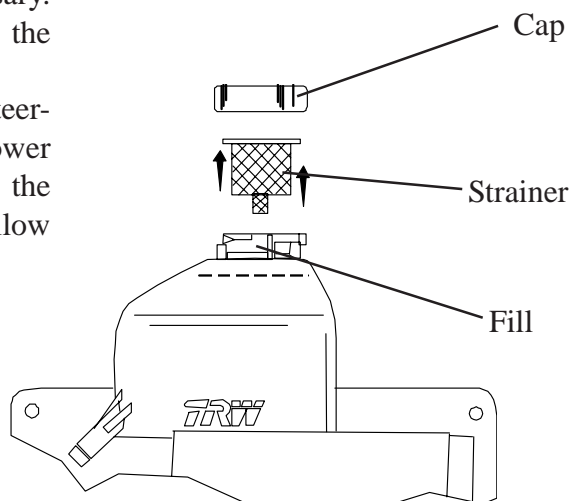
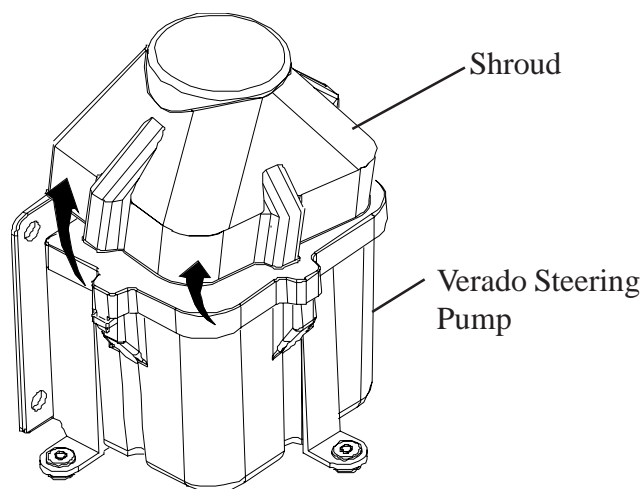
The Verado four-stroke engine uses an enclosed hydraulic pump unit. **The pump is electrically operated to provide hydraulic pressure to the steering system pump.** The pump is located in the aft bilge which can be accessed through the hatch in the bottom of the motorwell.

### FILLING AND MAINTENANCE

The system is virtually maintenance free, aside from regular fluid checks and visually inspecting the outside of the unit for signs of leaks or damage.

Remove the shroud and unscrew the cap to check the fluid level in the reservoir. There is a filter insert that needs to be checked and cleared if necessary. Fill as necessary. Make it a habit of checking the fluid level before each trip.

Use ONLY SAE 0W-30 Full Synthetic Power Steering Fluid when refilling the reservoir. The power steering pump's owner's manual will have all the information regarding care and maintenance. Follow all recommendations carefully.



## Gear Shift & Throttle Control



### CAUTION

Shift controls into NEUTRAL before starting engine. Shift only when engine is at idle. Reversing at high speeds can cause a flooding/swamping due to water being pushed over the transom.



### NOTICE

Your gear shift/throttle control unit is equipped with a Neutral Start Safety Switch. The engine(s) will not start while in a forward or reverse gear. Bring the gear shift/throttle control handle(s) back to neutral before starting the engine(s).



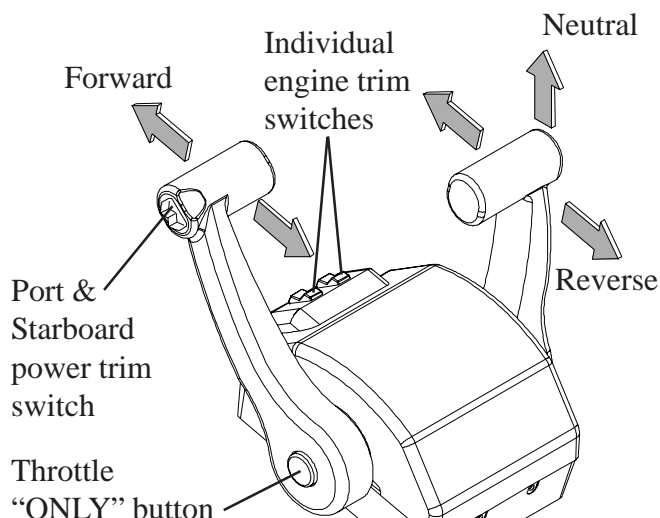
### NOTICE

Wind and sea currents can change how your boat responds while in motion. Understanding your boat and its reactions at speed will make boating for you safer and more enjoyable.



DUAL LEVER  
CONTROL  
(THROTTLE & SHIFT)

The 320 Outrage is equipped with a dual gear shift/throttle control unit mounted directly starboard of the steering wheel. The dual gear shift/throttle control unit activates both shifting mechanism and throttle. The control must be in the “NEUTRAL” position to start your engine. Neutral is the most upright position of the control unit and acts as an idle. There is a “THROTTLE ONLY” button at the center of the throttle control that when depressed will disengage the shifting mechanism and will allow you to operate the throttle without engaging the propeller. This button will automatically engage the shifting mechanism once the throttle control has been moved back to its center position (you will hear and feel a click when it is engaged). Moving the lever forward engages the forward gear and then the throttle advance. To reverse power, bring the control lever back to engage the reverse gear and increase the reverse thrust. The throttle control regulates the RPM of the engine. Regulating the RPM of the engine will control the speed of the boat. Pulling back on the gear shift/throttle control while moving at a high speed will cause a sudden slowing of the boat and will create a following wake which may rise above the transom and flood the boat.



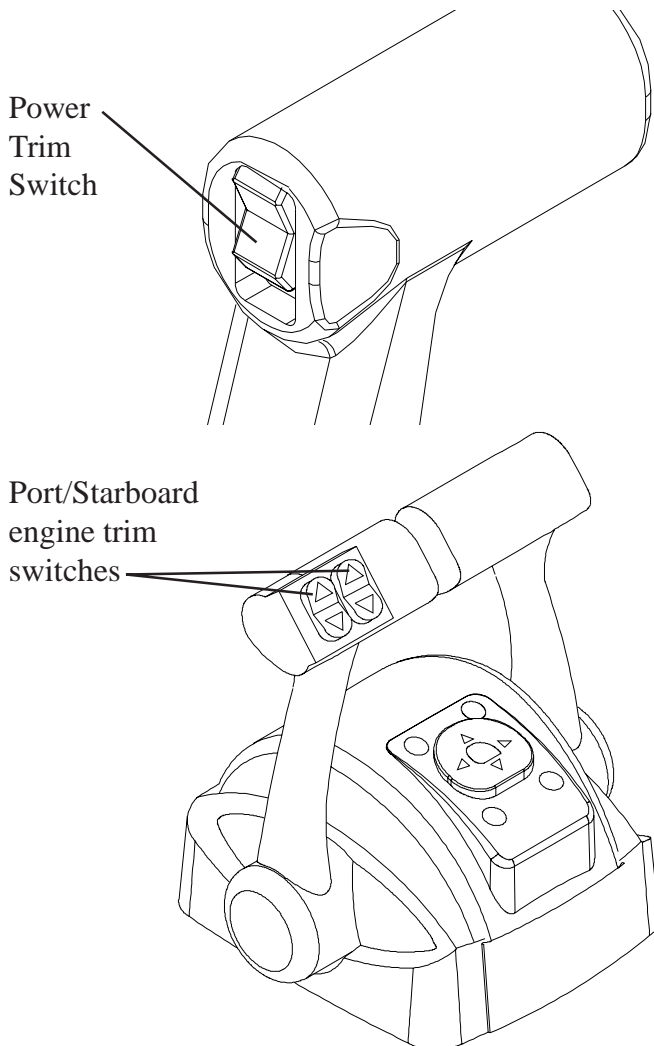
### Digital Throttle/Shift (DTS)®

Your 320 Outrage has the option of using a state of the art “drive-by-wire” gear shift and throttle control system. The Digital Throttle/Shift (DTS)® is the latest technology in recreational boating. There is a separate user’s manual that will detail the various systems that can be controlled by the DTS®. Read and follow all instructions regarding the proper use of the DTS® system. The DTS® system can be monitored through the use of the SC5000 display. The SC 5000 will give you a visual readout of all functions regarding your boats engine(s), direction, and applicable fluid capacities.

## Power Trim Operation

The power trim & tilt system allows you to raise and lower the engine(s) outdrive for trailering, launching and beaching. The switch is a momentary switch; which means that constant pressure must be applied to the switch during the raising and lowering cycle. This also allows for ideal boat angle (in relation to the water surface) for a given load and water condition. In most cases, best all-round performance is obtained with the engine adjusted so that the boat will run at a 3° to 5° angle to the water. The power trim is located on the gear shift/throttle lever.

**Boats can be operated in a manner and speeds resulting in trim angles that cause visibility to be obscured. Motor trim, hull trim plane and speed are factors that affect a boat's trim angle.**



This view represents the DTS® for a dual engine set-up. The single engine DTS® set-up has a single portside arm.

## Helm Seat Track Maintenance

The helm seats on the 320 Outrage are independently adjustable for your comfort. There is a handle on the front of the seat track that when pulled will allow the seats to be pulled forward, there are hole stops in the track that will lock the seat in place.

The track has a maximum forward slide range of 6 inches, (15cm).

### CARE & MAINTENANCE

The track system will need occasional maintenance to remain in proper working condition. Sea salt, grit and dirt will build-up and interfere with the slide mechanism. Rinsing with fresh water after each use will eliminate most salt and dirt residue. Make sure to pull the slide to its most forward position and rinse thoroughly. Check the slide every 4 months, depending on usage. If necessary, lubricate the slide and handle with a marine grade grease for longevity and continued smooth operation.

## Propeller Information



### DANGER

Disconnect power by moving the battery switch to the "OFF" position prior to removing the propeller.



### NOTICE

It is advised that you always carry a spare propeller, propeller hardware and propeller wrench on board. Should your propeller become damaged it can be easily replaced.



### NOTICE

Under no circumstance use a propeller which allows the engine to operate at a higher than recommended RPM.

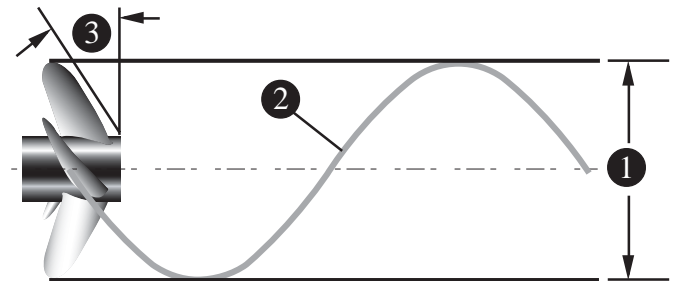


PROPELLER

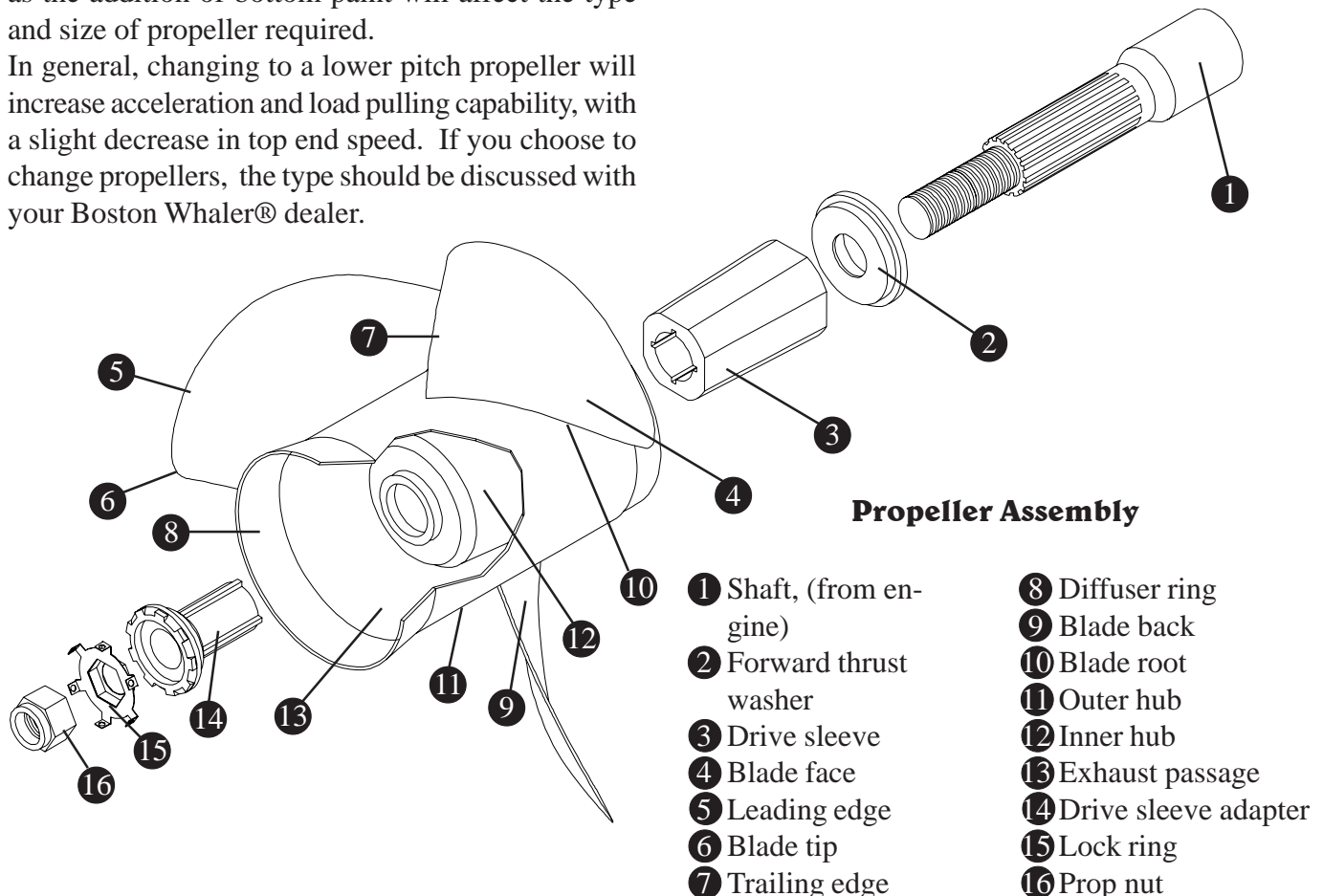
The engine(s) on the 320 Outrage have been equipped with propellers which our tests have shown to be best suited for general use under normal conditions and load. In some situations you may wish to change the propellers to give your boat slightly different performance characteristics. Changing your boat's running surface, such as the addition of bottom paint will affect the type and size of propeller required.

In general, changing to a lower pitch propeller will increase acceleration and load pulling capability, with a slight decrease in top end speed. If you choose to change propellers, the type should be discussed with your Boston Whaler® dealer.

All propellers are designed to provide maximum forward thrust, so the reverse thrust of the propeller will not be as efficient. The 320 Outrage uses propellers that are designed to counter-rotate, which means that the port engine's propeller rotates the opposite direction of the starboard engine. This will balance the torque effects of the engine's and along with the hydraulic steering will reduce driver fatigue by eliminating the constant need to fight the wheel.



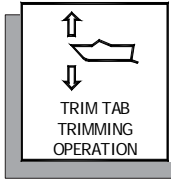
- ① Propeller Diameter
- ② 1 Revolution, (Pitch)
- ③ Propeller Rake



**Propeller Assembly**

- ① Shaft, (from engine)
- ② Forward thrust washer
- ③ Drive sleeve
- ④ Blade face
- ⑤ Leading edge
- ⑥ Blade tip
- ⑦ Trailing edge
- ⑧ Diffuser ring
- ⑨ Blade back
- ⑩ Blade root
- ⑪ Outer hub
- ⑫ Inner hub
- ⑬ Exhaust passage
- ⑭ Drive sleeve adapter
- ⑮ Lock ring
- ⑯ Prop nut

## Trim Tabs



Your 320 Outrage is fitted with electrically powered trim tabs. The trim tabs are located on the lower section of your transom and are used to trim the list of your boat caused by uneven weight distribution, too many persons on one side of the boat, or strong cross winds. An untrimmed boat will: decrease the visibility the pilot has, reduce fuel economy, increase wear on your engine(s). While accelerating there is some loss of forward visibility before the boat is on plane, the trim tabs can be used to adjust for forward visibility while underway. Read all information supplied by the trim tab manufacturer for its use and care.

### OPERATION:

The trim tabs are controlled by rocker switches located on the center part of your console above the throttle control. Short momentary bursts of the rockers

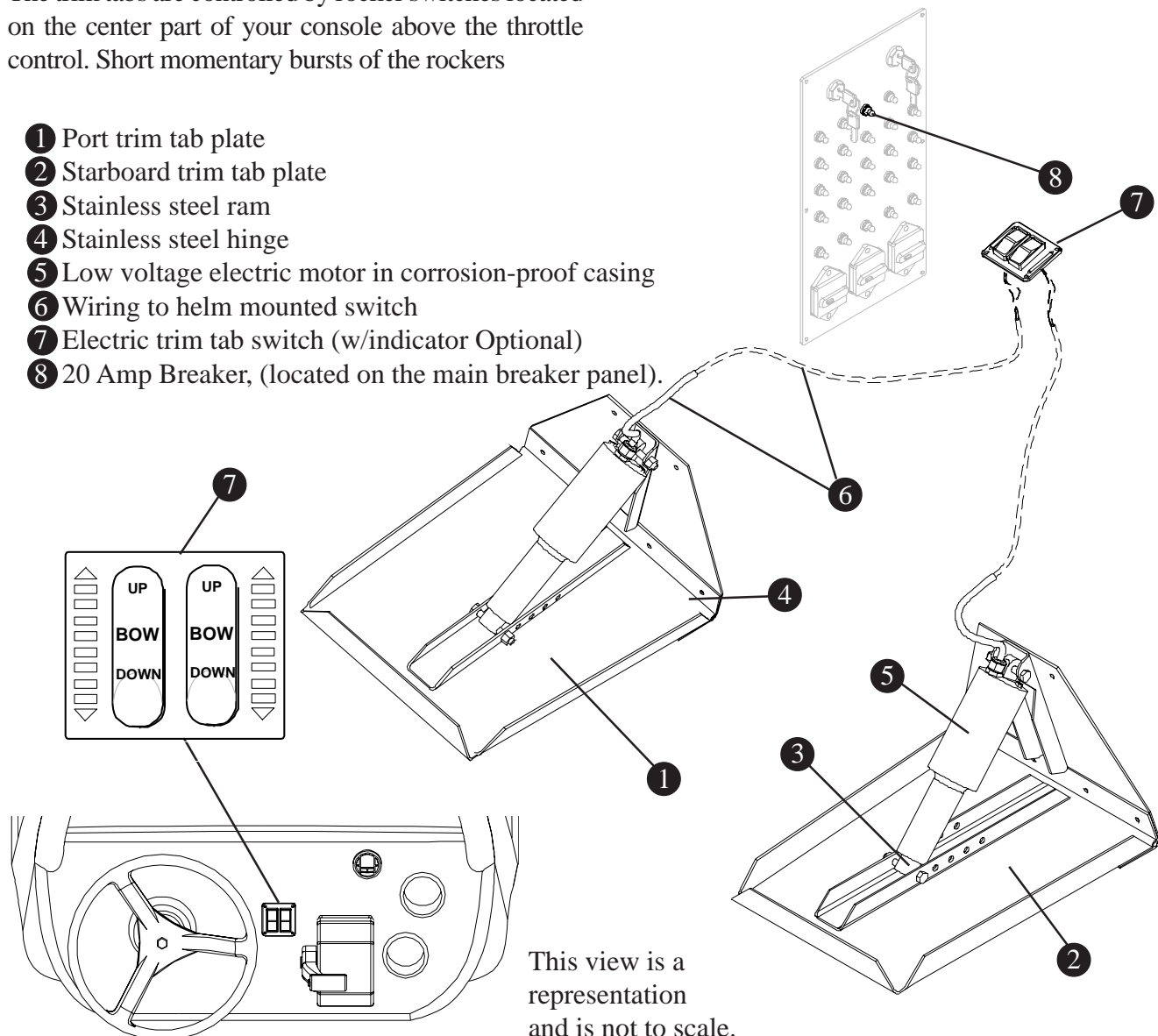
will achieve proper attitude of the hull. The trim tab switch is marked "bow up" and "bow down".

Using the trim tabs will:

- Level the boat; fore and aft.
- Reduce resistance in the steering system.
- Give you a smoother more stable ride.
- Speed will increase and there will be less strain on the engines.

### MAINTENANCE:

The trim tabs are a completely sealed unit and are waterproof and maintenance free. Aside from a general cleaning when the boat is out of the water you should also inspect the planes and hinges for marine growth; remove as necessary.





## Mooring Points

### **! DANGER**

Use only the lifting points specified. Using the cleats for lifting is dangerous and could cause serious injury or death and damage to the boat.

### **! WARNING**

Gelcoat surfaces are slippery when wet. Use extreme caution when walking on wet surfaces. Use care when waxing to insure that walkways are not made dangerously slippery.



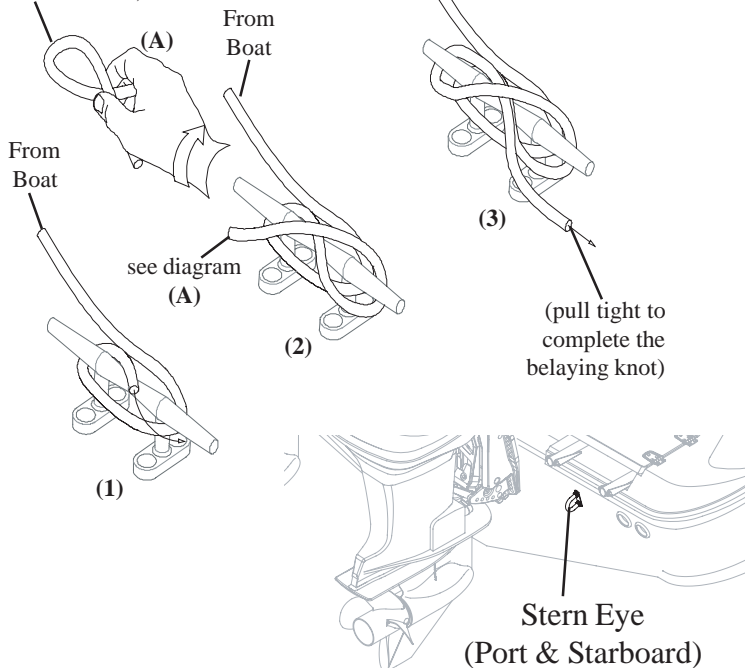
The 320 Outrage has (6) 10 inch cleats; two located at the bow, two located amidship and two located at the stern on the gunwale walls, between the under gunwale rodholders.

The cleat is used to secure the boat to the dock. While loading/unloading or mooring, please learn the proper way to secure the boat and how best to use the mooring points of your boat. The bow eye is used to haul and hold your boat onto a trailer. The stern eyes should be used as tie down points while trailering the boat. The bow and stern eyes should never be used for lifting.

Below is a simple diagram that shows a belaying knot; commonly used to secure a boat to a dock.

This knot is will hold fast and is simple to release when needed.

(make loop and rotate before pulling over the horn)



## Lifting

### **! DANGER**

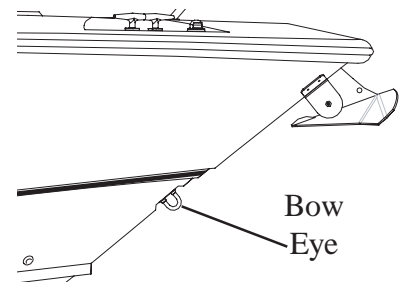
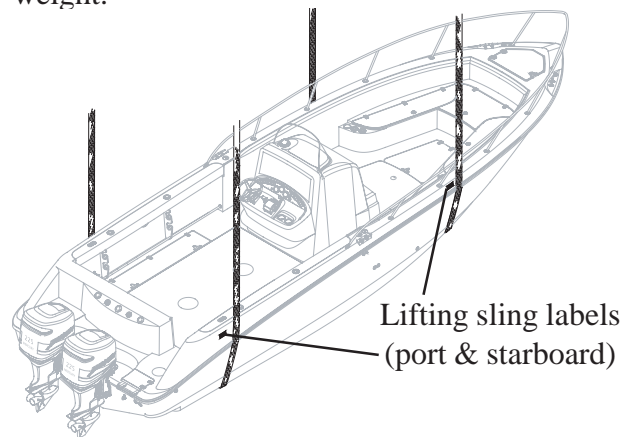
Use only the lifting points specified. Using the cleats for lifting is dangerous and could cause serious injury or death and damage to the boat.

There are labels marked "SLING" on the outside of the boats hull. Use these "SLING" points for lifting the boat. Keep the lifting straps away from under-water fittings before lifting. Whether you are lifting your boat out of the water for routine maintenance or long term storage, there are some points to consider.

- There are lift sling labels on your boats hull, use these labels to properly place the slings.
- If you are using a professional lifting service, it is prudent to check all credentials and ask for proof of insurance to protect your investment.
- Use a wide, flat, belting sling for lifting, to minimize stress on the gunwales. Careful location of the sling is required.

**DO NOT PLACE SLINGS WHERE UNDER WATER FITTINGS WILL BE IN CONTACT.**

- If you will be storing the boat on a lift, you must use a bunk type to evenly distribute the boats weight.



## Hull Maintenance

Clean the bottom of your boat of marine growth immediately, if the debris dries it will harden and will make its removal very difficult. Waxing of the exterior surfaces is recommended to be done at least twice a year to protect the gelcoat of your boat. Compounding may be necessary to remove more stubborn stains and chalking from the surface of your boat, compounding must be done after washing and prior to waxing. Check with your Boston Whaler® dealer on a compatible rubbing compound for your boat. When washing your windshield never use abrasive powders, gritty cloths or steel wool. Always use a damp cloth or a chamois when drying. Metal trim and fittings will stay bright if coated with a good grade metal polish or paste wax after washing. Stainless steel is strong and corrosion resistant, but still requires maintenance to keep its appearance. Crevice corrosion, a brownish coloring; occurs where two pieces of stainless hardware meet.

This condition is caused by impurities in water and air and can be cleaned easily with a good grade marine polish using a sponge, cloth or small bristled brush (for nooks and crannies).

### Hull Maintenance, (Blisters)

The fiberglass and resin structure of your boat is porous (intrusion of water into the gelcoat will take some time). Blistering is caused by water soluble materials in the hull laminate. The effect of osmotic pressure allows water to impregnate below the gelcoat and substrate; forming a blister. There have been extensive university studies funded by the United States Coast Guard regarding the cause and effect of blisters forming in the gelcoat of fiberglass boats. Fiberglass blisters can form in near-surface layers of the gelcoat to very deep into the fiberglass structure. The damage can range from cosmetic to catastrophic, (although the latter is a very rare occurrence). The studies seemed to point toward long term immersion of the hull in warm water as a primary cause of hull blisters. Stress cracks on the hulls below the waterline also contributed to the formation of blisters on the hull. There are a variety of ways to prevent the formation of hull blistering: Epoxy coatings can be applied to the hull, followed by hull painting.

An alkyd-urethane-silicone marine paint can also be used to aid in the prevention of hull blisters.

Reducing the amount of time that your boat stays in the water also helps prevent hull blisters from forming. Use of a trailer or boat lift will reduce the likelihood of hull blisters forming. Be sure to use a bunk type lift or trailer for long term storage of the boat out of water. If blisters are present in the hull; they need to be properly cleaned and dried out before any barrier protection can be applied. Contact your Boston Whaler® dealer for more information on prevention and treatment of hull blisters.

## Bottom Painting



### **DANGER**

There are risks and dangers inherent with the use of paints and solvents. Dispose properly of all rags, rollers and trays used for painting. Follow all the precautions and regulations listed by the manufacturer before and after painting your boats hull.

Painting the bottom of your boats hull is a good way to slow the formation of hull blisters, and also keeping bottom growth (fouling) under control. To determine the waterline, you will need to place the boat in water and with a full load of fuel and gear, mark the waterline. Measure above the marked line 1 to 3 inches for placement of the tape line. Masking tape is not recommended for the types of paint you will be using. Preparation is the key to a successful hull painting. If the hull is bare, the gelcoat will have to be dewaxed before sanding can begin; otherwise the wax will be dragged into the scratches and will reduce the adhesion properties of the paint. After the dewaxing is complete, light sanding with 80 grit paper is recommended. Proper ventilation and capture of the dust created by sanding is essential. The dust created is toxic and should not be breathed. A proper fitting respirator must be used. DO NOT use a paper filter mask. The paint can be applied after sanding and cleaning is complete. Follow the manufacturer's recommendation for applying the paint. Humidity and weather will play a role in how and when the paint is applied. Several thin layers are better than one thick layer.

### Vinyl Cushion Care

Make sure that there is enough paint left to cover areas that were not accessible, (slings, jackstands etc.) and paint accordingly. Follow the manufacturer's recommendation for do's and don'ts after the painting is complete. If the hull bottom is already painted, you must be sure to test the paint's adhesion to the already painted surface. If the paints are incompatible, the new paint will not adhere to the hull bottom or the paint will "Lift" the old paint. NEVER apply paint without first preparing the old painted surface. The paint is designed to resist algae growth which means it has chemicals embedded in the paint that are harmful if ingested. Take all necessary precautions required before painting or repainting your boat's hull. Painting your boat's hull will adversely affect the boat's speed and performance. If your boat will spend most of its time in the water, it might be a good idea to paint the hull bottom, if you will be trailering the boat to and from the water, you might want to forgo the painting. This is an abbreviated section on painting your hull bottom. Your Boston Whaler® dealer should have information on properly painting your boat's hull or recommendations on businesses that will paint your hull for you.

### Painted Hull Care (Bottom)

The painted hull bottom will need to be inspected annually. Any growth will affect the boat's performance and overall look. If it has been a while between inspections you might notice algae or slime growth. This can be cleaned with a coarse towel or soft bristle brush. The growth should be cleaned immediately after the boat has been removed from the water. If the growth is allowed to dry it will be that much harder to remove. If the growth is more severe, you may need to enlist the services of a professional hull cleaning company. Fresh water, salt water and water temperature can all affect the types of growth that you will find on your boat's hull.

Your cushions on the 320 Outrage are made of a durable vinyl material called OMNOVA and is protected by a finish called PreFixx.

This protective finish is designed to be cleaned easily, over and over without showing signs of wear. The PreFixx finish gives you the freedom to remove stains with ease that were not possible before.

The vinyl material and superior finish has been tested to resist heavy abrasion. There is a 3 step cleaning process recommended by the manufacturer; that if followed will ease in cleaning the vinyl cushions.

Complete cleaning instructions are included in the owner's packet. Read all information provided by the cushion manufacturer regarding the proper cleaning and maintenance.

Notice: As the level of stain is increased; the likelihood of using solvents may be necessary.

Read all information from the solvent manufacturer regarding safety and handling of this material.

Wear proper protective equipment to insure your personal safety. Only use solvents in a well ventilated area and test the solvent in a conspicuous section of the affected vinyl. Keep all solvents away from open flame and any other forms of ignition.

### Long Term Storage



#### CAUTION

Never start or run your outboard (even momentarily) without having water circulating through the cooling water intake holes in the gear case. This will prevent damage to the water pump (running dry) or overheating of the engine.



#### NOTICE

Periodically haul the boat out of the water and scrub the bottom with a bristle brush and a solution of soap and water. For better protection paint the hull below the waterline with a high grade anti-fouling paint.



#### NOTICE

Store the batteries in a cool, dry location. Keep the batteries in their plastic boxes. Periodically check the batteries during storage.

Storage or winter lay-up will require you to make sure that your boat and its systems are properly conditioned for extended periods of non-usage.

It is important that you follow all the recommenda-

tions set by the engine owner's operations manual. It will give you a schedule of when these important functions need to be done.

#### ENGINE:

Protecting your engines vital moving parts from corrosion and rust caused by freezing of trapped water or excessive condensation due to climatic changes is very important. Internal engine parts can be effected by rust due to lack of proper lubrication. Freezing water in the engine can cause extensive damage to the internal moving parts.

#### FUEL SYSTEM:

Tank(s), hoses, fuel pump and carburetor should be treated to help prevent the formation of varnish and gum. Temperature extremes cause condensation to accumulate in the fuel tank(s). Empty gas tanks collect condensation which could lead to fuel contamination and/or premature wear of your system.

#### TRAILER STORAGE:

If you will be storing the boat for an extended amount of time on its trailer, you will need to lift the trailer off of its wheels. Use care when raising the trailer. The surface should be level and conditioned to accept the weight of the boat and trailer and allow for adequate drainage. Covering the wheels will protect them from harmful UV rays. Repeatedly immersing the trailer in water during boat launching can cause a variety of problems. Water seeping into the wheel hubs will cause the grease to emulsify and can prematurely corrode the bearings. Check with the trailer manufacturer for scheduled maintenance of you trailer.

#### ELECTRICAL SYSTEM:

The battery should be removed from the boat. Remove the negative (-) cable first, then the positive (+) cable and the battery given a full charge. Clean the external surface of the battery and check all water levels before and after charging. Grease both terminals and bolts on the cable ends.

#### DRAINAGE:

It is important to raise the bow of the boat enough to allow for proper drainage of water from the deck and bilge area. Make sure all the drainage fittings are clear and free of debris. Store the engine in an upright position to promote adequate drainage of water.



#### NOTICE

NEVER trailer the boat with the sun-top in the open position. Damage to the frame, canvas and securing straps can occur. Use the protective boot when the sun-top is being trailered or stored.

Chafing, fiber wear from dirt and grit and deterioration from ultraviolet light can cause your canvas sun top and covers to degrade over time. The effects of ultraviolet light can sometimes be reduced by chemical treatment of canvas items. Consult your Boston Whaler® dealer or check with your owner's manual before using any chemical treatments on your canvas. To keep the canvas and metal parts in good working condition and keep a good appearance, you will need to keep them clean. The fabric should be cleaned regularly before substances such as dirt, pollen, etc. are allowed to accumulate on and become embedded in the fabric. The fabric can be cleaned without removing the framework.

Simply brush off any loose dirt, pollen, etc. hose down and clean with a mild solution of a natural soap in lukewarm water (no more than 100 ° F. 38° C.). Rinse thoroughly to remove soap. Allow the canvas to completely air-dry. After each use especially in salt water areas, rinse the canvas completely with fresh cold water. Let the canvas dry completely before stowing. All metal components of the canvas frame should be rinsed with fresh cold water and exposed components wiped dry to maintain appearance and working order.

Lubricate the snaps of the canvas with petroleum jelly, use a parafin wax on the zippers to keep them in proper working order. If you have stubborn cleaning cases call your Boston Whaler® dealer for proper cleaning procedures.

**Do not use bleach or solvents to clean the canvas material.**



## Trailer

### **! DANGER**

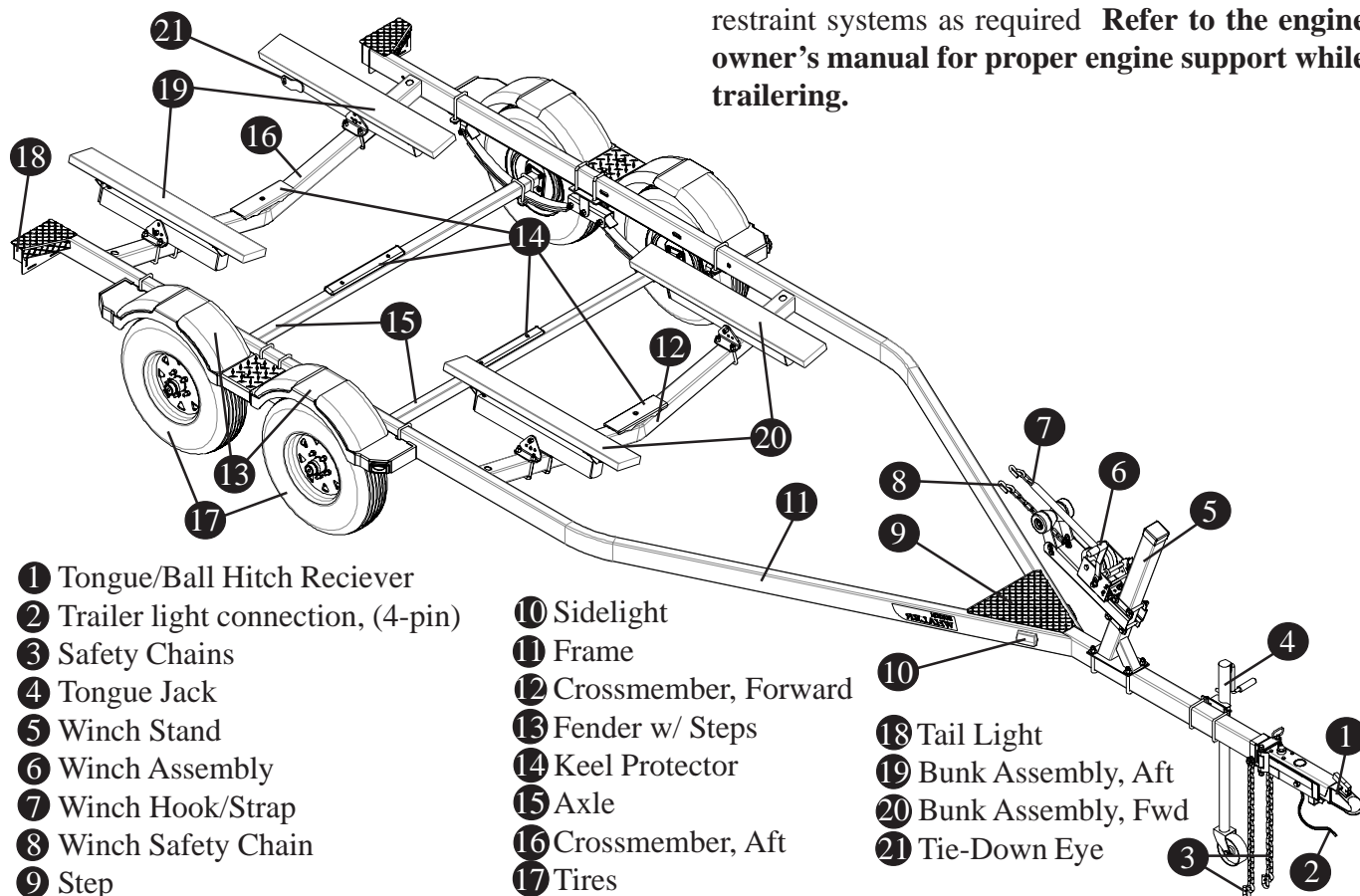
Tie-down straps should never be used by themselves, they are only used to help in keeping the boat secured to the trailer. Make certain that the safety chain is properly secured to the bow eye.

### **! NOTICE**

Your warranty may be void if you use a trailer with rollers. Use a trailer with bunks **ONLY**

Your 320 Outrage has the option of being fitted with a galvanized trailer. This trailer is best suited for your boats length and width. If you have a trailer or plan on purchasing a trailer separately; there are some points you need to consider. Having a center roller and keel guards will help provide good support for the keel, also provide good fore and aft support. Trailers equipped with rollers instead of bunks can damage the foam sandwich hull of your boat and should never be used. Bunks provide a more even weight distribution. It is important that you follow all maintenance schedules. Since most boat usage is seasonal

### Bunk Trailer Terminology



it is more important to keep up on the required maintenance to insure that the trailer will be ready for use when the time comes.

### Trailer Safety:

There are features that will keep your trailer secured to the tow vehicle: Tie-down straps can be used to secure the boat from the stern. The tie-down straps hook into the tie-down loops on the trailer frame to the lifting eyes on the transom. There is a safety chain that attaches to the bow eye and will keep the boat from sliding off the trailer in the event that the winch strap or cable breaks, hook this up first. There are a pair of chains that attach from the trailer to the tow vehicle. These chains must be criss-crossed and will prevent the trailer from hitting the ground should the trailer hitch become detached from the trailer ball.

**DO NOT SECURE THE CHAINS TO THE BUMPER.** A properly matched trailer hitch ball and coupler is important. **NEVER USE A HITCH BALL AND COUPLER THAT ARE NOT MATCHED.**

Make certain that the coupler and the hitch ball are properly seated and locked.

Maintain your trailers lighting, braking and safety restraint systems as required **Refer to the engine owner's manual for proper engine support while trailering.**



## Anchoring Information



### WARNING

SWAMPING HAZARD-Anchor from the bow if using one anchor. A small current can make a stern anchored boat unsteady; a heavy current can drag a stern anchored boat underwater.



### NOTICE

There are a variety of anchors with a variety of uses. Discuss the types with your dealer to find the right type for your boat.



The 320 Outrage is equipped with an anchor storage compartment located in the bow of the boat. Wind and sea conditions can affect the boat. The boat is not moving through the water, and without headway there is no control.

**Note: before using the anchor be sure the anchor line's bitter end is secured to the eye in the bottom of the anchor locker.**

**STAY ALERT!** Be sure that the anchor will hold under all circumstances if you are leaving the boat.

Understand the principles of rode and scope and their effect on anchor performance.

The rode is the line connecting the anchor to the boat. Nylon line is ideal because it is light, strong and stretches, it also can be stored wet and is easy to handle. Add a length of chain between the anchor and the nylon line to prevent abrasion of the line. The scope is technically defined as the ratio of rode length to the vertical distance from the bow to the sea floor. Scope also depends on the type of anchor, tides, winds, sea conditions and type of sea floor the anchor is in.

Minimum is 5:1 for calm conditions

Normal is 7:1

Severe conditions may require a 10:1.

Since you want to know how much rode to use when anchoring, use this common formula:

Rode length=(bow height + water depth) x

Scope

\*Scope factor may range from 5 to 10 or more.

Any number less than 5 and the anchor breaks away too easily.

Be sure to read the owner's manual supplied by the anchor windlass manufacturer before using the anchor windlass. Follow all recommendations and instructions regarding its proper use and care.

## Lowering the Anchor

Be sure that there is enough rope for the depth of water you will be anchoring in, and secure rode to both the anchor and the boat.

- Stop completely before lowering the anchor.
- Keep feet clear of coiled line as it pays out.
- Turn the anchor light on at night or during reduced visibility.

## Setting the Anchor

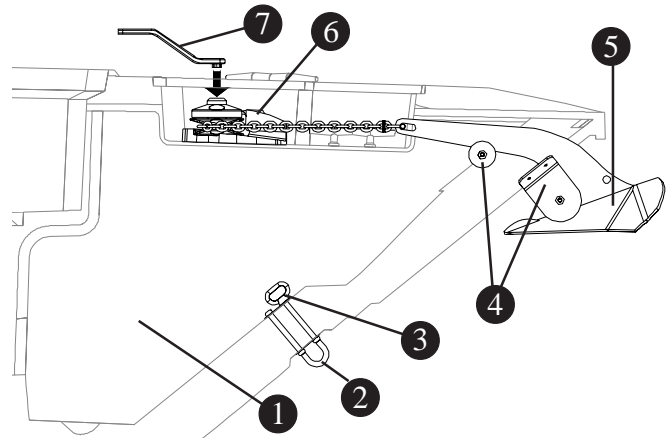
There is no best way to set an anchor. Experiment to see how it performs. One method is to turn the rode around a bitt or a cleat and slowly pay out as the boat backs from the anchor site. When the proper scope has been reached snub the rode quickly, causing the anchor to dig in to the sea bottom.

- Reverse the engine slowly to drive the anchor in and to prevent it from dragging.
- Secure the rode to the bitt or cleat.

## Weighing the Anchor

To weigh (or retrieve) the anchor, start the boat and run slowly up to the anchor, taking up the rode as you go. The anchor will usually break out when the rode becomes vertical. Coil lines to let them dry before stowing.

**BE CAREFUL THAT THE TRAILING LINES DO NOT FOUL IN THE PROPELLER.**



- 1 Anchor Locker
- 2 Bow Eye
- 3 Anchor Locker Bow Eye
- 4 Anchor Roller & Davit
- 5 25 lb.(11.35Kg) Anchor, (Standard Plow Type,- Optional Stainless Steel)
- 6 Anchor Windlass
- 7 Emergency Anchor Release/Pull Handle

## Anchor Windlass

### **! DANGER**

Use the anchor windlass switch on the helm when possible. Use care when operating the anchor windlass with the hand-held remote.

### **! NOTICE**

Be sure to read and fully understand the anchor windlass owner's manual before operating the anchor windlass.

The anchor windlass is located in the anchor locker. The anchor windlass gives you a mechanical means of raising and lowering the anchor.

#### OPERATION:

The anchor windlass is controlled by a switch located at the helm. The switch is a momentary type switch; which means that there must be constant pressure applied to the switch to operate the anchor windlass.

Power is activated by a push/pull button located to the left of the operation switch. There is a power indicator light that illuminates when the switch is powered. There is also a hand-held remote located in the anchor locker that you can use for raising and lowering the anchor. The power source for the remote is located on the aft bulkhead of the anchor locker.

**CIRCUIT PROTECTION-** There is a 120 amp circuit breaker located on the MDP in the console.

If this circuit trips, there is a lever that needs to be pushed up to reset the breaker. There is a red button that can be used to test the breaker. If the breaker continues to trip, have the anchor windlass system checked by a qualified marine electrician.

**LOWERING-**Pushing the top part of the switch down will power the anchor windlass DOWN. Make certain that the anchor lanyard carabiner is detached from the chain and is clear of any moving parts of the anchor windlass.

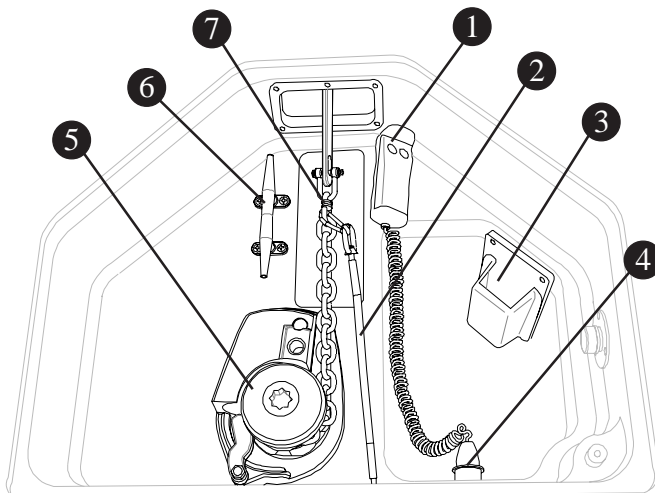
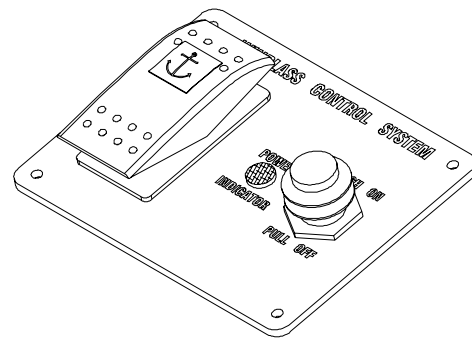
**RAISING-**Pushing the lower part of the switch will power the anchor windlass UP. Once the anchor and rode is secure in the UP position, the anchor lanyard can be re-attached to the rode.

**EMERGENCY OPERATION-**There is a handle that can be used in case the power to the anchor windlass is lost.

#### MANUAL DEPLOYMENT:

**LOWERING-** There is a star socket used for manual deployment of the anchor. Inserting the handle into the center socket and turning it counter-clockwise will loosen the anchor windlass chainwheel. Turn the handle counterclockwise will allow you to lower your anchor, while turning it clockwise will raise it.

Anchor Windlass Helm Switch



- ① Anchor Windlass Hand-held Remote
- ② Anchor Lanyard
- ③ Remote Storage Box
- ④ Remote Power Plug
- ⑤ Anchor Windlass
- ⑥ Anchor Locker Cleat
- ⑦ Anchor Swivel

### 320 Outrage-Owner's Manual

After the scheduled services are performed, fill out the areas below.

#### Maintenance Record

Date	Engine Hours	Serviced by	Maintenance Performed

#### Notes



**ACTIVE DECK SUSPENSION SYSTEM  
OPERATION MANUAL**

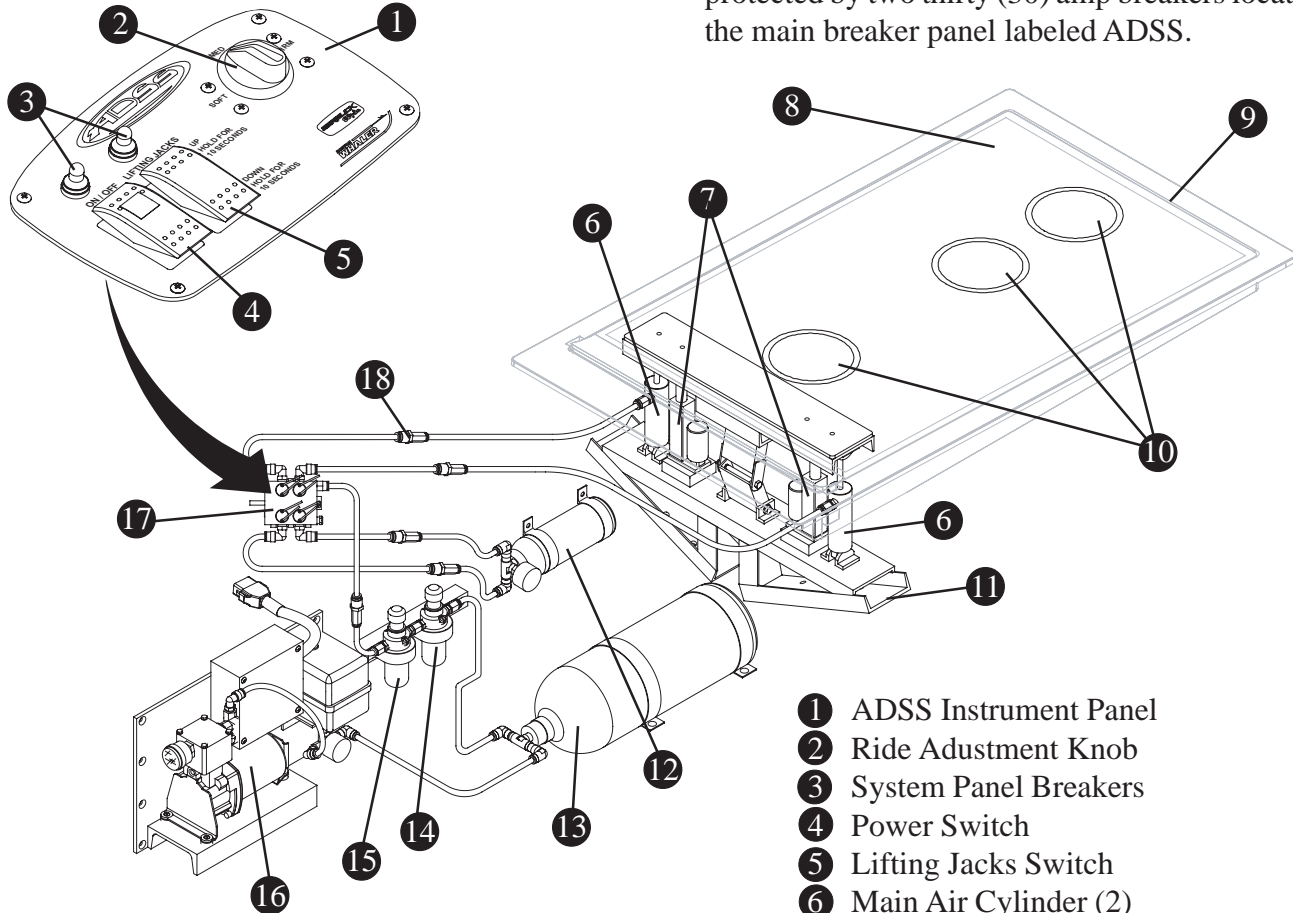
## ADSS

The Active Deck Suspension System (ADSS) is a revolutionary, patented shock absorption system designed to drastically reduce the amount of impact loading felt by the passengers on the boat. It is a pneumatic system whereby the weight on the suspension deck is supported at the front by air cylinders and at the rear by a hinge, when the system is fully operational.

The system consists of three main components:

- The main suspension chassis located beneath the helmsman.
- The air compressor, main air tank, expansion air tank, in-line oil supply and water separator located portside in the forward console..
- The ADSS instrument panel located on the dash.

The system is powered by the on-board batteries and protected by two thirty (30) amp breakers located on the main breaker panel labeled ADSS.



- 1 ADSS Instrument Panel
- 2 Ride Adjustment Knob
- 3 System Panel Breakers
- 4 Power Switch
- 5 Lifting Jacks Switch
- 6 Main Air Cylinder (2)
- 7 Lifting Jacks
- 8 Suspension Deck
- 9 Hinge
- 10 Deck Access Plates
- 11 Main suspension Chassis
- 12 Expansion Air Tank
- 13 Main Air Tank
- 14 In-Line Oil Supply
- 15 In-Line Water Separator
- 16 12V DC Air Compressor
- 17 Ride Adjustment Valve (Bottom View)
- 18 In-line filter (5 places)



### WARNING

The system only lessens the impact loading to those occupants who are **STANDING ON THE SUSPENSION DECK**. Occupants outside the suspension deck will be subjected to normal impact loads.



## Operation

To power the system, press the top of the power switch, the light on the switch will illuminate indicating the system is powered. The air compressor will run until the pressure in the air tank is at normal operating pressure.

The suspension deck is supported by the lifting jacks when the system is not be in use. After turning the system on it will be necessary to lower the jacks in order to activate the suspension deck. To lower the jacks hold the bottom half of the "LIFTING JACKS" switch for 10 seconds. After the air cylinders adjust to the amount of weight that is on the deck (usually 2-3 seconds) the suspension deck will be supported on a cushion of air. The ride adjustment knob has progressive settings through 3 modes, "Soft", "Medium" and "Firm". A "Soft" setting will allow the Active Deck Suspension System to absorb more impact, while the "Firm" setting will not deflect as much. The deck can be adjusted to your comfort, depending on sea conditions.

When leaving the boat for an extended period of time it is good practice to raise the lifting jacks to support the deck. To raise the jacks, hold the upper half of the "LIFTING JACKS" switch for 10 seconds. Once the jacks are raised the system can be powered down by pressing the bottom of the power switch.



### WARNING

DO NOT allow the system to give you a false sense of security. It reduces the vertical impact forces; it does nothing for reducing the forces of ROLL and YAW of the vessel. Please operate the boat responsibly in all sea conditions and never exceed the capacity of the vessel or the abilities of the operator.

It is important to note that the air cylinders are equipped with pressure switches that automatically adjust for the amount of weight that is on the suspension deck. When more people get on the deck, the deck will lower momentarily until the system has had a chance to adjust for the extra weight. This adjustment normally takes no longer than 2-3 seconds. In some instances, like in the case of trolling, it may be more desirable to have a traditional fixed deck. In this circumstance, the system can be locked out by raising the lifting jacks by holding the upper half of the "LIFTING JACKS" switch for 10 seconds. This will prevent the system from constantly trying to adjust for people moving back and forth across the cockpit.

## Emergency Operation:

If there is a pneumatic failure during operation the suspension deck will lower and not return. If this should occur, raise the lifting jacks so the deck returns to normal operating height and then power down the system. The suspension deck will remain fixed until the unit can be serviced.

## Maintenance:

Conduct maintenance every 100 hours of run time:

- Ensure oil reservoir is full.
- Drain the water filter.
- Check that all in-line filters are clear of contamination.

It is also best to periodically check the oil reservoir. If the oil level in the reservoir gets low, add air tool oil to get the level back up to the fill line.

- 1 Raise Lifting Jacks
- 2 Lower Lifting Jacks

