

### 2 REGAL

# OWNER'S MANUAL

50 SAV



TO THE REGAL FAMILY

### **OUR MISSION**

With God's help, we will develop an exceptional team dedicated to enriching lives and providing an awesome boating experience.

### **OUR VALUES**

Integrity

Gratitude

Relationship-Focused

Excellence-Driven

**Ambitious** 

Team

I know I speak for everyone at Regal when I welcome you to the evergrowing family of Regal boat owners. You've chosen a boat that is recognized worldwide for its standard of excellence. Each step in construction has been carefully scrutinized to assure safety, performance, reliability and comfort for both your passengers and yourself.

Your yacht is certified by the National Marine Manufacturers Association. It also complies with the applicable standards set by the United States Coast Guard, American Boat and Yacht Council and the International Marine Certification Institute. Your Regal boat was built with the same attention to detail and quality of construction that we would expect in a craft we would purchase ourselves.

Whether you're a veteran boater or a newcomer, we strongly urge you to read this owner's manual thoroughly. Familiarize yourself with the various components of your vessel, and heed the safety precautions noted herein.

If you have questions that are not covered in this manual, please consult your authorized Regal dealer for assistance, phone the Regal factory at 407-851-4360 or visit www.regalboats.com.

Thank you, and welcome to the "World of Regal"!

President & CEO

Duane Kuck

Ruch

### LIMITED WARRANTY

This document is your Limited Warranty Registration Certificate and Statement of Limited Warranty. Please check the registration information section for accuracy. If this information is not correct or if you change your address at some future date, please notify us at the following address: Regal Marine Industries, Inc. Attention: Warranty Registrations, 2300 Jetport Drive, Orlando, Florida 32809; or email customerservice@regalboats.com. Please read the Limited Warranty carefully. It contains important information on Regal's claims procedures and your rights and obligations under this Limited Warranty.

**WHAT IS COVERED:** This Limited Warranty applies to Regal boats beginning with model year 2023.

### LIFETIME LIMITED STRUCTURAL DECK & HULL WARRANTY:

Regal Marine Industries, Inc. warrants to the original retail purchaser of this boat, if purchased from an authorized Regal dealer, that the authorized selling Regal dealer or Regal will repair or replace the factory-installed fiberglass if it is found to be structurally defective in material or workmanship, for as long as the original retail purchaser owns the boat. For the purpose of this Limited Warranty, the hull is defined as the single fiberglass casting which rests on the water. The deck is defined as the single fiberglass casting attached to the hull. This Limited Warranty is subject to all limitations and conditions explained below.

### FIVE-YEAR TRANSFERABLE LIMITED STRUCTURAL DECK &

**HULL WARRANTY:** Regal Marine Industries, Inc. warrants to the original retail purchaser of this boat, if purchased from an authorized Regal dealer, In addition to the Lifetime Limited Structural Hull Warranty, Regal offers a Transferable Five-Year Limited Structural Deck & Hull Warranty. Under the Five-Year Transferable Limited Structural Hull Warranty, the authorized Regal

selling dealer or Regal will repair or replace the fiberglass hull or deck if it is found to be structurally defective in material or workmanship within the first five (5) years after date of delivery to the original retail purchaser. Any remaining term of this Five-Year Limited Hull Warranty may be transferred to a second owner if within 60 days of purchase; the new owner registers the transfer with Regal and pays the established Limited Warranty transfer fee. Contact Regal Customer Service at the above address for details.

FIVE-YEAR LIMITED HULL BLISTER WARRANTY: Regal Marine Industries, Inc. warrants to the original retail purchaser of this boat, if purchased from an authorized Regal dealer that the authorized Regal selling dealer or Regal will repair any underwater gelcoated surfaces of the hull against laminate blisters which occur as a result of defects in material or workmanship within five (5) years of the elate of delivery, provided that the original factory gelcoat surface has not been altered. Alteration would include but is not-limited to damage repair; excessive sanding, scraping, sandblasting; or from improper surface preparation for application of a marine barrier coating or bottom paint, any of which shall void this Five-Year Limited Hull Blister Warranty. Proper preparation must be applied to the hull bottom if the boat is to be moored in the water for periods in excess of sixty (60) days. Regal Marine shall repair or cause to be repaired any covered laminate blisters based on the following prorated schedule. Less than three (3) years from delivery date - 100%, Three (3) to four (4) years from delivery date - 50%, Four (4) to five (5) years from delivery date - 25% Reimbursement shall be limited to one repair, not to exceed one hundred fifty (\$150.00) dollars per foot of boat length prior to prorating. Regal's prior authorization for the method and cost of repair must be obtained before repairs are commenced. All costs to transport the boat for repairs are the responsibility of the owner.

**LIMITED GENERAL WARRANTY:** Regal Marine Industries, Inc. warrants to the original retail purchaser of this boat, if purchased from an authorized Regal dealer, In addition to above hull warranties, that the authorized Regal selling dealer or Regal will repair or replace any parts found to be defective in materials or workmanship for a period of one (1) year from the date of delivery, subject to all exceptions, limitations and conditions contained herein.

THREE YEAR REGAL COMPONENT WARRANTY: Regal Marine Industries, Inc. warrants to the original retail purchaser of this boat, if purchased from an authorized Regal dealer, that the authorized Regal selling dealer or Regal will repair or replace any parts found to be defective in materials or workmanship for cabinetry, fiberglass parts (aside from hull/deck) and upholstery for a period of three (3) years from the date of delivery, subject to all exceptions, limitations and conditions contained herein.

LIMITED EXTERIOR FINISH WARRANTY: Regal Marine Industries, Inc. warrants to the original retail purchaser of this boat, if purchased from an authorized Regal dealer that the authorized Regal selling dealer or Regal will repair cosmetic defects in the exterior gelcoat finish including cracks, air voids or crazing for one year from the date of delivery to the original retail purchaser reported within the first year, subject to all limitations and conditions contained herein. All warranty work is to be performed at a Regal dealership or other location authorized by a Regal Customer Service Manager after it is established to Regal's satisfaction that there is a defect in material or workmanship.

**CUSTOMER OBLIGATIONS:** The following are conditions precedent to the availability of any benefits under these limited warranties:

- (a) The purchaser, who is not Regal's sales agent and is otherwise not in any general or sales agency relationship with Regal, must sign and the authorized Regal selling dealer, must submit to Regal the "NEW BOAT DELIVERY and ACCEPTANCE CHECKLIST" within fifteen (15) days of the date of delivery and such information must be on file at Regal.
- (b) The purchaser must first notify the authorized Regal selling dealer from whom the boat was purchased of any claim under this Limited Warranty within the applicable Limited Warranty period and within a reasonable period of time (not to exceed thirty (30) days after the defect is or should have been discovered.)
- (c) Regal will not be responsible to repair any condition or replace any part,
- (1) if the use of the boat is continued after the defect is or should have been discovered; and (2) if such continued use causes other or additional damage to the boat or component parts of the boat.
- (d) Based on the authorized Regal selling dealer's knowledge of Regal's

Limited Warranty policy and/or consultations with Regal, the dealer will accept the claim and arrange for appropriate repairs to be performed, or deny the claim, if it is not within the Limited Warranty policy.

- (e) The authorized Regal selling dealer will contact the Regal boat owner regarding instructions for delivery of boat or part for covered warranty repair if it is covered by the Limited Warranty. **ALL COSTS TO OR FROM THE BOAT AND/OR TRANSPORT OF THE BOAT FOR REPAIRS ARE THE RESPONSIBILITY OF THE OWNER.**
- (f) If the Regal boat owner believed a claim has been denied in error or the authorized Regal selling dealer has performed the covered warranty work in an unsatisfactory manner, the owner must notify Regal's Customer Service Department in writing at the address listed for further consideration. Regal will then review the claim and take appropriate follow-up action.
- (g) Before bringing any action, claim, lawsuit or otherwise seeking relief against Regal based on any alleged breach of any of the Limited Warranties' terms or conditions herein, the Regal Boat owner must contact Regal's Customer Service Department Directly and allow Regal, beyond those efforts made by its authorized Regal selling dealer or other authorized Regal dealer, notice and an opportunity to cure any alleged breach of any of the terms of any of the Regal Limited Warranties.

# **WARRANTY EXCEPTIONS: THIS LIMITED WARRANTY** does not cover, the following are not warranted, are excluded from the terms of the Regal Limited Warranty and the following terms apply to any Regal Limited Warranty:

- (a) Engines, drives, controls, propellers, batteries, metal plating or finishes, windshield breakage, leakage, fading and deterioration of paints, canvas, vinyl, upholstery, and fabrics;
- (b) Gelcoat surfaces including, but not limited to discoloration or blistering except as noted above;
- (c) Accessories and items which were not part of the boat when shipped from the Regal factory or which carry their own individual warranty and /or any damage caused by such accessories and items;
- (d) Damage caused by one or more of the following: misuse, accident, corrosion, galvanic corrosion, negligence, lack of proper maintenance, or improper trailering;

- (e) Any boat used for racing, or used for rental or commercial purposes;
- (f) Any boat operated contrary to any instructions furnished by Regal, including instructions and guidance provided in the Regal Owner's Manual, or operated in violation of any federal, state, Coast Guard or other governmental agency laws, rules, or regulations;
- (g) The limited warranty is void if alterations have been made to the boat;
- (h)Transportation of boat or parts to and/or from a REGAL factory or service location;
- (i) Travel time or haul outs, loss of time or inconvenience;
- (j) Any published or announced catalog performance characteristics of speed, fuel and oil consumption, and static or dynamic transportation in the water;
- (k) Any boat that has been repowered beyond Regal's power recommendations;
- (I) Boats damaged by accident and boats damaged while being loaded onto, transported upon or unloaded from trailers, cradles, or other devices used to place boats in water, remove boats from water or store or transport boats on or over land;
- (m) Any item repaired, replaced or modified under the terms of this warranty does not in any way prolong, extend or change any terms set forth in this limited warranty;
- (n) Water damage to, dry rot to, condensation to, or absorption by interior surfaces, wood structures or polyurethane foam; interior wood including, but not limited to, mold, bleeding and/or discoloration as a result of condensation or moisture or water continually contacting the plywood causing staining to upholstery, carpet or other interior surfaces;
- (o) Costs or charges derived from inconvenience or loss of use, commercial or monetary loss due to time loss, and any other special, incidental or consequential damage of any kind or nature whatsoever.
- (p) Regal reserves the right to improve the design or manufacture process of Regal boats without obligation to modify previously produced product.

**NO WAIVER OF THESE TERMS:** The terms, conditions, limitations and disclaimers contained herein cannot be waived except by the Customer Service Manager of Regal. Any such waiver shall be in writing. Neither the authorized Regal dealer, nor the customer, nor any service, sales and/or

warranty representative of Regal is authorized to waive and/or modify these conditions, limitations and/or disclaimers.

EXCEPT AS SET FORTH HEREIN OR ON ANY OTHER WRITTEN EXPRESS LIMITED WARRANTIES BY REGAL, THERE ARE NO OTHER WARRANTIES EITHER EXPRESS OR IMPLIED PROVIDED BY REGAL ON THIS BOAT. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF FITNESS AND MERCHANTABILITY, ARE EXPRESSLY EXCLUDED. REGAL FURTHER DISCLAIMS ANY LIABILITY FOR ECONOMIC LOSS ARISING FROM CLAIMS OF PRODUCT FAILURE, NEGLIGENCE, DEFECTIVE DESIGN, MANUFACTURING DEFECT, FAILURE TO WARN AND/OR INSTRUCT, LACK OF SEAWORTHINESS, AND ANY OTHER THEORY OF LIABILITY NOT EXPRESSLY COVERED UNDER THE TERMS OF THIS LIMITED WARRANTY. AS SET FORTH ABOVE, REGAL MAKES NO IMPLIED WARRANTY OF MERCHANTABILITY AND EXPRESSLY EXCLUDES ANY SUCH WARRANTY. TO THE EXTENT SUCH EXCLUSION IS NOT ALLOWED BY LAW OR AN IMPLIED WARRANTY OF MERCHANTABILITY IS ALLOWED BY LAW:

- (I) ANY IMPLIED WARRANTY OF MERCHANTABILITY THAT IS, AS A MATTER OF LAW, NOT PERMITTED TO BE EXCLUDED AS SET FORTH ABOVE, IS LIMITED TO ONE YEAR FROM THE DATE OF DELIVERY TO THE FIRST RETAIL OWNER;
- (2) NEITHER REGAL, NOR ANY SELLING DEALER SHALL HAVE ANY RESPONSIBILITY FOR LOSS OF USE OF THE BOAT, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES MAY NOT ALLOW EXCLUSIONS OF IMPLIED WARRANTIES OR LIMITATIONS ON HOW LONG ANY IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT BE APPLICABLE. SOME STATES MAY NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT BE APPLICABLE IN THOSE STATES. THIS WARRANTY GIVES THE OWNER SPECIFIC LEGAL RIGHTS, AND THE OWNER MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

THE TERMS AND CONDITIONS CONTAINED HEREIN, AS WELL AS THOSE OF ANY DOCUMENTS
PREPARED IN CONJUNCTION WITH THE SALE OF THIS VESSEL MAY NOT BE MODIFIED, ALTERED OR
WAIVED BY ANY ACTION, INACTION, OR REPRESENTATIONS, WHETHER ORAL OR IN WRITING, EXCEPT
UPON THE EXPRESSED, WRITTEN AUTHORITY OF A MANAGEMENT LEVEL EMPLOYEE OF REGAL.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Regal's obligation with respect to this warranty is limited to making repairs to or replacing the defective parts and no claim for breach of warranty shall be cause for cancellation or rescission of the contract or sale for any boat manufacturer by REGAL

MARINE INDUSTRIES, INC. Regal will discharge its obligations under this warranty as rapidly as possible, but cannot guarantee any specific completion date due to the different nature of claims which may be made and services which may be required. Regal reserves the right to change or improve the design of its boats without obligation to modify any boat previously manufactured. This limited warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. Regal shall in no way be responsible for any repairs not PRE-AUTHORIZED by a Regal Customer Service Manager or repairs performed by a repair shop not PRE-AUTHORIZED by a Regal Customer Service Manager.

ARBITRATION OF DISPUTES AND WAIVER OF JURY TRIAL EXCEPT AS SPECIFICALLY EXCLUDED IN THIS LIMITED WARRANTY, PURCHASER, REGAL AND AUTHORIZED REGAL DEALER AGREE TO SUBMIT ANY AND ALL CONTROVERSIES, CLAIMS OR DISPUTES ARISING OUT OF OR RELATING TO THE BOAT AND THIS LIMITED WARRANTY AND ALL OTHER AGREEMENTS EXECUTED BY PURCHASER RELATED TO THE BOAT TO BINDING ARBITRATION. IT IS THE EXPRESS INTENT OF PURCHASER, REGAL AND DEALER THAT THIS ARBITRATION PROVISION APPLIES TO ALL DISPUTES, INCLUDING CONTRACT DISPUTES, TORT CLAIMS, FRAUD CLAIMS AND FRAUD-IN-THE INDUCEMENT CLAIMS, STATUTORY CLAIMS AND REGULATORY CLAIMS RELATING IN ANY MANNER TO THE BOAT AND THIS LIMITED WARRANTY.

IF ANY CONTROVERSY OR CLAIM DESCRIBED IN THIS ARBITRATION PROVISION IS DETERMINED FOR ANY REASON TO BE INELIGIBLE FOR ARBITRATION, AND FOR ANY CONTROVERSIES, CLAIMS, OR DISPUTES SPECIFICALLY EXEMPTED FROM ARBITRATION, THEN THOSE CONTROVERSIES, CLAIMS OR DISPUTES SHALL INSTEAD BE DECIDED BY A JUDGE OF A COURT OF COMPETENT JURISDICTION, IN ORANGE COUNTY, FLORIDA, WITHOUT A JURY. PURCHASER, REGAL AND DEALER KNOWINGLY AND VOLUNTARILY WAIVE THE RIGHT TO A TRIAL BY JURY FOR ALL SUCH CONTROVERSIES, CLAIMS AND DISPUTES. PURCHASER, REGAL AND DEALER UNDERSTAND THAT THERE SHALL BE NO JURY TRIAL, WHETHER THE CONTROVERSY OR CLAIM IS DECIDED BY ARBITRATION OR BY TRIAL BEFORE A JUDGE. NOTWITHSTANDING THE PROVISIONS OF THIS ARBITRATION AGREEMENT, WITH REGARD TO CONTROVERSIES AND/OR ENTITLEMENT TO POSSESSION OF EITHER THE BOAT OR ANY TRADEIN, ANY PARTY HERETO MAY RESORT TO A JUDICIAL DETERMINATION (BY A JUDGE AND NOT A JURY), OF SUCH CONTROVERSIES, DISPUTES OR CLAIMS WITHOUT WAIVING ANY RIGHT TO DEMAND ARBITRATION WITH RESPECT TO ALL OTHER CONTROVERSIES, DISPUTES OR CLAIMS BETWEEN THE PARTIES AS MORE SPECIFICALLY SET FORTH IN THIS ARBITRATION PROVISION.

ALL ARBITRATIONS SHALL PROCEED THROUGH THE AMERICAN ARBITRATION ASSOCIATION AND

BE SUBJECT TO ITS COMMERCIAL ARBITRATION RULES, EXCEPT AS SET FORTH HEREIN. THE ARBITRATORS SHALL HAVE THE AUTHORITY TO AWARD ANY FORM OF RELIEF THAT COULD BE PROPERLY AWARDED IN A CIVIL ACTION IN THE STATE OF FLORIDA FOR THE TYPE OF CLAIMS PRESENTED, SUBJECT HOWEVER, TO ALL LIMITATIONS, PREDICATES, AND CONDITIONS COVERING SUCH REMEDIES OR RELIEF UNDER FLORIDA LAW. THE PURCHASER, REGAL OR DEALER MAY DEMAND ARBITRATION OF A CLAIM BY FILING A WRITTEN DEMAND FOR ARBITRATION, ALONG WITH A STATEMENT OF THE MATTER IN CONTROVERSY WITH THE AMERICAN ARBITRATION ASSOCIATION, AND SIMULTANEOUSLY SERVING A COPY UPON THE OTHER PARTY. PURCHASER, REGAL AND DEALER AGREE THAT THE ARBITRATION PROCEEDING SHALL BE CONDUCTED IN ORANGE COUNTY, FLORIDA UNLESS OTHERWISE AGREED BY THE PARTIES. EACH PARTY AGREES TO BEAR THEIR OWN ATTORNEY FEES AND COSTS. THE FILING FEES AND ALL OTHER THIRD-PARTY COSTS FOR THE ARBITRATION, INCLUDING THE ARBITRATOR'S FEE SHALL BE PAID BY THE FILING PARTY INITIATING THE ARBITRATION. THE PREVAILING PARTY SHALL BE ENTITLED TO REIMBURSEMENT OF THEIR REASONABLE ATTORNEY FEES AND REASONABLE EXPENSES FROM THE NON-PREVAILING PARTY.

### INTRODUCTION

Congratulations on purchasing your new Regal boat. Regal is an industry leader in quality and luxury—the 50 SAV was born out of our commitment to those ideals. Your vessel is certified by the National Marine Manufacturers Association and meets or exceeds standards set by the United States Coast Guard, American Boat and Yacht Council, and the International Marine Certification Institute. We believe you have made the best choice in a crowded field.

As a Regal boat owner, it is important to learn about general boating practices and safety before operating your vessel. This document contains two manuals. The first covers system and equipment operation specific to your model. The second covers general boating operational and safety standards. Read both manuals thoroughly before embarking for the first time.

Your Regal owner's manual contains information that will help you operate your craft safely and with ease. There is a QR code placed close to the helm. Scan the code with your smartphone to access your owner's manual. Your owner's manual is not a complete technical manual, but may help troubleshoot select Regal systems and components.

Your Regal dealer will answer any questions and provide valuable hands-on information during the new boat delivery process. Your dealer has received factory training; employ their services to solve advanced technical problems and perform periodic maintenance. Your Regal dealer also carries a line of factory approved parts and accessories. Call 407-851-4360 or go to regalboats.com to find your closest Regal dealership.

# TABLE OF

3	Our Mission & Values	71	Water
5	Limited Warranty	<b>72</b>	Fresh Water
13	Introduction	<b>76</b>	Waste Water
17	Notes	81	Fire Suppression
21	Systems	84	Equipment
23	Propulsion	85	Bow
24	Components	89	Cockpit
27	Operation	98	Cabin
28	Starting Your Engines	106	Lazarette Compartment
30	Mercury Controls	109	Stern
33	Yamaha Controls	114	Fishing Tombstone
39	Electrical	116	Care
40	Components	122	Maintenance
48	Operation	126	Troubleshooting
<b>57</b>	Digital	139	General Vessel Manual
58	Components	184	Final Acknowledgments
60	Operation	185	Technical Drawings
63	Digital Switching		
69	Troubleshooting		



# NOTES NOTES

### **NOTES**

### **CALIFORNIA PROPOSITION 65**

Boats manufactured for use in California for model year 2018 and after meet the California EVAP Emissions regulation for spark-ignition marine watercraft. Boats meeting this requirement will have a label affixed near the helm.

### **A WARNING**

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

The fuel system in this boat complies with U.S. EPA mandated evaporative emission standards at time of manufacture using certified components.

### Typical Helm CARB Label-Trailerable Models

EMISSIONS CONTROL SYSTEM
INFORMATION
MEETS U.S. EP EVAP STANDARDS USING
CERTIFIED COMPONENTS AND MEETS
2020 MY CALIFORNIA EVAP EMISSIONS
REGULATIONS FOR SPARK-IGNITION
MARINE WATERCRAFT

MANUFACTURER: REGAL MARINE INDUSTRIES, INC.

CALIFORNIA EVAP FAMILY: LRMIPVSSL001 EMISSION CONTROL SYSTEM: CM

### MANUFACTURER'S WARRANTY COVERAGE

This evaporative emission control system is warranted for two years. If any evaporative emission-related part on your spark-ignition marine watercraft is defective, the part will be repaired by Regal Marine Industries, Inc.

### OWNER'S MANUAL RESPONSIBILITIES

- As the spark-ignition marine watercraft owner, you are responsible for the performance of the required maintenance listed in your owner's manual. Regal Marine Industries, Inc. recommends that you retain all receipts covering maintenance on your spark-ignition marine watercraft, but Regal Marine Industries, Inc. cannot deny warranty solely on the lack of receipts.
- As the owner, you should be aware that Regal Marine Industries, Inc. may deny you warranty coverage of your spark-ignition marine watercraft or a part has failed due to abuse, neglect, or improper maintenance or unapproved modifications.

• You are responsible for presenting your spark-ignition marine watercraft to a Regal Marine industries, Inc. distribution center or a service center as soon as the problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have any questions regarding your warranty coverage, you should contact Regal Marine Industries, Inc. at 407-851-4360.

### SAFETY LABELS

Safety precaution labels are caution, warning and danger signal words. They are highlighted in this manual by font design and symbol usage. A notice heading is included which provides operation and maintenance information but is not hazard-related. An information label provides tips on a variety of topics. Become familiar and understand all safety precaution labels!

### **PRECAUTIONARY LABELS**

Read and understand all safety labels affixed to your Regal boat or found in this manual and the vendor literature. Many of the safety labels are posted close to the helm, aft cockpit, cabin and swim platform. The location of the labels may vary. Review the helm safety labels with passengers before disembarking. Use common sense to analyze the result of an action on board your vessel. Always think safety first!

### **NOTICE**

DO NOT REMOVE OR COVER ANY PRECAUTIONARY LABELS. KEEP HARSH CHEMICALS AWAY FROM LABELS. IF A LABEL BECOMES ILLEGIBLE, CONTACT YOUR REGAL DEALER FOR ORDERING REPLACEMENTS.

### **NOTICE**

GENERAL OR SPECIFIC INFORMATION
WHICH IS IMPORTANT TO CORRECT
OPERATION OR MAINTENANCE, BUT IS
NOT HAZARD RELATED.

### **A** CAUTION

INDICATES A POTENTIALLY HAZARDOUS SITUATION OR UNSAFE PRACTICE THAT, IF NOT AVOIDED, MAY RESULT IN INJURY, PROPERTY OR PRODUCT DAMAGE.

### **A WARNING**

POTENTIALLY HAZARDOUS SITUATION THAT, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY

### **A DANGER**

IMMEDIATE HAZARDOUS SITUATION THAT IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

### **A** CAUTION

READ AND UNDERSTAND THE SEATING ARRANGEMENT DRAWING IN THE TECHNICAL CHAPTER. THIS DRAWING DISPLAYS THE DESIGNATED SEATING ARRANGEMENT FOR A BALANCED LOAD AND VESSEL MAXIMUM PERSONS SEATING CAPACITY.





# SYSTEMS

# Systems Introduction

The following is an operational and component overview of the Regal 50 SAV's systems. It is important that you, the owner, understand how to operate the boat and how the boat's systems work. Adequate understanding is crucial to operational safety, maintenance, and upkeep. For more specific information on third-party components, refer to the manufacturer owner's manual for that component included in your welcome packet.



## **Propulsion**

The 50 SAV's propulsion system generates 1800 HP from either triple Mercury or quad Yamaha outboard engines. The boat comes equipped with a 700 gallon fuel tank in between the firewall and the Lazarette compartment. The following section includes a basic overview of your propulsion and fuel system and an operational introduction to each propulsion package. Refer to your propulsion package owner's manual included in your welcome packet for specific engine operation, maintenance, and troubleshooting information.

Note: Layouts may vary. Mercury package pictured.



- 1 Ignition Panel (under steering wheel)
- 2 Helm Controls
- 3 Engines
- 4 Battery Activation Panel
- 5 Fuel Tank (in hull)
- 6 Fuel Tank Fill Cap
- 7 Bow Thruster Propeller (in hull, underwater)

### **A WARNING**

PREVENT INJURY OR DEATH!
READ ALL MANUFACTURER'S STERN DRIVE
ENGINE AND PROPULSION OWNER'S
MANUALS BEFORE OPERATING
YOUR VESSEL.

### **A WARNING**

PREVENT INJURY OR DEATH! ALWAYS STOP THE ENGINE(S) BEFORE PERFORMING ANY ENGINE MAINTENANCE!

### **Components**

### **Fuel**

A firewall is a bulkhead that separates the cabin from the fuel tank and protects the living quarters from sources of ignition and fumes.

There are two fuel fills in the starboard gunwale labeled "GAS". Do not fill the tank with the engines running. Improper fueling may void your warranty.

A charcoal canister fitted to the fuel vent absorbs fuel vapors in compliance with EPA and CARB regulations.

### **NOTICE**

DO NOT OVERFILL THE FUEL TANK!
THIS HELPS AVOID ANY OVERBOARD
SPILLS WHICH MAY HARM THE
ENVIRONMENT.

### **A WARNING**

PREVENT INJURY OR DEATH!
FUEL VAPORS
ARE A FIRE AND EXPLOSION HAZARD.
DO NOT STORE FUELS,
FLAMMABLE LIQUIDS
OR PORTABLE FUEL TANKS ON BOARD!

Absorbed vapors and particulates will drain back down into the fuel tank. When filling the tank, keep an eye on the fuel gauge on the "Engine" page of your chart plotters (see "Garmin Chart Plotters" pg. 60).

### Oil

Engines need oil to lubricate internal mechanisms. Refer to the engine manufacturer owner's manual for specific information on recommended oil types and maintenance schedule.

Changing a boat's oil is more complicated than changing a car's oil. Have your dealer change your oil when you take the boat in for regular maintenance.

### **A CAUTION**

AVOID ENGINE DAMAGE OR FAILURE! CHECK ENGINE/DRIVE OIL LEVELS BEFORE EACH OUTING. IF LOW ADD APPROPRIATE OIL TYPE AND OUANTITY.

### **Cooling**

Your engines use raw water for cooling. Impellers along the engines' raw water line pump water through the coolant system. Service periodically according to the manufacturer's instructions.

Do not start the engines dry. If the outdrives are not submerged, the coolant system will not take in water to cool the engine which could cause overheating and damage. Always make sure your outdrives are fully submerged before starting. Starting your engines dry may void your warranty.

### **A WARNING**

PREVENT INJURY DUE TO HOT LIQUIDS!

DO NOT OPEN THE COOLANT CAP
WHEN THE ENGINE IS HOT AS STEAM OR
HOT ANTI-FREEZE COULD CAUSE BURNS!

### **Exhaust**

Exhaust is expelled directly from the engines above and below water. Natural and power ventilation built into the Lazarette compartment expels any vapors that may accumulate.

Power ventilation utilizes bilge blowers to clear fumes from the engine compartment.

There are exhaust vents on the aft side of the fishing tombstone, above the port and starboard speakers. The port side vents are attached to blowers that move air through the Lazarette compartment. Before embarking, check the exhaust vents for any blockage to prevent potential CO poisoning.



### **A WARNING**

PREVENT INJURY OR DEATH!
ETHYLENE GLYCOL COOLANT IS
POISONOUS TO HUMANS AND ANIMALS
IF INGESTED. DISPOSE OF ALL COOLANT IN A
ENVIRONMENTALLY FRIENDLY WAY

### **A** CAUTION

AVOID EYE IRRITANT POTENTIAL!

WEAR EYE PROTECTION

WHEN WORKING WITH COOLANT.

WEAR GLOVES & WASH HANDS OFTEN!

### **A WARNING**

AVOID A POSSIBLE ACCIDENT CAUSING
INJURY, DEATH OR PROPERTY DAMAGE!
NEVER USE A STANDARD PROPELLER
ON A COUNTER ROTATION ENGINE, OR A
COUNTER ROTATION PROPELLER ON A
STANDARD ROTATION ENGINE. THE VESSEL
COULD TRAVEL IN AN UNEXPECTED
DIRECTION

### **Propellers**

Regal has selected the ideal propellers for your individual propulsion package.

Periodically check your propeller for:

- Loose, missing, or corroded hardware.
- Nicks, dings, or missing propeller material.
- Bent blades.
- Debris wrapped around the blades.

### **Operation**

The following section includes basic operating instructions for both Mercury and Yamaha propulsion packages. For more detailed instructions, refer to the owner's manual for your propulsion package included in your owner's welcome packet.

### **Battery Activation Panel**

Your engines receive ignition power from the DC battery bank in the Lazarette compartment (see, "Batteries" pg. 40). A spark from a spark plug ignites compressed fuel and provides the initial combustion reaction that starts your engine. After starting your engine, the batteries are recharged by the alternator or Power Bank (see "Live Power" pg. 48).

You must turn the batteries on before starting the boat. Flip up the starboard mezzanine seat to access the battery activation panel. Press the "12V ON/ OFF" button on the panel to turn the batteries on. The button will remain lit while the batteries are on. After activating the batteries, you do not need to activate them again unless you turn them off. To turn the batteries off, press the button again.



### **Starting Your Engine**

### Pre-Ignition Checklist

Perform the following safety and system checks before starting your engines:

- 1. Turn the batteries on from the battery activation panel.
- Open the engine hatch and perform a 'sniff test' to check for fuel leaks and vapors. If you smell any fuel vapors, do not start the engines. Have your boat serviced by your Regal dealer before turning on the engines.
- Check the exhaust vents on the fishing tombstone for blockage. Remove any debris that may cause vapors to accumulate in the Lazarette compartment.
- 4. Run your bilge blowers for at least four minutes to clear any lingering vapors. To run your bilge blowers, tap the blower icons in the Digital Switching System (see "Digital Switching System" pg. 63).
- Check oil.
- Check fuel levels. Remember the '1/3 Rule' (see, "General Vessel Manual" pg. 139).
- 7. Make sure the throttle is in the neutral position (see below).

### **A WARNING**

GASOLINE VAPORS CAN EXPLODE! BEFORE STARTING ENGINE. PREFORM SNIFF TEST AND CHECK BILGE FOR GASOLINE LEAKS OR VAPORS.

### **A WARNING**

PREVENT INJURY OR DEATH
DUE TO FIRE OR EXPLOSION!
RUN BLOWER AT LEAST 4
MINUTES BEFORE STARTING ENGINES.
RUN BLOWER BELOW CRUISING SPEEDS.

### **Helm Controls**



Note: Layouts may vary.

- 1 Steering Wheel
- 2 Ignition Panel
- 3 Throttle
- 4 Joystick
- 5 Bowthruster Control

After ignition, allow the engines to idle and warm up before embarking. While the engines are warming, check the engine compartment for any unusual sounds or conditions including visible fuel leaks.

### Mercury

Your Mercury propulsion package comes with triple 600 horsepower outboard engines, the Axius premier shifter, and the Mercury joystick. Refer to the manufacturer owner's manual for specific operating instructions.

### Ignition

The ignition panel is under the steering wheel at the helm. Each engine has a dedicated ignition switch. To start your engines, insert each key into the ignition switches. When a key is in the ten o'clock position, the ignition is off. To prime the ignition, turn each key to 12 o'clock until it clicks once.

**A WARNING** 

AVOID A POSSIBLE ACCIDENT CAUSING INJURY, DEATH OR PROPERTY DAMAGE! BEFORE STARTING ENGINE ENSURE THE BOAT IS SECURE TIGHTLY AT THE MOORING AND THERE ARE NO SWIMMERS IN THE AREA.

There are several options when cranking your engines.

- Turn each key individually to two o'clock to crank each engine separately.
- Press the "START ALL ENGINES STOP" button on the port side of the Mercury shifter to crank the engines together.
- Press the three "Start/Stop" buttons on the front of the Mercury shifter (see below) to turn on each engine.

To turn the engines off, you can perform any of the above steps in reverse.

Ignition Panel





### **Throttle**

Note: Layouts may vary.



Your boat comes equipped with a dual-handle, triple-engine ERC. The left lever controls the port engine and the right lever controls the starboard engine. The central engine will auto adjust to match the engine with the lowest throttle setting. If all engines are set at relatively the same speed, they will synchronize. Press the "1 Lever" button to control all engines together.

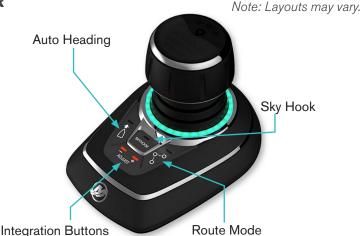
There is a screen in the middle of the throttle that will display the status of advanced features like the Active Trim. It will also display any potential faults that may occur.

The "Active Trim" button on the left side of the throttle engages Active

Trim. Active Trim automatically adjusts the angle of each engine to provide the optimal ride. There are arrow buttons above and below the Active Trim button. Use the arrows to select an Active trim profile. Each profile is a set of preprogrammed Active Trim parameters designed for specific situations.

Use the "All Trim" switch to adjust the trim angle of all engines together. Hold the switch up to raise the trim angle and hold it down to lower. There are also three manual trim switches on the back of the throttle to adjust each engine's trim individually. Adjusting the trim manually while Active Trim is engaged will turn Active Trim off.

### **Joystick**



To engage the Mercury Joystick, make sure the engine is running and the throttle is in neutral. A green ring around the joystick will illuminate when the joystick is activated. To use the joystick, simply grab it and begin piloting. Use the '+' and '-' buttons on the front of the joystick to adjust the joystick steering sensitivity.

Press the "Route Mode" button on the left side of the throttle to engage route mode. In route mode, the boat will pilot itself to a waypoint selected on the chart plotter. Press the button again to disengage route mode.

To activate "Auto Heading" Mode, put the boat into gear and then press the "Auto Heading" button on the right side of the throttle. In auto heading mode, the boat will maintain its current heading. After engaging auto heading mode, adjustment lights will illuminate on the top of the throttle. Tilt the joystick left or right to adjust the heading 1° port or starboard respectively. Twist the joystick counterclockwise or clockwise to adjust the heading 10° port or starboard respectively.

Press the "SKYHOOK" button in the center of the throttle to engage the SkyHook. SkyHook automatically maintains the boat's position and heading.

The bow thruster is integrated into the Mercury joystick. When piloting the boat using the joystick, the thrust will engage for extra control when maneuvering. When integration is active, two orange lights above the "Integration" button on the joystick will illuminate. To turn integration off, press the "Integration" button on the joystick once. Only one orange light over the minus icon (-) will be illuminated.

32

### Yamaha

Your Yamaha propulsion package comes with quad, 450 horsepower outboard engines, the Helm Master EX throttle, and the Yamaha joystick. Refer to the manufacturer owner's manual for specific operating instructions.

### Ignition

The ignition panel is under the steering wheel at the helm. Each engine has its own dedicated ignition button. To start your engines, begin by unlocking the ignition using the included Yamaha key fob. Once the ignition is unlocked, press the "Ignition" button to enable the ignition.

There are three ways to crank the engines.

 Press each ignition "ON/OFF" button individually to crank each engine separately.

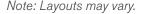
- Press the "Start All" button on the ignition panel to crank the engines together.
- Press the "Start/Stop" button on the throttle (see below) to crank the engines together.

To turn the engines off, press the "ON/OFF" or the "Start All" button(s) again.

After ignition, allow the engines to idle and warm up before embarking. While the engines are warming, check the engine compartment for any unusual sounds or conditions including visible fuel leaks.



### **Throttle**





Your boat comes equipped with a twin control Yamaha EX Shifter. The left lever controls the two port engines and the right lever controls two starboard engines. Press the "Single Lever" button to control all engines together.

The "Center Engine" button allows you to control only the center port and starboard engines. The specific control allows you to control the vessel better at slower speeds.

The "Speed Control" switch on the left side of the throttle lever allows you to maintain and adjust set speeds without moving the throttle. From any throttle position, press "UP" or "DN" on the switch to adjust the boat's

RPMs in 500 RPM increments. To turn off speed control, move the levers either forward or back and the control will disengage.

There are five "Power Trim" switches on the throttle. There is a universal switch on the port side lever. This switch raises or lowers the trim angle of all engines together. There are also four trim switches on the back of the throttle. Each switch raises or lowers the trim angle of each outboard individually.

The "Neutral Hold" button keeps the engines in neutral regardless of the throttle position. When you move the throttle forward or back while neutral hold is active, the engines will rev, and rpms increase, but the boat will not move.

There is also a DEC alert indicator LED on the throttle that will illuminate if there is a communication issue between the throttle and the engines. If the light illuminates, have your boat serviced by your Regal dealer.



Throttle side view



### **Joystick**

Note: Layouts may vary.



To engage the Yamaha Joystick, make sure the engine is running and the throttle is in neutral. Press the "JOYSTICK" button to activate the joystick. Press the button again to turn the joystick off.

Press the 'plus' and 'minus' adjustment buttons to adjust the joystick sensitivity.

There are three "SetPoint" buttons on the front of the joystick. Press the "STAYPOINT" button to automatically maintain the boat's position and heading.

Press the "DRIFTPOINT" button to maintain the boat's heading, but allow the vessel to drift with the current.

Press the "FISHPOINT" button and the vessel will automatically keep the bow pointed into the wind or current.

Press each button again to turn the modes off.

#### **Bow Thruster**



Note: Layouts may vary.

The bow thruster is designed for docking and maneuvering in tight areas. It is controlled by the bow thruster joystick at the helm and is a standard addition to your outboard propulsion system.

The bow thruster propeller is housed in the bow of the hull and, when engaged, pushes the boat to port or starboard. To turn the bow thruster on, press the on/off button on the front of the bow thruster joystick panel. Then, hold the button until a light on the panel flashes, then release. A light on the panel will illuminate to indicate the joystick is on.

To operate the bow thruster, tilt the joystick left to push the boat to port or right to push the boat to starboard.

Always ensure there are no swimmers in the area before using the bow thruster. Refer to the manufacturer owner's manual for specific operational instructions.

When completing periodic maintenance, inspect the propeller for debris and make sure it is aligned in the center of the hull tunnel and is not touching the walls. Do not operate the bow thruster when the boat is out of the water.

There is a bow thruster cut off icon in the DSS (see "Digital Switching System" pg. 63). In the unlikely event of a runaway bow thruster, tap the icon to cut power to the bow thruster. There is also an EGIS module in the anchor locker on the port side. Turning the starboard switch "Off" will also cut the power. Remember to return the switch to "Auto" once the bow thruster stops.

Bow Thruster Cut Off



#### **Embarking**

After warming the engines, you are ready to embark. Push the throttle forward to accelerate or pull the throttle aft to reverse.

When operating the throttle, use smooth and patient movements. Do not shift quickly from forward to reverse or vice-versa. Do not shift into forward or reverse while running the engine at high RPMs.

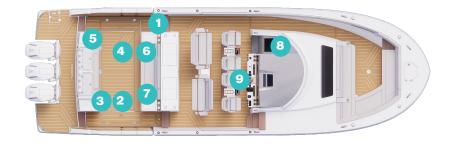
Ensure you have unobstructed visibility in front of and behind you before accelerating or reversing.

Review the "Rules of the Road" chapter of the General Vessel manual included in your welcome packet before piloting your boat.



## **Electrical**

The 50 SAV electrical system uses both direct (DC) and alternating (AC) current. A DC battery bank starts the engines and powers DC components. The Power Bank, part of the Live Power system, uses inverters to power AC components. All electrical components are protected by digital or physical breakers. Most breakers are turned off before your boat is delivered. After turning them on, you do not need to turn them on again unless you turn them off.



- 1 Batteries (under step)
- 2 Battery Management Board (in Lazarette comp.)
- 3 Generator (in Lazarette comp.)
- 4 Power Bank (in Lazarette comp.)
- 5 ELCI (in cabinet)
- 6 EZ Charge (under seat)
- 7 Battery Activation Panel
- 8 AC Main Distribution Panel (in cabin)
- 9 12 Volt Helm Panel (under helm controls)

### **A WARNING**

PREVENT SEVERE INJURY OR DEATH!

DISCONNECT

ALL ELECTRICAL POWER SOURCES

BEFORE ATTEMPTING

TO REPAIR OR REPLACE

ANY ELECTRICAL COMPONENT.

## **Components**

#### **Batteries**

#### 12 Volt

There are either seven or eight 12 volt direct current batteries on your vessel depending on your propulsion package (see, "Propulsion" pg. 23). There are either three or four AGM engine starter batteries--one for each engine.

Three are under the port side, flip up step next to the rear cockpit seat. If your boat comes equipped with four engines, there is an additional battery in the Lazarette compartment on the starboard side.

There are two 8 d, 12 volt AGM batteries under the starboard side teak step that power onboard DC electrical equipment.

There are two 12 volt, lead acid batteries in the Anchor locker in the bow that power the windlass' motor and the bow thruster (see, "Bow" pg. 85). The batteries are wired in series to produce one, 24 volt bank.

#### 12 Volt Battery Bank



#### 24 Volt

Regal's new Live Power system (see below) draws energy from a Power Bank consisting of four, 24 volt lithium batteries. Pairs of batteries are wired in series and then those pairs are wired together in parallel to create two, 48 volt power banks.



Note: Layouts may vary.

Turn the Power Bank on by tapping the "Lithium ON" icon in the DSS (see, "Digital Switching System" pg. 63).



Power Bank

#### **Fuses**

There are three types of DC fuses on your boat: Midi and ATC and Class T. Understanding fuses is important, so that you can replace them if necessary.

Midi fuses are small rectangular fuses with teeth protruding from each end and circles punched into the teeth for connections. The amperage rating is displayed on the center body of each fuse.

Typical MIDI Fuse



ATCs are blade type fuses. Both connector teeth protrude from the fuse body on the same side. ATC fuses are designed for lower draw electrical components. Both ATC and Midi fuses have clear bodies designed to easily identify a blown fuse.

When a fuse blows, the wiring in the center of the fuse that connects the teeth is broken.

Typical ATC Fuse



T Class fuses have a central, cylindrical body and two teeth protruding from either end. They are used in the Live Power system, the bow thruster, and to protect some batteries.

Typical Class T Fuse



#### **Breakers**

Most electrical equipment is controlled from the Digital Switching System and most breakers are digital (see, "Digital Switching System" pg. 63), however, there are some physical breakers. You can access these breakers from the "12 Volt Helm Panel," the "DC Breaker Panel," and the "AC Main Distribution Panel."

#### **12 Volt Helm Panel**



The "12 Volt Helm Panel" breakers helm electrical components including the plotters, VHF radio, and trim tabs.

The panel is located on the starboard side of the helm underneath the steering wheel. When a breaker trips, a button on the panel pops out. To reset the breaker, push the button back in until it clicks.

Note: Layouts may vary.



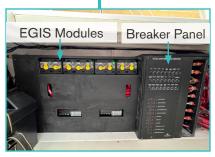
Panel Under Helm Controls

#### **DC Breaker Panel**

The "DC Breaker Panel" is part of the battery management board and protects DC components. The battery management board is on the starboard side of the Lazarette storage compartment.



Note: Layouts may vary.



**Battery Management Board** 

When a breaker on the DC panel trips, a switch on the panel will flip off. To reset the breaker, flip the switch back on.

#### **AC Main Distribution Panel**

The "AC Main Distribution Panel" or MDP, protects all high voltage AC components on your vessel. The MDP controls the power flow from your Live Power system and protects the air conditioning, water heater, cooking and entertainment appliances. It contains all physical AC breakers and is behind the port side flip down seating in the V-berth.

The MDP is split into two 'legs' labeled "1" and "2." Each leg regulates power from one of your two inverters (see, "Live Power" pg. 48).

V-berth view from stairs



#### MDP



Note: Layouts may vary.

#### **ELCI**

The "Equipment Leakage Circuit Interrupter" or "ELCI" is a breaker that cuts power from the AC shore system if it detects a ground leak in the wiring for the system. A ground leak occurs when power leaks out of the system and spreads through other conductible material. Ground leaks can be lethal.



The ELCI is in the fishing tombstone's port side drawer.

If the ELCI trips, LED lights on the breaker panel flash in different combinations to indicate the cause.

#### Green LED on, Red LED off.

Line voltage is present, the breaker is closed, and the device is protecting the circuits.

#### 2. Green LED off, Red LED on.

The device has detected a ground leak and opened the circuit breaker.

## Green LED flashing, Red LED Off.

The circuit breaker is open due to over current or has been manually turned to the "off" position.

#### 4. Both LEDs off.

Line voltage is not present. Make sure the marina breaker is on and check the power cord connections.

#### **GFCI**

The "Ground Fault Circuit Interrupter" of "GFCI" operates like the ELCI and is used to protect your boat from deadly ground leaks. While the ELCI governs AC power flowing through the whole system, the GFCI governs all the AC outlets on the boat.

If the GFCI detects a ground leak from any outlet on the boat, it will trip and cut power flowing to all the outlets.



Reset the GFCI from the outlet in the head or the outlet behind the V-berth seating. When tripped, the top button on the outlet will pop out. Press it in until it clicks to reset the breaker.

If either the GFCI or ELCI trips repeatedly, have your boat serviced by your Regal dealer immediately and do not use the vessel until the leak is fixed.





## **Operation**

#### **Live Power**

Live Power is Regal's new, automated power system. Live Power uses two Mastervolt CombiMasters to convert direct current to alternating current and power electronics around the vessel. A generator, and a series of Mastervolt Mac Plus units, work in combination with the 48 volt lithium battery Power Bank to automatically maintain a consistent charge. When operated properly, you will never need to worry about running out of power on the water.



Note: Layouts may vary.



#### Generator

The generator on your boat does not directly power electrical equipment. Instead, it charges the Power Bank and the Power Bank sends electricity to onboard equipment.

The generator is in the Lazarette compartment on the starboard side.

Diesel generators come with sound insulation capsules to control noise. Refer to your general manual's "Exhaust and Carbon Monoxide" section for generator safety guidelines before operating.

The generator pulls fuel from a dedicated diesel tank in the sump. The diesel system includes two fuel filters that keep debris out of the generator. The first is an in-line filter located close to the generator. The second is a cartridge style filter on the generator itself.

Refer to your generator owner's manual for upkeep and maintenance schedules.

Your generator uses raw water pumped from the seacock for cooling. All seacocks are located in the center of the Lazarette compartment. The generator has a dedicated seacock separate from the central manifold (see, "Seacocks" pg. 107).

There is a strainer located along the raw water line that catches debris and keeps your generator clean. To check the strainer basket, first make sure the seacock is closed. Next clear the strainer by turning the strainer top clockwise, removing the strainer basket, and dumping out any debris.

Replace the basket by pushing it down evenly into place and tightening the strainer top. Reopen the seacock. Periodically check the strainer basket for debris.

Your generator also uses chemical coolant. Consistently check coolant levels in the coolant reservoir on the generator to avoid overheating. The coolant reservoir is marked to indicate the optimal fill level.



#### Starting Your Generator

The Live Power system is designed to eliminate as much manual operation as possible (see below).

To enable the generator's auto functionality, tap the "Auto Gen" icon on the "Switching" page within the chart plotters (see, "Switching" pg. 53).

The auto-gen feature will turn on automatically when you turn on the boat. You will only need to turn the auto gen off when storing the boat for long periods.

You can turn the generator on manually using the generator activation panel under the MDP or the "Gen Start" icon on the switching page (see below).

#### Generator Panel Location



#### **Inverting**

"Inverting" is the process of changing direct current to alternating current to power AC devices on the vessel. Live Power uses two Mastervolt CombiMasters to convert direct current from the lithium ion batteries in the Power Bank to alternating current.

Power Bank levels are displayed on the helm plotter home screen. As appliances run, energy in the Power Bank depletes and the system engages the generator to replenish the charge.

#### Mastervolt CombiMaster



### Charging

The Live Power system is designed to run without any manual human operation. After turning on the Power Bank, the system will automatically monitor and communicate between the generator, Power Bank, and Mac Plus units to maintain power levels.

#### Mastervolt Mac Plus



If the Power Bank's charge level drops below 20%, the generator will turn on and charge the batteries. The generator will then turn off automatically once the batteries reach 80% charge.

A Mastervolt Mac Plus is a DC to DC converter that converts voltage to transfer power between battery banks. When the engines are off, the Mac Plus units transfer power from the Power Bank to charge the engine/house batteries. When the engines are running, the Mac Plus units transfer some of the power siphoned from the engines by the alternator, typically used just to charge the engine batteries, and transfer it to the Power Bank. There is a dedicated Mac Plus that charges the bow thruster battery bank in the bow.

#### Lazarette Compartment



Note: Layouts may vary.

While charging, monitor the Power Bank's charge level from the "Battery Management" page. If the charge level is not increasing, AC equipment might be using power faster than the Power Bank can be recharged. Turn off AC powered devices and continue charging. If the issue persists, there may be a problem with your Live Power system. Have your vessel serviced by your Regal Dealer.

#### **Battery Management Page**



59

#### **Switching**

AUTO GEN

CTR ENG

LITHIUM BANK OFF

The "Switching" page in the Garmin plotters allows you to manually activate and deactivate certain components and functionality of the Live Power system.



Note: Layouts may vary.

To open the switching page, tap the layout icon in the center of the screen at the bottom. Scroll through the list of icons and tap the switching icon.

Generator controls are on the left side of the page. dot Use "GENERATOR START" the and "GENERATOR STOP" icons to turn the generator on and off manually. The "AUTO GEN ENABLE" icon enables the automatic generator feature of the live power system. Auto-gen will turn on automatically when you turn the boat on. Turn off the auto-gen feature when the boat is not in use, even when connected to shore power. Regal recommends leaving the generator in auto mode.

Inverter controls are in the center of the page at the top. There are two icons for each CombiMaster labeled "INVERTER 1" and "INVERTER 2". Inverter icons labeled "[CHG]" control the CombiMasters' charge functionality. The icons illuminate when the vessel is connected to shore power and the CombiMasters are charging.

Inverter icons labeled "[INV]" control the CombiMasters' inverting functionality. When the icons are illuminated, the CombiMasters are converting DC power to AC power. Tap each icon to turn inverting on or off.

Mac Plus controls are on the center left side of the screen. When the icons are illuminated, the Mac Plus units are converting voltages to charge battery banks. When the "ENG" icons are illuminated, the Mac Plus units are converting voltages between the engine batteries and the lithium battery bank to charge one or the other. When the "48/24" icon is illuminated, the corresponding Mac Plus unit is converting voltages to charge the anchor locker batteries.

Regal strongly recommends leaving the Mac Plus controls untouched and in automatic mode except in unlikely emergency situations.

On the left side of the page, you can select your shore power level using the "SHORE IN" icons (see below).

Use the "LITHIUM BANK OFF" and "LITHIUM BANK ON" icons on the bottom right side of the screen to turn the Power Bank on and off.

Regal recommends turning the lithium bank off before long term storage. Press the "LITHIUM BANK OFF" icon before turning the boat off from the Battery Activation Panel (see, "Battery Activation Panel" pg. 27)

#### EGIS Module



#### **EGIS**

The EGIS battery management system uses automatic charging relays—"ACR"—to connect the batteries in parallel whenever there is a charge source present. By connecting the batteries, the system can charge multiple batteries at the same time.

It will also disconnect the batteries as the voltage level drops to ensure that you are not left stranded on the water.

In the unlikely event you need to manually set the batteries to parallel, you can do so directly from the ACRs on the battery management board

When your boat leaves the Regal factory, the ACR switches are set to "Auto."

Regal insists on leaving the switches on auto to avoid running out of battery power and being unable to start the engines. However, in an emergency it may be necessary to manually connect or disconnect the batteries.

To connect or disconnect the batteries from the EGIS, turn the ACR switches on the unit to either "OFF" or "ON." Off will turn the batteries off completely. On will connect the batteries. Do not forget to disconnect the batteries or you will run out of power and be left stranded.

The battery activation panel also has a "Parallel" button that connects the batteries in parallel instead of series. However, Regal insists on relying on the EGIS system, except in rare emergency situations, to avoid running out of power.

Only manually connect batteries in emergency situations.

### **NOTICE**

THE BATTERY PARALLEL FEATURES ON THIS

VESSEL ARE INTENDED FOR EMERGENCY
INTERMITTENT USE ONLY!

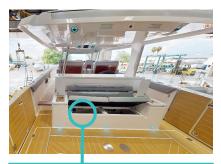
WHEN A PARALLEL FEATURE IS REQUIRED
IT MAY INDICATE A SERVICE BATTERY
IS NEAR THE END OF ITS USEFUL SERVICE
LIFE

### EZ Charge Panel

With the EGIS system set to auto, it is virtually impossible for the DC battery bank to die completely. However, when storing the boat, the batteries may die over time.

If the batteries do die, the engine will not crank and the EGIS will not be able to charge the bank. In this unlikely scenario, the engine hatch will be inoperable.

To access the engine, you will need an extra 12 volt battery and a pair of jumper cables.





Flip up the port side, rear cockpit seat to access the EZ Charge Port. Use the cables to attach the positive battery terminal to the red terminal on the EZ Charge Port. Attach the negative battery terminal to the black EZ Charge terminal. The EZ Charge will siphon energy from the battery to power the engine hatch.

Use the manual engine hatch switch to raise the engine hatch. Once the engine hatch is raised, jump or replace the batteries as necessary or service the vessel with your Regal dealer.

#### **Shore Power**

There are two shore power inlets located behind the vented panel in the aft facing, starboard side of the fishing tombstone. When connected to shore power, the system will use the onshore power source to charge the Power Bank.



Connecting to shore power will automatically begin charging the Power Bank. If any AC equipment is on while connected to shore power, the Live Power system will power the equipment while the shore power charges the Power Bank. If too many devices are on while charging, the onshore source will power equipment instead of charging the Power Bank. Connecting to shore power will disable the auto-generator feature.

Before connecting to shore power, set the amperage limit using the Live Power pop up in the DSS (see, "Digital Switching System" pg. 63). Tapping the "15A" icon will limit shore power input to 15 amps. Tapping the "30A" icon will limit the input to 30 amps. You will only need to select the "15A" option when connecting to shore power with an extension chord and not a shore power tower.



# **Digital**

The 50 SAV digital systems are controlled from Garmin displays placed around the boat. From the displays, you can access various gauges and information, and control on deck equipment. Digital signals are sent from the displays to Empirbus modules via an internal NMEA 2000 communications network.



- 1 Helm Garmin Plotters
- 2 Cabin Garmin Plotter (in cabin)
- 3 Hardtop Plotter (above Refreshment Island)
- 4 Cockpit Garmin Plotter (in Hardtop)
- 5 Garmrest



## **Components**

#### **Empirbus**

An Empirbus module is a digital distribution module that receives commands from the Digital Switching System in each plotter and outputs power to connected devices. When you tap an icon in the Digital Switching System, a signal flows from the plotter to an Empirbus module that reads the signal then powers the appropriate device.





- 1 Power Supply
- 2 NMEA 2000 Port

Each channel on the Empirbus has an LED light that indicates if power is flowing to and from the module.

If the channel is active, the light will be green. If the breaker for the channel is tripped the light will be red. If there is no power flowing through the channel, the light will be off.

- 3 Breaker Control Buttons
- 4 Channel Indicator Lights

Some channels are always powered; others are powered only once they receive a signal from the DSS Breakers are reset using the "Breaker Reset" page within the DSS (see, "Digital Switching System" pg. 63) In the unlikely event that the plotters go down, you can reset the breakers and activate DSS controlled devices on the Empirbus modules themselves. Channel breakers are controlled using the buttons on the front of the module.

First, use the arrow buttons on the left side of the unit to navigate through the channels. When you press the arrow buttons, all the channel lights will turn off except for the selected channel. Use the 'left' and 'right' arrows to navigate to the desired channel. The lights will turn on and off as you cycle through channels. Stop when the light for the correct channel is illuminated.

After accessing the channel, use the "Man On/Man Off" button to turn the channel on or off. After manual operation is complete, press the "Reset/Auto" button to return the channel to automatic function.

To reset the channel's breaker, press the "Reset/Auto" button. Contact your Regal Dealer for a channel list of all Empirbus modules.

#### **Garmin WDUv2**

The Web Display Unit or WDU is the translator for the digital switching system and is powered by the NMEA 2000 network (see below).

When you tap an icon in the DSS, the WDU receives, interprets, and transmits a signal to the Empirbus modules via the NMEA.

#### **NMEA 2000**

NMEA 2000 is a communication system between electronic components. The NMEA backbone is the main hub of the system and as electronic components are added wires are attached to the back bone and branch off. The NMEA network is spread throughout the boat and sends control commands to applicable electronic devices.

The NMEA controls certain electronic components that are accessed from the plotters like the digital switching system, the Seakeeper, and Fusion stereo unit. The NMEA makes items visible on the plotters and if an icon is missing or a system is no longer accessible from the plotters, there may be an issue with the NMEA network. Have your boat serviced by your dealer if you believe there are issues with the NMEA 2000.

## **Operation**

#### **Garmin Chart Plotters**

The onboard Garmin displays or chart plotters are the central control system for your boat. The plotters are touch screens that function like tablets.

There are eight Garmin displays on your boat. Three displays in the helm, two in the hardtop, one on the port cabin wall, and two "Garmrests" attached to the helm seats (see below). Your displays are powered by the DC battery bank. To turn on your plotters, make sure the DC battery bank is on (see, "Battery Activation Panel" pg. 27). The plotters should turn on automatically once the batteries are on, if they do not tap the power icon in the lower right hand corner of each display.



Note: Layouts may vary.

From the Garmin plotters, you can access the Digital Switching System, entertainment control, engine readings, waste and fresh water levels, and power levels. Digital switching functionality will be limited on the rear cockpit and cabin plotters (see, "Digital Switching System" pg. 63).

To access pages within your helm chart plotters, navigate to the home screen. Some icons may come preloaded on the home screen. Use these icons to access their corresponding pages.

Note: Layouts may vary.



The following details some of the icons Regal suggests programming to the home screen.

The digital switching icon will allow you to access the Digital Switching System.

The "Engine" icon accesses the engine page which includes all the gauges. Once there you can monitor your speed, RPMs, fuel levels, and engine temperature. In the unlikely event of an engine malfunction, the plotters will issue an alert that includes a code denoting the specific malfunction. Refer to your manufacturer's manual for a list of specific alarms and their solutions.

The "Switching" icon accesses the Live Power switching page. From the switching page you can activate various components of the Live Power system. Read and understand the switching instructions detailed in the Live Power section of this manual before utilizing the switching page (see, "Live Power" pg. 48).

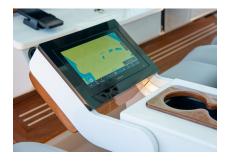
To access the additional pages, tap the "Layouts" icon at the bottom center of the screen (white bar). This will bring up a scrollable row of icons and tappable words. To scroll through the bottom row, slide your finger from right to left along the screen. To access pages not preprogrammed to your home screen, tap the word "Vessel" from the horizontal scroll or from the icon on the home screen.

Garmin plotters are customizable. Icons and data can be removed, added, or rearranged to suit your needs. To customize an icon, hold the icon until a drop down menu appears. To remove an icon, tap the remove option in the drop down menu.

To replace the icon, tap the replace option and another drop down menu will appear. This menu includes all of your icon and data display options. Tap an option to replace the current icon or data with the new selection. For more specific Garmin operational instructions, refer to your Garmin owner's manual included in your welcome packet.

Regal programs and organizes chart plotters based on our years of boating experience, so that you have the most useful information easily accessible. Regal recommends utilizing the Garmin system as it comes delivered from the factory before customizing pages. Customization is best done once you become familiar with your personal needs after embarking a few times.

#### **Garmrests**



There are two Garmin displays attached to the outer armrest of the captain and copilot chairs. The Garmrests have the same functionality as the other plotters around the boat (see, "Garmin Chart Plotters" pg. 60).

#### **Digital Switching System**

The Digital Switching System controls most electrical devices on Regal boats. Where there were once rows of physical switches, now there are convenient and minimal touchscreen displays. Most devices are one touch activation and one touch deactivation unless safety is a concern.

Note: Layouts may vary.





When your boat leaves the Regal factory, the Digital Switching System—DSS—is set as the helm plotters' launch screen. To access the system, turn on your boat and power up your displays. The DSS should appear automatically. At the helm, there will be a map of your boat shown in the center of the display.

If the DSS does not appear or you would like to navigate there from another page on your display, tap the digital switching icon indicated by the Regal boats logo.

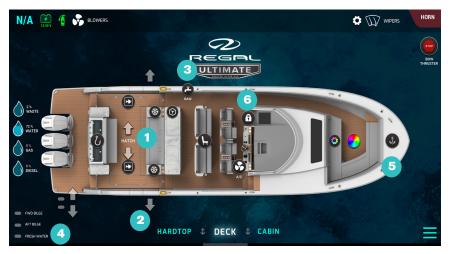
There are three digital switching pages: Deck, Hardtop, and Cabin.

There are two bilge pump indicator lights (see, "Bilge Pumps" pg. 106) on the bottom right corner.

When the pumps activate automatically, the light will be red. You can tap the icon to manually run the pumps temporarily. When running manually, the light will be amber. Hold the icon to bypass and run the pumps continually. When bypassed, the light will be green. Hold the icon again to turn the pump off.

Tap the battery icon in the top left corner to open the voltage indicators. The voltage indicator(s) will change from green to yellow to red as the boat's systems use power stored in your batteries. Each icon displays a single battery's voltage

Tap the "Blowers" icon to run the bilge blowers. Tap the "Wipers" icon to open the wiper control pop up. Tap the "Horn" icon to honk the horn.



- 1 Lazarette Hatch Control
- 2 Terrace Door Control
- 3 Raw Water Activation

From the "Deck" page, you can control all on deck electrical devices. When you tap a device icon on the boat map the icon will illuminate, indicating the device activated.

To open the Lazarette hatch, tap the up arrow. Hold the down arrow to close the hatch.

Tap the "FRESH" and "RAW" icons to activate the fresh and raw water systems.

When the freshwater tank is almost empty, a low water alert will appear next to the freshwater icon and the

- 4 Freshwater Activation
- 5 Anchor Windlass Control
- 6 Door Lock

icon will lock. To bypass the lock, hold the icon for two seconds. When running, the freshwater icon will turn amber.

Some other icons can be bypassed by holding the icon for two seconds. When operating in a manual bypass, the icons will turn green. When operating normally, the icons will turn blue. Holding a bypassed icon again will revert the equipment to its normal operation.

Refer to the back end menu (see below) for information on icons that can be bypassed.

#### Deck cont.

#### Note: Layouts may vary.



Tapping some icons will open pop up menus with specific controls and information.

Tap the gear icon next to the color wheel icon to control the brightness and color of on deck RGBW lights.



Tap the battery voltage indicator to bring up the Live Power pop up.

From the pop up, you can monitor the Power Bank charge levels and inverter and charger statuses.

You can also set the shore power input limit by tapping either the "15A" icon or the "30A" icon.



Tap the door lock icon to open the lock combination pop up.



Tap the livewell icon to open the livewell pop up.

#### **Hardtop**

Note: Layouts may vary.



- 1 Power Shade Controls
- 2 Hardtop Light Control

From the "Hardtop" page, you can control all hardtop equipment.

Tap the Power Shade arrows to extend or retract the power shade.

Tap the "Cockpit TV" arrows to raise and lower the cockpit TV.

Tap the "NAV Lights" icon to turn on the navigation lights.

Tap the "Spreaders" icon to to turn on the Lazarette compartment lights.

Tap the "Lightbar" icon to turn on the light bar.

- 3 TV Control
- 4 Active Icon



The droplet icons along the left side display the gas, diesel, waste, and freshwater levels. Tap the waste icon to enable the macerator. Hold the macerator icon to activate the pump.

#### Cabin

Note: Layouts may vary.

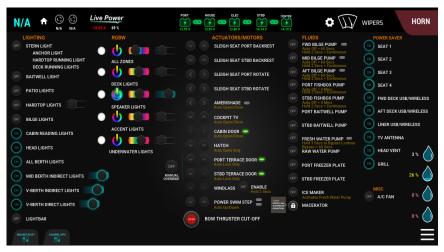


From the "Cabin" page, you can control all the lights in the cabin and the Lazarette hatch. You can also raise and lower the Lazarette hatch.

Note: Some items are optional and may not be included in your vessel.

#### **Back End Menu**

Note: Layouts may vary.



Tapping the three lines in the lower right hand corner of the screen will open the back end menu. From the back end menu, you can control all DSS equipment from one screen.

The left most column contains all the basic lighting on the boat.

The second column from the left contains all RGBW lighting on the boat.

The middle column contains all actuators and motors. Some actuators may require you to hold the icon to activate. Follow the instructions in yellow below each icon label.

The second column from the right contain all the fluid controls including pumps, macerator, and optional ice maker. Follow the operational instruction in yellow below each icon label.

You can turn electrical equipment on and off from the right most column. When turned off, electrical equipment will not receive power and be inoperable.

### **A CAUTION**

DO NOT SIT, STAND ON, OR TRY TO IMPEDE ACTUATOR EQUIPMENT. DOING SO MAY DAMAGE TO THE ACTUATOR

### **A WARNING**

PREVENT POSSIBLE INJURY!
BEFORE OPENING OR CLOSING ANY
ACTUATOR CONTROLLED SYSTEM
ENSURE THAT ALL PERSONNEL
ARE CLEAR FROM THE
ACTUATOR OPERATION AREA!

#### **Breaker Reset**

The 'Breaker Reset' page will display any tripped breakers in the system. All breakers in the digital switching system are digital and can be reset by tapping the breaker when it appears on the 'Breaker Reset' page. You will receive an alert if a breaker trips.



Breakers trip when more power is sent through the breaker than the breaker can handle. Digital breakers can be easier to trip than physical breakers. Impeding the motion of an actuator is one way to trip a breaker.

#### **Functionality**

Some displays have limited functionality. Displays in the cabin, and cockpit only control devices in their immediate vicinity.

The helm is the only display that can control all devices and the only display with an overhead boat map. Display options can vary.

Should you ever need to reset your digital switching system, turn your boat on and off and the display will reset.

#### **Trouble Shooting**

Follow these steps for simple troubleshooting solutions to potential problems.

- Screen is dark and won't come on.
  - 1. Screen may be asleep. Tap the screen.
  - 2. Screen may be off. Turn the screen on.
  - 3. Cycle power by turning vessel on and off.

- Screen is frozen (spinning circle).
  - 1. Cycle power to reset.
- Tap an icon, but nothing happens.
  - Check the digital breaker.
     Make sure it is not tripped.
  - Check applicable
     equipment: ensure light
     bulbs are new, pumps have
     power flowing to them,
     and actuators are working
     properly.
  - 3. Cycle power to reset.

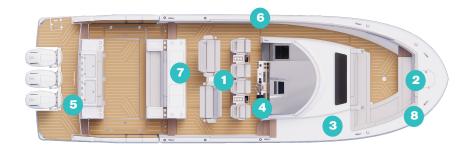
    While digital breakers
    are more sensitive than
    physical breakers, if a
    breaker is tripped often it
    may indicate an issue with
    the circuitry and you should
    have your vessel serviced
    by the dealer.

If problems persist after trouble shooting, have your dealer service your vessel.

Your dealer has received factory training; employ their services to solve advanced technical issues or any issues you are not sure how to solve.



# **Water**



- 1 Freshwater Tank (under mattress)
- 2 Water Heater (under cabin seat)
- 3 Head/Shower (in cabin)
- 4 Shower Box (in cabin)

- 5 Shore Water Valve
- 6 Freshwater Fill Cap
- 7 Waste Tank (in sump)
- 8 Waste Pump Out

### **Fresh Water**

Tank Filling

The freshwater system onboard your Regal 50 SAV features a 90 gallon tank that feeds freshwater to your onboard head, shower, and faucets. The tank is under the bed in the mid-berth cabin. Open the hatch underneath the mattress to access the tank compartment.



Before embarking, check your fresh water levels in the DSS (see, "Digital Switching System" pg. 63). There is a droplet icon labeled "WATER" on the left side of the screen. Keep an eye on fresh water levels while embarked to avoid running out of potable water.

Fill your tank from the freshwater fill valve labeled "Water" on the port side helm gunwale.



Unscrew the cap, thread one end of your freshwater hose to the water source and the other into the fill valve. Freshwater hoses are normally white, can be purchased from any home improvement or marine supply store, and do not leave a rubbery taste in your drinking water. Turn the water source on and fill the tank until the freshwater icon in the DSS reads full. Turn the water off, disconnect the hose, and replace the valve cap.

A feed hose sends water from the tank to the freshwater pump underneath the portside flip up teak step where it is then distributed around the vessel. Check the strainer next to the freshwater pump before activating the system. Remove any debris.

After filling the tank, tap the "FRESH" icon on the "DECK" page of the DSS to activate the freshwater system. The freshwater system must be activated before you can use the shower, the head, and the faucets. Open a faucet to purge air from the system and check that there is water flowing from the tap.

#### Shore



Your freshwater system can also run from an onshore water source when docked. To connect your boat to an onshore source, remove the cap from the city water valve on the aft face of the fishing tombstone toward the lower starboard side, below the shore power compartment.



Connect one side of a freshwater hose to the removable faucet supplied with the boat. Next, insert the faucet into the city water hook up. Then, connect the other end of the hose to the on shore water source.

The shore water control valve is in the forward upper vanity in the head. When the valve is turned to the left, in the open position, and an on shore source is connected, water will fill the on board freshwater tank. When the valve is turned to the right and in the closed position, the system will pressurize and pull water directly from the onshore source. Turn the onshore water supply on and check the hose and connections for leaks.

Make sure any onshore water source is drinkable before connecting the onshore valve or filling the onboard tank.

Typical Drinking Water Hose



#### **Shower**

The shower has both a waterfall and hand held shower head. There are two shower handles. The right handle controls the flow of water to the shower heads. When it is turned to the left, water will flow from the waterfall shower head. When it is turned to the right, water will flow from the hand held shower head. The left handle controls the water temperature. Turn the handle right for hot water and left for cold.

Your shower pulls water from the freshwater tank. When the vessel is connected to an external source of freshwater and pressurized, the shower will bypass the freshwater tank and pull directly from the external source. The onboard water heater does not heat water from an onshore source.

#### Shower



Water drains through the floor grate and down into the shower box (see below). An automatic pump in the engine compartment then evacuates the water overboard or into the wastewater tank if your boat has the optional gray water system.

Clean the drain screen periodically to avoid clogging.

#### **Water Heater**

The onboard water heater can heat your water to a max temperature of 125 °F. A cold water line feeds water through the tank where it is heated by an element. The hot water line then carries the water out of the heater and to a distribution manifold and then to your shower and faucets. Your water heater holds eleven gallons; do not expect hot water to last as long as in your home. Take shorter showers to conserve hot water and onboard freshwater in general.

The water heater is in a compartment forward of the V-berth. Fold down the forward V-berth seat back and remove the panel to access.

## **A** CAUTION

PREVENT HOT WATER HEATER DAMAGE!

DO NOT TURN ON THE WATER HEATER

WITHOUT WATER IN THE SYSTEM!

THE ELEMENT WILL BE DAMAGED!



## **A WARNING**

PREVENT INJURY OR DEATH
FROM ELECTRIC SHOCK!
NEVER REMOVE THE TANK REAR COVER.
CALL A SERVICE PROFESSIONAL
AS HIGH VOLTAGE IS PRESENT.

# **Waste Water**

#### Head

The onboard head is a vacuum style marine toilet designed to use minimal water. The toilet runs on 12 volt DC power and has a dedicated breaker on the battery management board. The head pulls water from the onboard freshwater tank. If your vessel is connected to an external water source, the head will still draw its water from the onboard freshwater tank.

Operate the head via the wall control switches behind the toilet. Press and hold the "ADD WATER" side of the switch to add water to the bowl. Release when the water reaches the desired level. Press the "FLUSH" side of the switch to empty the bowl into your systems onboard wastewater tank. The system will automatically replace a small amount of water in the bottom of the bowl to eliminate potential odors. You do not have to fill the bowl with water to use the head. Keep an eye on water levels to avoid running out of freshwater while embarked.

The head control panel is next to the control switches. From the panel you can operate the lights in the bathroom



and the exhaust fan vent. The head exhaust vent is located above the toilet and is designed to remove unwanted odors from the head.

Do not flush any foreign materials—paper towels, moist towelettes, condoms, feminine hygiene products, or garbage—down the toilet. Only flush appropriate waste and RV or marine specific toilet tissue to avoid damaging the head or the waste system. RV and marine toilet tissue can be purchased online, in home-improvement stores, or boating supply stores.

If the waste holding tank is full, the head's flush function will lock. The waste tank's sensors are positioned just below the tank's capacity, thus it is sometimes possible to fill the tank past "full."

Holding the flush button for eight seconds will override the lock and flush the head. Only override the lock when you are sure there is additional room in the tank and do not override the lock more than twice before emptying the tank to avoid overflow or damage to the waste management system. Regal is not responsible for damage to equipment that may result from waste overflow due to overriding head lockout. Improper system use may void your warranty. Refer to your boat's warranty provided with your dealer welcome packet for more information.

## **A** CAUTION

POSSIBLE OVERFLOWING
OF THE WASTE HOLDING TANK
CAN OCCUR DUE TO USING
THE SINGLE FLUSH OVER-RIDE
FUNCTION.

#### **Waste Tank**

Your waste tank holds 26 gallons of wastewater. Your waste tank is in the same compartment as the water heater. It has a pump out fitting labeled "WASTE" in the starboard gunwale just forward of the terrace door.. Marina's and other docking facilities often have onshore waste pumps for emptying your waste tank. Always keep an eye on accumulating waste levels and plan your pump out in advance to avoid overfilling the tank. Always check waste tank levels before embarking. Your waste levels will be displayed on the left side of the DSS (see, "Digital Switching System" pg. 63).

Waste



#### To empty your waste tank:

- Remove the cap from the on deck, waste pump out fitting.
- Put on any personal protection equipment like latex gloves to avoid disease and waste contamination.
- Remove the pump hose from the onshore pump system and lay the coil on the deck. Check for kinks or potential blockages before attaching the pump to the on deck fitting.
- Make sure the nozzle valve on the waste pump is in the off position perpendicular to the hose nozzle.
- 5. Turn the pump on.
- Put the nozzle into the on deck fitting. Turn the nozzle to tighten until you cannot tighten any further to ensure that there is an airtight seal between the nozzle and the fitting.
- Turn the nozzle valve on-parallel to the hose nozzle. Maintain a seal during the entire pumping process.

- 8. The glass on the nozzle should become cloudy as waste is pumped through the hose. The glass will clear as most waste is pumped out of the tank. Continue pumping until you are confident no more waste is flowing from the tank.
- After the first pump out, flush water down the head, then return to the pump and pump out the remaining waste.
- 10. When no more liquid flows from the tank, turn the valve off. Before removing the nozzle from the fitting, tilt the nozzle slightly and allow any liquid remaining in the nozzle to drip back down into the tank.
- 11. Once all the remaining liquid has dripped out of the nozzle, submerge the nozzle in a bucket of water and open the valve to clean the hose and flush any remaining waste down into the pump. Once the bucket is empty and the pump has sucked up all the water, let the pump run dry for a few seconds and then turn the valve off.

- Turn the pump off and replace the hose.
- 13. Use a garden hose to rinse any liquid in the fitting back down in the waste tank and replace the waste fitting cap on deck before embarking.

#### **Macerator**

Your vessel may come equipped with an overboard discharge system and included macerator. There are numerous federal and international regulations governing overboard discharge of waste on the high seas and in coastal waters. Some of these regulations govern the size of discharged waste particulates. The macerator breaks down your onboard waste to appropriate size for legal discharge when on the high seas. You can operate the macerator from the DSS in your helm plotters (see, "Digital Switching System" pg. 63).

The macerator seacock is in the shower box compartment (see below). Make sure the seacock is open before running the macerator

Regal waste management devices do not come with waste treatment chemicals. It is illegal to dump any untreated waste in any body of water within any part of the United States and up to three miles off the coast. Do not dump untreated waste overboard in any American waters under any circumstance as such action could impose heavy fines and jail time. Refer to your General Vessel manual and the United States Coast Guard for more information on environmental waste regulations. Regal Marine Industries Inc. does not accept any liability or responsibility for the consequences of illegally dumping untreated waste.

#### **Shower Box**

The shower box is a collection and distribution point for waste water used by the shower, head sink, and A/C system. It is located below the floor next to the head. To access the shower box, open the hatch in the floor near the Mid-berth step.

Turn the center cover on the top of the box counter clockwise to access the inside of the box



A gulper pump on the starboard side of the engine compartment pumps water out of the shower box and overboard through a thru hull fitting on the starboard transom. Check the pump periodically for debris blocking the pump grate.

#### **Sanitizing and Winterization**

Regal recommends sanitizing your water system at least once a year.

First, flush the entire freshwater system by running the faucets and shower until the entire system is empty, including the water heater. Discharge any waste water that has accumulated in the waste tank. Fill the tank with a 100 parts per million chlorine solution and allow the solution to stand for at least an hour. Drain the chlorine solution and flush the system with fresh water. Allow the rinse to drain and then refill the tank.

Proper winterization depends on expected temperature levels over the time the boat will be stored. Due to variation in proper winterization procedures, Regal insists on contacting your dealer to winterize your vessel. Improper winterization may result in damage to your vessel and could void your warranty.

# **Fire Suppression Systems**

Your 50 SAV comes equipped with a fuel vapor detection system and an automatic fire suppression system in the Lazarette compartment. Your boat may come with an included, USCG approved, portable fire extinguisher. If it does not, refer to the General Vessel Manual for information on required, USCG approved fire extinguishers

#### **Gasoline Vapor Detection**

There is a gas vapor detection indicator light on the ignition panel just below the steering wheel at the helm.

In the unlikely event of a gas vapor leak, the vapor detection system will issue an alarm and the "DANGER" light on the ignition panel will illuminate.

If the vapor alarm goes off, cease operating the vessel immediately, turn off all potential sources of combustion and service your boat with your Regal dealer before operating again.

Ignition Panel Vapor

Detection Light



# Fire Suppression - Auto Operation

In the event of a Lazarette compartment fire the system will automatically discharge the fixed fire extinguisher to put the fire out. The system will also shut the generator and the blowers down automatically. If the extinguisher discharges, immediately turn off your engines, electrical systems, and generators.



There is a "Fire Suppression" indicator light within the DSS (see, "Digital Switching System pg. 63). When the system is charged and ready to detect a fire, the light will be green. If the system has detected a fire and is discharged, the light will flash red and an alert message will display on the Garmin plotters.

After discharging, the system will shut down and lock the blowers and generator. There are two overrides. The first is in the digital switching system. After discharge the blower icon will be red and an override message will appear next to the icon. Tap the override icon and the red ring will disappear allowing you to run the blowers again.

The other override is on the Fireboy panel underneath the steering wheel. When the system auto-discharges, the panel will flash red and issue an alarm. Press the override button on the panel to shut off the alarm and reactivate access to the generator



Extinguisher Indicator Light

and blowers. There is also an indicator light on the ignition panel below the steering wheel that will illuminate when the ignition is on and the system is charged and will turn off once the system has discharged.



# Fire Suppression - Manual Operation

To operate the system manually, access the fire extinguisher pull handle underneath the rear cockpit seat, next to the battery activation panel (see, "Battery Activation Panel" pg. 27). Remove the safety pin to release the "FIRE" handle and then pull firmly on the handle to activate the fire extinguisher.

A loud whooshing sound will indicate the extinguishers have successfully deployed.

After a fire, do not attempt to restart your boat. Have your vessel serviced by your Regal dealer before embarking again.

# **NOTICE**

FIRE SUPPRESSION SYSTEM SHOULD BE INSPECTED ANNUALLY BY THE MANUFACTURER.





# 

# Bow

There is seating on three sides of the bow. The front and starboard seats have storage underneath the seat cushions. Flip up the seat cushions to access. There are two fold down armrests in the forward-facing seating. There are cup holders and usb outlets set in the gunwale on either side of the bow. There are grab rails on both sides of the seating area for extra stability while underway.

#### Fore Bow Storage



Starboard Cup Holder Console



## **A WARNING**

AVOID BODILY INJURY OR DEATH!
ENSURE THAT ALL BODY PARTS & CLOTHING
ARE KEPT CLEAR OF THE ANCHOR RODE
AND WINDIASS DURING OPERATION

Note: Layouts may vary.

#### **Anchor and Windlass**

A windlass is a winch that raises and lowers the anchor. The anchor "rode" is a length of chain or a combination of rope and chain that connects the anchor to the windlass

There is a safety clutch on top of the windlass body. Tightening the clutch will tighten the hold on the anchor rode and loosening will release the hold. To tighten, insert the clutch handle, stowed under the forward bow seat, and rotate clockwise. To loosen, rotate counter-clockwise.

You can lower your anchor by using the windlass' electric motor or gravity. To lower the anchor using gravity, remove the safety carabiner and loosen the clutch until the anchor starts to descend. Apply clockwise pressure to the clutch to control the anchor's descent. Lower the anchor slowly to avoid damage.

#### Windlass Locker



You can control the motor with the buttons inside the anchor locker or on any plotter via the DSS (see, "Digital Switching System" pg. 63).

When using the anchor buttons, you must first activate the windlass battery. Make sure the port side, yellow ACR switch on the starboard side of the anchor locker is set to 'on' or 'auto'. Press the forward anchor button to lower the windlass and the rear to raise.

To operate the windlass via the DSS, navigate to the "Deck" page. Press and hold the anchor icon on the bow. Two arrows will pop up. Press the forward facing arrow to lower the anchor, and the aft facing arrow to raise.

To raise the anchor, first pilot the boat toward the anchor. Raise the anchor slightly to take up the slack created in the rode as the boat approaches the anchor. Stay close, but do not navigate the boat past the anchor. The rode should be close to vertical and perpendicular to the waterline.

Once positioned, hold the aft facing arrow icon on the DSS or the aft button in the anchor locker until the anchor is raised.

## **A** CAUTION

AVOID POSSIBLE SERIOUS INJURY!
POWER SWITCH
AT BOW ANCHOR WINDLASS
MUST BE IN "OFF" POSITION
WHEN NOT IN USE.

Do not let the rode get tangled in the windlass. If the sound of the windlass changes abruptly before the anchor is fully retracted, inspect the anchor locker for a bind.

Once raised, reinstall the safety carabiner and close the anchor hatch to stow.

Do not use the windlass to pull the boat. Excessive strain on the windlass may cause damage. Improper operation of the anchor and windlass could cause damage to the vessel and void your warranty.

Your anchor is a heavy and potentially dangerous piece of equipment. When operating, keep all body parts and clothing clear of the windlass, the anchor, and the rode and have a spotter watch the anchor. Make sure the anchor is properly secured before embarking.



#### **Fender Clips**



Note: Layouts may vary.

Fender clips allow you to attach and remove fenders. Fender clips have two pieces: the female side installed in the hull and the male side secured to the fender.

To attach a fender to your boat using the fender clips, first tie the fender line to the male side then insert the male side into the female side until it is locked in place. To remove the fender, press the quick release mechanism and pull the male side out.

Do not use fender clips as cleats. Improper use could void your warranty.

#### Bahama Shade

To install the Bahama Shade, first install the four poles into each of the rod holders in the gunwale around the U-shaped seating area.

Run the ropes attached to the front of the shade through the eyelets at the top of each pole.

Next, clip the other end of the shade to the eyelets on the front of the hard top. Pull on the ropes to tighten. Once tightened, tie each rope off to the cleat attached to the bottom of each pole.

The Bahama Shade poles are telescopic. Once the Bahama Shade is installed, you can raise or lower the poles to your desired height.

Uninstall the Bahama Shade before cruising.



# **Cockpit**

The cockpit includes the helm, refreshment bar, and, mezzanine seating area. There are four wireless smartphone charging stations on the dash and two more in the hard top above the refreshment bar.



#### **Humphree Lightning**

There are two Humphree Lightning interceptors mounted to the transom on either side of the engines. The Lightning system is an automatic trim and stabilization system customized for the 50 SAV.

Interceptors extend and retract to manipulate the flow of water under the boat. When an interceptor deploys, the stern is lifted which allows the system to adjust the boat's trim and list.

When the auto features are engaged, the Humphree Lightning software automatically extends and retracts the interceptors to provide the best ride based on the selected autoadjustment program. The Humphree Lightning System on your boat comes with the Comfort Package pre-installed. The Comfort Package comprises three auto-adjustment programs: Auto Trim, Auto List, and Pitch Control. These features can be toggled on or off from the Humphree control panel at the dash.



#### <u>Inteceptor</u>

Auto Trim uses the interceptors to adjust the angle of the bow and achieve the best running angle at any speed. For example, if the bow is too high, the interceptors will extend to lower the bow. This feature has been customized by Regal to fit your boat, however these values can be easily altered by you to further customize your boat's ride.

Auto List deploys the interceptors to compensate for list and keep the boat at an even keel while running. For example, if the boat is listing toward port, the port interceptor will extend to lift that side of the boat.

Pitch Control continually adjusts the interceptors to compensate for rough or choppy seas and keep the bow as steady as possible for a safe and smooth ride.

You can also control the boat's trim and list manually from the Humphree control panel. Drag your finger left and right along the panel to adjust the list. Drag your finger up and down to adjust the trim angle.

There are four levels of software packages for the Humphree Lightning system. The software can be upgraded if you desire. Contact your Regal dealer for assistance.

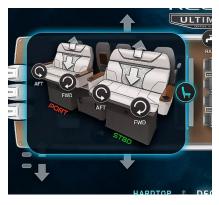
Refer to the manufacturer owner's manual included in your welcome packet for specific operating instructions.

#### Seating

Sleigh Seating



There are two rows of cockpit seating on the 50 SAV-a row of four helm cockpit seats, equipped with foldable armrests, and a pair of sleigh seats behind them. The sleigh and outer helm seats rotate 180°. To rotate the sleigh seats, tap the seat icon on the "Deck" page in the DSS. A window will pop up. Hold the curved arrows to rotate the sleigh seats. Do not sit on the seat while rotating.



Note: Layouts may vary.

Hold the straight arrows to raise and lower the seat back.

To rotate the outer helm seat, pull the handle in the back of the seat base and rotate the seat inward. Release the handle and the seat will lock into place. Seats only lock facing fully forward or backward.



All seats come with an adjustable bolster. Raise the bolsters when rotating. Both rows of seating fold down and come equipped with teak inlaid in the seat back to create additional surfaces for dining or food preparation. The captain and copilot seats have "Garmrest" touch screens built into the outer armrest of each seat (see, "Digital" pg. 60).

The mezzanine seats, aft of the refreshment island, contain storage underneath the seat cushions. Flip up the seat cushions to access.

#### Ice Maker

Your vessel may come equipped with optional ice makers on either side of the mezzanine seats.



Tap the snowflake icon on the DSS to turn the ice maker. The ice maker will turn off when ice level reaches a shut off sensor in the bin.

#### **Cockpit Television**

Your stern facing, fifty-five inch cockpit television drops down from the ceiling above the refreshment island. Tap the TV icon on the "Hardtop" page in the DSS to raise or lower the television (see, "Digital Switching System" pg. 63). Refer to the "Cabin" section of the equipment chapter for specific television signal operation.



#### **Fusion Stereo**

The Fusion stereo is the central hub for your audio entertainment system. The waterproof unit is on the starboard side of the dash. Fusion radio is fully integrated with the chart plotters. From the plotters, you can control your entire audio system including independent control of all sub woofers, mix balance, and volume for individual audio zones.



The Fusion stereo supports a variety of source and input options including, but not limited to Bluetooth, USB, AUX, AM/FM and Sirius Satellite radio (subscription not included). Refer to the manufacturer owner's manual included in your welcome packet for more information on functionality and operation.

Your audio system is controlled from the "Media" page in your helm chart plotters. Tap the "Layout" icon at the bottom of your helm plotter home screen and scroll through the available icons until you find the "Media" page (see, m "Garmin Chart Plotters" pg. 60).

The Fusion audio unit is waterproof and is engineered for the marine environment. Sub woofers and speakers are also waterproof and designed to provide optimal sound quality outdoors and on the water.

#### **FLIR Camera**

Your vessel may come equipped with an FLIR M232 Pan & Tilt Thermal Camera attached to the hard top roof. The FLIR camera is a thermal camera that provides enhanced visibility when piloting your boat at night, in stormy weather, and in other low visibility conditions. Access the FLIR camera feed by tapping the "Video" icon on the helm plotter home screen and then selecting the FLIR camera from the input list. Tap the arrows in the bottom left corner of the screen to control the tilt and pan of the FLIR camera.

You can also control the camera by dragging your finger across the screen to pan and tilt and pinch to zoom. The camera has a 360° range of motion.

#### Radar



Your boat may come equipped with an optional Garmin Fantom 4' Open Array radar installed on the roof of your 50 SAV. The radar system is designed to assist navigation in low visibility situations by locating land masses, other boats, and incoming weather.

The radar system is controlled from the chart plotters at the helm (see, "Garmin Chart Plotters" pg. 60). Tap the "Layout" icon in the bottom center of your home page to pull up the horizontal icon scroll. Tap on the word "Radar" to bring up the radar layouts. On the radar page, you will see an icon labeled "X-mit" or 'transmit.' Tap the icon to activate the radar.

Once the radar is active, the radar antenna on your hard top will start spinning and the radar page will begin displaying readings.

Tap the transmit button again to turn the radar off.

Radar waves have been linked to certain types of cancer. Do not ever stand on the roof or anywhere near the antenna while the radar is active to avoid potential adverse effects.

#### Sunroof



Note: Layouts may vary.

Your sunroof is operated manually. Squeeze the handle to unlock the latch and slide the window panes toward the stern until the locking mechanism clicks into place.

Rinse out the sunroof tracks periodically to remove grime and debris. Do not apply lubrication to the sunroof tracks.

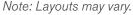
Remember to close the sunroof when leaving the boat unattended for extended periods. Damage resulting from improper sunroof operation and maintenance may void your warranty.

#### **Underwater Lights**

There are eleven underwater lights attached along the hull and the transom. Underwater lights are controlled from the "Lights" page within the digital switching system (see, "Digital Switching System" pg. 63).



#### Refreshment Island





#### **Grill**

There are two, 48 volt electric grills on the starboard side of the refreshment bar. Your grills run on DC power and need no other fuel source to operate.

#### Grill Control Panel



To operate your onboard grill, first make sure Live Power is on (see, "Live Power" pg. 48). Flip the grill breaker switch, under the port side mezzanine seat, on. There are two grill control panels in the center of the refreshment island on the forward face. Press the "ON/OFF" button on each control panel to turn the grills on and then press the unlock button to unlock the grills. Use the 'plus' and 'minus' buttons to control the grill's temperature.

In the unlikely event of an emergency, such as a fire, immediately close the grill lid. The lid will activate the safety shutdown switch in the port aft corner. The grill will deactivate. Always keep a fire extinguisher within reach while using the grill to avoid fire spreading.

In any event other than an emergency, turn the grill off and let it cool completely before closing the lid to avoid damage.



Note: Layouts may vary.

#### Refrigerator

The refreshment bar comes with either two refrigerators or one refrigerator and one freezer. Each refrigerator can hold up to 95 liters of food and drink and comes with a separate freezer drawer, bin, bottle racks to secure items while at sea, and a stainless steel door covered with acrylic.



Note: Layouts may vary.

The optional dedicated freezer can also hold 95 liters.

The units run on AC current. Make sure the refrigerator breaker on the MDP is on, before attempting to run the refrigerator.

There is a temperature control under the overhang. The power button on the right will turn the refrigerator on. The snowflake button next to the power button will change the temperature setting. There are five temperature settings. Temperature setting and other specific operational instructions can be found in the manufacturer owner's manual included with your welcome packet.

Regal recommends turning the refrigerators on and allowing them to run for six hours prior to stocking to ensure that any perishable items are kept as cold as possible.

Periodically clean the door and interior of the refrigerator with standard household cleaners to prevent mold and other food contaminants from building up. Refer to your manufacturer manual for specific care and maintenance instructions.

#### **Windshield Wiper**

Your windshield wipers are controlled from the DSS. You can set the wipers speed and spray washer fluid to clean the windshield. Tapping the "Quick Wipe" icon will activate the blades for a short time.

Check your wiper blades for wear periodically and replace as necessary.



# **Cabin**

A/C

There are two air conditioning units in your 50 SAV. One for the cabin and one for the deck. The cabin A/C unit is in the forward most V-berth compartment. To access, pull the forward-most seat back down and remove the panel. The deck AC unit is in the Mid-berth hanging locker. Open the hanging locker and remove the back panel to access.

The A/C system is part of the raw water system and uses a single pump to draw water in from the water manifold through a dedicated seacock in the Lazarette compartment (see, "Seacocks" pg. 107).



The raw water loop through the A/C units returns to the Lazarette where it discharges through a thru hull in the transom. The unit comes equipped with a sound cover and dedicated vibration isolation system that will help reduce noise.

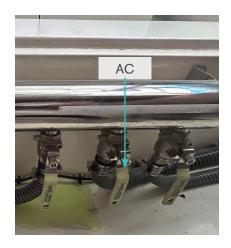
You can control the cabin A/C unit from the Garmin display on the port cabin wall next to the stairs or from the Dometic control panel in the starboard V-berth storage compartment.

#### Mid-Berth



Note: Layouts may vary.

Control the on deck A/C from any of the cockpit chart plotters. There is also a Dometic control panel behind the starboard side refreshment bar trash can. Remove the trash can from the well to access. Refer to the manufacturer owner's manual included in your welcome packet for specific operational instructions.



Your manufacturer manual will also include a set of system codes that can be used to solve various errors that may occur.

Open the Lazarette hatch and remove the white cover aft of the seakeeper to access the water manifold. Before turning on the A/C, clear the manifold seacock strainer basket of any debris (see, "Seacocks" pg. 107). To turn on your A/C, first make sure the A/C valve is open. Next. turn on the "AC PUMP" breaker and the breaker for the corresponding A/C unit: "CABIN AIR CONDITIONER" or "DECK AIR CONDITIONER." All three are on the MDP. Once the A/C pump is running, turn the A/C on using either the Garmin display or the Dometic control panels for their respective unit.



Follow the manufacturer instructions to set cooling or heating preference and A/C cycles.

Each A/C condenser has a condensation drain pan underneath the unit. Periodically check the drain pan and remove any debris that may have accumulated. Failure to remove debris may cause the pan to fill with water and overflow causing damage.

Refer to your manufacturer owner's manual for specific operating instructions.



AVOID DEATH OR BODILY INJURY
DUE TO SHOCK!
AC PUMP LOCATED IN AFT BILGE IS
230 VOLTS AC CURRENT.
IF SERVICE IS REQUIRED CALL A
CERTIFIED MARINE FLECTRICIAN.

#### **Berths**

A berth is a sleeping area on a boat. There are two berths in the cabin.

#### **Mid-Berth**



The Mid-berth, aft of the cabin stairway, is the boat's dedicated sleeping berth. There is a king size bed on the port side with dedicated storage bins on either side that double as nightstands. Each night stand has a wireless phone charger. There are reading lights and USB and 110V outlets on either side of the bed.

#### **V-Berth**

The V-berth is the bow sleeping area and features convertible dining seating just forward of the cabin stairs.

There is a base plate installed in the floor between the V-berth seating.

A threaded hole in the center of the

plate receives a corresponding bolt. To begin installing either the table or the filler seat cushion, you must first install the table base. The table base comes with a T-bolt and a nut. Thread the nut on to the T-bolt. Next, position the table base so that the hole in the base and the plate are aligned. Screw the T-bolt, with attached nut, into the table base and base plate until it is tight.

After installing the base, select either the longer table leg or the shorter fill cushion leg and slide the leg into the base to install. Then select the corresponding equipment-either the table top or the fill cushion-and slide the leg into the plate on the bottom.

To switch configurations, remove the leg and attached equipment and replace it with your desired option. You do not need to remove the base plate once installed.

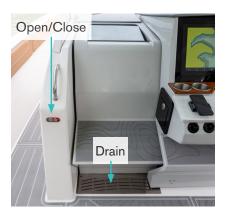


#### **Cabin Door**

The cabin door is controlled from the Deck page in the DSS or with the buttons on the side of the door. When open, the door slides behind the helm and is hidden away from sight. There are three teak steps leading from the door down into the cabin. There is a drainage grate in front of the door that prevents water from penetrating the cabin.

The cabin door lock is code protected and controlled from a pop up on the "DECK" page of the DSS (see "Digital Switching System" pg. 63).

To lock the door, tap the lock icon.



Once the door is locked, you will need to enter the code to unlock it from the outside. Input the code and tap the unlock icon to unlock the door.

The default lock code is 0123. To change the code, tap the "Change Password" icon at the bottom of the door lock pop up window and follow the on screen instructions.



#### **Cabin Televisions**

Your cockpit and Mid-berth cabin televisions run on AC power. You must turn the "ENTERTAINMENT" breaker on the 120 Volt AC panel in the cabin on before using the television.



Your boat comes equipped with a limited range air antenna that provides limited channel options while the vessel is docked or close to the shore.

Your television system comes with two HDMI inputs in the stateroom media cabinet. There are two shelves available for accessories to use with your television including game consoles, DVD players or other third party streaming devices. After connecting your accessories to the HDMI ports, navigate to your inputs using the television remote

and select either "HDMI 1" or "HDMI 2." The HDMI ports utilize a splitter to route a signal to all the televisions and plotters on your boat.



#### **KVH Satellite**

Your boat may come equipped with the optional KVH satellite system. The KVH satellite system allows you to connect to satellite television whether you are docked or offshore and works with any third party. satellite television subscription. Regal does provide a satellite TV subscription or the third party equipment to access satellite television. The KVH satellite package only includes the hardware necessary to receive a satellite signal.

If you have chosen the KVH satellite package, contact a third party satellite television provider for subscriptions and any accessory installation necessary to access your subscription.

The KVH system runs on DC power. Make sure your DC battery bank is turned on before attempting to operate the TV using a satellite signal. Power on the TV using the included remote. The KVH system will be wired through your "HDMI 1" port (thus removing one of the ports for use with a third party accessory). Use your remote to navigate to the input menu on your TV and select "HDMI 1" to access your satellite television.

Refer to your included TV and satellite owners manual for more specific operating instructions.



#### **Carbon Monoxide Detectors**

monoxide-CO-is Carbon toxic in any quantity and deadly in high concentrations. Your boat comes equipped with two, combo CO/ Smoke detectors that monitor CO levels and will sound an alarm when CO or smoke concentration in the cabin reaches levels that are unsafe. Both detectors are on the starboard side-one in the storage compartment in the V-berth and one in a storage compartment above the Mid-berth seating. Refer to your General Vessel manual for more information about the dangers of CO poisoning and how to avoid potential CO accumulation in your boat.

The detectors are battery powered. If functioning properly, a green light on the detector's body will flash every 180 seconds. Refer to the CO detector manufacturer owner's manual for detector testing frequency and procedure. If you have any reason to believe the CO detector is not functioning properly, follow the troubleshooting instructions found in the manufacturer owner's manual.



CO Detector

When the alarm detects unsafe levels of CO, the indicator flashes red and the unit emits horn beeps in groups of four. If your alarm sounds:

- 1. Press the reset button on the unit.
- Vacate the vessel and move to a fresh air environment as quickly as possible to avoid passing out from CO poisoning. Do not return to the vessel until emergency services have given an all clear.
- 3. Call emergency services.
- Have a qualified technician inspect the boat and fix any leaks that may have caused CO to accumulate before operating the vehicle again.

### **NOTICE**

CARBON MONOXIDE PRECAUTIONARY
LABELS ARE LOCATED AT THE HELM,
TRANSOM AND CABIN AREAS.
ENSURE THAT ALL ABOARD READ AND
UNDERSTAND THE SIGNS AND EFFECTS
OF CARBON MONOXIDE (CO).

## **A DANGER**

CARBON MONOXIDE IS A TASTELESS,
ODORLESS AND INVISIBLE GAS
THAT CAN CAUSE DISCOMFORT,
SEVERE ILLNESS, AND EVEN DEATH.
EXERCISE CAUTION WHILE OPERATING
GENERATOR OR ENGINES
IN CONFINED SPACES OR AT DOCK
SIDE. DO NOT ALLOW HULL EXHAUST
OUTLETS TO BECOME BLOCKED OR
EXHAUST FUMES CAN BECOME TRAPPED
IN AND AROUND THE CONFINES
OF YOUR BOAT.
DURING IDLE AND SLOW CRUISE
CONDITIONS, BILGE BLOWERS SHOULD
BE USED.

# Lazarette

A Lazarette compartment is a storage compartment on a boat. The Lazarette on the 50 SAV contains most components of the Live Power system and the central raw water manifold. It also contains the Seakeeper stabilizer and automated bilge pumps.

#### **Bilge Pump**

In a marine environment, it is impossible to keep the Lazarette compartment completely dry. Bilge pumps are used to pump any excess water that may accumulate in the bilge out of your vessel.



Your bilge pumps operate both automatically and manually. Float switches will automatically activate a pump when necessary. You can manually activate the bilge pumps from the DSS. Icons in the DSS will also indicate when a pump is active, whether triggered automatically or manually (see, "Digital Switching System" pg. 63).

Keep an eye on your bilge pump icons; while some water is expected to accumulate in the bilge, consistent pump activation may indicate a leak somewhere in the boat. If you suspect there is a leak, have your boat serviced by your Regal dealer.

There are three bilge pumps on the vessel-two in the Lazarette compartment and one in the cabin. The main pump is set all the way aft in between the two central stringers. The secondary pump is underneath the Seakeeper. The third is in the cabin, underneath the lower floor surface at the base of the step that divides the main cabin from the Midberth (see, "Shower Box" pg. 79). Before embarking, check the bilge pump outlet for debris and test your bilge pumps by manually activating each pump. Make sure the bilge pump indicator icons illuminate when you activate the pump.

#### Seakeeper

The Seakeeper is a gyroscope that uses a rotating flywheel to generate force that counteracts boat roll and stabilizes your vessel on the water. The Seakeeper is located in the Lazarette compartment aft of the firewall.



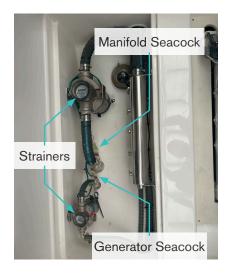
Turn the Seakeeper breaker on at the MDP and verify that the seakeeper handle on the water manifold is horizontal (open) before operating (see below).

The Seakeeper is controlled from its dedicated page within your helm plotters. To navigate to the Seakeeper page, tap the Seakeeper icon on the plotter home screen. Once on the page, turn the Seakeeper on by tapping the gray power icon. After tapping, the button will turn blue indicating the Seakeeper is on.

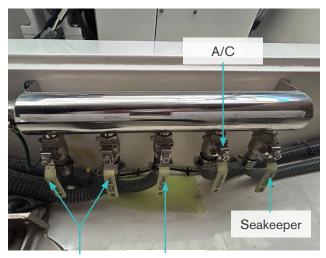
It will take between twenty and forty minutes for the flywheel to get up to speed. A boat roll icon will appear below the power icon once the flywheel is up to speed. Tap the icon to activate stabilization.

You can monitor Seakeeper performance and boat roll using the roll angle gauge on the Seakeeper page. Refer to the manufacturer owner's manual for specific operating instructions.

#### **Seacocks**



A seacock is a valve on a ship or boat's hull that controls the flow of water in or out of the vessel. There is a central raw water manifold in the middle of the Lazarette compartment beneath the removable floor panel just aft of the seakeeper.



Livewells Ice Maker

The manifold is fed by the port side seacock with the larger stainer. The starboard seacock is the dedicated generator raw water feed.

This central raw water manifold feeds the seakeeper, air conditioners, two baitwell pumps, and the optional on board ice maker. Make sure the respective seacock is open before operating the corresponding equipment. Before embarking, clear the manifold seacock filter of any debris.

First, close the seacock to stop the flow of water. To remove the strainer basket, turn the plastic cap counterclockwise and remove the cap and the o-ring inside the cap. Pull the basket out, dump out any debris and rinse clean.

Sediment may have accumulated in the bottom of the strainer. To clear sediment, remove the plug on the underside and allow the strainer to drain completely.

Replace the plug, basket, and cap once the unit is clear of debris.

## Stern

## **Boarding Ladder**

The boarding ladder is stowed in a hatch on the port side of the swim platform. To access the ladder from on deck or in the water, open the cover, unfold the rungs, and extend the ladder into the water. Make sure the ladder is fully extended when reboarding. To stow, fold up the ladder and return it to the dedicated hatch.



Note: Layouts may vary.

## **A WARNING**

AVOID INJURY OR DEATH
FROM DROWNING DUE TO CO POISONING!
NEVER HANG FROM OR ENTER
UNDER THE SWIM PLATFORM
STRUCTURE OR APPROACH THE SWIM
PLATFORM/LADDER WITH ANY ENGINE
OR GENERATOR RUNNING.

## **Dive Doors**

Your port and starboard dive doors are located in the terrace doors on either side of the aft cockpit (see below). Each door features a stainless steel hinge and latching system. To open the door from the inside, press the stainless steel button in and slide the latch aft. Magnets in the terrace doors will hold the door open. To close the dive doors, repeat the process in reverse. When closing, verify the door latch clicks into place to lock.



## **A** WARNING

AVOID POSSIBLE INJURY OR DEATH
DUE TO FALLING OVERBOARD!
CLOSE AND SECURE DOOR
WHILE UNDERWAY.

## **Transom Doors**



The transom doors separate the stern seating area from the swim platform. To open, lift up on the door and swing the door forward. To close the doors, lift up on the door and release once the door is in place. Keep both transom doors closed while underway to avoid injuries or damage to the vessel.

## **Terrace Doors**



Terrace Doors Deployed

## **A WARNING**

AVOID INJURY OR DEATH FROM FALLING OVERBOARD! ENSURE THAT TRANSOM DOOR IS

SECURED WHILE MAKING HEADWAY.

Regal's new terrace doors fold down to create an expanded entertainment area in the rear of the boat. The doors are controlled from the "Deck" page in the DSS. To fold the doors down, tap the corresponding arrow icon.

In the unlikely event that the automatic terrace door sensors stop working, you can manually control the terrace doors from DSS back end page (see, "Digital Switching System," pg. 63).

Tap the "Manual Override" icon. A pop up will appear. To lower the doors, press and hold the "UNLOCK" icon.



When the lock is fully retracted, press and hold the down "DOOR" arrow. Attempting to lower the door while the lock is engaged will damage the vessel.

To raise, first make sure the door lock is not extended. Attempting to close the terrace doors with the door lock extended will cause damage. Press and hold the "UNLOCK" arrow to retract the lock. Then, press and hold the up "DOOR" arrow to raise. Once the terrace door is fully raised, tap the "LOCK" icon to lock the door.

## **Fishbox**

There are two fishboxes on your vessel located in the deck on the port and starboard sides of the aft cockpit seating area. Fishboxes are designed to store caught fish on ice for the journey back to shore. They are insulated and come equipped with a drainage system and included macerator. To open a fishbox, lift up the ring tab on the fishbox lid, turn the tab 90° counterclockwise and open the lid. To lock a fishbox, close the lid, turn the tab clockwise, and return the tab to its flush position.



Each fishbox macerator operates independently. Tap the fish icons to drain each fishbox and activate the macerator.

Fishboxes can also be used as storage to stow fenders, dock lines, water sports equipment, or other gear.

## **PowerShade**



Your Powershade is operated from the "Hardtop" page in the DSS (see, "Hardtop" pg. 66). The PowerShade provides shading to the aft cockpit and extends from the back of the hard top. To extend the PowerShade, tap the extend arrow. To retract the Powershade, tap the retract arrow. Do not extend the Powershade (or PowerPlatform) while underway. or moored next to another vessel running a generator. When used improperly the PowerShade can increase CO accumulation in the cockpit area. Refer to your general vessel manual for more information. on managing CO accumulation on your vessel.

## **PowerPlatform**

The electrically operated PowerPlatform is an option on boats equipped with a Mercury propulsion package.

The PowerPlatform sits under the swim platform on the starboard side and can be raised or lowered to provide seating in the water or make it easier to enter and exit the boat from the stern. There is a physical switch on the starboard side of the tombstone side table. Press. the bottom button to deploy the platform and press the top button to retract. To operate the platform from the DSS, navigate to the "Deck" page. Press the down arrow once to deploy and the up arrow once to retract (see, "Digital Switching System" pg. 63).



Power Platform

## **A** CAUTION

AVOID INJURY OR PROPERTY DAMAGE! ENSURE THAT POWER PLATFORM IS IN THE UP POSITION AND CLEAR OF ALL OBJECTS BEFORE STARTING THE ENGINE!

## **A** CAUTION

AVOID INJURY OR PROPERTY DAMAGE
DUE TO IMPROPER OPERATION!
STERN DRIVE MUST BE TRIMMED
BELOW 20 DEGREES
OR FULLY CENTERED
TO OPERATE POWER PLATFORM.
ENGINE MUST BE OFF.

## **Fishing Tombstone**

The fishing tombstone is the central hub for your fishing expeditions. It features storage compartments, flip down seating, twin pressurized livewells, a secondary anchor, and eight rod holders.





## **Anchor**

The stern anchor is stored in the Lazarette compartment and is accessed from the rear side of the fishing tombstone through a hatch. The stern anchor is only operated manually. To lower the anchor, pull out the rode and allow the anchor to sink toward the bottom.

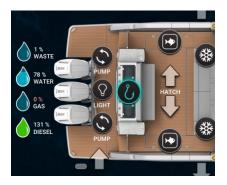
## Livewells

There are two thirty gallon, pressurized livewells in the center of the fishing tombstone. The lid of each livewell is held in place by a stainless steel latch. The livewell pumps continuously pump water into the livewells to maintain pressure against the sealed lids. Make sure that the fill valve is open and the two drain valves are closed in each livewell before operating (see image below).



Water will continuously overflow through a cutout in the lid gasket at the outboard aft corner of the lid. The overflowing water will run down the aft side of the tombstone and onto the swim platform. Adjusting the top drain changes the amount of water that overflows the gasket. Twist the drain to adjust.

To fill the livewells, tap the hook icon on the "Deck" page of the DSS. A pop up will appear. Tap the pump icons to fill the livewells and tap the light icons to turn on the livewell lights. To drain the livewells, first turn the pumps off. Then, open the drain valves.



## Flip Down Seating

There is forward facing, flip down seating on the forward side of the fishing tombstone.

Pull up and out on the seat handle then guide it until it is fully extended. To return the seat to the stowed position, lift up on the seat and guide it up until it has fully stowed.

Stowed



Extended

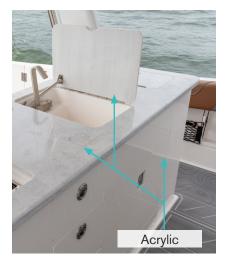




## CARE

## **Acrylic Solid Surface**

Acrylic is used in surfacing applications around your vessel including the wet bar counter top and cabinet face and the helm seat backs. Acrylic is durable and does not need as much care as other surfacing materials.



Use warm, soapy water or household surface cleaners for routine cleaning. If further attention is needed, use a 1:4 diluted bleach solution. Make sure to avoid using bleach on metal; bleach can cause corrosion. Use lint free or microfiber rags to clean acrylic without creating static discharge. Wipe dry after cleaning to avoid film building up on acrylic surfaces. Acrylic scratches easily--make sure cloths are totally clean before using to clean acrylic.

Do not use paper towels. Do not use an abrasive or scouring pad. Do not use window cleaners. Do not use organic, oil-based solvents including, but not limited to, acetone, nail polish remover, paint thinner, benzene, alcohol solutions, and carbon tetrachloride.

Polishing may help remove scratches and other marks that do not respond to basic cleaning. Use a soft, lint-free cloth to polish. After polishing, remove any residual product.

For further care instructions, refer to the LG HI-MACS care and maintenance website.

## **Canvas**

Never store canvas in a wet, moist, or unventilated area. Roll the canvas instead of folding. Shake out dusty canvas. Clean canvas with mild soap or detergent. Spray with a hose to remove dirt and debris. Rinse thoroughly. Incomplete rinsing may cause threads to deteriorate. Do not use bleach or other harsh chemicals. Do not steam press. Do not machine wash or machine dry. Excessive heat can damage and shrink the canvas.

## **Zippers and Snaps**

Canvas covers have zippers. Do not force zippers closed. Do not pull on canvas to force zippers closed. A dedicated zipper lubricant may help operate new zippers and maintain old ones.

Always attach and detach canvas snap fasteners as close to the snap itself as possible. Do not remove canvas by pulling on the material. For further care instructions, refer to the TaylorMade website.

## **Fiberglass and Gel Coat**

Outdoor exposure can cause your boat's gel coat to fade. Routine maintenance is the only way to keep your boat shiny and new. Wash your boat once a month with a mild detergent or dish soap. Dry as you wash to avoid calcium spots. Avoid alkaline cleaners, abrasives, bleaches, and ammonia. For best results, use dedicated gel coat cleaners. For stains in the gel coat, use an acid based, fiberglass stain remover. Follow all manufacturer safety and application instructions.

Wax the gel coat surface twice a year to protect the finish. Use fiberglass wax and follow the label instructions. Apply a 3'x3' area and use clean applicator cloths or a bonnet to buff. If a haze develops, use a power buffer at low speed to remove the haze. Keep the buffer moving to avoid heat buildup. Never wax in direct sunlight.

If washing and waxing do not restore shine, it may be necessary to use a fiberglass polish or fine rubbing compound. Do not apply a rubbing compound in direct sunlight. Use a power buffer at low speed to remove impurities from the gel coat that cause dulling. Use light pressure and keep the buffer moving. When finished, re-wax.

## **Interior Fabrics**

Clean interior fabrics with dry cleaning, fluid style cleaners approved for use with soft fabrics. Allow adequate ventilation and follow the label instructions.

## **Seagrass Matting**



Seagrass matting is Regal's in house, custom deck matting that comes standard on your 38 Surf. Seagrass contains Microban, an antimicrobial protection that inhibits the growth of stain and odor causing bacteria, mold and mildew.

Air out your Seagrass after each outing. When removing material from the cockpit, do not pull on the material itself, instead lift from the metal snaps.

To clean your Seagrass matting, vacuum any dust or detritus, clean with a sponge and mild detergent, rinse with a hose and hang to dry. Do not wash Seagrass in your washing machine.

Seagrass mats feature urethane backing designed for marine environments. When storing your Seagrass mats, always roll with the backing facing in. Do not fold or crease to avoid splitting the backing.

## Seadek/Reflex



Your vessel may be equipped with optional Seadek or ReFlex matting. Matting is made of UV protected, non-absorbent foam that stays cool to the touch and maintains traction even when wet. Upgraded matting is designed to resist stains and, most of the time, hosing down the matting is enough to keep it clean. If more thorough cleaning is required, use any, non-acid based household cleaners and soft rags or soft bristle brushes to remove any dirt or residue.

## Metal

Consistent care is key to maintaining metal components. Rinse and dry metal components with fresh water each time you use the boat. Wash metal components and dry thoroughly to avoid corrosion and rusting. Do not use acidic products like heavy cleaners and degreasers. Acid can speed corrosion and damage metal components. Do not use chlorine, sulfurs, or ammonia based products.

## **Stainless Steel**



Select cosmetic hardware on your vessel including interior drains, grab rails, brake light covers, and select gas ramps is stainless steel. Stainless steel is more durable and resistant to corrosion than other metal finishes.

To clean your stainless steel hardware, use any typical stainless steel cleaner. Avoid using hard bristle brushes and avoid scratching the stainless steel hardware.

Stainless steel is expensive to fix and oftentimes replacing an entire piece is more cost effective then repairing even the smallest scratch.

## **Plastic**

Use marine specific, plastic cleaners and polishes. Use proper applicators. Read all instructions carefully. Test the product on a small area first. Apply with a soft rag and rinse the surface with water. Do not use ammonia based cleaners and abrasives.



## **Upholstery**

Clean the cockpit and interior vinyl periodically to prevent dirt and mildew buildup. Contaminates may stain and reduce vinyl life.

Clean common stains with warm, soapy water. Scrub with a soft bristle brush to loosen dirt and grime from embossed surfaces and under welting. For tougher stains, use a mild household cleaner.

For best results, remove stains immediately, before they penetrate the vinyl. Do not use powdered abrasives, steel wool, or industrial strength cleaners on upholstery. Do not wax vinyl. Use tanning lotion instead of tanning oil to avoid damaging upholstery. Do not leave upholstery exposed to the sun for long periods. Use canvas covers whenever the boat is not in use.

## **Chill Cool Vinyl**

Your vessel may come equipped with optional Chil Cool Technology vinyl. Chil Cool vinyl keeps your seats cool after hours in the sun. Caring for Chil Cool vinyl is slightly different from regular upholstery.

To clean Chil Cool Vinyl, use a soft cloth submerged in a mixture of 30:1 warm water to mild, non-bleach dish soap. Gently rub away any dirt or residue and then rinse with clean, warm water and wipe dry.

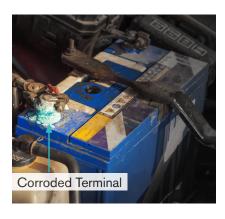
NEVER use bleach or bleach containing products, like eraser sponges, to clean your vinyl. Failure to care for your vinyl may void your warranty and damage your vinyl.



## 

## **Batteries**

Periodically check your battery terminals for corrosion. If you find a greenish, powdery substance on the terminals, remove the cable connectors and clean the terminals and the connectors with a wire brush and either an anti-corrosion cleaner or a paste made from water and baking soda. The baking soda will neutralize the acid and stop the corrosion. Reconnect the battery cables after cleaning.



Check the battery's electrolyte level every thirty days. Levels should be maintained between the top of the battery plates and the bottom of the fill cap opening. Add distilled water, as needed, to flooded electrolyte batteries after charging. Do not overfill. Sulfuric acid could overflow and cause damage.

Use a voltmeter to monitor battery charge. Trickle charge batteries onshore. Do not smoke or bring any open flames near a battery that is charging or that has recently been charged.

Do not allow any metal objects to spark across battery posts while working near a battery. Sparking may cause damage and personal injury. Always cover positive posts with their boot cover.

Tighten all battery connectors. Check tightness by tugging on the connectors. They should not move. Reinstall boot covers over the terminals after tightening.

## **Fuel System**

Inspect all fuel system components periodically. Examine each hose and clamp for signs of deterioration and/or leakage. Check the fuel sender for loose bolts, nuts, and leaks. Inspect the fuel tank for signs of leakage and abrasion. Tighten components as needed.

### **Hull Bottom**

Fiberglass hulls are strong, but can be damaged. A fiberglass hull has no internal stresses. When a part of the hull is broken or punctured, the rest of the hull will retain its shape. A severe blow will either be absorbed or cause a localized break. A break in the hull should be repaired by your Regal dealer.

Clean your hull bottom regularly to eliminate marine contaminants that may affect performance. Never use wire brushes or abrasive scouring pads on the hull bottom. Abrasives could damage the gel coat or bottom paint.

## **Propellers**

Damaged propellers will affect performance and cause vibration. Damaged props should be replaced, but some chipped or bent props may be repaired by your Regal dealer. Consider carrying a spare set of props onboard; most marinas do not carry replacement propellers. Refer to your manufacturer owner's manual for propeller replacement information or contact your Regal dealer.

Make a note of the propeller diameter and pitch while the vessel is in dry dock; they are pressed directly into the prop.

Select propellers feature a hub pressed into the center of the propeller that includes a hole for the prop shaft. The hub may be damaged by impact which will prevent the boat from reaching its rated revolutions per minute.

## **Sacrificial Anodes**

Salt and fresh water are excellent conductors of electricity. When different metals are connected and then submerged in a conductive liquid like water they become subject to electrolysis and corrosion. There is no way to stop corrosion, but attaching a third, more corrosive metal to the submerged metal components will delay corrosion of the less corrosive metals. These additional, more corrosive pieces of metal are called sacrificial anodes because they are sacrificed to protect the rest of the submerged metal components on your vessel.

Over time, sacrificial anodes will corrode and need to be replaced.

As anodes corrode, they lose surface area which in turn leads to faster corrosion of both the anode and the other metal components on the boat. It is important to keep an eye on the sacrificial anodes and replace each anode when it is 30% consumed. There are sacrificial anodes on the outdrives, the trim tabs, the swim platform and any other underwater metal components that may come equipped on your boat. Contact your Regal dealer to replace sacrificial anodes.

## **Storage**

When lifting the vessel, follow the sling placement diagram in the back of the manual (see, "Technical Drawing Catalog" pg.XX). Use a properly rated, overhead hoist to lift the boat. Place a spreader bar at each sling to prevent damage to the gunwale.



# SOUBIESHOOTING TOOR

The following diagnostic information will assist you in identifying minor electrical, fuel, and mechanical problems. Some of the items listed require technical training and tools. Additional assistance is available in the engine manufacturer's owner's manual. Also, you can contact your closest Regal dealer or marine professional for more information. Sometimes a problem can be solved by performing a logical sequence of elimination and/or root cause techniques.

## **A WARNING**

AVOID SERIOUS INJURY OR DEATH!
BEFORE PERFORMING ANY MAINTENANCE
WORK, TURN OFF THE BATTERY SWITCH
AND REMOVE THE IGNITION KEY(S)
FROM THE SWITCH.

## **A WARNING**

AVOID SERIOUS INJURY OR DEATH!

USE ONLY APPROVED MARINE

REPLACEMENT PARTS THAT

ARE IGNITION PROTECTED.

Problem	Possible Cause
Engine Overheating	Water pick-up feeds are blocked by debris. Clear intake of debris.
	Cooling system leak. Service at dealer.
	Impeller is worn or blocked by de- bris. Clear debris. Service at dealer if issue persists.
	Propeller is over propped for the circumstances, causing the engine to work extra hard. Service at dealer.
	Debris in oil is holding heat more than normal - defective oil filter. Change oil filter. If issue persists, service at dealer.
	Defective thermostat. Service at dealer.
	Faulty temperature sender. Service at dealer.

Problem	Possible Cause
Starter Will Not Crank	Battery weak or dead. Charge/ replace battery. Service at dealer if issue persists.
	Starter defective. Service at dealer.
	Fuse for electric start relay blown. Replace fuse. Service at Dealer if issue persists.
	Control not in neutral. Return throttle to neutral.
	Defective start panel button. Service at dealer.
Excessive Steering Play	Air in steering lines. Bleed lines. Service at dealer if issue persists.
	System low on steering fluid. Add steering fluid.
	Mechanical parts-loose connection.  Tighten connections. Service at dealer if issue persists.

Problem	Possible Cause
No Power To Helm	Battery switch turned off. Turn
	switch on.
	switch on.
	B
	Batteries are weak or dead.
	Charge/replace batteries.
	Main breaker tripped. Reset
	breaker. Service at dealer if issue
	persists.
	Loose connection. Tighten con-
	nections. Service at dealer if issue
	persists.
Engine Cranks But Will Not Start	Fuel flow obstructed/water in fuel.
	Drain fuel lines. Service at dealer if
	issue persists.
	Low battery voltage. Charge/re-
	place batteries.
	Engine ignition system malfunction.
	Service at dealer.
	Timing belt broken. Replace belt.
	No fuel in tank. Fill fuel tank.
	Control not in neutral. Return throt-
	tle to neutral.

Problem	Possible Cause
Hard Starting	Vacuum In Fuel System. Service at dealer.
	Fuel lines obstructed. Service at dealer.
	Water in fuel. Flush fuel lines. Service at dealer if issue persists.
	Debris in fuel/clogged fuel filter. Service at dealer.
Engine Idles/ Runs Rough	Old fuel. Replace fuel.
	Faulty spark plugs. Replace spark plugs.
	Fuel contaminated/ clogged anti-si-phon. Service at dealer.

Problem	Possible Cause
Power Loss	Damaged propeller. Replace propeller.
	Improper trim angle. Trim engine. Service at dealer if issue persists.
	Spark plugs fouled. Replace spark plugs.
	Fuel system malfunction. Service at dealer.
	Hull bottom fouled with debris. Clean hull. Service at dealer if issue persists.
	Excess water in bilge. Service at dealer.
	Engine needs tune-up. Service at dealer.

Problem	Possible Cause	
Excessive Vibration	Damaged propeller. Replace propeller.	
	Damaged propeller shaft. Service at dealer.	
	Loose/broken motor mount. Service at dealer.	
	Steering pivot loose or damaged. Service at dealer.	
	Debris caught on propeller. Remove debris.	
	Ignition malfunction. Service at dealer.	
	Motor mount bolts loose. Service at dealer.	
Buzzer Sounds/Icon Lights	Cooling system malfunction. Service at dealer.	
	Engine oil level low or incorrect type. Fill/replace oil. Service at dealer if issue persists.	
	Wrong spark plug heat range. Replace spark plug.	
	Oil feed pump malfunction. Service at dealer.	

## DC Electrical Diagnostic Chart

Problem	Possible Cause
No 12 Volt Power At Battery	Charging system inoperative.
	Service at dealer.
	Weak or dead battery. Charge/
	replace battery. Service at dealer if
	issue persists.
	Battery cables loose/disconnected.
	Reconnect/tighten cables.
	Battery cables corroded. Service at
	dealer.
Battery Not Charging While Engine Is	Faulty stator/alternator. Service at
Running	dealer.
	Faulty circuit wiring. Service at dealer.
Battery Will Not Hold Charge	Faulty/old battery. Replace battery.
	Loose battery cables. Tighten cables.
	Corroded battery terminals.
	Replace battery

## DC Electrical Diagnostic Chart

Problem	Possible Cause
12 Volt Equipment Not Working	Fuse blown. Replace fuse. Service at dealer if issues persist.
	Weak or dead battery. Charge/ Replace battery.
	Corroded wire connection. Service at dealer.
	Loose wire connection. Tighten connection.
	Internal equipment short /failure. Service at dealer.

## AC Electrical Diagnostic Chart

Problem	Possible Cause	
No Voltage At Main AC Panel	Ships dock side cord not plugged in. Plug in cord.	
	Dock side breaker tripped. Reset dockside breaker.	
	ELCI breaker tripped. Reset breaker.	
	Faulty dock side power cord. Replace cord.	
AC Panel Indicates Reverse Polarity	Dockside wires reversed at marina power supply. Contact marina owner.	
No Voltage At GFCI outlets	GFCI outlet tripped. Reset breaker.	
	Outlet breaker off at AC main ship's panel. Turn on breaker panel.	
	Faulty equipment plugged in. Unplug faulty equipment.	
Main AC Panel Breakers Trip When All Equipment Is Energized	Turn off equipment as needed to balance load on shore 1 and shore 2	

## Metal

Keep all stainless steel and other metal parts rinsed and wiped dry. To maintain their finish annually polish the stainless steel and other bright works at least annually. Use commercially available metal products and read the labels carefully before use. Refer to the flier in the owners information pouch. Most marinas and boating retail outlets carry metal care products.

## **Hull Bottom**

Never use wire brushes or highly abrasive scouring pads on your hull bottom. It could damage the gel coat surface or the bottom paint. The bottom of your boat needs to be clean since the build up of natural coatings from water or marine life can potentially create drag and affect your boat's performance.



## FREQUENT STAINS/CLEAN-UP STEPS

	1	2	3
Coffee, Tea, Chocolate	. В		
Permanent Marker*	E	В	С
Household Dirt	Α	В	
Grease	D	В	
Ketchup, Tomato Products	Α	В	
Latex Paint	Α	В	
Oil Base Paint	D	В	
Mustard	Α	В	С
Suntan Oil	Α	В	
Asphalt/Road Tar	D	В	
Crayon	D	В	
Engine Oil	В		
Spray Paint	В		
Chewing Gum	D	Α	
Shoe Polish*	D	В	
Ballpoint Pen*	E	В	Α
Lipstick	Α	В	
Eyeshadow	E	В	
Mildew*	С	В	Α
Wet Leaves *	С	В	Α

A= Soft brush; warm soapy water/rinse/ dry

B= Fantastik cleaner

C= One tablespoon ammonia, 1/4 cup of hydrogen peroxide, 3/4 cup of warm water/ rinse/dry

D= Scrape off residue ( use ice to lift gum)

E= Denatured alcohol/rinse/dry

<sup>\*</sup> These products contain dyes which leave permanent stains.



2 REGAL

## OWNER'S MANUAL

GENERAL VESSEL AND SAFETY

# TABLE OF

142	Introduction	176	Rules of the Road
145	Resources and Information	178	Encountering Vessels
151	Delivery Process	180	Security
154	General Boating Safety	181	Navigation Aids
155	Boating and Alcohol	182	Night Running
157	Sever Weather	183	Bridges
158	Fueling	184	Final Acknowledgments
159	Exhaust and Carbon Monoxide	185	Technical Drawings
162	Boating Accidents		
163	Water Sports Safety		
165	Safety Equipment		
166	Personal Flotation Devices		
169	Fire Extinguishers		
170	Distress Signals		
173	Pollution and Waste Discharge		
174	Pollution Regulations		
175	Waste Discharge		

## INTRODUCTION

Boating is a fun and rewarding hobby. Without adequate education, however, boating can be dangerous. Understanding basic operating principles and standard safety precautions before leaving shore is imperative for your safety and enjoyment on the water.

The following manual focuses on rules of the road, safety precautions, and various governmental regulations governing boating. The information contained herein can help reduce the risk of accidents and injury on the water. We have compiled this manual using resources from the US Coast Guard, National Marine Manufacturers Association, American Boat and Yacht Council, and our decades of industry knowledge. Regal urges you to read and understand this manual thoroughly before setting out to help keep you and your loved ones safe.

Regal does not accept any liability or responsibility for accidents resulting from owner operations.

For more information on safe boating practices, visit the US Coast Guard website or usboat.com. Regal recommends taking the usboat.com licensing test for your state to become a licensed boater.





## LAXEN FRACTION

# **Resources and Information**

### **Owner's Information Packet**



At time of delivery, your Regal dealer will provide an owner's information packet in a black satchel bearing the Regal logo. Become familiar with the materials contained in the packet including a copy of your extended warranty and valuable information on your propulsion package, systems, equipment, and care and maintenance.

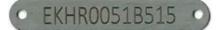
# **A WARNING**

Prevent Injury, Death, or property Damage! read and understand the regal owner's manual BEFORE attempting to operate the vessel.

### **Hull Identification Number**

The "hull identification number" (HIN) is a fourteen character serial number used to identify your boat. It denotes your manufacturer, model, manufacturer serial number, and month and year of manufacture. The HIN is mounted on the starboard side of your boat's transom just below the rub rail on the transom's vertical surface. Locate and write down the HIN for future reference. It can be useful when ordering parts from your Regal dealer.

Typical HIN Plate



# **Max Capacity Plate**

### **NMMA Yacht Plate**

Note: Layouts may vary.



The Maximum Capacity Plate displays the maximum weight capacity and the maximum number of people the boat can carry safely in good weather and is mounted on boats less then 26 ft. (approx. 8m.) long.

Maximum weight is the combined weight of all passengers, gear, and engines.

Never exceed the maximum weight capacity of your boat. An overloaded boat, or a boat with uneven weight distribution, is difficult to steer and can cause accidents.



The NMMA Yacht Plate indicates that your vessel meets or exceeds the U.S. Coast Guard (USCG) safety standards in effect at the time of certification. It is mounted near the helm on Regal boats 26 ft. (approx. 8m.) and over.

# **Vessel Information Sheet**

Fill out this page to keep all in	nformation about your vessel handy and organized.
Owner:	
Address:	
	Business Phone:
In Case Of Emergency Notify:	
Address	
0.7	
Insurance Agent's Name:	
Policy#:	
	Local Police:
Marina Phone:	Slip (Dock#):
Hull Serial #: RGM	
Key #: Engine:	
Selling Dealer:	
Address:	
	Fax:
Servicing Dealer:	
Address:	
Phone:	Fax:

# **Vessel Float Plan**

Document your float plan on this page before departing. Leave it with someone responsible on land who can notify the USCG or police if you do not return as planned. Notify the individual if plans change.

Owner:			
City & State:			
Telephone#:			
Person Filing Repo	ort:		
Make Of Craft:			
Color Trim	Нр		
Inboard Ste	ern Drive		
Hull I.D.#			
Documented Vesse	el #		
Registration#			
Length Boa	t Name		
Leave From			
Destination:			
Fuel Capacity			
Est. Time Of Arriva	.l		
If Not Back By	_o 'clock Ca	Ill Authorities	
Safety Equipment	Aboard:		
Life Jackets		Flash Light	
Flares		Cell Phone#	
VHF Radio		Lap Top	
FoodWater_		E-mail address	· · · · · · · · · · · · · · · · · · ·
First Aid Kit			
Persons Aboard:			
Name	Age	Address	Phone

# **Vessel Cruise Checklist**

Use	e this checklist to prepare for your trip. Fill out a copy each time you embark.
	Check the local weather forecast.
	Inspect the hull bottom and propellers for damage and marine growth like barnacles.
	Check the sacrificial anodes on the propulsion unit, transom, and engine. Replace if 2 of the 3 nodes are missing.
	Check the electrical system and carry extra fuses.
	Check your bilge pump. If your boat has been in the water, run the pump until water stops flowing. If your boat has been out of the water, check that all bilge water has drained and the drain plug is installed.
	Check that all safety equipment is on board and in good working order including, but not limited to, personal flotation devices, hand held fire extinguishers, and visual and sonic distress signals.
	Check fuel level (See "Safety," pg. XX).
	Open the engine compartment and inspect for fuel odors and visible leaks in the fuel, oil, coolant, exhaust, and power steering systems.
	Check the engine for cracked hoses, worn or loose belts, and loose hardware.
	Check all fuel filters for water.
	Check fluid levels of engines, drives, and generators.

# **Recommended Onboard Equipment**

Tools:

Allen Wrenches <u>Basic Gear & Supplies:</u>

Jack Knife Tow Line

Pliers Mooring Lines
Wrench Set Dock Fenders
Screwdriver Set Distress Signals
Side Cutters First Aid Kit

Ratchet & Socket Set Boat Hook

Hammer Wax

VOA Electrical Tester Vinyl Cleaner

Floating Flashlight/Lantern Emergency Food & Water

Duct Tape Life Raft

Bailer or Hand Pump

Spare Parts: Rust Stain Remover Extra Hand

Coolant Held Fire Extinguishers

Oil Corrosion Block

Extra Light Bulbs Personal Flotation Devices

Fuses Rags, Diapers

Batteries Shop Vacuum (1 Gal. Cap. Wet-

Dry) Bucket Squeegee

Binoculars

# **Delivery Process**

# **Orientation and Inspection**

Your dealer must properly complete the delivery process to activate your boat's warranty.

Upon arrival, your dealer will complete an operational orientation of your boat including safety and maintenance instructions. The dealer will also inspect the boat with you in detail. The dealer will document each step of the delivery orientation and inspection on the Customer Delivery Acceptance Form.

After completing the form, you will sign the form acknowledging that the dealer explained the boat's systems and warranty provisions and indicating that all information documented therein is accurate.

Double check the form before signing. An incomplete form or one that is improperly completed may void your warranty.

It is your responsibility to make sure the dealer accurately completes all parts of the Customer Acceptance Delivery Form.

# **Dealer's Responsibility**

It is the dealer's responsibility to provide the location of all relevant owner's resources including, but not limited to: vendor warranties, third party equipment manuals, and the Regal owner's manual for your vessel.

After delivery, your dealer will send all delivery documents to Regal World Headquarters and Regal will send you a warranty certificate within six weeks of boat delivery.

# **Owner's Responsibility**

After completing the Customer Delivery Acceptance Form in full, you are entitled to all benefits and services outlined in your Regal warranty. You also have responsibilities to ensure warranty satisfaction.

- Read and understand warranty materials.
- Follow all boating and environmental rules and regulations.
- Comply with all applicable accident reporting standards and warranty terms and conditions.
- 4. Read all relevant owner's literature, including this owner's manual, and follow all the recommendations therein.
- Perform proper maintenance and service your boat according to the standards outlined in your owner's literature.





# SAFETY

# **General Boating Safety**

Safety is the skipper's number one priority. As the skipper, you are responsible for the safety of your passengers and all other boats sharing the water. Follow all safety information found in this manual and familiarize yourself and your passengers with safe boating practices every time you embark. Use common sense to analyze the results of an action and always put safety first.

Follow these general guidelines when operating your vessel:

### 1. Never drink and drive.

Do not mix alcohol and boating. Alcohol impairs the boat operator's ability to make wise decisions and react in emergency situations.

- Obey all 'Rules of the Road' (see, "Rules of the Road" pg. 176). A weather resistant copy of the rules is included in your black Regal owner's satchel.
- The spoken word "MAYDAY"
  is the international signal of
  distress and is for emergency
  circumstances only. Never
  use the word unless there
  is imminent, life threatening
  danger.
- Make sure your boat and essential equipment are in good working order by frequently inspecting the hull, engine, and propulsion components.

- Posted speed limits, swimming areas, no wake zones, and other restrictions will be marked by white buoys with orange stripes on the top and bottom. Follow all posted restrictions (see, "Navigation Aids" pg. 181).
- Always have paper charts on board in case of equipment failure. Up to date charts can be purchased from a National Oceanic and Atmospheric Administration authorized dealer. Head to the NOAA website to find a dealer near you.
- Never allow anyone to sit anywhere on the boat not specifically designed for seating or stand in the bow area while underway.

# **Boating and Alcohol**

Operating a boat while intoxicated is a federal offense. Operators with a blood alcohol content of .08% (.10% in some states) or higher can be subject to a civil penalties of up to \$1000 or criminal fines of up to \$5000 and/or one year imprisonment.

Intoxicated boating causes the most marine accidents each year. Loss of balance, impaired vision, and decreased judgment all contribute to avoidable boating accidents. You are responsible for the safety of your passengers and other boaters at all times.

# **A** DANGER

# **DO NOT DRINK AND DRIVE.**

### **Severe Weather**

Before embarking, check weather conditions. Getting caught in severe weather is hazardous. Stay up to date with the latest weather conditions while on the water.

If you are caught in severe weather, do the following:

- 1. Slow down and proceed with caution.
- 2. Put on PFDs (see, "Personal Flotation Devices" pg. 166).
- 3. Turn on running lights.
- 4. Head to the nearest shore that is safe to approach.
- 5. Navigate into waves at a 45 degree angle if possible.

- 6. Have passengers sit low and in the center of the vessel.
- 7. Make sure the bilge pump stays free of water.
- 8. Secure loose gear and get emergency equipment ready.
- If the engine fails, trail a sea anchor from the bow of the boat to keep it headed into the waves.



# Fog

Avoid operating your boat in fog. When fog sets in, take bearings and log courses and speeds. Emit a five second blast from your horn or whistle once every minute. Wear personal flotation devices and watch for oncoming vessels.

### **Shallow Water**

Shallow water operation presents a number of hazards including sandbars and changing tidal levels. If the vessel strikes an underwater hazard, check for damage. If the engine vibrates more than normal after striking an underwater obstruction the propeller may be damaged. If you run aground, seek help using using onboard distress signals (see, "Distress Signals," pg.170).





# **Fueling**

Use extreme caution when fueling. Never allow smoke or flame nearby while you are fueling. Turn off engines, all electrical equipment, radios, stoves, and other appliances, and remove all passengers from the boat before fueling.

After fueling, ventilate the vessel by opening all ports, hatches, and doors and running the blower for at least four minutes. Check the bilges for fuel vapors before turning on the engine. Use the sniff test to make sure there is no odor of gas anywhere on the boat. Always check for fuel leaks and fumes after fueling. Be certain you have enough fuel for your cruising needs. Practice the one third rule: use one third of your fuel to go out, one third to return, and keep one third in reserve

Do not start the engine until all traces of fuel vapors are eliminated.

### **Exhaust and Carbon Monoxide**

Carbon Monoxide (CO) can be hazardous, especially in exhaust from gasoline engines and generators, grills, stoves, and space heaters. Diesel engines and generators produce much less CO, but even low levels of CO exposure can be dangerous. Be aware of and avoid:

- Blockage in exhaust outlets. Blockage can cause CO to accumulate in the cabin and cockpit even if doors, hatches, and portholes are open.
- Sleeping on board while an engine or generator is running.
   It is easy to succumb to CO poisoning while asleep.
- Running an engine or generator next to or in a confined area. Sea walls and other confined spaces such as docks can cause CO to accumulate.



 Anchoring next to another boat that has their engine or generator running for an extended period.
 Boats nearby can cause your vessel to accumulate CO.



5. Operating the engine for an extended period with the canvas deployed. Back drafting or the "station wagon effect" can cause CO to accumulate in the cabin, cockpit and bridge.



### Also:

- Avoid operating your vessel with the bow up while cruising slowly.
- Operating close behind another vessel at slow speeds.



Follow these guidelines to help prevent CO accumulation:

- Make sure all exhaust clamps are in place.
- Look for rust, black streaking, water leaks or damaged fittings.
   These indicate an exhaust leak.
- Inspect all rubber exhaust hoses for burned or cracked areas. All rubber hoses should feel soft and be free of kinks.
- Make sure that cooling water flows from the exhaust outlet when the engines and generator are started.

- Do not obstruct or modify the ventilation system.
- Do not disable the CO alarms that come installed on your Regal boats and have them serviced periodically.
- When underway, open all hatches, windshield vents, and doors to allow proper airflow from bow to stern. Keep forward facing hatches open at all times, even in inclement weather.
- Listen for changes in exhaust sound. These may be evidence of an exhaust component malfunction.

# **Symptoms of CO Poisoning**

- dizziness
- drowsiness
- nausea
- headache
- ringing in ears
- throbbing temples
- watering/itchy eyes

Anyone with symptoms of CO poisoning should be placed in a fresh air environment and given medical attention as quickly as possible.

# **A WARNING**

INSPECT THE EXHAUST SYSTEM.
IMMEDIATELY REPAIR OR REPLACE
LEAKING, CRACKED AND CORRODED,
OR MISSING EXHAUST COMPONENTS.

# **NOTICE**

CARBON MONOXIDE PRECAUTIONARY
LABELS ARE LOCATED AT THE HELM,
TRANSOM AND CUDDY CABIN.
ENSURE THAT ALL ABOARD READ AND
UNDERSTAND THE SIGNS AND EFFECTS
OF CARBON MONOXIDE (CO).

- flushed appearance
- inattentiveness
- incoherence
- fatigue
- vomiting
- convulsions

# **A DANGER**

CARBON MONOXIDE IS A TASTELESS,
ODORLESS AND INVISIBLE GAS
THAT CAN CAUSE DISCOMFORT,
SEVERE ILLNESS, AND EVEN DEATH.
EXERCISE CAUTION WHILE OPERATING
GENERATOR OR ENGINES
IN CONFINED SPACES OR AT DOCK
SIDE. DO NOT ALLOW HULL EXHAUST
OUTLETS TO BECOME BLOCKED OR
EXHAUST FUMES CAN BECOME TRAPPED
IN AND AROUND THE CONFINES
OF YOUR BOAT.
DURING IDLE AND SLOW CRUISE
CONDITIONS, BILGE BLOWERS SHOULD
BE USED.

# **Boating Accidents**

Take the necessary precautions to avoid accidents and make sure your passengers are educated and prepared to act in an emergency.

Common causes of boating accidents:

- Mixing boating and alcohol.
- Using the deck walk-around to reach the bow at unsafe speeds.
- Sitting on the bow, deck, or swim platform while underway.
- Boating during inclement weather, especially high winds and thunderstorms.
- Disembarking without checking all fluids and systems, especially fuel system components.
- Inattentive boat operation
- Broken emergency equipment
- Improper boat handling
- Inadequate fuel supply and/or navigational aids in open water
- Not wearing PFDs (see below)

Reporting boating accidents

Operators are legally required to report accidents in 48 hours when the accident involves:

- Death
- Injury required treatment beyond first aid
- Passenger disappearance

A formal report must be made within 10 days for accidents involving more than \$2000 worth of damage or complete loss of vessel



# **Water Sports Safety**

Be particularly careful around those engaging in water sports like scuba divers, water skiers and wake boarders, and fishermen.

# **Scuba Diving**



The "diver down" flag indicates there is a diver in water. Use the flag whenever a diver is operating from your boat and continually observe the diver's air bubbles. Whenever you see a diver down flag, maintain at least 100 ft (approx. 30m) distance in inland water and 300 ft. (approx. 91m) in open water.

# **Towing Sports**

Wear a life jacket when engaging in any towing activities like water skiing, wake boarding, wake surfing, or tubing. The life jacket should remain secure upon impact with the water.

Have a passenger observe the person being towed at all times. This "observer" should not be the operator. Turn your engines off whenever someone is using the swim platform or transom to reboard from the water.

Do not engage in towing sports after dark.



# **Fishing**

When underway, stay clear of fishermen. Nets and lines can get cut or caught in our propeller when operating too close. Slow down when approaching fishing boats and do not return to cruising speeds until clear.

When fishing, never anchor in a shipping channel or tie up to a navigational aid. Lookout for shallow water and hidden obstructions. Use a tidal chart to help avoid grounding.



### **Swim Platform**



Make periodic inspections of all hardware that supports the platform including the ladder. Ensure that all connections and fittings are tight and in good condition. Always retract the ladder and secure in the locked position before making headway.

When operating the boat in reverse, ensure that water does not accumulate on the platform or transom, especially in rough seas. Do not exceed the recommended maximum capacity.

# **A WARNING**

AVOID SERIOUS INJURY OR DEATH!

DO NOT OPERATE THE BOAT

WITH PEOPLE IN THE WATER

ON TOP OR HOLDING ON TO

THE SWIM PLATFORM STRUCTURE.



# SAFETY

# **Personal Flotation Devices**

You are legally required to provide one USCG approved, wearable personal flotation device (PFD) to every person on board. PFDs should be in good condition and readily accessible: able to be worn in a reasonable amount of time in an emergency. Devices should not be stored or locked in closed areas. A PFD that cannot be located quickly in an emergency is useless.

Before embarking, show your passengers where their PFDs are stored and how to put them on. Make sure each PFD is the correct size for the wearer. PFDs should fit snugly, without restricting breathing.

Children under 13 must wear a USCG approved life jacket unless they are below deck or in an enclosed cabin.

Some states have regulations that differ from the USCG regulations. Check your local and state laws before embarking with children. A PFD can save your life, but only if you wear it.

The USCG organizes PFDs into five 'Types:" I, II, III, IV, and V. Types I, II, III, and V are wearable PFDs. Type IV PFDs are throw-able and the USCG requires that at least one is available on every vessel in addition to the required wearable PFD.

Anyone being towed behind a vessel, i.e. water skiers and wake boarders, are considered on board the vessel and a PFD is required to comply with the USCG requirements. Water skiers and wake boarders should wear PFDs designed to withstand the impact of hitting the water at high speed.



# **PFD Types**

# <u>Type I:</u>

This offshore, inherently buoyant jacket is the most buoyant and is effective in all waters where rescue may be delayed. It will turn most unconscious users to a true, face up position in the water.



# Type II:

This near-shore buoyant vest is effective in calm waters where there is a chance for quick rescue. It will turn some unconscious people face up in the water, but not as many as Type I. Some models may need to be inflated.



# Type III:

This buoyant flotation aid is effective in inland waters where there is chance for immediate rescue. It is normally used for supervised activities like water skiing, wake boarding, or kayaking. It is designed to help wearers keep themselves in a face up position in the water.



Type IV:

These devices are designed to be thrown to an overboard victim for them to grab onto and hold until rescued. They cannot be worn. Type IV includes ring buoys, buoyant cushions, and horseshoe buoys. At least one Type IV PFD is required on all vessels over 16 ft. (approx. 5 m.).



# Type V:

This PFD must be inflated to be buoyant and is only effective in the special cases for which it was designed like sailing vests or deck suits. When inflated, it has similar buoyancy to Types I, II, and III. It must be worn while underway to meet USCG PFD requirements: simply having Type V on board will not count.

### **Life Rafts**

Inflatable life rafts are recommended for ocean going vessels. Make sure the raft is large enough for everyone on board and contains proper emergency equipment. Make sure the raft is USCG approved and have the unit serviced periodically

# **Maintaining PFDs**

A PFD is only useful if it is well maintained. Every PFD has a life expectancy. Be aware of PFD age and replace it with past life expectancy. Use the following checklist to inspect and maintain your PFDs.

- Check for broken zippers, frayed webbing, water soaked kapok bags, missing straps, and stitching that has become undone.
- Clean PFDs with soap and water, and let them dry completely before storing.
- Check any kapok-bagged jackets by squeezing the bag and listening for air. If you hear air escaping, the bag is defective and should be discarded.

- Grab the cover with your fingers.
   If the cover material rips, the PFD should be discarded.
- If the kapok bag is hard, the PFD should be discarded.



# **Fire Extinguishers**

USCG approved marine tvpe fire extinguishers are required on all recreational boats with a permanently installed fuel tank. Fire extinguishers are classified with a letter and a number. The letter indicates the type of fire the extinguisher is designed to put out; the number indicates the size of the extinguisher. USCG approved extinguishers are all type 5-B and can be identified by a marking on the label. Type B extinguishers are designed to put out fires caused by flammable liquids like grease, oil, and gasoline.

Approved extinguishers have a marine type mounting bracket that keeps them mounted when on the water. Extinguishers should be mounted in a readily accessible location that will not hinder passengers while underway. Always check state and local laws and regulations for any additional requirements.

Refer to the table below for fire extinguisher requirements based on your boat's length.

I amountly (for an)	Minimum number of 5–B portable fire extinguishers required <sup>1</sup>		
Length (feet)	If no fixed fire extinguishing system in machinery space	If fixed fire extinguishing system in machinery space	
Under 16	1	0	
16 or more, but less than 26	1	O	
26 or more, but less than 40	2	1	
40 or more, but not more than 65	3	2	

 $<sup>^{\</sup>rm 1}$  One 20–B portable fire extinguisher may be substituted for two 5–B portable fire extinguishers.

# **Distress Signals**

All vessels operating in the navigable, coastal and territorial waters of the United States must be equipped with USCG approved visual distress signals. Vessels owned in the United States and operating on the high seas must also have approved visual distress signals.

# **Pyrotechnic Devices**

Pyrotechnic visual distress signals must be USCG approved and readily accessible. All devices display the service life. Do not use expired devices.

A minimum of six devices is required: three for day and three for night. Some devices will meet both day and night requirements, some will not. Pyrotechnic devices should be stored in a cool, dry location. Devices should be stored in a high visibility, watertight container.

There are three types of USCG approved devices:

 Pyrotechnic red flares, hand held or aerial (day/night).



2. Pyrotechnic orange smoke, hand held or floating (day).



Launchers for parachute flares or aerial red meteors.



Pistol style launchers handle like firearms and should be treated with the same care and caution. Some devices are banned in certain locales. Check state and local regulations before embarking.

170

No distress signal is best in all circumstances, but pyrotechnics are widely considered the most effective. They do, however, emit a searing flame that can cause burns and ignite flammable materials. Check the area around you and practice caution when operating.

### **Non-Pyrotechnic Devices**

Non-pyrotechnic visual distress signals must be marked USCG approved and readily accessible.

There are two types of devices:

 Orange distress flags: For day use only. Must be 3x3 or larger with a black square and ball on an orange background. Should be able to be spotted when displayed from a boat hook or long fishing rod, or when attached to a paddle and waved overhead.



Electric distress lights: For night use only. Used to flash the international SOS distress signal in Morse code (...---...). Under inland navigation rules, a white light flashing at regular intervals 50-70 times a minute is commonly considered a distress signal, however, it does not meet the USCG carriage requirements for a visual distress signal.



Do not display any visual distress signals under any circumstances except when assistance is required to prevent immediate danger to passengers.

### **Sonic Devices**

All boats must carry a sound signaling device. Navigation Rules require sound signals be made under certain circumstances like crossing or overtaking (see, "Rules of the Road" pg. 176). All vessels are under 13 meters long and are required to carry a whistle in inland and international waters.

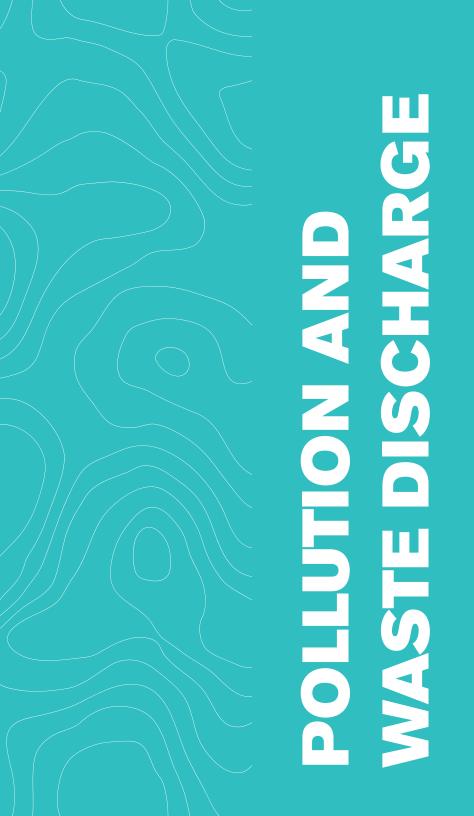
### **VHF Radio**



Very high frequency or VHF radios are used for distress signaling, ship to ship, and ship to shore communication. All Regal boats leave the manufacturer with a VHF-FM radio installed. Channel 16 is the primary channel for ships in distress.

# To make a distress call on your VHF-FM radio:

- 1. Make sure the radio is on.
- 2. Turn the radio to channel 16.
- 3. Press/hold the transmit button.
- Clearly say, "Mayday, Mayday, Mayday."
- 5. Communicate:
  - Vessel name, HIN, and description
  - Position/location
  - Nature of emergency and
  - Number of people on board
- Release the transmit button.
- 7. Wait ten seconds for a response.
- 8. If there is no response, repeat steps



# **Pollution Regulations**

# **Marpol Treaty**

The International Convention for the Prevention of Pollution from Ships (MARPOL) prohibits dumping refuse matter of any kind into the waters of the United States including oil, garbage, and other liquid pollutants.

# Federal Water Pollution Control Act

The Federal Water Pollution Control Act prohibits discharge of oil or hazardous substances into the navigable waters of the United States. No vessel may intentionally drain oil or oily waste from any source into the bilge of any vessel. Violators are subject to civil penalties and/or criminal sanctions including fines and imprisonment.

The act requires that all vessels equipped with propulsion machinery be capable of storing oily mixtures and oil discharge on board. On recreational vehicles, buckets, heavy plastic bags, or portable pumps are suitable for retention on board.

There is a placard mounted in the engine compartment that contains additional information

Immediately notify the USCG if your vessel discharges oily or hazardous substances. Call toll free at 800-424-8802. Report location, source size, color, substance and time observed.

# The Act to Prevent Pollution from Ships

The Act to Prevent Pollution from Ships limits the discharge of garbage from vessels. It is illegal to:

- Discharge plastic or garbage with plastic into any waters in the navigable United States and in all other waters within 3 nautical miles of the nearest land.
- Discharge plastic, dunnage, lining, and packing materials that float within 25 nautical miles from the nearest land.

Violating these laws may incur a civil penalty of up to \$25,000, a fine of up to \$50,000 and imprisonment for up to five years for each violation. Regional, state, and local laws may also apply.

# **Waste Discharge**

### **Marine Sanitation Devices**

Recreational vessels under 65 ft. (approx. 19m) with installed toilet facilities must have a marine sanitation device (MSD). All Regal boats with toilet facilities include a Type III MSD per USCG requirements. Type III devices do not chemically treat wastewater and therefore it is illegal to empty wastewater tanks, on all Regal boats, into any waters in the contiguous United States.

Dumping untreated wastewater is allowed only 3 miles off ocean coasts and 12 miles of the coast in the Gulf of Mexico

# **No Discharge Zones**

In 'No Discharge Zones' it is **illegal** to dump treated or untreated wastewater. Contact your local and state environmental agencies to find specifics on any zones in your area.

Do your part to help keep our waterways clean.





# MOM MOM RUES OF THE

# Introduction

Just like there are rules for driving on the road, there are also rules for driving on water. These 'Rules of the Road' define the responsibilities of vessel operators and, when followed correctly, can reduce boating accidents. It is your responsibility to understand and follow them whenever encountering another vessel.

### **72 COLREGS**

The International Regulations for Preventing Collisions at Sea 1972 (72 COLREGS) are published by the International Maritime Organization and set out the "Rules of the Road." Both inland and international rules follow the 72 COLREGS, but contain some slight differences.

This section is only an introduction included for convenience. It is not exhaustive. We recommend additional education before getting behind the wheel. The complete rules can be found on the USCG website.

# **Navigation Rules**

The Navigation Rules establish actions to be taken by vessels to avoid collision and are divided into international and inland rules. Operators of vessels 39.4 ft. (approx 12m) and over are required to keep a copy of the inland navigation rules onboard at all times.

Vessels that have the right of way are designated "stand-on" vessels. It is their responsibility to maintain course and speed when encountering another vessel Vessels that do not have the right of way are "give-way" vessels. They are responsible for yielding to the stand-on vessel to avoid collision. In general, larger, less maneuverable vessels have the right of way. This includes:

- Sailboats driven by wind
- Vessels engaged in fishing
- Vessels performing work that limits their mobility
- Vessels run aground or otherwise not under command.

Smaller boats are also obligated to avoid close quarters with larger tonnage vessels.

# **Encountering Vessels**

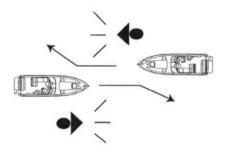
There are three main situations in which you will encounter another vessel: meeting, crossing, and overtaking. Post a lookout to watch for dangers that may come from any direction and assist in navigation when encountering another vessel.

# **Meeting**

In a head on meeting, neither vessel has the right of way and both must take action to avoid a collision.

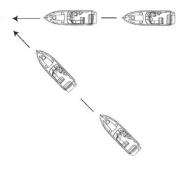
Vessels must sound a single blast (see, "Sonic Devices" pg. 172) if steering toward starboard and passing the other vessel on the port side.

Vessels must sound two blasts if steering toward port and passing the other vessel on the starboard side. Port side passing is preferred.



# **Crossing**

When two vessels cross in close proximity, the vessel that views the other from the starboard side is the give-way vessel and must alter course to avoid the stand-on vessel. The stand-on vessel views the other from the port side and should maintain its current speed and trajectory.



# **Overtaking**

When overtaking another vessel, the vessel overtaking is the giveway vessel. Give one short blast if overtaking to starboard and two short blasts if overtaking to port. When the stand-on vessel replies with the same, alter your course and speed to pass while staying well away from the stand-on vessel. The stand-on vessel should maintain its speed and course until overtaken. If it is unsafe to pass, the stand-on vessel will respond with five short blasts.

In the event of an imminent collision, no vessel has the right of way. Both vessels must take evasive action to avoid the collision.

# **A WARNING**

FOLLOW THE NAVIGATION "RULES OF THE ROAD" TO PREVENT COLLISIONS AND AVOID INJURY AND DEATH.



### **Safety and Security Zones**

In response to the terrorist attacks of 9/11 and the attack on the USS Cole, the USCG established Safety and Security Zones to keep U.S. Naval vessels, commercial vessels, cruise ships, and essential infrastructure safe.

Help protect our country by following all rules and regulations.

- You may not approach within 100 yards (approx. 91m) of any U.S. naval vessel. When this is unavoidable, contact either the vessel or USCG escort vessel on channel 16 of your VHF-FM radio.
- You must operate at minimum speed when within 500 yards (approx. 457m) of these vessels.

- You must avoid operating your vessel near all cruise liners and some commercial vessels.
- You must avoid operating your vessel near all security zones and commercial ports. Most dams and power plants near water also have restrictions.

# **Rendering Assistance**

All operators are obligated by law to provide assistance to other vessels in dangerous situations on the water. Operators may be subject to a fine for failure to do so.



# **Navigation Aid**

Navigation aids, like buoys or beacons, are placed along coastal and navigable waters to help operators determine their position relative to land and as guides to mark safe water and hidden dangers. Each aid provides specific information.

Aids are often used together to form a system that helps operators follow the natural and improved channels. Such systems also help with coastal plotting.

#### **Lateral Aids**



Buoy and beacons called lateral markers indicate the port and starboard sides of a given waterway. All U.S. lateral markers follow the traditional 3-R Principle: red, right, returning. When returning from sea and heading inland, keep the red markers on your right or starboard and keep the green buoys on your left or port.

#### Information and Regulatory Markers

These orange and white markers are used to alert operators to various warnings and regulations.

Characteristics include:

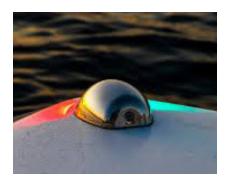
- Orange bands running horizontal across the top and bottom of a white body
- Black text in proximity to an orange circle, square, diamond, or diamond with a cross in the center.
- 3. Buoys or beacons
- 4. Blinking, white light

Refer to the US Coast Guard website for specific information on navigation aids

# **Night Running**

Night time operation can be dangerous. Boats operating between sunset and sunrise must use navigation lights. At night, all rules of the road still apply, but it is best to slow down and stay well clear of other vessels regardless of who has the right of way.

#### **Navigation Lights**



The USCG requires recreational boats to display navigation lights between sunset and sunrise and any other periods of reduced visibility.

Navigation lights help avoid collision by improving visibility. All Regal boats are required to have navigation lights displayed on the vessel as indicated. Follow all manufacturer instructions regarding replacement of navigation lights and Do not tamper or otherwise modify navigation lights for any reason.

Use running lights to gather information about any vessel you encounter at night.

Green lights indicate the starboard side and red lights the port. If you see green lights, you have the right of way. If you see red lights, you must yield. Size, speed, and position can be difficult to determine in the dark. It is best to avoid encountering other vessels if possible.

# **Bridges**

#### Clearance

Your vessel has a specified bridge clearance height. This height is an estimate of the distance from the waterline to the top of the highest equipment on board. The estimated height can change for a variety of reasons including variances in the vessel's loaded condition and variances in equipment.

Some Regal boats come equipped with fold-able towers that facilitate easy passage under low bridges. Some bridges will be marked with a clearance measurement, but others won't. Know your boat and take appropriate action when approaching a bridge to avoid damaging your vessel.

After making sure your vessel will clear a bridge, proceed with caution at a safe speed. Often, green or white lights will mark the safe or main channel under a bridge. Green may also denote the "up" position on lift bridges. Refer to the chart on the following page for diagrams of common bridge lights.

You may resume a safe, cruising speed once you are clear of the bridge and have clear visibility of the water on all sides. Never park under a bridge and always use common sense when maneuvering near bridge structures.



# Final Acknowledgments

We would like to welcome you again to the Regal family. We are happy you are here and look forward to sharing your boating journey with you. Thank you for taking the time to read this manual and become familiar with the operation and maintenance of your Regal 38 Surf.



Please refer to third party, manufacturer owner's manuals, included in your owner's welcome packet, for detailed information on technical features, equipment, operation, maintenance, and troubleshooting. You should have received your owner's welcome packet during the new boat delivery process. If you did not receive your welcome packet, contact your Regal dealer. You can access all Regal manuals online by going to https://www.regalboats.com/owners-resources/.

For any questions or issues that you can not answer using the manuals, please contact your authorized Regal Dealer or call our customer service line at 1(800) 877-3425.

#### Parts of a Boat



- 1 Bow: The front of the boat.
- 2 Stern: The rear of the boat.
- 3 Port: Left (facing the bow).
- 4 Starboard: Right (facing the bow).
- 5 Gunwale: The upper edge of the boat.
- 6 Transom: The flat edge of the back of the boat.
- 7 Helm: The boat's steering equipment
- 8 Engine Compartment: The storage area for the engines and other equipment.

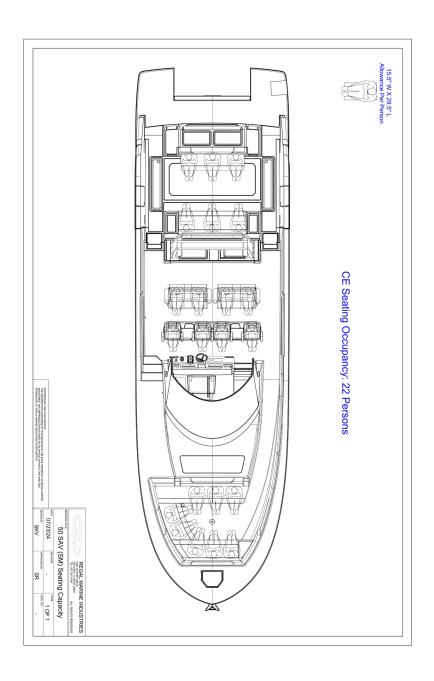
# **Side View**



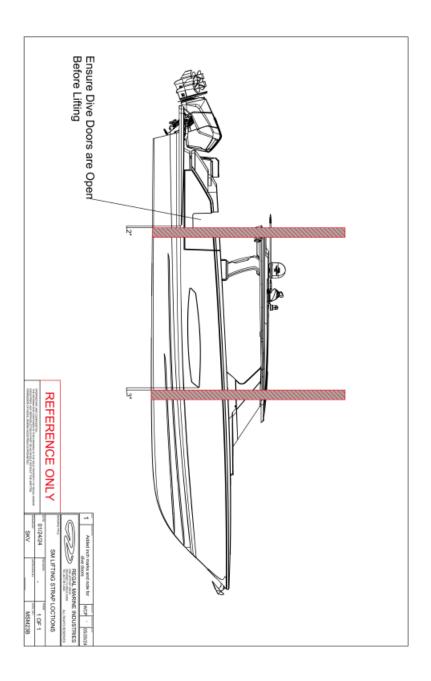
# **Top View**



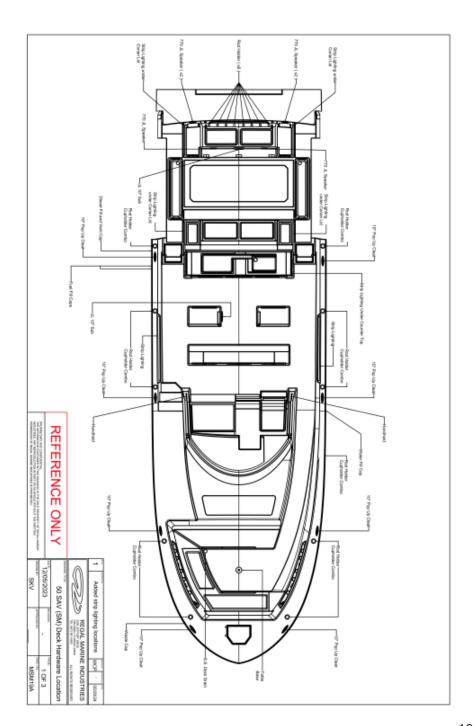
# **Seating Capacity**



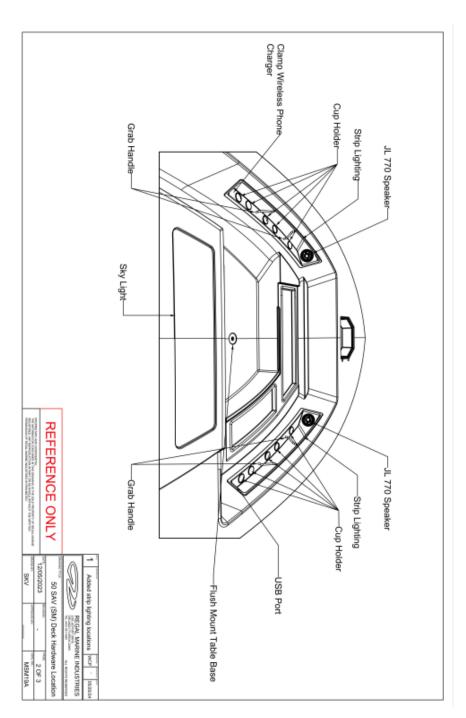
#### **Lifting - Proper Strap Placement**



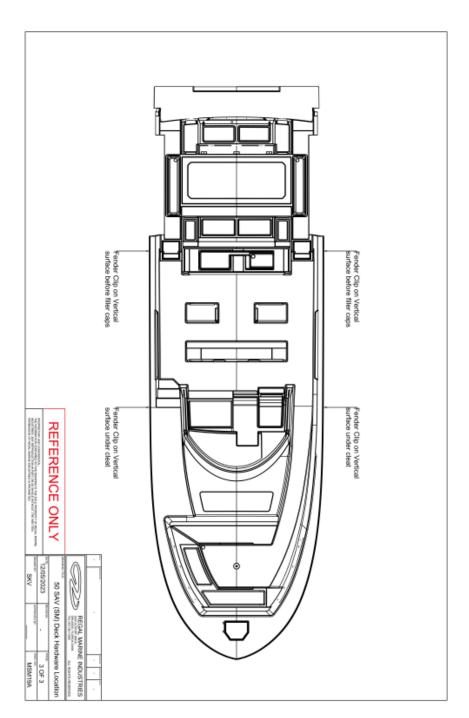
#### **Deck Hardware - 1**



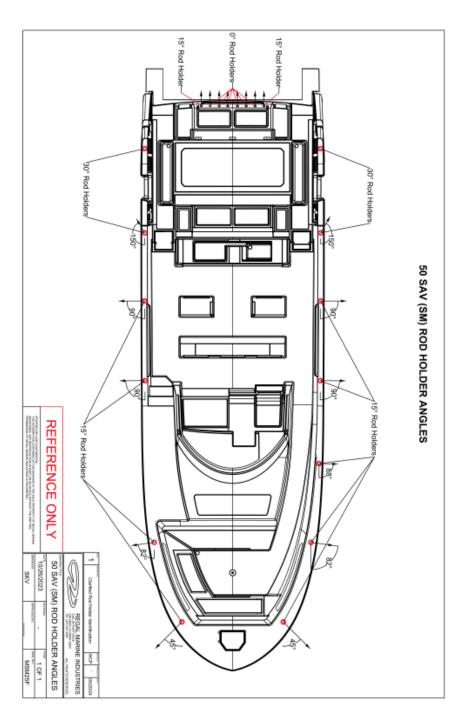
#### **Deck Hardware - 2**



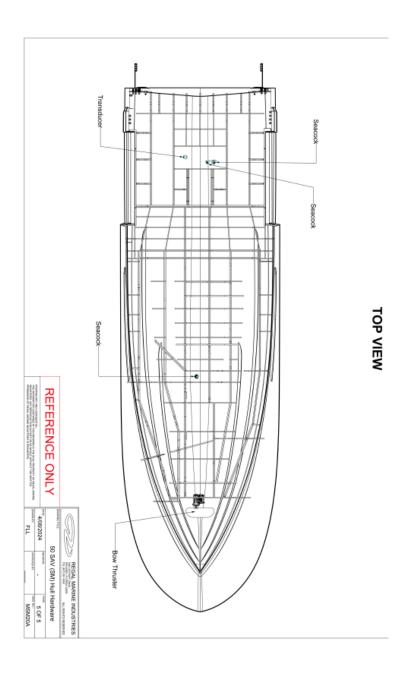
### **Deck Hardware - 3**



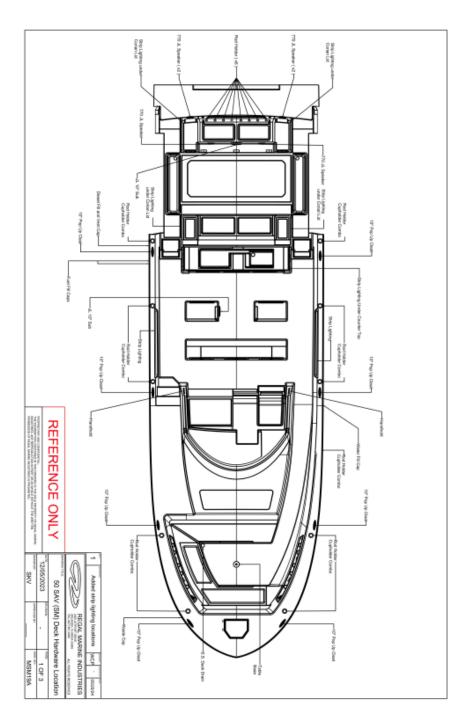
### **Rod Holder Angles**



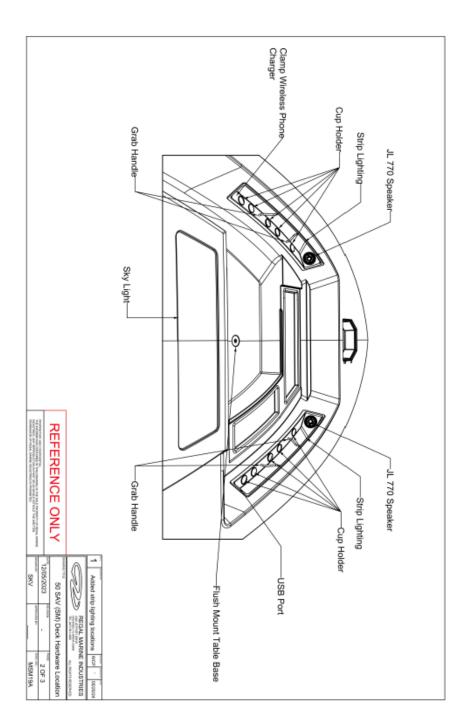
## **Hull Hardware - Top View**



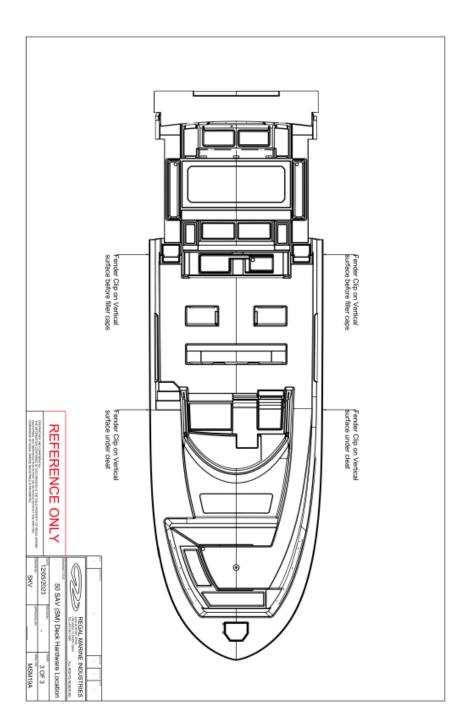
#### **Hull Hardware - 1**



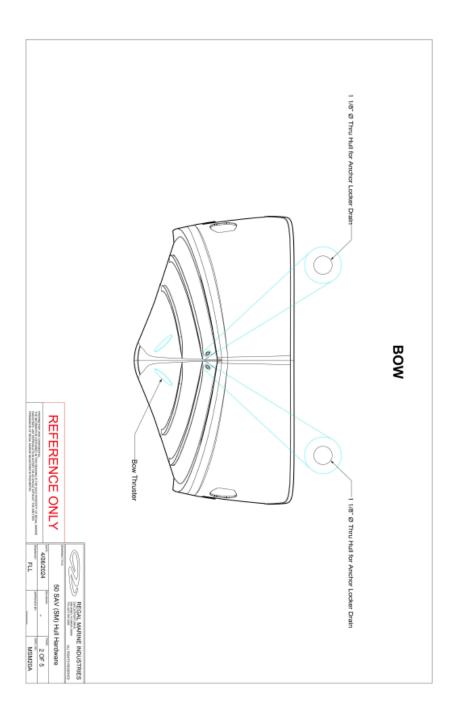
#### **Hull Hardware - 2**



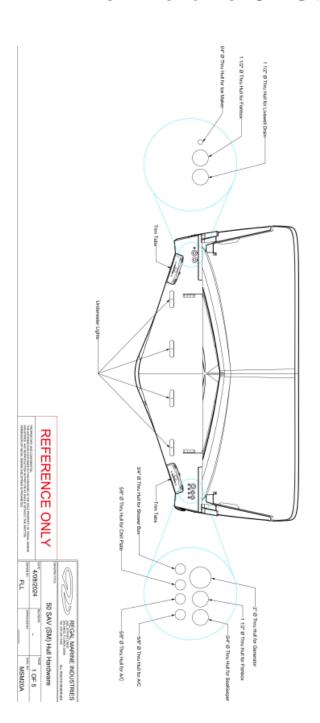
#### **Hull Hardware - 3**



#### **Hull Hardware - Bow**

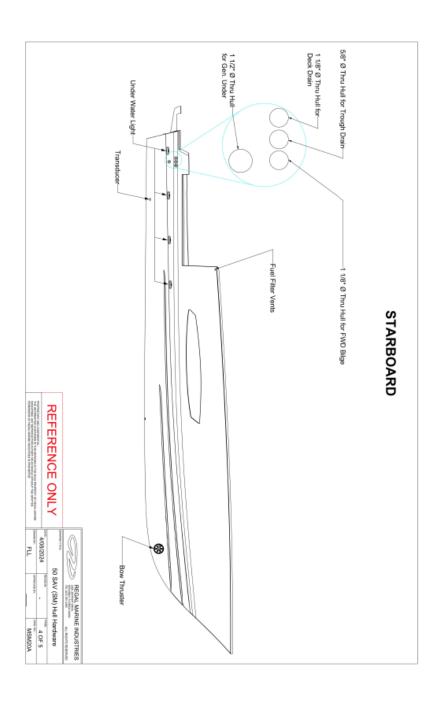


# **Hull Hardware - Stern**

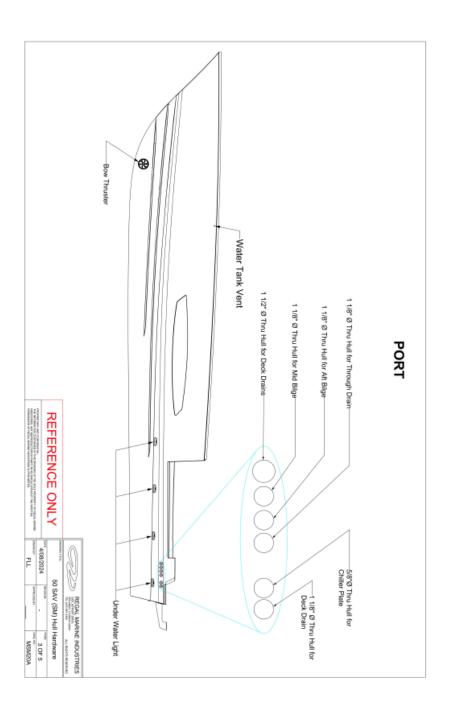


STERN

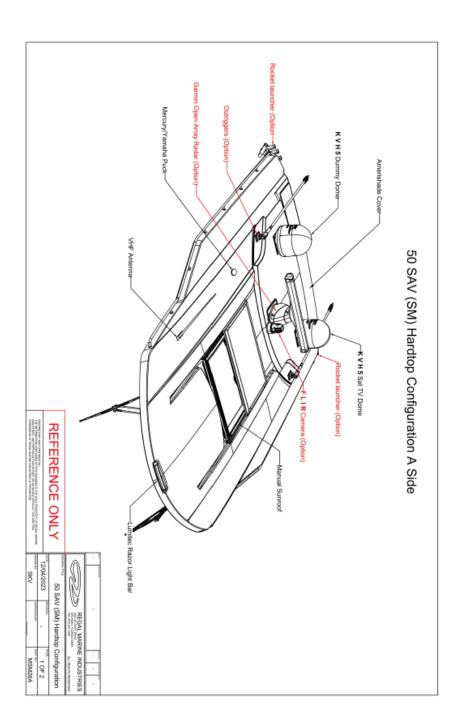
#### **Hull Hardware - Starboard**



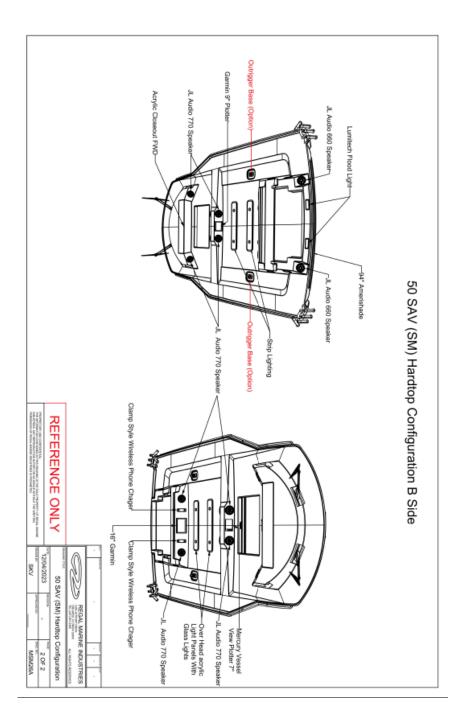
## **Hull Hardware - Port**

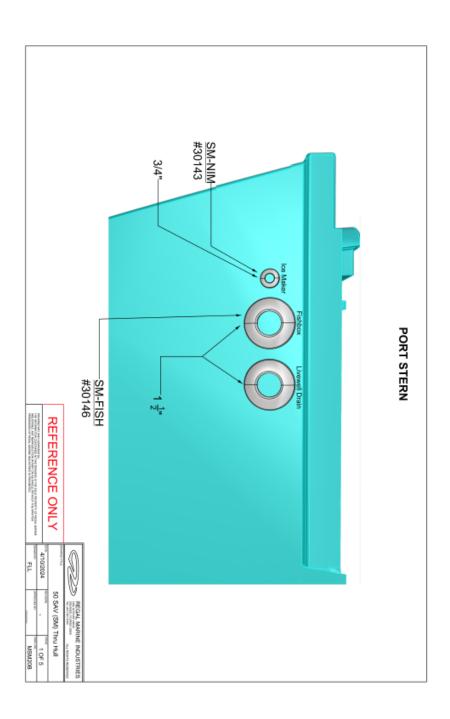


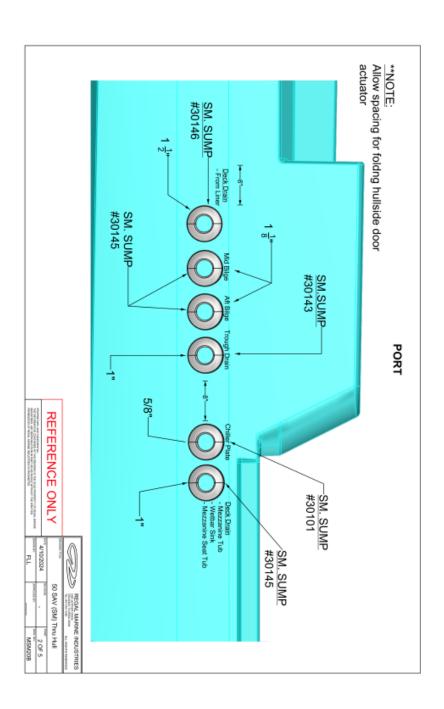
### **Hardtop Hardware - 1**

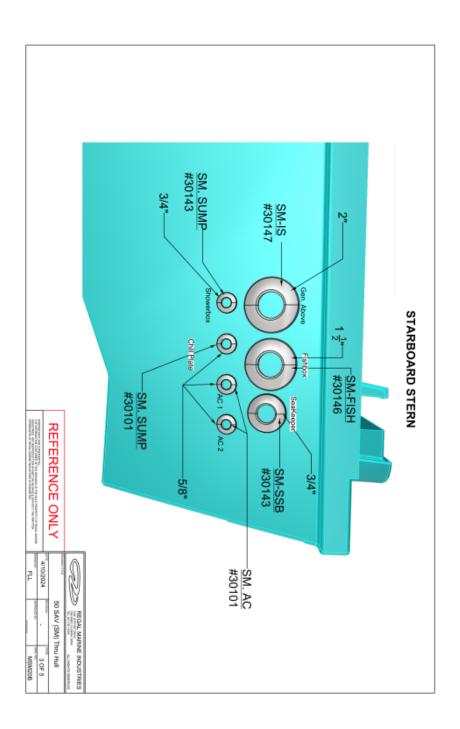


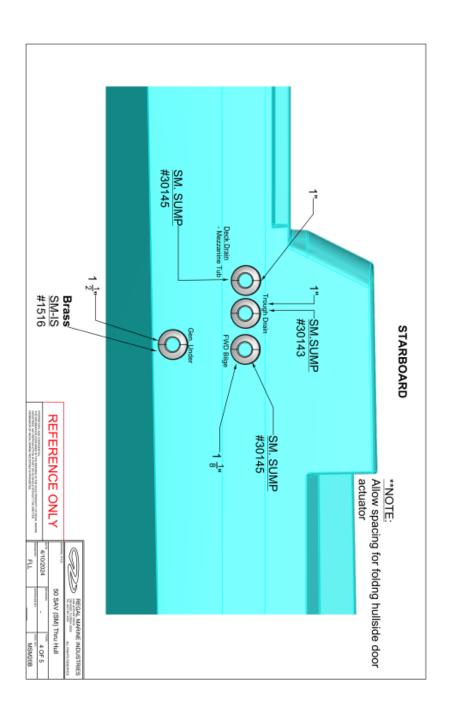
#### **Hardtop Hardware - 2**

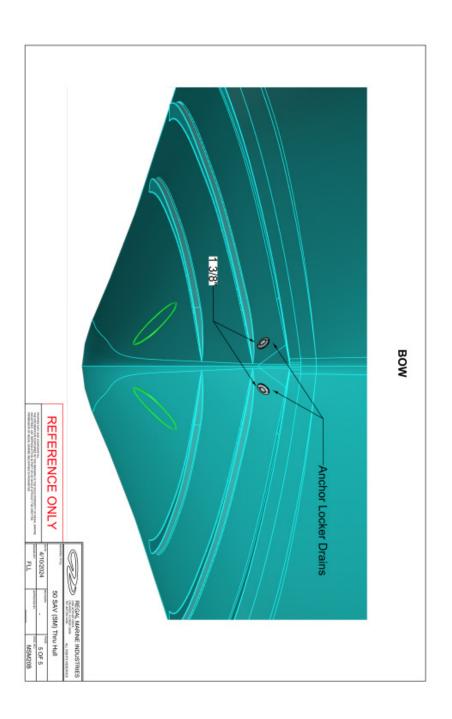




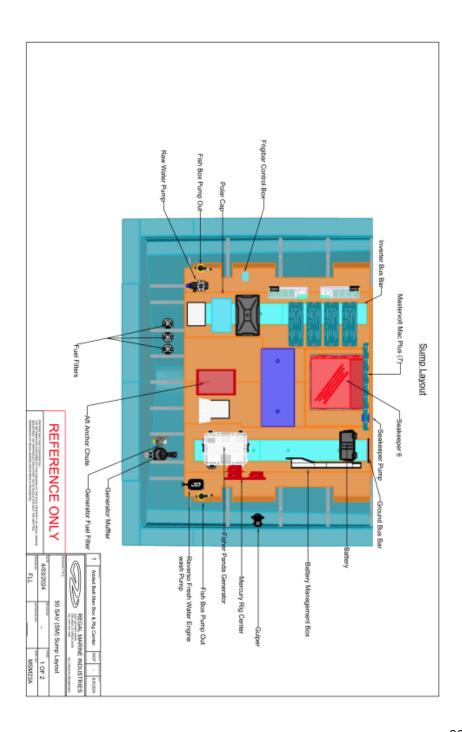




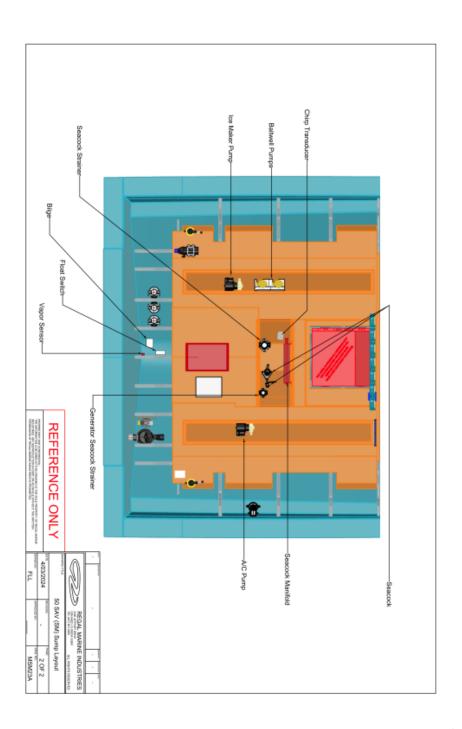




#### **Sump Layout 1**



# **Sump Layout 2**



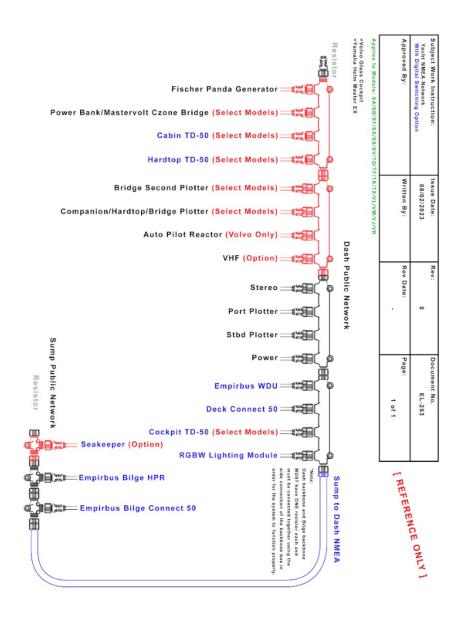
# **Seacock Routings 1**



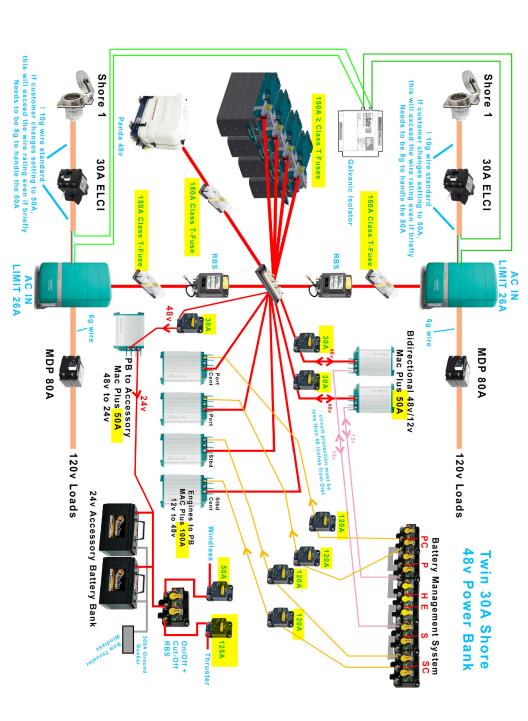
## **Seacock Routings 2**



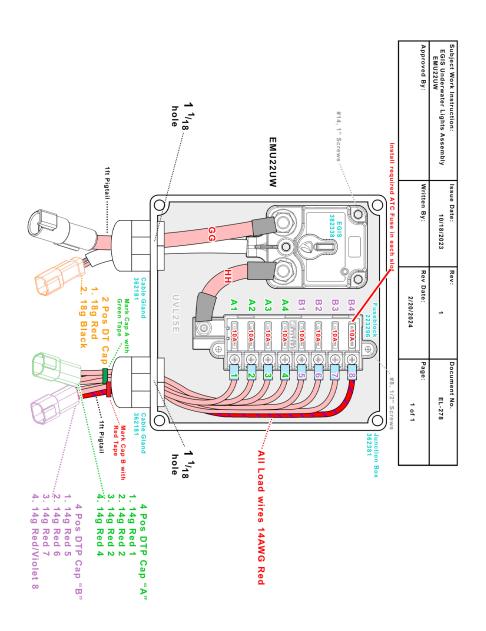
#### **NMEA 2000 Network**



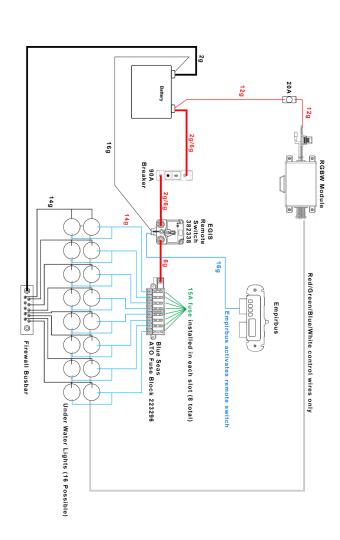
### **Live Power System**



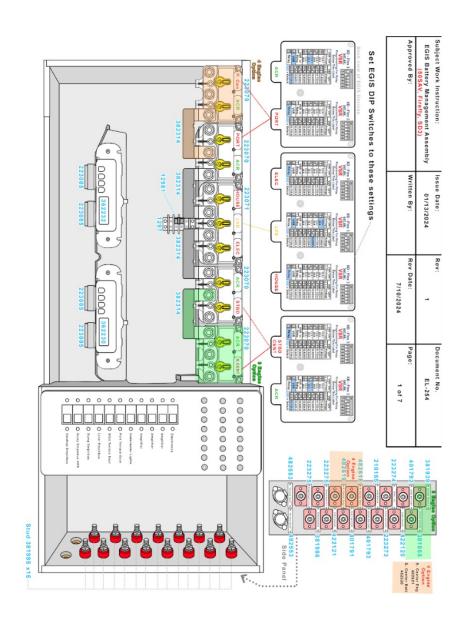
#### **Underwater Lights EGIS Assembly**

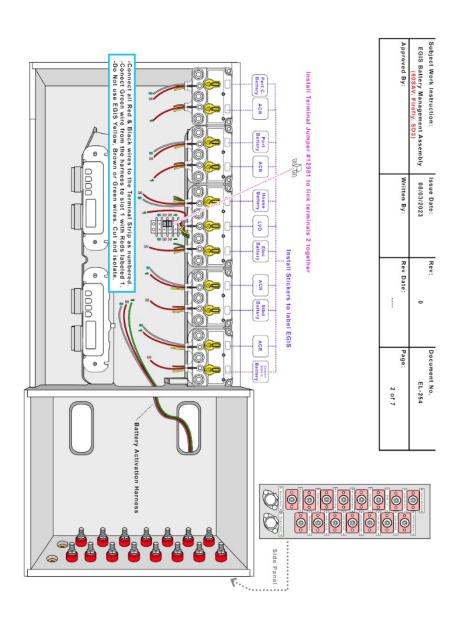


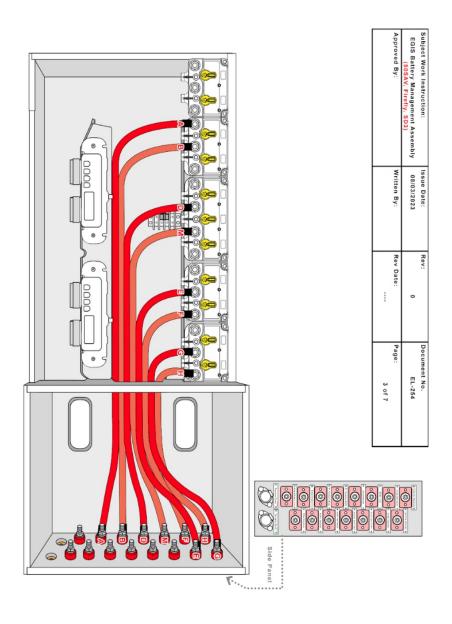
### **Underwater Lights Wiring**

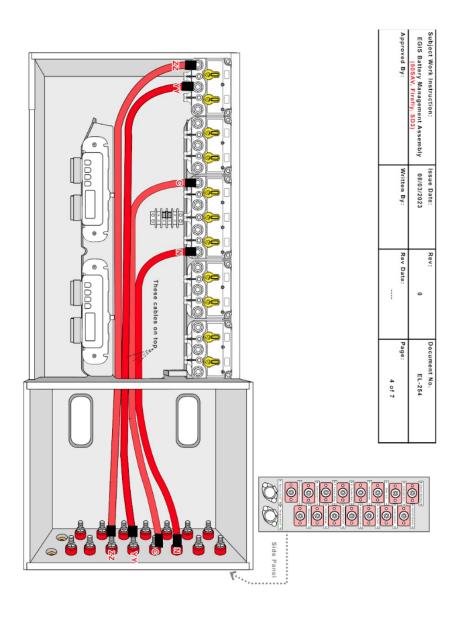


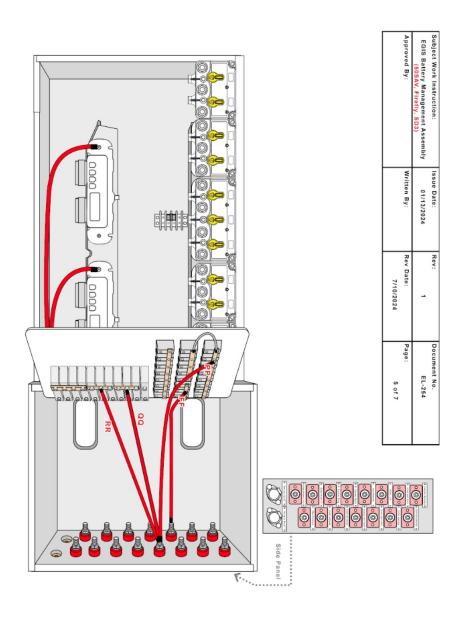
Subject Work Instruction:	Issue Date:	Rev:	Document No.
Ultimate Underwater Lights Package Wiring	10/18/2023	0	EL-277
Approved By:	Written By:	Rev Date:	Page:
		1	1 of 1

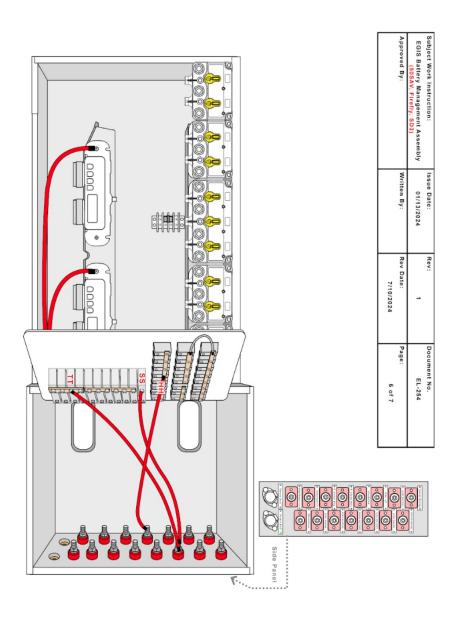


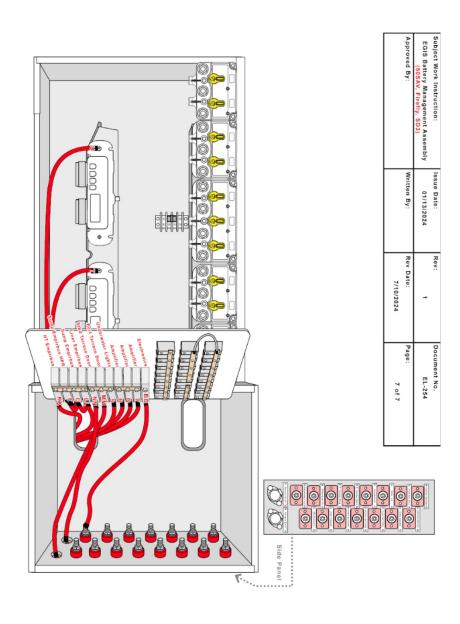


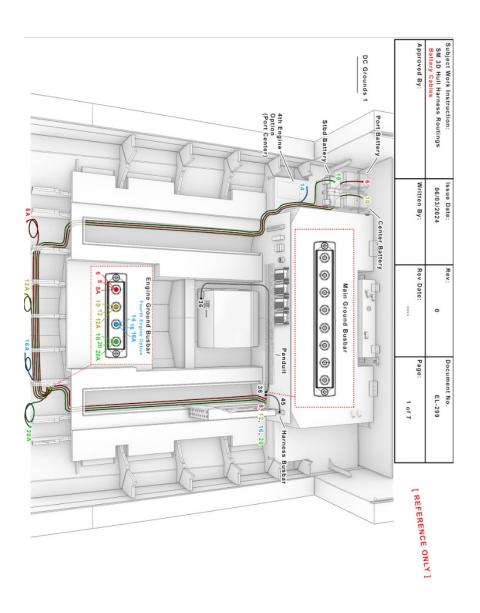


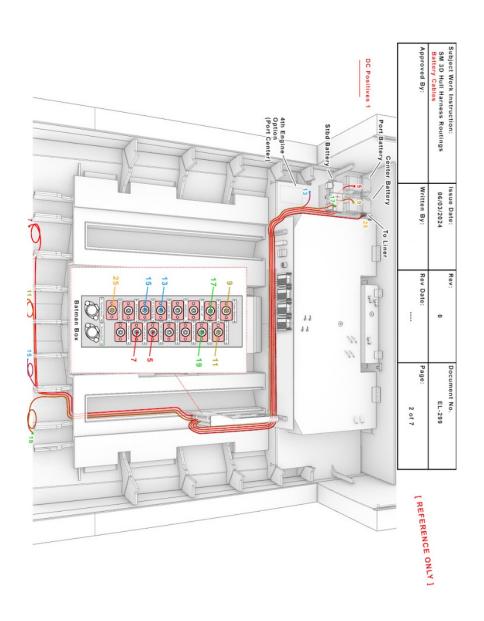


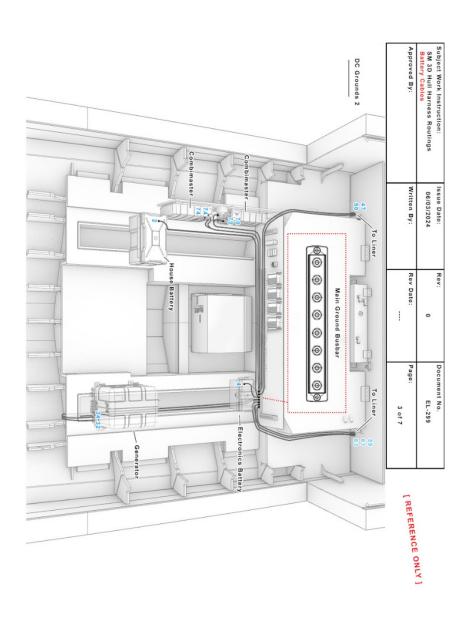


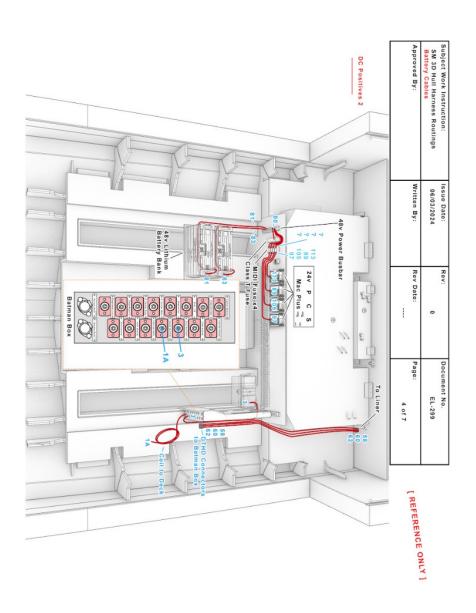


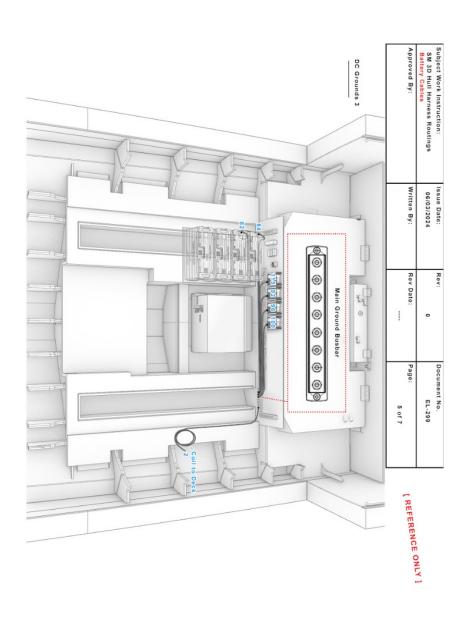


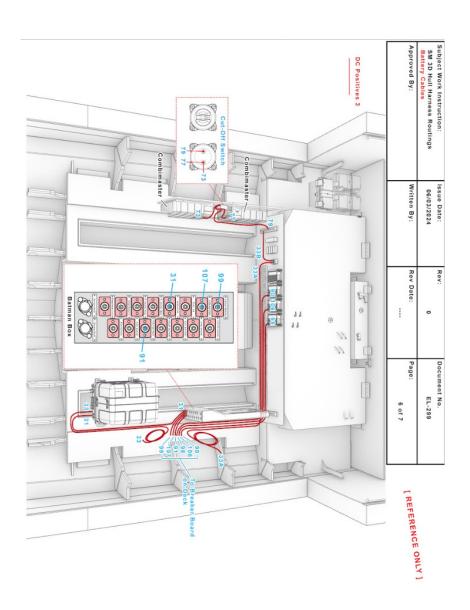


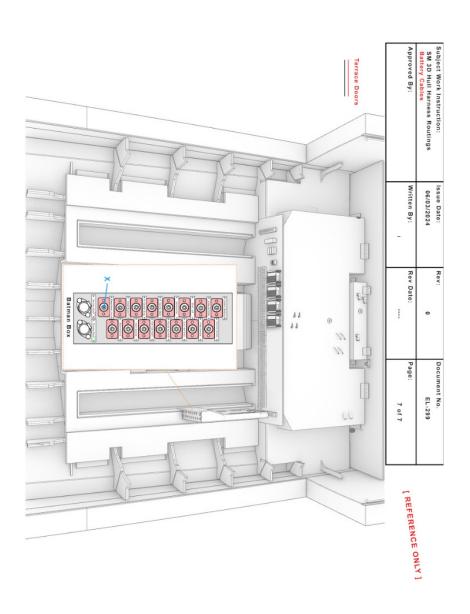




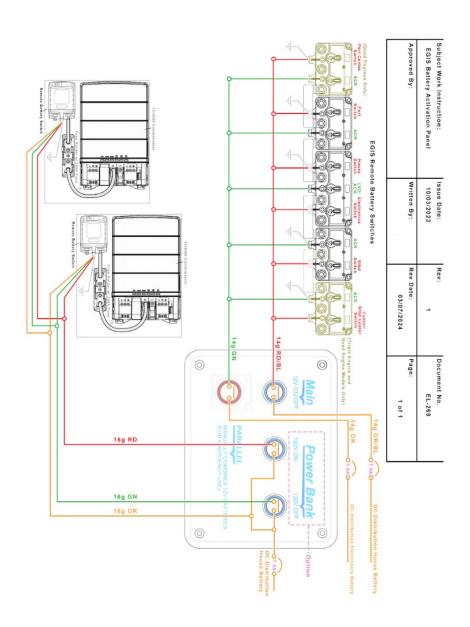


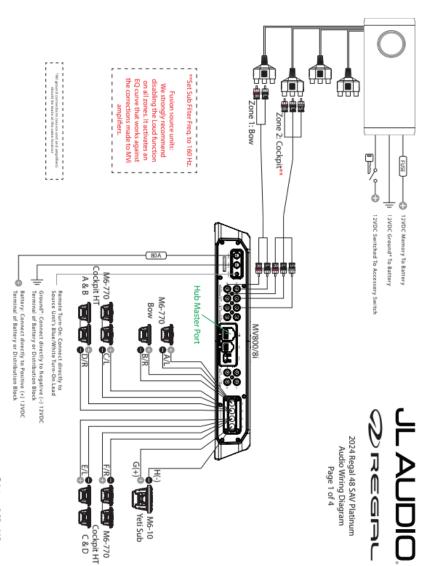




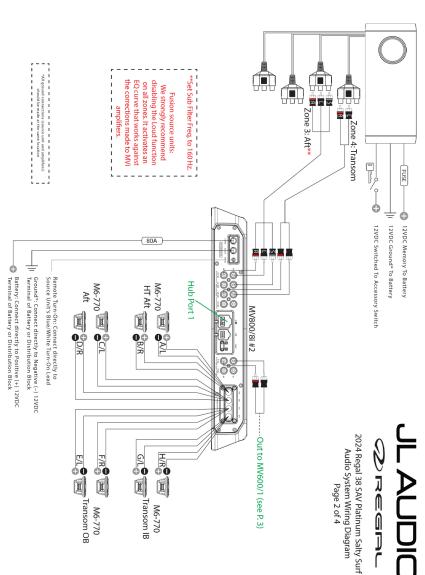


## **Battery Activation Panel**

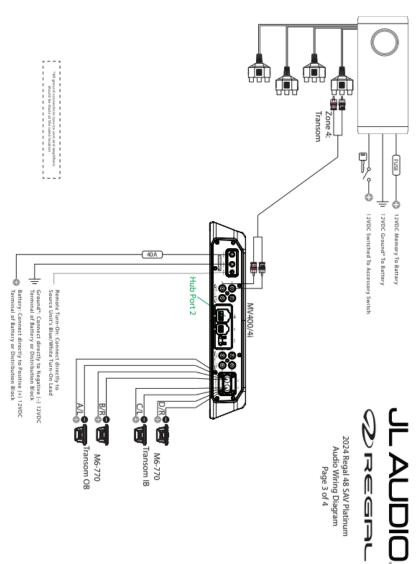




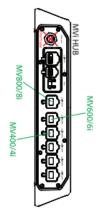
Print on 8.5"x 11" paper



Print on 8.5" x 11" paper.

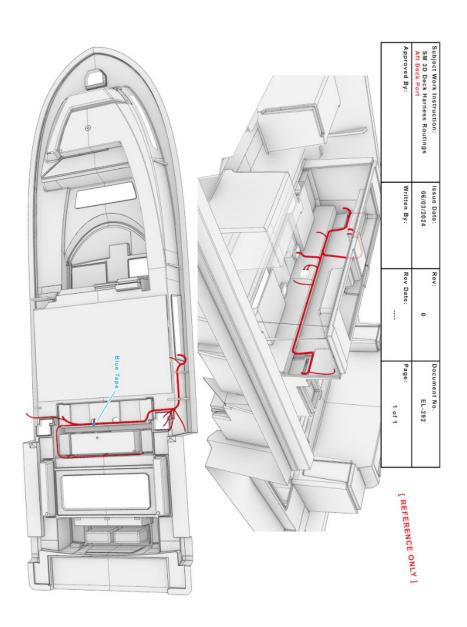


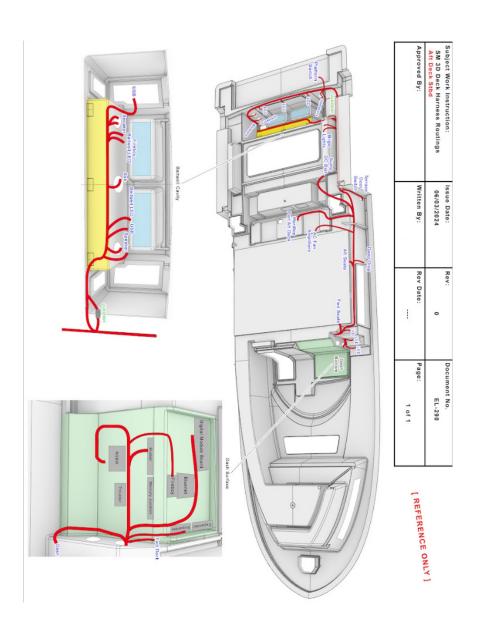
Print on 8.5"x 11" paper.

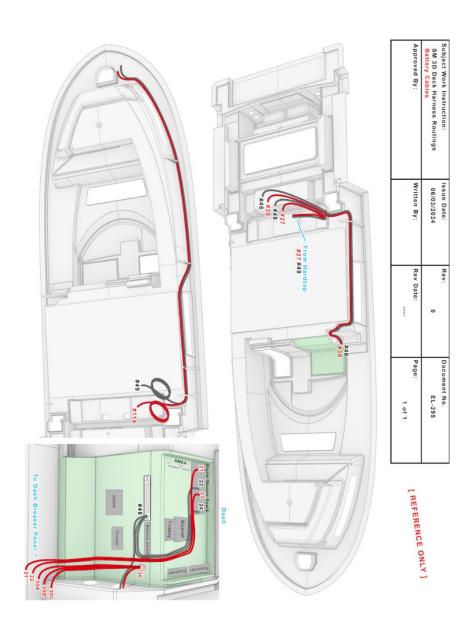


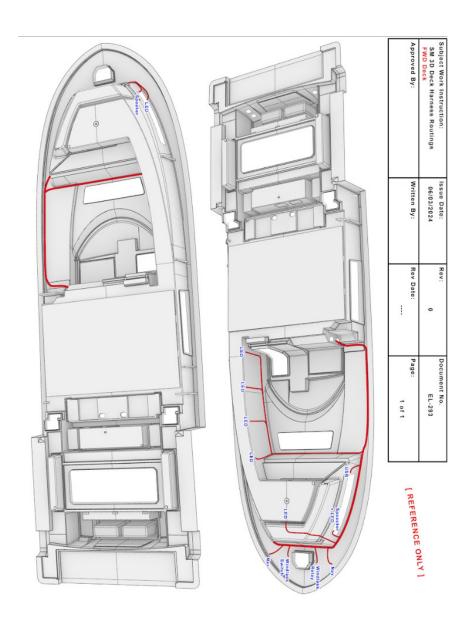
2024 Regal 48 SAV Platinum
Audio Wiring Diagram
Page 4 of 4

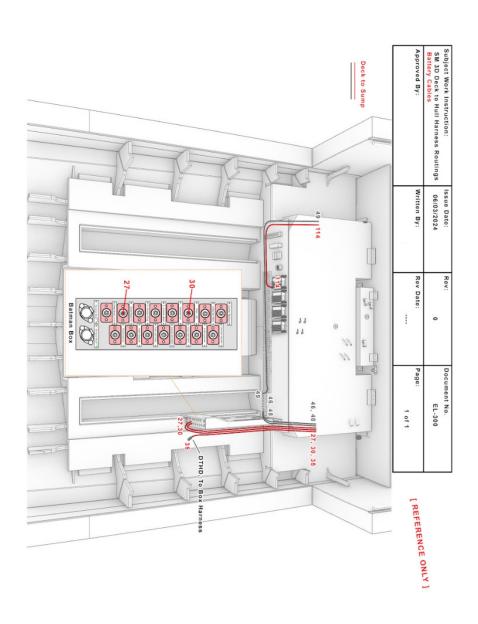
Print on 8.5"x 11" paper.

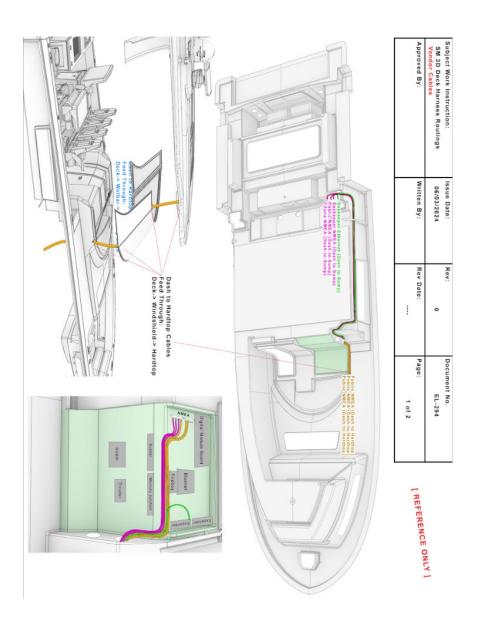


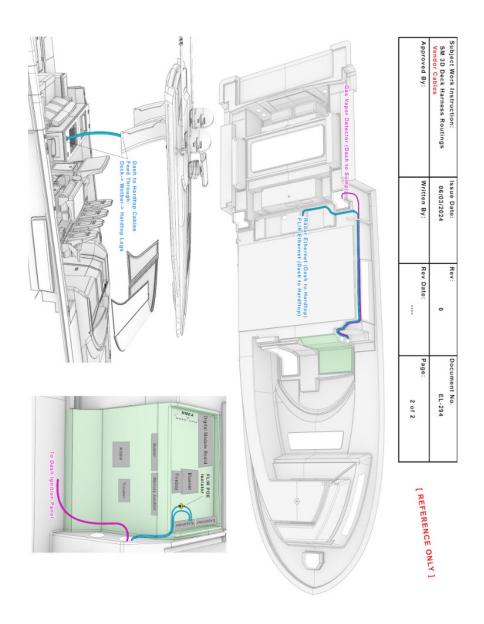


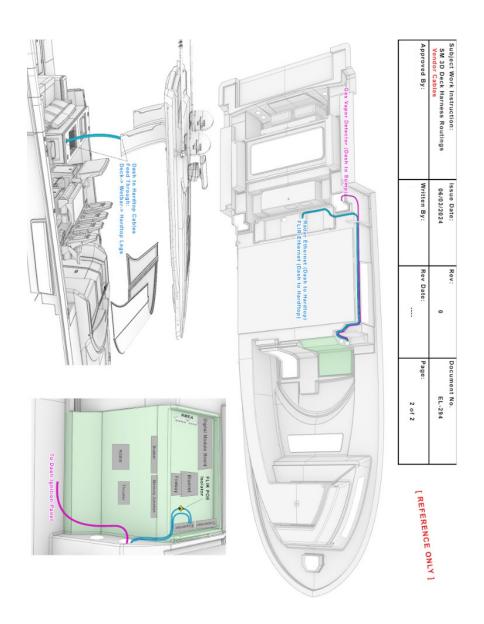


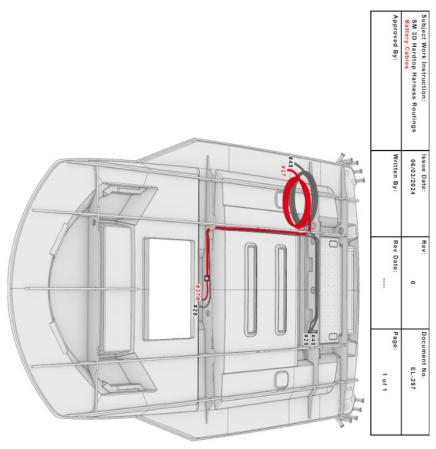




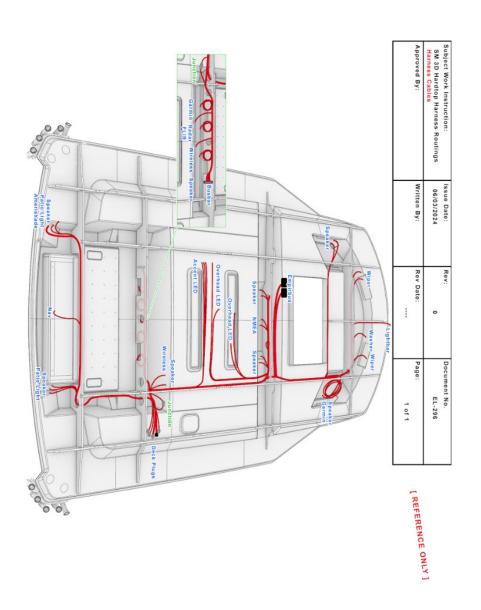


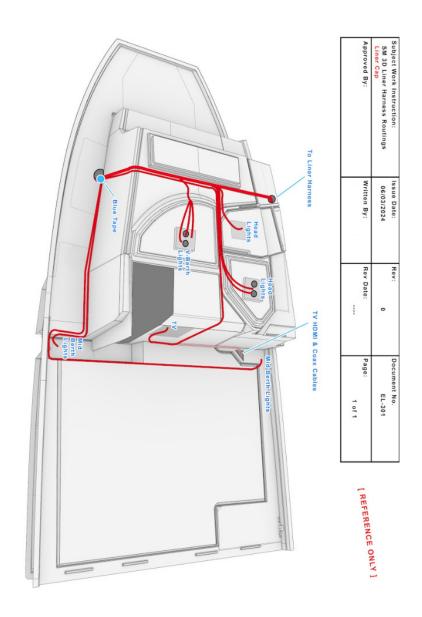


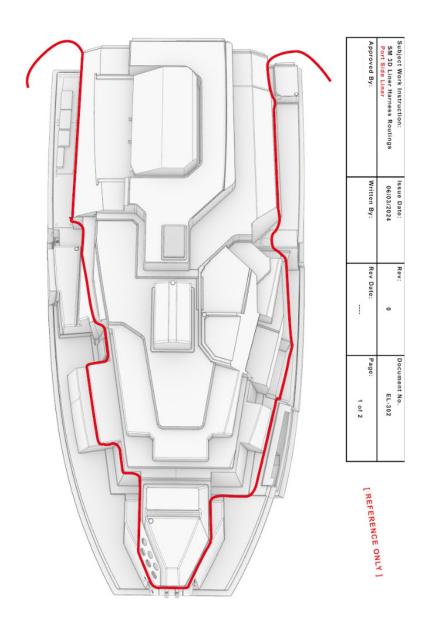


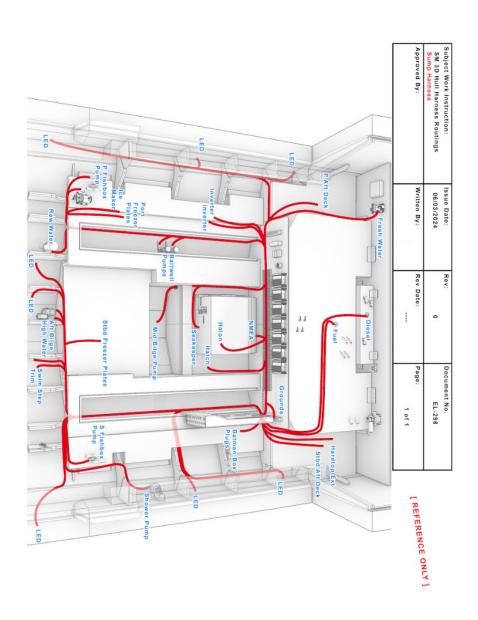


[ REFERENCE ONLY ]

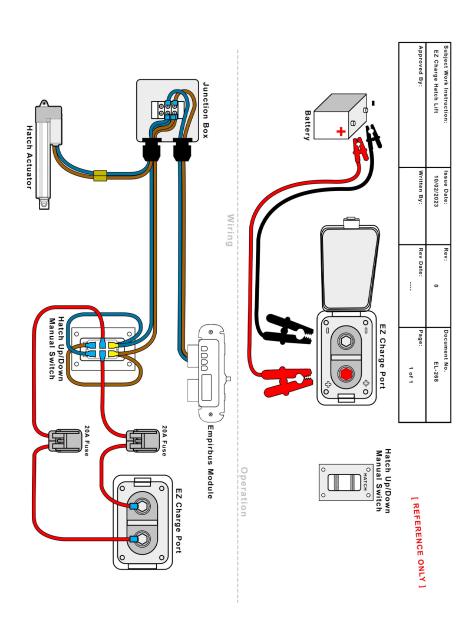




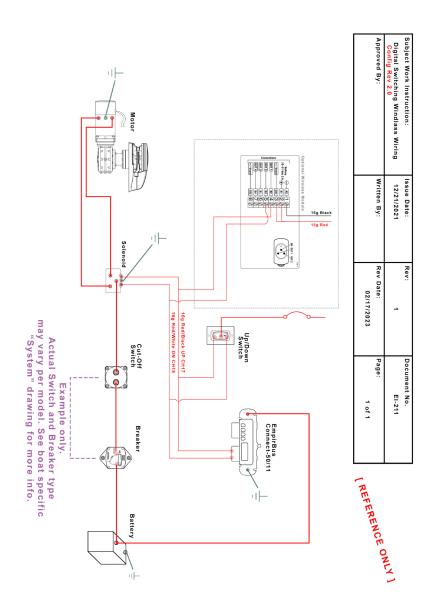




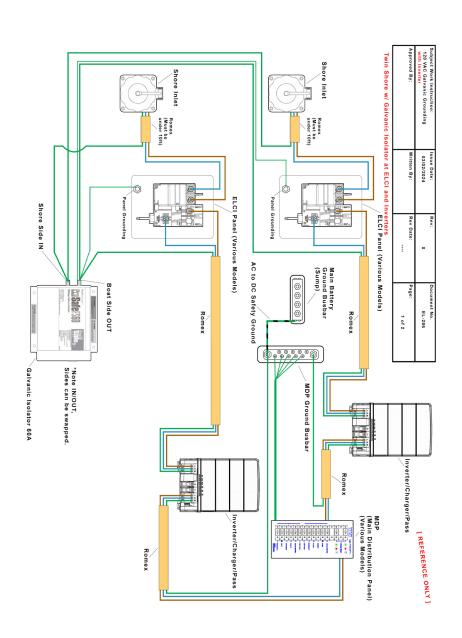
## **EZ Charge Hatch Lift**



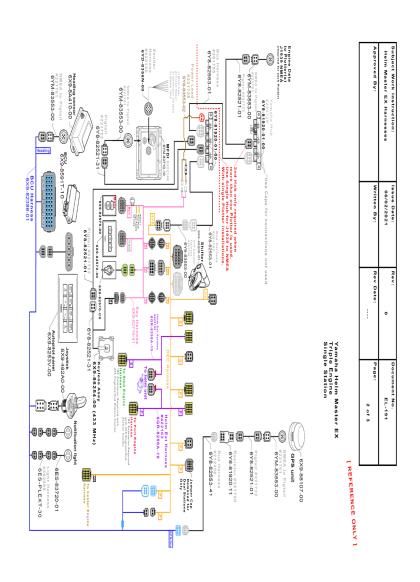
## **Digital Switching - Windlass**



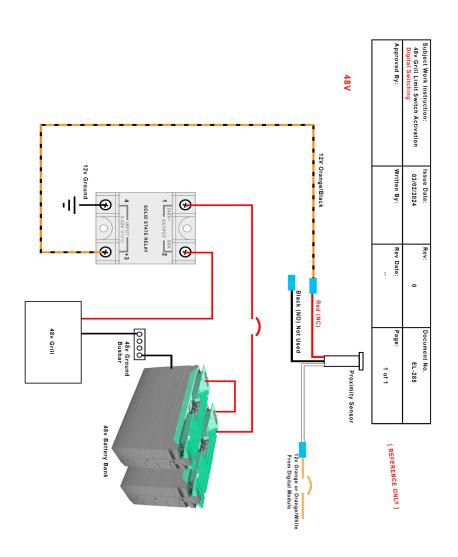
## 120 VAC Galvanic Grounding w/Inverters



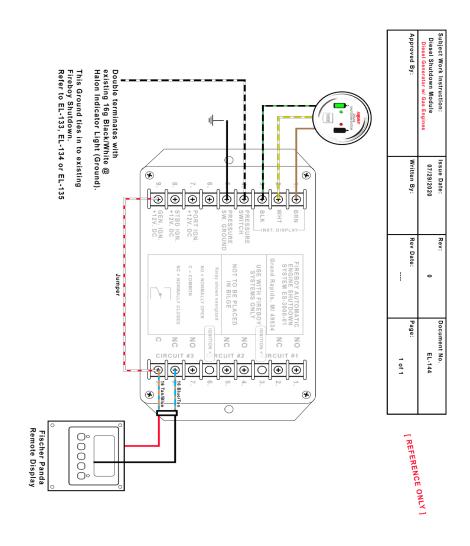
#### Yamaha Helm Master EX Harness



## **Grill Stove Limit Switch Assembly Wiring**



#### **Diesel Shut Down Module**



# **Fireboy System**

