

## DEMAND THE DIFFERENCE



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# Sailfish 220 WAC Specifications





#### **SPECIFICATIONS**

| LOA Hull Only             | 21' 3"     |
|---------------------------|------------|
| Length Rigged             | 23' 6"     |
| Beam                      | 8' 6"      |
| Fuel Capacity             | 93 Gallons |
| Fresh Water               | 6 Gallons  |
| Weight                    | 4,950 lbs. |
| Cockpit Depth Rear        | 26"        |
| Max Horsepower Single     |            |
| Draft (Hull Only)         | 18"        |
| Dead Rise (Multiangle)    |            |
| Battery Capacity          | 2          |
| Rod Holders (Standard)    | 10         |
| Bridge Clearance with Top | 8' 4"      |
| Person Capacity           | 8          |
|                           |            |

#### STANDARD FEATURES

#### Boat

- Boarding Ladder (3 step)
- Built In Rigging Tubes (From Bilge to Helm with pull tapes)
- · Carbon Fiber & Kevlar ® Reinforced Deck & Hull
- Closed Cell Foam Flotation
- Cockpit Bolsters
- · Exclusive Dot Matrix Non-Skid
- Exclusive VDS Hull Design (Variable Deadrise Stepped Hull)
- · Faucet at Sink
- Hydraulic Steering w/ Tilt Wheel & Power Knob
- Mercury Verado Fuel Filter / Water Separator
- Recessed SST Cup Holders (5)
- SailTech Composite Full Length Transom
- SailTech Foam Filled Fiberglass Stringer System
- Stainless Steering Wheel w/ Power Knob
- Walk Thru Transom Door with Wave Guard Step
- Yamaha 10 Micron Fuel Filter / Water Separator w/ SS Base

#### Cabin Amenities

- Cabin 25Qt, Cooler
- · Cabin Butane Stove / Sink / Freshwater / Table
- Cabin V-Berth Cushions and Filler Cushions
- Mirror

#### Electrical

- · Accessory Switch Panel w/Circuit Breakers
- Cabin Lighting
- Compass
- · Dual Battery Switch
- Electric Horn
- · Full Digital Instrumentation
- · LED Interior Cockpit & Bilge Lighting
- · LED Navigational Bow & Anchor Light
- Remote Control For Stereo at Helm
- Stereo (Bluetooth Capable, AM/FM w/4 Speakers)
- Trim Tabs With Indicator Switch & Built In Auto Retract Feature
- 12 Volt DC Accessory Plug

#### **Fishing**

- Baitwell w/ LED Lighting 25 gal. Transom
- Built-In Tackle Storage (Aft Under Transom Door)

#### Hardware

- Bow Anchor Roller
- Fender Cleats Aft (2)
- Flush Mount Hinges and Latches & Deck Plates
- Heavy Duty Stainless Steel Bow & Stern Eyes Heavy Duty Stainless Steel Rub Rail
- · Marine Grade Stainless Steel Hardware
- · Sailfish Engraved Transom Plate
- Stainless Steel & Bronze Thru Hull Fittings
- · Stainless Steel Full Bow Rail
- Stainless Steel Propeller(s)
- Stainless Steel Rod Holders (4)

#### Helm

 Large Dash Area (Capable of flush mounting 10" Screen)

#### Plumbing

- Automatic Bilge Pump (2000 GPH)
- Freshwater Showers (2) Transom and Cabin
- High Speed Livewell Pickup
- Porta Potti
- Raw Water Wash Down
- · Self Bailing Cockpit
- Sink with Faucet (In Cabin)

#### Storage

- · Anchor Locker (w/ Bow Roller)
- Battery Storage (Bilge Compartment)
- Insulated -Fish Box / Storage (Leaning Post)
- Recessed Rod Storage Port & Starboard

#### Seating

Leaning Post (L/P 4) Fiberglass w/Fish Box & Cooler

#### **OPTIONS**

#### **Boat Options**

- 25 qt. Igloo Coolers (pr)
- Bimini Top
- CommandLink Plus (C Series Motors Only)
- · Leaning Post Cover
- Underwater LED Lights (2)
- VesselView 4"

#### **Electrical Options**

- · Built-In 2 Bank Battery Charger
- Fusion Satellite Radio Upgrade
- Garmin B60 Airmar Thru Hull Transducer w/o CHIRP
- Garmin B75M Airmar Thru Hull Transducer w/ CHIRP
- Garmin GPSMap 742xs w/o Transducer
- Garmin VHF Radio & Antenna
- · Solar Battery Charger, Hard Top Only

#### **Hardware Options**

- Mid-Ship Fender Cleats (2)
- Ski Tow Bar (Retractable)

#### **Seating Options**

Rear Jump Seats

#### **Optional Packages**

 Offshore Tournament Pack Hard Top, Powder Coated w/ Built-In Radio Box, Flush Mount Cleats & Transom Rod Holders (3)

#### **Engine Options**

#### Yamaha

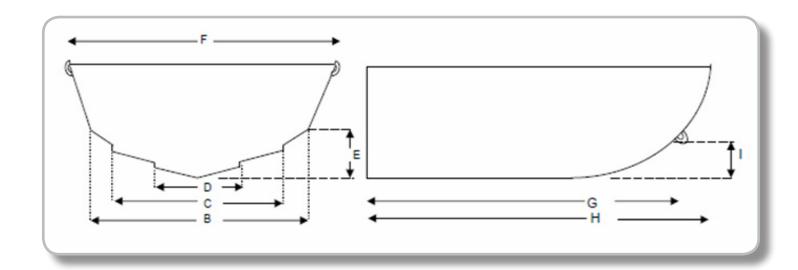
- F150XB
- F200XB
- F200XCA

#### Mercury

- 150XL
- 200XI Verado

# **Sailfish Boat Trailer Measurement Chart**

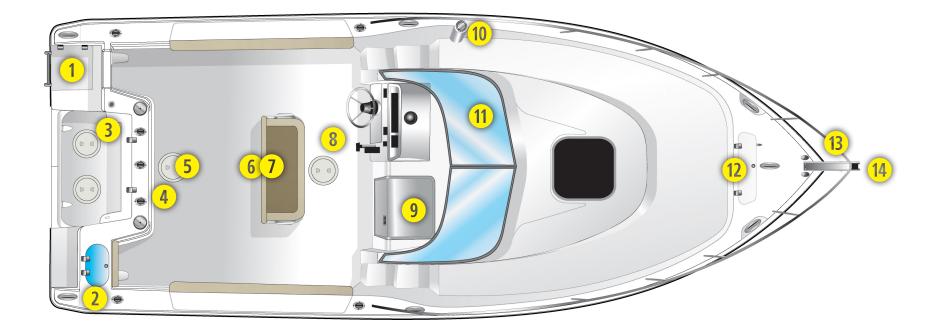




| Boat Models                   | В        | С       | D      | E        | F         | G         | н       | ı      |
|-------------------------------|----------|---------|--------|----------|-----------|-----------|---------|--------|
| 208 CC                        | 78 in.   | 53 in.  | 28 in. | 11 in.   | 82 in.    | 218 in.   | 235 in. | 27 in. |
| 1900 BB                       | 88 in.   | 66 in.  | 37 in. | 10.5 in. | 99.5 in.  | 198 in.   | 217 in. | 24 in. |
| 2100 BB                       | 88 in.   | 66 in.  | 37 in. | 10.5 in. | 99.5 in.  | 220 in.   | 240 in. | 24 in. |
| 220 CC & 220 WAC              | 87 in.   | 59 in.  | 31 in. | 14.5 in. | 102.5 in. | 216.5 in. | 243 in. | 32 in. |
| 236 CC & 241 CC & 245 DC      | 91 in.   | 57.5 in | 30 in. | 14 in.   | 103 in.   | 250 in.   | 273 in. | 36 in. |
| 240 CC & 240 WAC & 242 CC     | 92 in.   | 59 in.  | 31 in. | 15 in.   | 107 in.   | 241 in.   | 272 in. | 30 in. |
| 270 CC & 270 WAC & 275 DC     | 94 in.   | 59 in.  | 31 in. | 15 in.   | 107 in.   | 268 in.   | 302 in. | 30 in. |
| 290 CC                        | 94.5 in. | 61 in.  | 32 in. | 15.5 in. | 107 in.   | 301 in.   | 336 in. | 30 in. |
| 320 CC & 320 EXPRESS & 325 DC | 105 in.  | 65 in.  | 33 in. | 16.5 in. | 115 in.   | 315 in.   | 349 in. | 38 in. |

# Sailfish 220 WAC Boat Layout





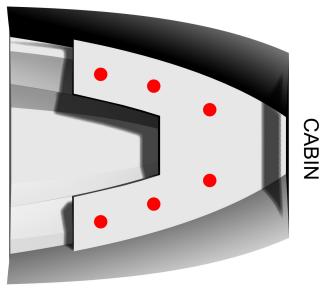
| Key | Description                    |
|-----|--------------------------------|
| 1   | Boarding Ladder                |
| 2   | 30 Gallon Livewell             |
| 3   | Fresh Water Fill               |
| 4   | Bilge Access                   |
| 5   | Fuel Sender and Pick-up Access |
| 6   | Removable Cooler               |
| 7   | Leaning Post                   |

| Key | Description                |
|-----|----------------------------|
| 8   | Helm Area                  |
| 9   | Cabin Door                 |
| 10  | Fuel Fill                  |
| 11  | Full Wraparound Windshield |
| 12  | Anchor Locker              |
| 13  | Full Bow Rail              |
| 14  | Anchor Roller              |

# **Sailfish 220 WAC Seating Locations**

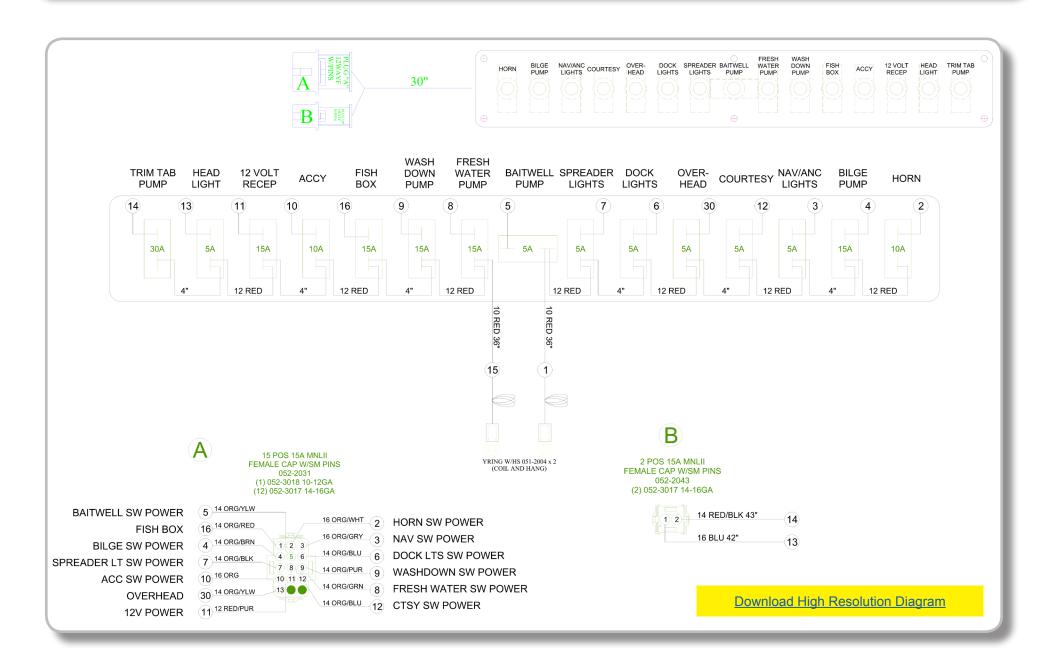






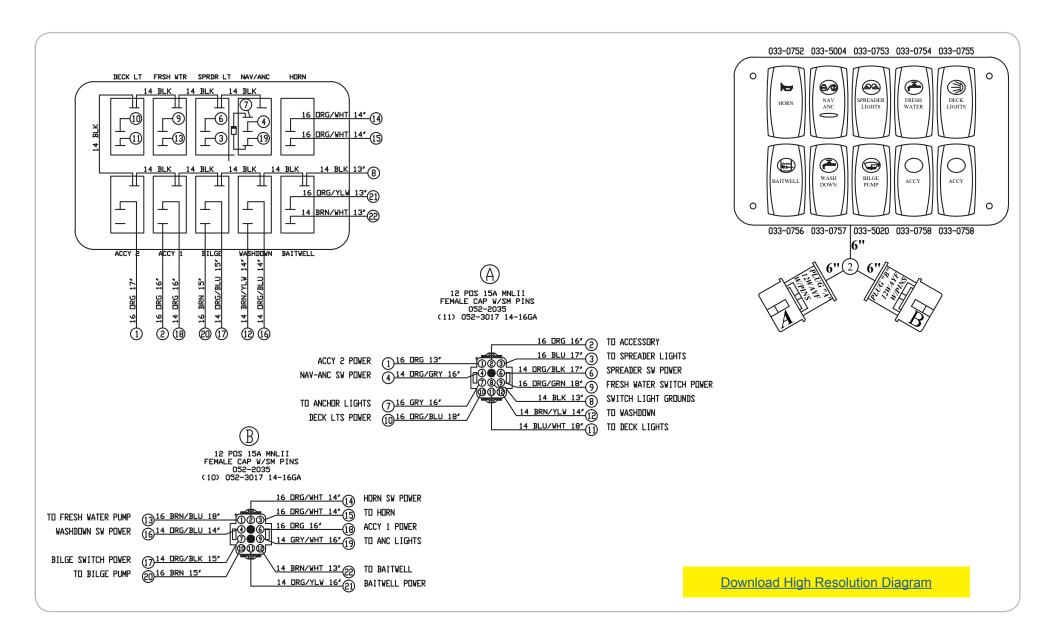
## **Breaker Panel Schematic**





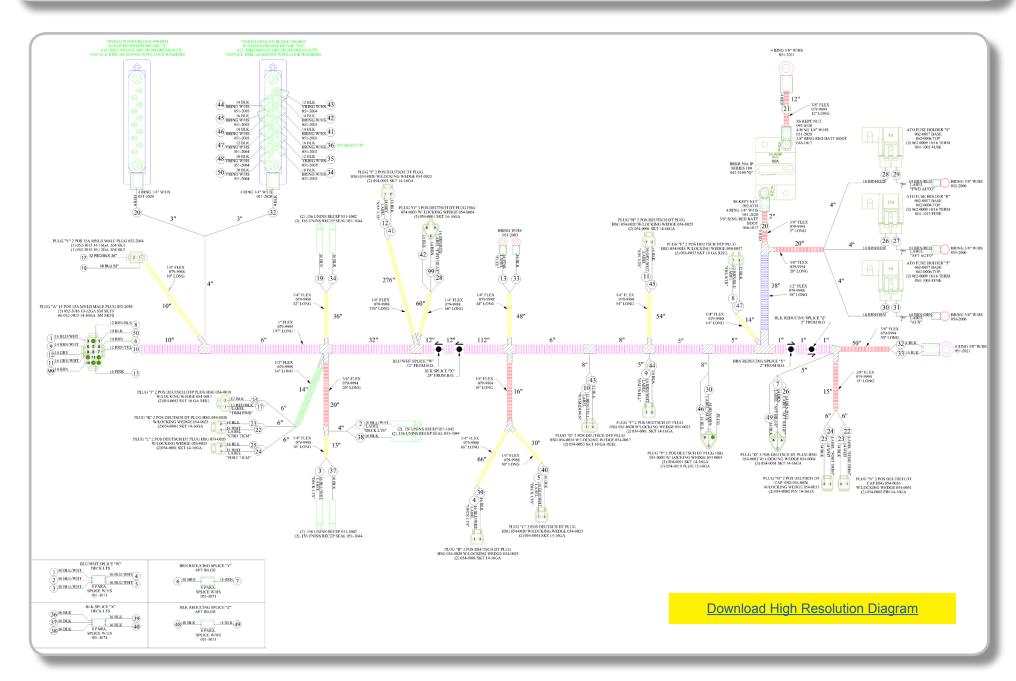
## **Switch Panel Schematic**





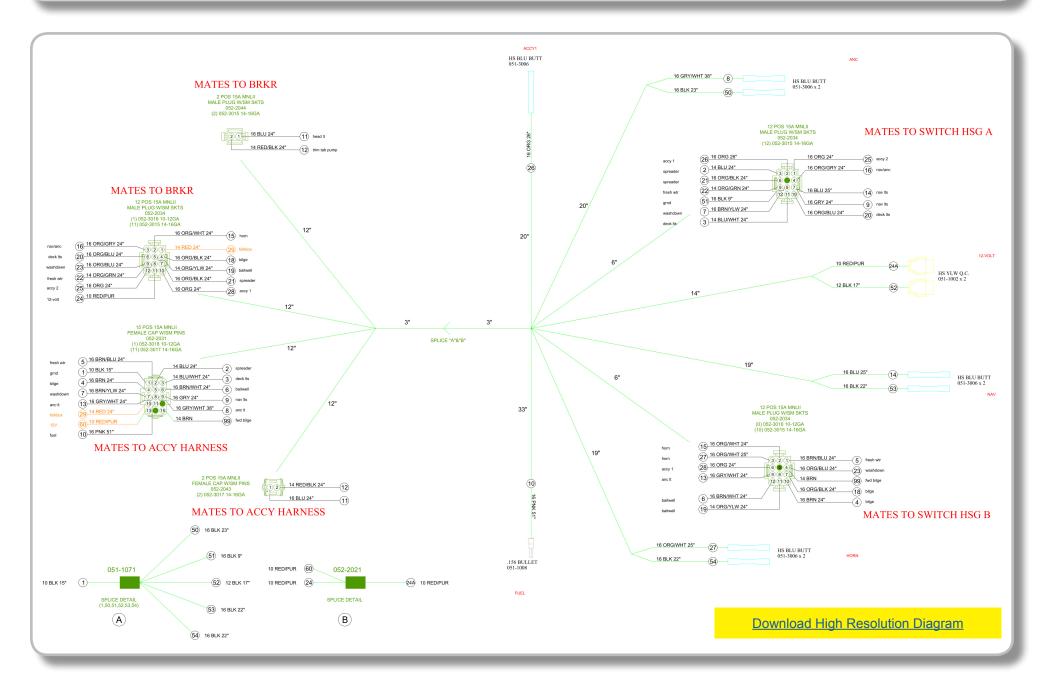
## **Distribution Harness**





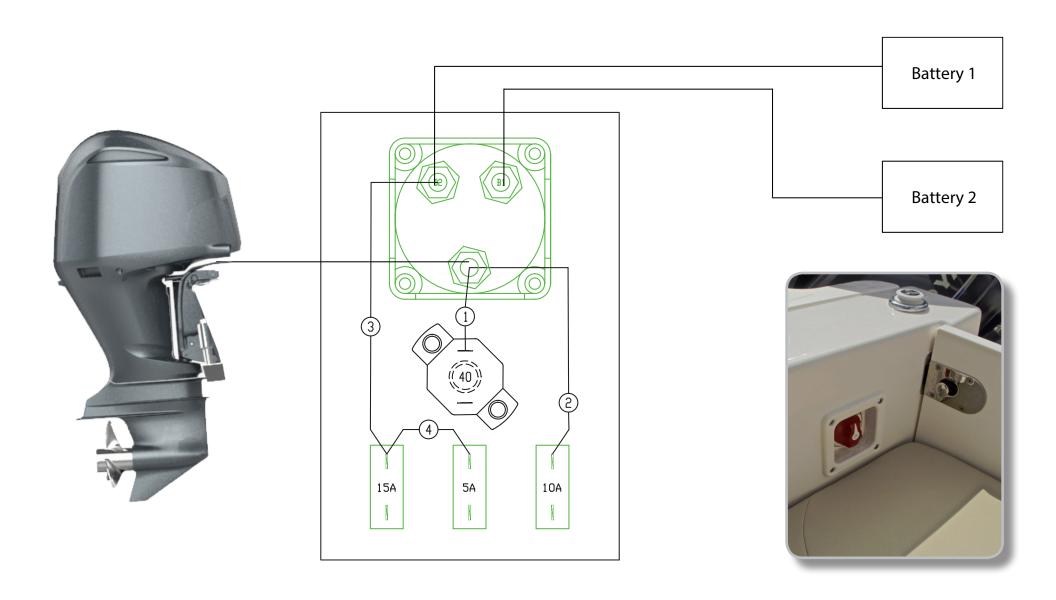
# **Adapter Harness**





# **Battery Installation: Perko Switch**





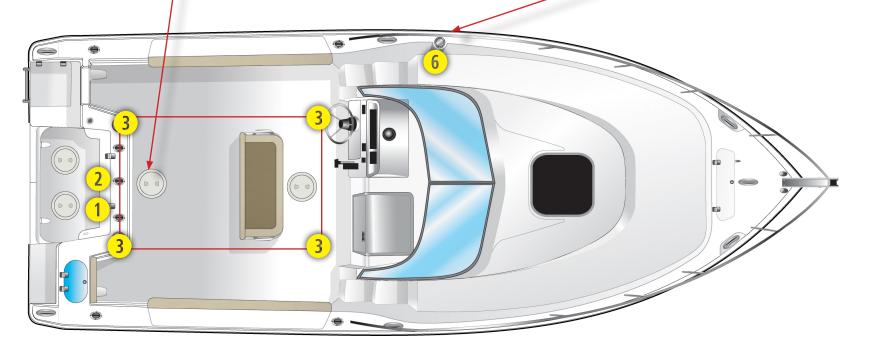
# **Fuel System Layout**





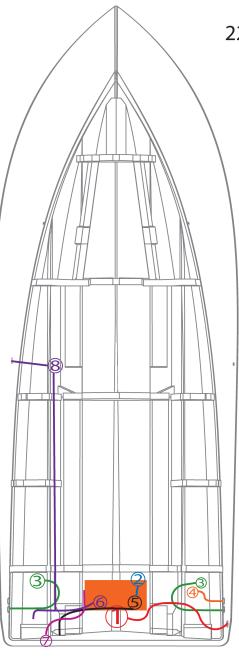
| Key | Description                               |
|-----|---|
| 1   | Primer Bulb - N/A on Verado               |
| 2   | Fuel Filter Access - Yamaha & Verado Only |
| 3   | Fuel Tank Location                        |
| 4   | Fuel Pickup                               |
| 5   | Fuel Sender                               |
| 6   | Fuel Fill                                 |





# **Plumbing Diagram - 220 WAC**

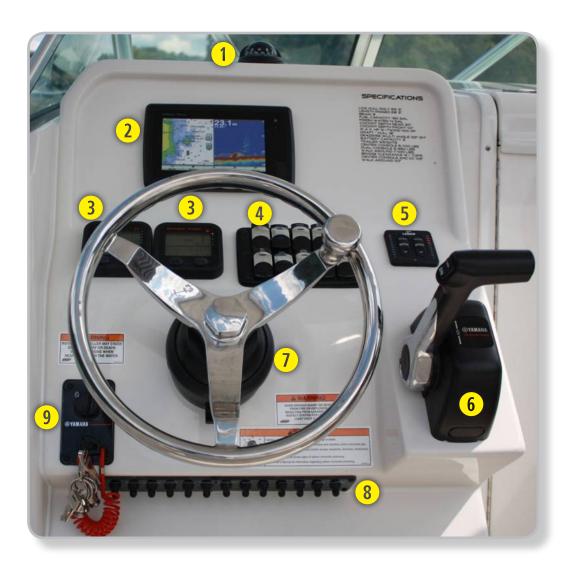




#### 220 WAC Sailfish

- 1. Bilge Pump
- 2. Livewell Fill Pump
- 3. Deck Drain
- 4. Livewell Drain
- 5. Transom Washdown Pump
- 6. Fresh Water Pump
- 7. Fresh Water Fill and Vent
- 8. Fresh Water sink

# **Helm Area**



| Key | Description                                       |
|-----|---|
| 1   | Compass   |
| 2   | Optional Garmin Unit                              |
| 3   | Brand Specific Motor Guages                       |
| 4   | Switch Panel                                      |
| 5   | Trim Tab Actuator Switches                        |
| 6   | Binnacle  |
| 7   | Tilt Helm w/ Stainless Wheel and Power Knob       |
| 8   | Breaker Panel                                     |
| 9   | Ignition Switches and Emergency Shut-<br>off Cord |







# **UFLEX Steering System**

UFLEX has been the choice for steering for Sailfish boats for the last three years because of the quality of the USA built products.

Every helm comes standard with a full stainless steel shaft; cylinders are built with carbon steel pistons, coupled with extra-large end caps to prevent leakage.

All of their connection materials are 304 stainless steel that has been electro-polished and passivated.

For more information on the service and maintenance of your UFLEX system please refer to your UFLEX owner's manual or view it electronically at http://uflexusa.ultraflexgroup.com/public/File/UFLEX2013\_USA.pdf



# Ignition Switches, Engine Shut-off Cord/Lanyard

Each Sailfish boat will be equipped with a Yamaha or Mercury ignition switch with an emergency engine shut off cord/lanyard.

This lanyard should be worn at all times while operating the vessel, if the vessel operator falls or moves a unsafe distance away from the helm controls the lanyard will pull out causing the engine to shut down.

Make sure the lanyard is not attached to a part of your clothing that could be easily torn free causing the switch not to pull. See your YAMAHA or MERCURY owner's manual for more information on this safety feature.

### **Engine Break-In Period**

Each new outboard motor will need to go through a break in period to make sure all of the internal moving parts and components have a chance to correctly mate.

For more information on the break in period specific to your engine please refer to your YAMAHA or MERCURY Owner's manual.







## **Plug and Play Wiring**

Deutsch Connectors are quick disconnect plugs used for durability and ease of replacing components in your Sailfish Boat.

These water resistant plugs are for use in electrical systems where moisture, salt spray, dirt and dust could affect the electrical connections or systems.







## **Fuel-Water Separator**

Sailfish has rigged either Yamaha or Mercury, (Verado Only), water fuel separators in the bilge compartment. Each engine will have its own filter. These filters can be accessed through the bilge access doors, in the back of the boat. For more information on these filters, please review your Yamaha or Mercury Owner's Manuals.

# **Console/Head Area**







| Key | Description                                       |
|-----|---|
| 1   | Large panel for easy access to Console Components |
| 2   | Portable Stove                                    |
| 3   | Freshwater Sink                                   |
| 4   | Cooler Storage                                    |
| 5   | Cabin Door  |
| 6   | Standard Stereo                                   |
| 7   | Optional Porta Potti                              |



### **Bilge Access and Explanation**

The bilge of your boat can be accessed through the large door in the aft of the boat. This large door allows easy access too many of the boats components.

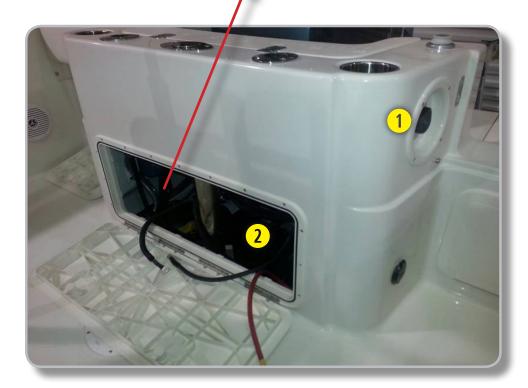
You may also access it through the two access plates in the splash-well.

The bilge area of your sailfish boat should be checked before, during and after each operation.

A small amount of water in this area is normal but large amount of water could point to a major issue such as a leak. If this situation presents itself please contact your Authorized Sailfish Dealer Immediately.

| Key | Description                      |
|-----|----------------------------------|
| 1   | Recessed Battery Selector Switch |
| 2   | Battery Storage                  |







### **Bilge Pumps**

All Sailfish Boats are furnished with Rule Bilge Pumps, The Rule 2000 GPH (gallon per hour) pump has a built in automatic float switch. This is engaged when the water level rises in the bilge and the float rises in the pump causing the pump to turn on.

These pumps can be tested by turning them upside down, the pump should turn on, once turned back over it will run for a few more seconds and then shut off. The pumps also have a manual switch function on the main switch panel.

These pumps are wired into your boat bypassing the battery switch so that they have power at all times, this allows the automatic feature to work while you are away from the boat and the batteries are turned off.

Sailfish boats 241CC and larger are equipped with a forward bilge pump that is an electronic sensor pump. These pumps have a state of the art internal water sensor that detects water and automatically activates the pump when there is enough present to be pumped out.

These pumps can be tested by placing your finger over the "Test Area" on the back of the pump for 5 seconds, the pump will turn on to let you know it is functioning correctly. All wiring and switches to these pumps are the same as the Rule 2000GPH pumps.





## **Raw water Washdown system**

The raw water wash down on your Sailfish Boat is powered by a Shur-flo Pro Blaster Pump which creates a pressurized system, once the pump is turned on and pressure is created the pump will shut down until more pressure is needed. The raw water wash down pump can be accessed through the bilge access door in the aft of the boat.

To operate make sure the seacock is in the open position. The hose fitting for the wash down is located in the transom splash well, to use simply attach a hose with a nozzle and turn the switch on. Pressure will build up in the hose and the nozzle and as you spray the pump will continue to engage as needed.



| Key | Description                     |
|-----|---------------------------------|
| 1   | Raw Water Washdown Hose Fitting |





# Freshwater Washdown and Shower System

The freshwater washdown and shower system on your Sailfish Boat is powered by a Shur-flo Pro Blaster Pump which creates a pressurized system, once the pump is turned on and pressure is created throughout the freshwater hoses; once they are all pressurized the pump will shut down until more pressure is needed.

All of the freshwater systems on the boat will operate on this system once the freshwater switch is engaged.

You should allow a few seconds for the system to prime and pressurize before attempting to use any of the showers/sinks ect.

The freshwater holding tank is located behind the fuel tank in the bilge area.

The fill for this tank is located under the cutting/measuring board on the port side of the vessel. The freshwater pump can be accessed through the bilge access door in the aft of the vessel.







# **Livewell Operation**



### **Instructions**

- Make sure the seacock below the baitwell pump is in the open position.
- Turn on the livewell switch.
- Adjust the black aerator in the livewell to the desired flow (shown in CLOSED picture).
- In order to fill the livewell, place the white stand pipe with the strainer into the center drain hole.
- To drain the livewell remove the stand pipe and the water will flow out the drain hole.







## **Trim Tab Maintenance Tips**



## **Cleaning**

The attractive surface appearance of stainless steel cannot be regarded as completely maintenance-free. Our 304 Series Stainless Steel may in fact stain, discolor, or accumulate a layer of surface contamination (dirt and grime) during the normal course of the life cycle.

Minute particles of dust and rust may adhere to the stainless steel during shipping, installation or storage at OEM or retail locations.

Also, please remember that some types of stainless steel fasteners tend to "bleed" over the tabs and onto the boat. To achieve maximum corrosion resistance, the surface of the stainless steel must be kept clean and free of all these contaminants.

NOTE: LENCO RECOMMENDS AN ACID AND WATER SOLUTION TO CLEAN THE TRIM TAB BLADES. MARYKATE'S ON & OFF PRODUCT IS A GOOD CHOICE. RINSE THOROUGHLY UPON COMPLETION. BIODEGRADABLE, BUT PLEASE FOLLOW THE MANUFACTURER'S INSTRUCTIONS BEFORE APPLYING.

# Sacrificial Anodes for your Lenco SS Trim Tabs

Be aware that stray currents in your marina or in a visiting marina can cause damage to your trim tab blades if not protected by sacrificial anodes.

- The addition of anodes on each tab will deter electrolysis.
- Do not paint under the anode or the anode itself.
- Check Anode condition frequently. Replace when necessary.

# Visual inspection of system

- Periodically inspect all wires, mounting brackets, and hardware for damage.
- Make sure all mounting brackets are secure and working properly.
- Periodically test system for smooth operation.







# **Optional Porta Potti**



### **Prepare Unit**

- Separate tanks (Fig. 1A & 1B).
- Add Deodorant (Fig. 2A & 2B) and 4-oz of water.
- Close valve (Fig. 2C).
- Recombine Tanks (Fig. 3)
- Fill upper tank with fresh water (Fig.4). Replace cap and tighten securely.

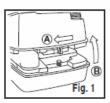
NEVER add deodorant to fresh water tank.

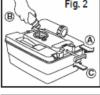
#### **Before Use**

Vent any built-up heat or altitude pressure and prevent splashing: close cover (Fig. 5A), and open and close holding tank valve (Fig. 5B).

#### To Flush

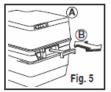
- · Open Valve (Fig. 2A).
- Bellows: Fig. 6.
- Piston Pump: Fig. 7.
- Electric Flush: Fig. 8 For best rinse and efficient water use, press button quickly several times.
- Close valve completely for odor-tight seal (Fig. 2C).



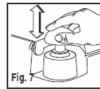














#### **Deodorizing**

Recommended holding tank deodorant for best performance:

Thetford SupremeGreen Thetford Aqua-Kem Thetford Campa-Chem



#### Care

Recommended cleaner: Thetford Aqua-Clean

NEVER use scouring powders, acids or concentrated cleaners, which can damage plastic parts and rubber seals.



#### Service & Parts

For parts and/or service, contact your RV Dealer.

For warranty issues or more information, call Thetford's Customer Relations Department:

1-800-521-3032

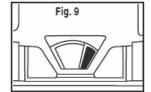


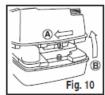
# **Optional Porta Potti**

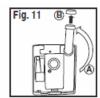


### **Emptying Waste Tank**

- 1. DO NOT OVERFILL TANK. Empty when waste level indicator turns from green to red (Fig. 9). (Toilet without an indicator: open valve to check visually).
- 2. Be sure valve handle is closed. Separate tanks (Fig. 10).
- 3. Carry waste tank to a permanent toilet.
- 4. Remove Pour-Out Spout Cap while it is pointing upward (Fig. 11).
- 5. Press Air relief valve to prevent splashing (Fig. 12).
- 6. Rinse, recharge and reassemble unit.









#### **Deodorizing**

Recommended holding tank deodorant for best performance:

Thetford SupremeGreen Thetford Aqua-Kem Thetford Campa-Chem



#### Care

Recommended cleaner: Thetford Aqua-Clean

NEVER use scouring powders, acids or concentrated cleaners, which can damage plastic parts and rubber seals.



#### **Service & Parts**

For parts and/or service, contact your RV Dealer.

For warranty issues or more information, call Thetford's Customer Relations Department:

1-800-521-3032.

# **Vinyl Care and Cleaning**



#### **Step-by-Step Cleaning Instructions**

| otep-by-otep olea      | 9      |   |   |   |
|------------------------|--------|---|---|---|
| Type of Stain          | Steps: | 1 | 2 | 3 |
| General Care           |        | Α | В |   |
| Dirt Build-Up          |        | Α | В |   |
| Ballpoint Ink*         |        | Е | В | Α |
| Chewing Gum            |        | D | Α |   |
| Coffee, Tea, Chocolate |        | В |   |   |
| Grease                 |        | D | В |   |
| Household Soil         |        | Α | В |   |
| Ketchup                |        | Α | В |   |
| Latex Paint            |        | Α | В |   |
| Lipstick               |        | Α | В |   |
| Mildew or Wet Leaves*  |        | С | В | Α |
| Motor Oil              |        | В |   |   |
| Oil-Based Paint        |        | D | В |   |
| Permanent Marker*      |        | Е | В | С |
| Spray Paint            |        | В |   |   |
| Suntan Lotion          |        | Α | В |   |
| Tar / Asphalt          |        | D | В |   |
| Yellow Mustard         |        | Α | В | С |

#### Legend

- **A.** Medium-Soft brush, warm soapy water, Rinse / Dry
- **B.** Vinyl Finish Vinyl Cleaner®, Rinse / Dry
- C. One (1) tablespoon of ammonia; one-fourth (1/4) cup of Hydrogen Peroxide, three-fourth (3/4) cup of water, Rinse / Dry
- **D.** Wipe or scrape off excess (chill gum with ice before hand)
- **E.** Hemisphere Ink Remover, Rinse / Dry

Failure to care for your vinyl properly, or use of improper cleaners may void your warranty & damage your vinyl.

#### Do's & Don'ts

#### Do's

- Vinyl Finish Vinyl Cleaner
- Dish Soap (Dawn, Ivory)
- Fantastik
- 303 Aerospace Protectant

#### Don'ts

- Formula 409
- · Murphy's Oil Soap
- Simple Green
- Armor All
- Son-of-a-Gun
- Turtle Wax / Tar Remover

All cleaning methods must be followed by a thorough rinse with clean warm water.

Certain household cleaners, powdered abrasives, steel wool, and industrial cleaners can cause damage and discoloration and are not recommended. Dry cleaning fluids and lacquer solvents should not be used as they will remove printed pattern and gloss. Waxes should be used with caution as many contain dyes or solvents that can permanently damage the protective coating. \*Suntan lotion, tree pollen, wet leaves, and some other products can contain dyes that stain permanently.

#### \*Always Remove Stains Immediately!

# Caring for Aluminum - Cosmetic Corrosion (Pitting)



The information provided is designed to give you a thorough understanding of the factors that can impact the appearance of your anodized aluminum. By using this information, we hope to help you enhance the beauty and value of our products.

#### **What Causes It?**

Corrosion is a natural phenomenon that affects metals by either a chemical or electrochemical reaction. The rate at which aluminum corrodes depends greatly on the environmental conditions and the amount of preventative maintenance performed. Our goal is to slow down or stop this natural phenomenon we call pitting (or corrosion).

#### **Anodized Aluminum**

The aluminum on your boat has been anodized. This creates a very hard protective seal on the surface of the aluminum to protect it as much as possible from pitting. When the anodized coating is broken and raw aluminum is exposed, corrosion will take place. Damage from other abrasive impacts can break the anodized coating.

#### **Chemical Attack**

Corrosive chemicals containing high concentrations of acids or alkalis will remove the anodized coating. Solutions containing chlorine, salts, or ammonia are all harmful to the anodized aluminum on your boat. Many common household cleaners contain chemicals that will remove the anodizing and cause pitting.

| Avoidable   | Unavoidable   |
|---|---|
| Strong acidic solutions found in cleaner paint remover, degreasers, etc.                | Airborne pollution. Airborne particles from local sources: vehicles, incinerators, paper mills, chemical plants, power plants, etc. |
| Concentrated alkaline based solutions. Many concentrated soaps fall into this category. | Harsh chemicals from work performed at local shipyards and dry docks.   |
| Chlorine, sulfurs, solvents and ammonia based products.                                 | Be aware of local sources that can expose your new boat to corrosive chemicals.   |



## **Caring for Aluminum**



## **Tips**

Avoid the use of bleach or chlorides to clean the aluminum or nearby components. Chlorides can leach onto the aluminum when used nearby.

Avoid abrasive cleaning products. Never use steel or brass wool, wire brushes, polishing wheels, rubbing or polishing compounds. These items will remove the anodizing and lead to pitting.

#### **Protective Products**

There are many different products available to protect aluminum. Some are designed to seal and protect before problems occur and others are designed to use after pitting has appeared.

While these products are effective, they are not one time solutions. Metal protectors must be reapplied on a regular basis. How often a protector should be used varies according to the protector you choose, the types of exposure your boat is subjected to, and how often you use and wash your boat. Follow the application guidelines provided with the protector you choose.

#### **Harmful Cleaners**

Bleach (Chlorox, etc.)
Mild abrasive cleaners (Ajax, Comet,
Soft Scrub, Rubbing Compounds, etc.)
Strong cleaners (409, Engine
Degreasers, Bilge Cleaners, Teak
Cleaners, Bottom Cleaners, etc.)



| Below are some metal protection products that are readily available at marine retailers. |   |  |
|--|---|--|
| Woody Wax CPR  | Woody Wax<br>woody-wax.com<br>800-619-4363          |  |
| Boeshield T-9  | PMS Products, Inc.<br>boeshield.com<br>800-962-1732 |  |
| Premier Polish   | Aquatech aquatech-marine.com 800-853-7760           |  |
| Corrosion Block  | Lear Chemical<br>learchem.com<br>800-256-2548       |  |

# **Caring for Stainless Steel**



The information provided is designed to give you a thorough understanding of the factors that can impact the appearance of your anodized aluminum. By using this information, we hope to help you enhance the beauty and value to our products.

# What Makes Stainless Steel Stainless?

Oxygen is the key element in causing rust, or red oxide on steel and other metals. Stainless Steel contains Chromium which reacts with the oxygen in the air to form a chrome-oxide surface layer that is invisible to the eye, but strong enough to prevent further oxygen from "staining" (rusting) the surface. Higher levels of Chromium and the addition of other alloying elements such as nickel and molybdenum enhance this surface layer and improve the corrosion resistance of the stainless material.

# What Determines Different Grades of Stainless Steel?

The grade of Stainless Steel is primarily determined by the amount of the Chromium and Nickel alloys contained in the material. 304 and 316 are the prominent grades of Stainless Steel: 304 contains 1% Chromium and 8% Nickel, while 316 Contains 16% Chromium and 10% Nickel and 2% Molybdenum. The Molybdenum is added to help

resist corrosion to chlorides (like sea water and de-icing salts).

# **Can Stainless Steel** rust?

Not in the way steel rusts. Steel will discolor, bubble and flake from red oxide development. Stainless Steel may develop red spots, but this is usually due to Iron particles on the surface of the Stainless Steel. Any Iron particles must be removed and the Stainless Steel cleaned with a high concentration of citric acid or a commercial cleaner specifically designed for Stainless Steel.

## Is Stainless Steel Green (Environmentally Friendly)?

Stainless Steel is highly sought after by recyclers and is 100% recyclable. New Stainless Steel typically has a recycled content of between 65% & 80% which makes it one of the highest average content recycled construction materials on the planet.

# Will Stainless Steel Discolor?

Cleaners that are typically used with cement, grout and stone, etc., may contain Muriatic Acid.

Stainless Steel is not resistant to Muratic Acid. MURIATIC ACID SHOULD NOT BE USED IF STAINLESS STEEL IS PRESENT. It is not even necessary that the acid touch the Stainless Steel, just the "fumes" from it will cause a discoloration of the Stainless Steel. Other than this, Stainless Steel is usually very resistant to discoloring.



## **Care Instructions**



Regular cleaning with fresh water and a soft cloth will keep and protect your windshield, window, or hatch for years.

#### **GLASS**

Use commercially available glass cleaners or a mixture of fresh water and vinegar. Do not use abrasives, harsh chemicals, or metal scrapers. Regular cleaning will help assure clarity of the glass for safe boating.

# PLASTIC TYPE WINDSHIELDS

Never use glass cleaning solutions or dry cloth to clean Plexiglas. Never use acetone, benzene, carbon tetrachloride, or lacquer thinner. The only acceptable cleaners are a small amount of denatured alcohol, clean water, or a commercially available plastic polisher specific for the purpose. Use a soft rag and wash off the plastic windshield first with lukewarm water to avoid scratching the surface.

#### **WINDOW CHANNELS**

Clean window channels with mild detergent only. Channels can be sprayed with silicon aerosol while sliding the glass back and forth.

#### STAINLESS STEEL

Polish with commercially available metal polishes. A boat or car wax periodically applied will offer extra protection against the elements.

#### **PAINTED SURFACES**

Clean with fresh water periodically. Touch up scratches and areas where paint has chipped off with touch-up spray paint. Touch up kits are available from the factory. Boat top clips – never slide along windshield framework.

To change clip location, snap on and off the aluminum top track.

# SIDE WING VENT ADJUSTERS

Use care when opening and closing vent. Do not force.

Never ground windshield with any electrical devices or appliances.

Never use the windshield as a mooring cleat for tying off to a dock, pier or another boat. Never use the windshield as a tie-off attachment for trailering purposes.

### **Gel Coat**



# Your Boat's Gel Coat Finish

Congratulations! You are the proud owner of a new power or sail boat. You are also the owner of a new Integrity® gel coat finish on the hull and/or topside, and we would like you to be as proud of it as we are. That beautiful, shiny new color you love is the result of many years of gel coat research, testing and development.

But as proud as we are of the gel coat, no finish is totally impervious to chemicals and weathering. Imagine what a brand new car could look like if allowed to sit at a marina for years with no cover and no washing or waxing. With the same minimum maintenance you would ordinarily give your new automobile's finish, your boat's gel coat finish will retain its depth of color and gloss for years.

#### **Overall Maintenance**

Normal maintenance of your gel coated fiberglass boat is similar to the care you would give your automobile. Overall, automotive cleaners and waxes work fine, as well as the marine cleaners and waxes.

Note: Do not use caustic or highly alkaline (high pH) cleaners or those containing ammonia. These type of cleaners may darken white or off-white weathered gel coat surfaces. A chemical reaction

producing staining occurs if these type of cleaners are used on weathered gel coat. However, the stain may be removed with a rubbing compound or by lightly sanding with 400 grit sandpaper followed by an application of rubbing compound and a thorough waxing.

### **Cleaning**

We recommend general washing to avoid soil build-up and staining. The soil to your gel coat is the result of regular use and environmental pollutants such as soot and smog. Periodic cleaning with a mild detergent is necessary to remove normal deposits of soil.

### Waxing

From constant exposure over time to our natural environment and undesired pollutants, the gel coat begins to lose its gloss. To restore your finish to the original gloss and color requires your special attention. After washing with a mild soap or detergent, give the surface a good polishing with a self-cleaning marine or automotive wax. Waxing in the fall and spring is generally recommended to maintain and restore most of the original gloss. If the surface has not been maintained and has weathered badly, and if cleaning and waxing does not restore the finish satisfactorily, compounding will be required.

#### Compounding

Please see your marine dealer for advice. Polishing and compound (fine abrasive) or rubbing compound (coarser abrasive) is recommended for use on fiberglass boats to remove scratches, stains, or a severely weathered surface. Polishing or rubbing compound can be applied by hand or by pneumatic buffer. After the scratched, stained or weathered surface has been moved, it should be waxed to enhance the gloss and color while providing a seal to retard staining or new soil accumulation.

#### **Discoloration Removal**

Your marine dealer is best equipped and trained to do this work. If regular washing and waxing has been neglected, discoloration of the gel coated fiberglass surface may occur.

### **Gel Coat**



Discolored areas are very shallow in depth, literally right on the surface. The discoloration may be removed by gently wet-sanding the affected areas only by using 600 grit, wet or dry specially treated waterproof sandpaper. It's important to always sand in one direction, this includes the curves too. Use plenty of water to cool and clean the sandpaper and cut back on dust. After you are finished sanding, dry the areas and verify all the discoloration has been removed. If not, repeat the process.

After all the discoloration has been removed, the area will need to be buffed. Using an electrical or pneumatic buffer, buff at low speed (1750 rpm – 2250 rpm), this will restore the luster to the sanded surface. Using a generous amount of rubbing compound, apply it in a circular motion with a soft wool pad. When buffing has been completed, wash off the rubbing compound with clean water, and dry the surface.

To restore the gloss to the affected area, use a high-grade marine or automotive wax.

## Repairs

During the life of your boat, some damage to the gel coat surface is unavoidable. We recommend repairs done by trained, experienced professionals at your local marine dealer.

#### **Scratches**

If the scratch is in the gel coat surface, not penetrating the fiberglass, use an automotive polishing compound and rub it out. Apply the compound by hand using a damp rag or by using a power buffer. The scratch may not entirely disappear, but it should be noticeably better.

### **Gouges and Chips**

Our recommended patching procedure is to first clean the area needing repair with an acetone solvent to remove all traces of wax and oil. Next, thoroughly mix one tablespoon of "Patch Paste" with two or three drops of catalyst on a scrap piece of cardboard.

Apply the mixture to the pit, chip or gouge with a single-edge razor blade, matching the surface and contour of the area being repaired. Apply slightly more mixture to avoid having to fill the damaged section a second time. Allow the patch to harden thoroughly for a minimum of two to three hours.

Using a fine grit "wet or dry" sandpaper on a sanding block, wet-sand the patch until it is level with the surrounding surface. Finish with a marine or automotive rubbing compound using the same approach as used for the scratches.

### Refinishing

For a severely scratched or weathered fiberglass boat that is no longer restorable by using the previous methods, it may then be necessary to refinish it with two-package or two-part aliphatic urethane enamel. This can be done very effectively, but it is recommended refinishing should only be done by experienced professionals.

