

# **280 Vantage Commissioning Checklist** Dealer: \_\_\_\_\_ Engine Model: \_\_\_\_\_ **Engine Serial** Number(s): HIN: \_\_\_\_\_ 1. Administrative Review Bill of Sale Registration(s): Boston Whaler, Mercury, trailer, state, federal Review owner's manuals: Boston Whaler, Mercury, trailer, components Review warranties: Boston Whaler, Mercury, trailer, components Review maintenance schedules: Boston Whaler, Mercury, components Review and explain all warning/precaution placards Review ethanol fuel precautions Review California Proposition 65 Notification (California residents only) Introduce dealer sales, parts and service personnel Record key numbers: 2. Pre-launch Review **Boat** Batteries, switches, operation Gray water pumpout Interior/exterior boat inspection Batteries; Mercury's AGM/CCA requirements Beach boarding ladder\* Head pumpout Bow filler table operation NAUTIC-ON\* operation/system transfer Cockpit lights operation NAUTIC-ON\* battery sensor(s) Cockpit table/storage operation\* Navigation/anchor lights Drain plug placement Refrigerator operation Safety lanyard/emergency cut-off switch Engine oil level check Engine flushing procedures Seating operation Engine fuel/water separator service Shore power/battery charger/ACR operation Stereo/bluetooth/satellite radio operation\* Fire extinguisher operation Folding wall shelf Sunshade operation\* Fueling procedure USCG safety equipment Grill/inverter operation\* Windshield walkthrough operation

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Trailer						
Bunks properly adjusted	Swing tongue/tongue weight reviewed					
Engine trailer position	Tires properly inflated					
Lights/brake functioning properly	Trailer ball size					
Lug nuts tension	Winch and strap functioning properly					
Safety chains/tie downs properly adjusted	Wire harness connection					
3. Sea Trial Orientation						
AC distribution system operation	NAUTIC-ON* app operation					
Autopilot operation*	Onboard alarms and interpretations					
Bilge pumps	Overboard discharge procedures/regulations					
Circuit breakers	Radar operation*					
Corrosion protection	Raw water operation*					
DC distribution system operation	Satellite weather system operation					
Reboarding Ladder operation	Seacock operation					
Engine trim and tilt operation	Spotlight operation*					
Fishbox pumpout	Starting procedures					
Fishfinder/GPS/chartplotter operation*	Trim tab operation					
Fresh water operation	VHF operation*					
Gauge function and explanation	Windlass operation					
Head system operation*	Windshield wiper operation					
Joystick piloting operation*						
Livewell operation	*If equipped.					
4. Boston Whaler Owner's Club						
Email address:						
I am satisfied that the dealership's representative has fulfilled his/her responsibilities by thoroughly						
						explaining the systems, equipment, features, and options mentioned above.
Customer Name (print) Dealer Representative (print)						
Customer Signature	Dealer Representative Signature					
Date	Date					

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# 280 Vantage



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



# **MARNING**

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

MRP: 2333659 BW280\_Vantage\_MY20\_20200408



T H E N S I N K A B L E  $L E G E N D^{TM}$ 

Welcome to the Boston Whaler® family and congratulations on your purchase!

For over 60 years, Boston Whaler has engineered the most reliable and forward-thinking boats on the water. Every chapter of our history starts with a belief in pushing the limits of what's possible, and this heritage is cause for both reflection and celebration.

Standing behind every Whaler® is an extremely qualified network of dealers to provide you with a truly exceptional boating experience. Information and assistance is also available at bostonwhaler.com, where you will find customer resources including how-to videos, maintenance tips, and other technical content. While there, don't forget to sign up to receive future issues of Boston Whaler's lifestyle magazine, Whaler.

Since Boston Whaler's inception in 1958, we are committed to providing customers with the safest, highest-quality, most-durable boats in the world. We are confident that as a Whaler owner you will love the quality and pride that is built into every boat.

From all of us here at Whaler, thank you for selecting one of our a legendary and innovative boats. May that choice bring you a lifetime of boating enjoyment.



280 Vantage



Intro-1

## **HISTORY**

Since our founding more than 60 years ago, Boston Whaler® has conceived and built peerless designs that meet boaters' diverse and changing needs. It all began in Braintree, Massachusetts with founder Richard Fisher's inspired new construction method featuring two significant innovations: first, a twin sponson hull design that resulted in superior stability and a remarkably dry ride, and second, a unique foam core construction that made the boat not only durable, but unsinkable as well. So for people whose livelihood and lives depend on their boat, Boston Whaler is the right choice because of our seaworthiness, dependability, and the inherent safety of a hull that won't sink even if severely damaged. Plain and simple, Boston Whaler boats are built to last.

In 1961, Fisher's demonstration of that unsinkability was captured by *Life* magazine in photos showing a Whaler® boat being sawed in half and Fisher then motoring away in the remaining half. True to Fisher's vision, Boston Whaler's world class team has consistently pushed the envelope, furthering advances in manufacturing, design, navigation, and propulsion technologies.

In 1996, Richard Fisher was posthumously inducted into the National Marine Manufacturer's Association (NMMA) hall of fame for accomplishments made in marine engineering and construction.



In 1958, the legend is born as company founder Dick Fisher demonstrates a Boston Whaler's total unsinkability.

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# Introduction

## **Preface**

280 Vantage

## READ AND RETAIN this manual. If the boat is sold, ensure all documentation is transferred to the new owner.

Information in this publication is based on the latest product specifications available at the time of printing. Boston Whaler reserves the right to make changes at any time without prior notice. Boston Whaler is not responsible for specification changes to parts or accessories manufactured by other companies.

Brunswick Corporation registered trademarks: Mercury Marine, Mercury Racing, Optimax, NAUTIC-On, Skyhook, SmartCraft, Verado, Vantage, VesselView, VesselView Mobile.

Boston Whaler, Inc. registered trademarks: Boston Whaler, Boston Whaler with harpoon and hull logo, Conquest, Dauntless, Montauk, Outrage, Realm, Unibond, Whaler.

All other trademarks listed in this publication are the property of their respective owners.

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#### BOSTON WHALER LIMITED MANUFACTURER WARRANTY (US AND CANADA)

Boston Whaler, Inc. ("Boston Whaler") provides the following Limited Manufacturer Warranty to the original retail owner of its 2020 model year boats, if purchased from an authorized Boston Whaler Dealer and operated under normal, non-commercial use ("Boat"), subject to the remedies, exclusions, and limitations set out below.

- 1. <u>Ten-Year Structural Hull Limited Warranty:</u> Any Structural Hull Defect in material or workmanship which is reported within ten (10) years from the date of sale to the original retail owner will be repaired or replaced at Boston Whaler's sole discretion. The "Hull" shall mean the single fiberglass molded shell and integral structural components. A Structural Hull Defect shall mean a substantial defect in the Boat's Hull which causes the boat to be unfit or unsafe for general use as a pleasure craft under normal operating conditions
- 2. Three-Year Limited Warranty on Components Manufactured or Installed By Boston Whaler: (not applicable to 13 Super Sport or 16 Super Sport models): Boston Whaler will repair or replace, at its sole discretion, any components manufactured or installed by Boston Whaler that are defective in factory materials and/or workmanship, which are reported within three (3) years from the date of sale to the original retail owner, and are not addressed in the specific warranties listed in paragraphs 1 or 4 or set out in the Exclusions paragraph below.
- 3. One-Year Limited Warranty on Accessory Components for the 13 Super Sport and 16 Super Sport Models: Boston Whaler provides the following Limited Warranty to the original retail owner of any factory-authorized accessory for the 2020 model year 13 Super Sport and 16 Super Sport, if purchased from an authorized Boston Whaler Dealer, authorized Boston Whaler website or any Boston Whaler affiliate and utilized under normal, non-commercial use ("Accessory"), subject to the remedies, exclusions, and limitations set out below. Boston Whaler will repair or replace, at its sole discretion, any Accessory that is defective in material or workmanship, which is reported within one (1) year from the date of sale to the original retail owner. Boston Whaler is not responsible for any defect and/or damage to the Accessory and/or the boat caused by improper installation, whether performed by the retail owner, dealer or any other third party.
- 4. One-Year Limited Warranty on Upholstered Items, Canvas, Teak, and Powder Coating: Boston Whaler will repair or replace, at its sole discretion, any upholstered items, canvas, teak, and powder coating manufactured or installed by Boston Whaler that are defective in factory materials and/or workmanship and are reported within one (1) year from the date of sale to the original retail owner.
- 5. <u>Transportation:</u> For warranty claims filed under the following provisions 1) Ten-Year Structural Hull Limited Warranty, 2) Three-Year Limited Warranty for Warranty Servicing of Vessels with Beams greater than 8.5 feet and not legally trailer-able without special permits and 3) One-Year Limited Warranty for Warranty Servicing of Vessels not offered with a standard trailer: Reasonable expenses, at Boston Whaler's sole discretion, for hauling out, transportation to and from the dealer or other service provider authorized by Boston Whaler for warranty service.
- **6.** <u>Limited Engine Warranty:</u> Retail owners are entitled to the limited engine warranty as provided in the warranty manual from the engine manufacturer delivered to the retail owner with the Boston Whaler Boat.

#### **EXCLUSIONS**

This Limited Manufacturer Warranty does not apply to any boat which has been salvaged or declared a total loss or constructive total loss for any reason not covered in this limited warranty. This Warranty also does not apply to the following items:

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- 1. Except where offered above, expenses for hauling out, transportation to and from the dealer or the Boston Whaler factory for warranty service.
- 2. Equipment or accessories which are not installed by Boston Whaler or which carry their own individual warranties, including but not limited to engines, engine components, batteries, propellers, controls, steering mechanisms, and electronics.
- 3. Damage, deterioration, discoloration or mold of cushions or cosmetic surface finishes, including scratches, gouges, chips, chalking, blistering, cracking, crazing, fading or oxidation of gel coat, stress lines, plated or painted metal and stainless steel finishes, plastics or acrylic materials, or anti-fouling bottom paint.
- 4. Windshield breakage and leakage.
- 5. Any Boston Whaler Boat initially sold at retail by a party other than an authorized Boston Whaler dealer.
- 6. Damage resulting from abuse, misuse, improper rigging and installation by an owner or any other person or entity not being an authorized dealer, accidents, overloading or powering in excess of the recommended maximum horsepower.
- 7. Failure of the owner to use, maintain, or store the boat as specified in the Boston Whaler owner's manual; and any other failure to provide reasonable care and maintenance. Normal wear and tear maintenance items are excluded from warranty coverage including but not limited to filters, bulbs, batteries, bungees, wiper blades, anchor rope, trailer finishes, tires, brakes, bearings and lights.
- 8. Any Boston Whaler Boat which has been altered or modified from Boston Whaler factory specifications, including penetration of the hull by anyone other than Boston Whaler factory personnel or Boston Whaler authorized dealer service personnel following factory specified procedures.
- 9. Damages resulting from use of improper trailer, improperly placed supporting bunks or slings, incorrect bunks placement and improper boat lift or sling.
- 10. Any Boston Whaler Boat used for commercial purposes, which includes, but is not limited to, any for-profit or other revenue-generating uses.
- 11. Any representation or implication relating to speed, range, fuel consumption or estimated performance characteristics.
- 12. Any failure or defect caused by an act of nature resulting in damage, cost, or expense;
- 13. Any failure or defect arising from a previous repair made by a non-authorized service provider.
- 14. Any item exceeding the expressed coverage limits specified in any Boston Whaler Limited Manufacturer Warranty.
- 15. Failure of the owner to use, maintain, or store an Accessory in reasonable fashion; and any other failure to provide reasonable care and maintenance.
- 16. Any Accessory which has been altered or modified from Boston Whaler factory specifications.
- 17. Any Accessory not purchased from an authorized Boston Whaler Dealer, authorized Boston Whaler website, or authorized Boston Whaler affiliate. For a list of Boston Whaler's affiliates, please refer to www.brunswick.com.
- 18. Any Accessory used for commercial purposes, which includes but is not limited to, any for-profit or other revenue generating uses.
- 19. Any defect or repair requiring redesign of the Boat, except pursuant to the recall provisions of the United States Federal Boat Safety Act of 1971 or the recall laws of any other foreign jurisdiction.

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#### **SOLE REMEDY**

THE REMEDY OF REPAIR OR REPLACEMENT OF PARTS OR MATERIALS THAT ARE FOUND TO BE DEFECTIVE IN FACTORY MATERIALS OR WORKMANSHIP COVERED BY THIS LIMITED MANUFACTURER WARRANTY SHALL CONSTITUTE THE OWNER'S SOLE AND EXCLUSIVE REMEDY AGAINST BOSTON WHALER FOR ANY CLAIMS WHATSOEVER OF ECONOMIC LOSS RESULTING FROM PRODUCT FAILURE. In keeping with environmental policies and practices, Boston Whaler reserves the right to utilize reconditioned, refurbished, repaired or remanufactured products or parts in the warranty repair or replacement process. Such products and parts will be comparable in function and performance to an original product or part and warranted for the remainder of the original warranty period. In no event shall any repair or replacement under this Limited Manufacturer Warranty exceed the fair market value of the product as of the date of the owner's claim. Acceptance of any product returned or any refund provided by Boston Whaler shall not be deemed an admission that the product is defective. Products that are replaced become the property of Boston Whaler.

#### **OTHER LIMITATIONS**

EXCEPT AS SET FORTH HEREIN, THERE ARE NO OTHER WARRANTIES EITHER EXPRESS OR IMPLIED PROVIDED BY BOSTON WHALER ON THIS BOAT. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF FITNESS AND MERCHANTABILITY, ARE EXPRESSLY EXCLUDED. BOSTON WHALER 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 MANUFACTURER WARRANTY. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS DISCLAIMED. TO THE EXTENT THE IMPLIED WARRANTY CANNOT BE DISCLAIMED, IT IS LIMITED TO THE SHORTER OF ONE YEAR FROM THE DATE OF DELIVERY TO THE FIRST RETAIL OWNER OR THE DURATION OF THE RESPECTIVE EXPRESS LIMITED WARRANTIES STATED HEREIN. TO THE EXTENT ALLOWED BY LAW, NEITHER BOSTON WHALER, NOR THE SELLING DEALER, SHALL HAVE ANY RESPONSIBILITY FOR LOSS OF THE BOAT, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT BE APPLICABLE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT BE APPLICABLE. THIS WARRANTY GIVES THE OWNER SPECIFIC LEGAL RIGHTS, AND THE OWNER MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE OR COUNTRY TO COUNTRY.

#### STATUTE OF LIMITATIONS

Any action for rescission or revocation against Boston Whaler shall be barred unless it is commenced within one (1) year from the date of accrual of such cause of action. This provision does not grant any consumer a right of rescission or revocation against Boston Whaler, where such right does not otherwise exist under applicable law. Some states may not allow the applicable statute of limitations for rescission or revocation to be reduced, so this provision may not apply to each retail owner.

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#### **OWNER'S OBLIGATIONS**

To initiate a warranty claim, it is the responsibility of the owner to contact an authorized Boston Whaler dealer immediately after discovery of any defect, describe the nature of the problem, and provide a hull serial number, date of purchase, and name of selling dealer. The authorized dealer will notify Boston Whaler, who is solely responsible for determining and authorizing in writing the remedial action(s) to be performed at either an authorized Boston Whaler dealership chosen by Boston Whaler or at the Boston Whaler factory. The owner should notify Boston Whaler of any boat being repaired by an authorized Boston Whaler dealer which has been at the dealership for fifteen (15) days, or of any claimed defect which was not corrected after one repair attempt. Our privacy policies are available at bostonwhaler.com.

#### ASSIGNMENT OF COMPONENT WARRANTIES

Except as expressly set out herein, all warranties provided by the manufacturers and distributors of components, equipment, and parts on the boat (collectively "Component Manufacturers") are hereby assigned to the owner to the extent permitted by the Component Manufacturers, as the owner's sole and exclusive remedy with respect to such items.

#### REGISTRATION & WARRANTY TRANSFER POLICY

The limited warranty coverage is activated by the authorized selling dealer registering the sale of a new Boat with Boston Whaler. The Ten-Year, Three-Year, and One-Year limited warranties are transferable to a subsequent owner, except the one-year Accessory warranty which is not transferrable, and this Limited Manufacturer Warranty will not transfer to any new owner of a boat which has been salvaged and resold, or resold after a declaration of a total loss or a constructive total loss, i.e., the cost of repair exceeds the value of the boat. The new owner must fill out and send in a Boston Whaler warranty transfer form, accessible from www.bostonwhaler.com, and a copy of the bill of sale to Boston Whaler, 100 Whaler Way, Edgewater, Florida 32141, within 30 days of purchase.

#### **MODIFICATIONS & SEVERABILITY**

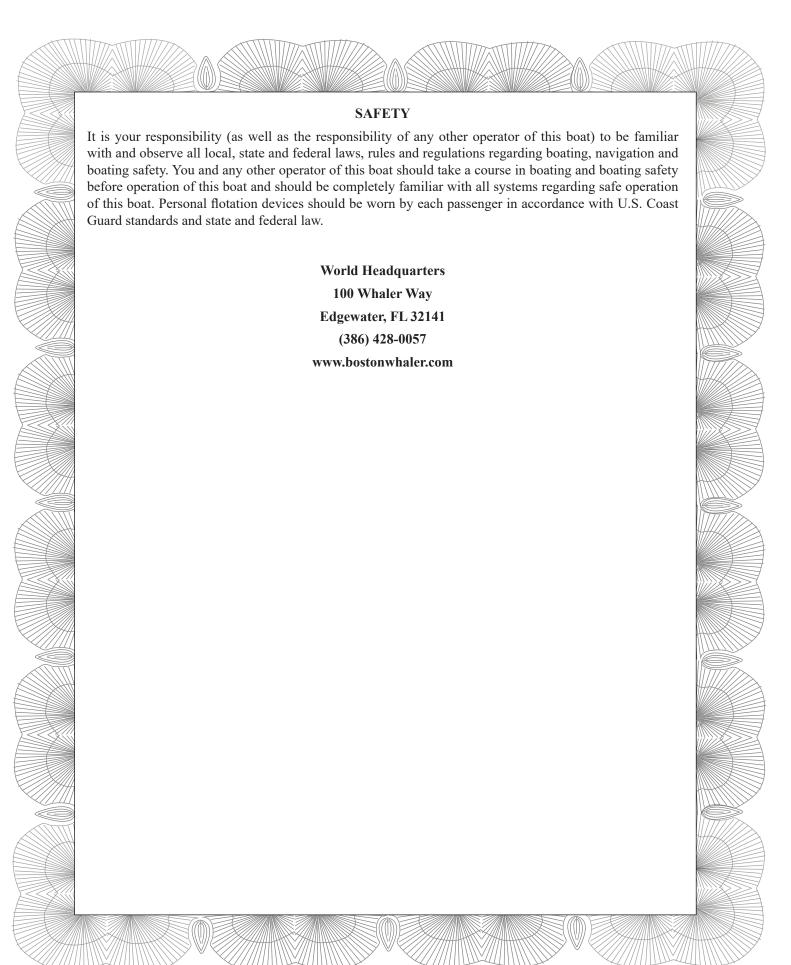
The terms and conditions contained herein, as well as those of any documents prepared in conjunction with the sale of this vessel may not be modified, altered or waived by any action, inaction, or representations, whether oral or in writing, except upon the expressed, written authority of a management level employee of Boston Whaler. The invalidity or unenforceability of any one or more of the provisions herein shall not affect the validity and enforceability of the other provisions.

#### **GOVERNING LAW AND VENUE**

This Warranty shall be interpreted and construed according to and governed by the laws of the State of Tennessee, without regard to conflict of law principles. Venue for any and all disputes arising out of or related to this Warranty, including without limitation the interpretation, performance or breach of this Warranty, shall be solely and exclusively before the United States District Court for the Eastern District of the State of Tennessee. The parties consent to the in *personam* jurisdiction of said court for the purposes of any such litigation and waive, fully and completely, any right to dismiss and/or transfer any action pursuant to 28 U.S.C. Section 1404 or 1406 (or any successor statutes) or the doctrine of *forum non conveniens*. If the United States District Court does not have subject matter jurisdiction of said matter, then such matter shall be litigated solely and exclusively before the appropriate state court of competent jurisdiction located in Knox County, Tennessee, and the parties consent to the personal jurisdiction of such court for the purpose of such litigation.

280 Vantage SOSTON Intro-9





Intro-10 280 Vantage



#### BOSTON WHALER LIMITED MANUFACTURER WARRANTY

#### Non U.S. or Canada

Boston Whaler, Inc. ("Boston Whaler") provides the following Limited Manufacturer Warranty to the original retail owner of its 2020 model year boats, that if purchased from an authorized Boston Whaler dealer and operated under normal, non commercial use, the authorized dealer will repair or replace, at its sole discretion, any defect in material or workmanship in the Boston Whaler Boat that is reported within the applicable Limited Manufacturer Warranty periods and within the scope as set out below.

Mandatory warranty rights, including a consumer's mandatory statutory rights, by law are not affected by this Limited Manufacturer Warranty and in particular not limited or excluded. These mandatory legal rights exist regardless of whether a warranty claim occurs or rights are asserted under this Limited Manufacturer Warranty.

#### **SCOPE**

This Limited Manufacturer Warranty applies only to Boston Whaler Boats purchased outside of the US and Canada, including the territory of the European Union and Australia, and to recreational use customers only (not commercial users). Commercial use, which voids the Limited Manufacturer Warranty, is defined as any use of the product which generates income, even if the product is only occasionally used for such purposes.

Routine maintenance outlined in the Operation and Maintenance Manual must be timely performed in order to maintain Limited Manufacturer Warranty coverage. This Limited Manufacturer Warranty applies to the following items:

- 1. Ten-Year Structural Hull Limited Warranty: Any Structural Hull Defect in material or workmanship which is reported within ten (10) years from the date of sale to the original retail owner will be repaired or replaced at Boston Whaler's sole discretion. The "Hull" shall mean the single fiberglass molded shell and integral structural components. A Structural Hull Defect shall mean a substantial defect in the Boat's Hull which causes the boat to be unfit or unsafe for general use as a pleasure craft under normal operating conditions.
- 2. Three-Year Limited Warranty on Components Manufactured or Installed By Boston Whaler (not applicable to 13 Super Sport or 16 Super Sport models): Boston Whaler will repair or replace, at its sole discretion, any components manufactured or installed by Boston Whaler that are defective in factory materials and/or workmanship, which are reported within three (3) years from the date of sale to the original retail owner, and are not addressed in the specific warranties listed in paragraphs 1 or 4 or set out in the Exclusions paragraph below.
- 3. One-Year Limited Warranty on Accessory Components for the 13 Super Sport and 16 Super Sport Models: Boston Whaler provides the following Limited Warranty to the original retail owner of any factory-authorized accessory for the 2020 model year 13 Super Sport and 16 Super Sport, if purchased from an authorized Boston Whaler Dealer, authorized Boston Whaler website or any Boston Whaler affiliate and utilized under normal, non-commercial use ("Accessory"), subject to the remedies, exclusions, and limitations set out below. Boston Whaler will repair or replace, at its sole discretion, any Accessory that is defective in material or workmanship, which is reported within one (1) year from the date of sale to the original retail owner. Boston Whaler is not responsible for any defect and/or damage to the Accessory and/or the boat caused by improper installation, whether performed by the retail consumer, dealer or any other third party.

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- 1. One-Year Limited Warranty on Upholstered Items, Canvas, Teak, and Powder Coating: Boston Whaler will repair or replace, at its sole discretion, any upholstered items, canvas, teak, and powder coating manufactured or installed by Boston Whaler that are defective in factory materials and/or workmanship and are reported within one (1) year from the date of sale to the original retail owner.
- 2. <u>Transportation:</u> For warranty claims filed under the following provisions 1) Ten-Year Structural Hull Limited Warranty, 2) Three-Year Limited Warranty for Warranty Servicing of Vessels with Beams greater than 8.5 feet and not legally trailerable without special permits and 3) One-Year Limited Warranty for Warranty Servicing of Vessels not offered with a standard trailer: Reasonable expenses, at Boston Whaler's sole discretion, for hauling out, transportation to and from the dealer or other service provider authorized by Boston Whaler for warranty service.
- 3. <u>Limited Engine Warranty:</u> Retail owners will be entitled to the limited engine warranty as provided in the warranty manual from the engine manufacturer that was delivered to the original retail owner with his or her Boston Whaler Boat.

#### **ENVIRONMENTAL POLICIES**

In keeping with environmental policies and practices, Boston Whaler reserves the right to utilize reconditioned, refurbished, repaired or remanufactured products or parts in the warranty repair or replacement process. Such products and parts will be comparable in function and performance to an original product or part and warranted for the remainder of the original warranty period.

#### **EXCLUSIONS**

This Limited Manufacturer Warranty does not apply to any boat which has been salvaged or declared a total loss or constructive total loss for any reason not covered in this limited warranty. This warranty also does not apply to the following items:

- 1. Except where offered above, expenses for hauling out, transportation to and from the dealer or the Boston Whaler factory for warranty service.
- Equipment or accessories which are not installed by Boston Whaler or which carry their own individual
  warranties, including but not limited to engines, engine components, batteries, propellers, controls,
  steering mechanisms, and electronics.
- Damage, deterioration, discoloration or mold of cushions or cosmetic surface finishes, including scratches, gouges, chips, chalking, blistering, cracking, crazing, fading or oxidation of gel coat, stress lines, plated or painted metal and stainless steel finishes, plastics or acrylic materials, or anti-fouling bottom paint.
- 4. Windshield breakage and leakage.
- 5. Any Boston Whaler Boat initially sold at retail by a party other than an authorized Boston Whaler dealer.
- Damage resulting from abuse, misuse, improper rigging and installation by an owner or any other person or entity not being an authorized dealer, accidents, overloading or powering in excess of the recommended maximum horsepower.
- 7. Failure of the owner to use, maintain, or store the boat as specified in the Boston Whaler owner's manual; and any other failure to provide reasonable care and maintenance. Normal wear and tear maintenance items are excluded from warranty coverage including but not limited to filters, bulbs, batteries, bungees, wiper blades, anchor rope, trailer finishes, tires, brakes, bearings and lights.
- 8. Any Boston Whaler Boat which has been altered or modified from Boston Whaler factory specifications, including penetration of the hull by anyone other than Boston Whaler factory personnel or Boston Whaler authorized dealer service personnel following factory specified procedures.





- 9. Damage resulting from use of improper trailer, improperly placed supporting bunks or slings, incorrect bunks placement and improper boat lift or sling.
- 10. Any Boston Whaler Boat used for commercial purposes, which includes, but is not limited to, any for-profit or other revenue-generating uses.
- 11. Any representation or implication relating to speed, range, fuel consumption or estimated performance characteristics.
- 12. Any failure or defect caused by an act of nature resulting in damage, cost, or expense;
- 13. Any failure or defect arising from a previous repair made by a non-authorized service provider.
- 14. Any item exceeding the expressed coverage limits specified in any Boston Whaler warranty.
- 15. Failure of the owner to use, maintain, or store an Accessory in reasonable fashion; and any other failure to provide reasonable care and maintenance.
- 16. Any Accessory which has been altered or modified from Boston Whaler factory specifications.
- 17. Any Accessory not purchased from an authorized Boston Whaler Dealer, authorized Boston Whaler website, or authorized Boston Whaler affiliate. For a list of Boston Whaler's affiliates, please refer to www.brunswick.com.
- 18. Any Accessory used for commercial purposes, which includes but is not limited to, any for-profit or other revenue generating uses.
- 19. Any defect or repair requiring redesign of the Boat, except pursuant to the recall provisions of the United States Federal Boat Safety Act of 1971 or the recall laws of any other foreign jurisdiction.

#### **ACCESS FOR SERVICE**

The owner must provide Boston Whaler with a reasonable opportunity to repair, and reasonable access to the Boston Whaler Boat for warranty service. Warranty claims shall be made by delivering the Boston Whaler Boat for inspection to a Boston Whaler dealer authorized to service the product. If the owner cannot deliver the product to such a dealer, written notice must be given to Boston Whaler. Boston Whaler will then arrange for the inspection and any covered repair and the owner shall pay for all related transportation charges and/or travel time.

## STATUTE OF LIMITATIONS

Without prejudice to your mandatory statutory rights, any action for rescission or revocation against Boston Whaler shall be barred unless it is commenced within one (1) year from the date of accrual of such cause of action, unless a longer period is prescribed by local law. This section shall not apply to Boston Whaler Boats purchased in Australia.

#### ASSIGNMENT OF COMPONENT WARRANTIES

Except as expressly set out herein, all warranties provided by the manufacturers and distributors of components, equipment, and parts on the boat (collectively "Component Manufacturers") are hereby assigned to the owner to the extent permitted by the Component Manufacturers, as the owner's sole and exclusive remedy with respect to such items.

#### **OWNER'S OBLIGATIONS**

To initiate a warranty claim, it is the responsibility of the owner to contact an authorized Boston Whaler dealer immediately after discovery of any defect, describe the nature of the problem, and provide a hull serial number, date of purchase, and name of selling dealer. The authorized dealer will notify Boston Whaler, who is solely responsible for determining and authorizing in writing the remedial action(s) to be performed at either an authorized Boston Whaler dealership chosen by Boston Whaler or at the Boston Whaler factory. The owner should notify Boston Whaler of any boat being repaired by an authorized Boston Whaler dealer which has been at the dealership for fifteen days, or of any claimed defect which was not corrected after one repair attempt. Our privacy policies are available at bostonwhaler.com.





#### REGISTRATION & WARRANTY TRANSFER POLICY

The limited warranty coverage is activated by the authorized selling dealer registering the sale of a new Boat with Boston Whaler. The Ten-year, Three-year, and One-year Limited Warranties are transferable to a subsequent owner, except the One-year Accessory Warranty which is not transferrable, and this Limited Manufacturer Warranty will not transfer to any new owner of a boat which has been salvaged and resold, or resold after a declaration of a total loss or a constructive total loss, i.e., the cost of repair exceeds the value of the boat. The new owner must fill out and send in a Boston Whaler warranty transfer form, accessible from www.bostonwhaler.com, and a copy of the bill of sale to Boston Whaler, 100 Whaler Way, Edgewater, Florida 32141, within 30 days of purchase.

#### **MODIFICATIONS & SEVERABILITY**

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 Boston Whaler. The invalidity or unenforceability of any one or more of the provisions herein shall not affect the validity and enforceability of the other provisions.

#### **SAFETY**

It is your responsibility (as well as the responsibility of any other operator of this boat) to be familiar with and observe all local, state and federal laws, rules and regulations regarding boating, navigation and boating safety. You and any other operator of this boat should take a course in boating and boating safety before operation of this boat and should be completely familiar with all systems regarding safe operation of this boat. Personal flotation devices should be worn by each passenger in accordance with applicable standards and state and federal law.

# THE FOLLOWING SECTION IS APPLICABLE TO AUSTRALIAN CONSUMERS ONLY

Boston Whaler Boats come with guarantees that cannot be excluded under the Australian Consumer Law. Retail owners are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. Retail owners are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. This Limited Manufacturer Warranty does not cover any expenses that retail owners may incur claiming the warranty.

The benefits to retail owners given by this Limited Manufacturer Warranty are in addition to other rights and remedies of the consumer under a law in relation to the goods or services to which the Limited Manufacturer Warranty relates.

World Headquarters 100 Whaler Way Edgewater, FL 32141 (386) 428-0057 www.bostonwhaler.com

Intro-14 SOSTON WHALER 280 Vantage



#### CALIFORNIA EVAPORATIVE EMISSIONS CONTROL SYSTEM WARRANTY STATEMENT

#### YOUR WARRANTY RIGHTS AND OBLIGATIONS:

The California Air Resources Board and Boston Whaler, Inc. ("Boston Whaler") are pleased to explain the evaporative emission control system's warranty on your 2020 MY spark-ignition marine watercraft (SIMW). In California, new spark-ignition marine watercraft must be designed, built, and equipped to meet the State's stringent anti-smog standards. Boston Whaler must warrant the evaporative emission control system on your spark ignition marine watercraft for the period listed below provided there has been no abuse, neglect or improper maintenance of your spark-ignition marine watercraft. Your evaporative emission control system may include parts such as: carburetors, fuel tanks, fuel lines, fuel caps, valves, canisters, filters, vapor hoses, clamps, connectors, and other associated components.

#### **MANUFACTURER'S WARRANTY COVERAGE:**

This evaporative emission control system is warranted for three years. If any evaporative emission-related part on your spark-ignition marine watercraft is defective, the part will be repaired or replaced by Boston Whaler.

#### OWNER'S WARRANTY RESPONSIBILITIES:

As the spark ignition marine watercraft owner, you are responsible for performance of the required maintenance listed in your owner's manual. Boston Whaler, Inc. recommends that you retain all receipts covering maintenance on your SIMW, but Boston Whaler cannot deny warranty solely for the lack of receipts. As the SIMW owner, you should however be aware that the Boston Whaler may deny you warranty coverage if 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 Boston Whaler distribution center or 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 a question regarding your warranty coverage contact Boston Whaler at 877-294-5645.

## SIMW EVAPORATIVE EMISSIONS WARRANTY PARTS:

Fuel tank Grade valves

Fuel field hoses Fuel fill deck plate with cap and pressure relief valve

Fuel line fittings

Hose clamps on fuel system components

Fuel demand valves Fuel level vent valve

All other parts not listed that may affect the evaporative emissions control system.

280 Vantage WHALER / Intro-15

#### PRIVACY STATEMENT

Thank you for purchasing a boat or requesting information from Boston Whaler. This Privacy Statement is to inform you how we collect, use, disclose, and safeguard the personal information you provide to us through your purchases, requests for brochures, product registration cards, promotions, surveys, call centers, or other customer contacts. To see our full Privacy Policy and any updates, please visit www.bostonwhaler.com and select the Privacy Statement link. "Personal information" may include your name, age, mailing address, residential phone number, or e-mail address. It may also include income ranges, marital status, product or lifestyle preferences, and information concerning dealer service.

How we collect personal information: Our authorized dealer provided Boston Whaler or our company in the European Union with personal information collected at the time of your boat order/purchase with other product registration data and will continue to provide warranty and servicing information on your boat. We will send you customer satisfaction surveys which you may elect to return to provide us with information on your boat purchase and your servicing needs. Your personal information may be gathered by or shared with Boston Whaler's marketing providers and affiliated companies, who have comparable levels of privacy protection, for the purposes described in this statement. Boston Whaler, your dealer, and our marketing providers collect personal information when your request information about our companies and from surveys, promotions, contests, correspondence, your e-mails, telephone inquiries, web forms, and other communications. How We Use and Disclose Personal Information: Unless you advise us otherwise, Boston Whaler, our authorized dealers, affiliated companies, and our marketing providers may generally collect, use, disclose, hold, and file your personal information for the following purposes: (1) Providing goods, brochures, information, incentives, and/or services to you or on your behalf; (2) Fulfilling the terms of our limited warranty or other service obligation; (3) Facilitating recalls or service campaigns if necessary; (4) Reviewing goods and/or services provided to you in product, services, and marketing analyses; (5) Ensuring your satisfaction through surveys or other contacts; (6) Administration, billing, accounting, and collections; and protecting against fraud and error; and (7) Investigating a breach or a contravention of a law, complying with a subpoena, warrant, court order, or as required or otherwise permitted by law. Boston whaler will not sell your personal information or subject you to telemarketing or unsolicited e-mail.

Safeguards: We use security safeguards appropriate to the sensitivity of personal information to protect it from loss or theft, as well as prohibiting unauthorized access, disclosure, copying, use or modification of your personal information. These safeguards include restricted access to offices and equipment, security clearances, the use of passwords and/or encryption, publishing our privacy policy to appropriate personnel with instructions to act in accordance with its principles, and contractual provisions with our marketing agents and authorized dealers to follow the principles of our privacy policy.

Access and correction to your personal information: Subject to the exceptions provided by applicable law, we will provide, upon written request, your specific personal information collected in a form which is generally understandable. Your Personal Information is held by us and for us by our marketing agency, Rollick Company, who has contractually agreed to protect your information according to our privacy policies at the following addresses: Boston Whaler Inc., 100 Whaler Way, Edgewater, FL 32141. Please direct corrections, withdrawal of consent for specific purpose, complaints or other inquiries regarding personal information to: Rollick Company, 1078 Headquarters Park Drive, Fenton, MO, 63026; phone: (636) 343-9988, fax: (636) 326-3282. You can withdraw consent for us to use your personal information at any time or provide corrections upon providing to us a 30-day notice, unless withdrawing consent would impede the performance of legal obligations. We are required by law to provide you with information for product recall and other product safety relates purposes. The withdrawal of your consent may also adversely affect our ability to provide products and services to you and to maintain our relationship. Please note, notifying us will not result in withdrawing consent from your dealer, who should be contacted separately.

Obtaining consent: If any supplementary disclosure is required, we will obtain your consent for disclosure to other persons or organizations and for other purposes than stated herein, unless otherwise permitted by law.

Thank you for your business. We hope you have many years of wonderful boating experiences!

Intro-16 280 Vantage WHALER







## **Owner's Manual**

The contents of this manual:

- Provide basic boating-safety information
- Outline the fundamentals of boat use
- Detail the boat's features and equipment
- Contain maintenance information

You must learn to operate this boat as well as read, understand, and use this manual. This manual does not give you a course in boating safety or how to navigate, anchor or dock your boat. Operating a power boat safely requires more skills, knowledge, and awareness than is necessary for a motor vehicle.

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

The owner's packet is a large, zippered bag that contains all manuals and instructional information for non-Boston Whaler equipment and systems on your boat. Read and retain this information.

# Registration

Your Boston Whaler dealer will complete your new boat warranty registration. To warranty register this boat as a pre-owned Whaler, please visit the *Whaler Ownership* section on bostonwhaler.com.

#### **Contact Us**

Boston Whaler, Inc.

877-294-5645

www.bostonwhaler.com

### **Warranties**

In addition to the Boston Whaler<sup>®</sup> Limited Warranty, each component and/or system on your boat has its own warranty that can be found with the specific information and manual for that component. These are included with your owner's information packet. Please locate, read, and retain the individual warranties.

# **Boating Information**

A comprehensive background in boating can be found in the book, *Chapman Piloting: Seamanship & Small Boat Handling*, by Elbert Maloney. For boating courses in North America, contact one of the following organizations:

Organization	Website	Phone
Boat U.S. Foundation	boatus.org	800-336-2628
U.S. Coast Guard	uscgboating.org	_
U.S. Coast Guard Auxiliary	cgaux.org	877-875-6296
US Power Squadron	usps.org	888 367-8777
Canadian Coast Guard	ccg-gcc.gc.ca	800-267-6687
Canadian Power and Sail Squadrons	cps-ecp.ca	888-277-2628
Red Cross	redcross.org	800-733-2767
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State boating offices

Yacht clubs

Outside of North America, contact your dealer or your governmental boating agency for assistance.





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# **Safety Labels**

The most important aspect of boating is safety. Although every effort is made to address the numerous issues regarding the safe use of this vessel, it is strongly recommended that you avail yourself of the training and knowledge available through boating safety courses.

Mounted at key locations throughout this vessel are safety labels which advise the operator of imperative safety precautions to follow when operating and/or servicing equipment. Label categories are broken down by color and type.

# **A** DANGER

Denotes an immediate hazard exists that WILL result in severe personal injury or death.

# **▲ WARNING**

Denotes hazards or unsafe practices that MAY result in severe personal injury or death.

# **A CAUTION**

Denotes hazards or unsafe practices that COULD result in minor personal injury, product or property damage.

# **NOTICE**

Denotes information that is important to know prior to operation and/or maintenance, but is not hazard related.

Below are black and white examples of safety labels which appear throughout this manual and must be observed when operating or servicing your boat. Learn to recognize the label category and understand the explanations before reading this manual.

# A DANGER

Denotes an immediate hazard exists that WILL result in severe personal injury or death.

# **AWARNING**

Denotes hazards or unsafe practices that MAY result in severe personal injury or death.

# **A CAUTION**

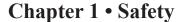
Denotes hazards or unsafe practices that COULD result in minor personal injury, product or property damage.

# **NOTICE**

Denotes information that is important to know prior to operation and/or maintenance, but is not hazard related.







# Safe Boating Means

- Knowing the limitations of this vessel.
- Following navigational rules (rules of the road).
- Be aware of people and objects in the water.
- Not boating in water or weather conditions that are beyond the boat's and operator's capability.
- Never operating the boat while under the influence of drugs or alcohol.
- Being aware of passenger safety at all times.
- Reducing speed when there is limited visibility, rough water, boats or structures.

# **NOTICE**

As a boat owner or operator, you are responsible for the safety of you, your passengers, and other boaters.

Boating in beautiful weather and calm water conditions can be a wonderful experience. But boating requires considerably greater skills than operating a land vehicle. Taking a boating course is the best way to prepare for a safe and enjoyable experience on the water.

- Take a USCG, U.S. Power Squadron or equivalent boating safety course. Call the Boat/U.S. Foundation at 800-336-2628 for information on available courses, or go to: www.boatus.org
- Get hands on training on how to operate this vessel properly.

# **Safe Boating Checklist**

# **Before Departure**

- □ Check weather forecast
   □ Check required documents are on board
   □ Check navigation charts are on board
   □ Check safety equipment is on board
   □ Ensure passengers and crew have received safety instructions on procedures, location, and use of safety equipment.
   □ Check drain plugs are installed
   □ Check bilge pumps are working and clean
- ☐ Check blower is working☐ Check navigation lights are working
- ☐ Check horn is working
- ☐ Check fuel system has no leaks or fumes
- ☐ Check fuel filter is tight and clean
- ☐ Check power steering fluid is full (if applicable)
- ☐ Check steering system is working smoothly
- ☐ Battery connections and fluid levels (if applicable)
- ☐ File float plan with friend or relative

# **Trailering (if applicable)**

- Check boat position is secure on trailer
- ☐ Check tiedowns are tight
- ☐ Check winch is locked
- ☐ Check trailer hitch is connected
- ☐ Check engine clearance in trailering position
- ☐ Check safety chains are attached
- Test lights, brake lights, and turn signals
- ☐ Adjust mirrors for trailering

## **After Return**

- ☐ Fill fuel tanks (allow for expansion) to prevent condensation
- ☐ Check fuel system for leaks
- ☐ Check bilge pump is operating properly
- ☐ Check bilge is clean and leak free
- ☐ Check in with float plan notification person



#### **General Considerations**

- Know how this vessel handles under different conditions. Recognize your limitations and the boat's limitations. Modify speed in keeping with weather, sea, and traffic conditions.
- Instruct passengers on location and use of safety equipment and procedures.
- Instruct passengers on the fundamentals of operating this vessel in case you are unable to do so.
- You are responsible for passenger's actions. If they place themselves or the boat in danger, immediately correct them.
- Remember the Rule of Thirds: Use one third of the fuel for the trip outbound, one third for the return trip, and keep one third for reserve.

# **Maintaining Control**

High performance boats require intimate knowledge of each vessel's handling characteristics for safe, high speed operation.

- Learn the effects of trim, steering and throttle changes at gradually increasing levels of speed.
- Approach full throttle while adjusting trim for safe handling of the vessel.

On the water there are no marked traffic lanes, no traffic signs or lights, and boats have no turn signals. The boat operator must keep her or his attention focused not only on what's ahead but what's on the left, right, and behind the boat.

The operator must always be alert to approaching boats (from the rear, right and left sides, as well as those ahead). There can be a variety of navigational hazards in the water including partially submerged debris, rocks, sand bars or dangerous currents, to name a few.

Your passengers are relying on you to operate and maneuver the boat safely so that they are not in danger of going overboard. If you turn too quickly or increase or decrease speed abruptly, your passengers are at risk of being thrown overboard or thrown about the boat. When visibility becomes impaired because of weather or time of day, use navigational lights to ensure other boats can see you. In addition, if high bow angle causes reduced visibility, slow down to allow sufficient time to react if an emergency occurs.

## **Boarding**

- Board only one person at a time.
- Never jump into boat; step or climb.
- Load gear after aboard. Carrying gear while boarding can cause you to lose balance.
- Distribute weight evenly.
- Instruct passengers where to sit during on plane operation to reduce the possibility of falling overboard during high speed maneuvers.
- If gear is not immediately needed, stow it in secure areas.
- Safety gear must be immediately accessible at all times.

# **Impaired Operation**

# **AWARNING**

**Control Hazard - Federal laws prohibit operating** a boat while under the influence of alcohol or drugs. These laws are vigorously enforced.

The detrimental effects of alcohol and drugs are increased by wind, waves and sun, and will decrease your response time and ability to react in critical situations. Give special attention to the effects of alcohol and drugs while boating. No other single factor causes as many marine accidents and deaths. Death or serious injury and damage to personal and private property can result from being impaired while operating a boat.





1-3



# **A WARNING**

Death or serious injury can result if you fail to observe these safety rules:

- Anyone who controls the boat should have completed a boating safety course and be trained in the proper operation of the boat.
- Always operate the boat at speeds that will not put people or property in danger.
- Be constantly aware of conditions in all directions when underway and before turning.
- Reduce speed, use a lookout to identify possible hazards or difficulties, and turn on navigation lights when:
  - Visibility is impaired
  - In rough water
  - In congested waterways
- Watch your wake. It can capsize a small boat or damage moored boats or other property. You are responsible for damage caused by your wake.

# **A** WARNING

Never operate a boat at a speed at which you do not feel in control.

# **AWARNING**

A qualified operator must be in control of the boat at all times. Do not operate the boat while under the influence of alcohol or drugs. Never operate this vessel at speeds which exceed the operator's ability to react if an emergency develops. At night, turn on the appropriate navigation lights and cruise at a reduced speed that allows you plenty of time to avoid dangerous situations.

# **AWARNING**

## **STABILITY HAZARD**

- Load boat properly. The manufacturer's load rating is the maximum weight allowed under normal conditions. Adjust downward if weather, water or other conditions are adverse.
- Allow passengers to ride only in areas that do not pose a hazard to themselves or the boat.
- Do not allow passengers to ride on the bow of a closed-bow boat.
- Do not allow several passengers to ride in the bow of a small open-bow boat, causing the boat to plow in the water.
- Do not allow passengers to ride on the stern cushion or gunwales.
- Do not overload the stern.
- Observe manufacturer's recommended on-plane seating locations.
- Passengers should remain seated while boat is moving.

Personal injury hazard - Stay alert. Use of drugs, alcohol, or other substances which impair judgement poses a serious threat to yourself and others. The boat operator is responsible for the behavior of passengers.

Drowning hazard - Boats must carry one wearable personal flotation devices (PFDs) for every passenger on board. Boats must have at least one throwable life preserver.

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

# **Legally Mandated Equipment**

Consult your national boating law enforcement agency. The following equipment is the minimum required by the United States Coast Guard (USCG) for a boat over 26 feet (7.9 meters) in length but less than 39.4 feet (12 meters) in length.







# **Personal Flotation Devices (PFD's)**

One USCG approved Type I, II or III is mandatory for each person aboard. One throwable Type IV device is also required to be onboard and located so that it is immediately available.

A Type V device is acceptable (see *PFD Classifications*, later in this chapter) if worn for approved use. Always wear a PFD when boating.

# **AWARNING**

There is rarely time to reach stowed life jackets in time of emergency. Boaters should always wear a properly fitting, approved life jacket when on the water. Children and non-swimmers must wear PFDs at all times when aboard.

# **NOTICE**

Depending on the state or country of operation, the operator of a vessel may be fined for failure to comply with local or national rules regarding PFD usage.

# **Fire Extinguisher**

If there is no fixed fire extinguishing system installed, two size B-I or one B-II fire extinguisher(s) must be on board. If a fixed system is installed one B-I is required. The American Boat & Yacht Council (ABYC) recommends three A, B or C Type fire extinguishers be on board and located within easy reach of helm, outside of engine compartment(s), galley, and passenger area.

## **Sound Producing Devices**

Ensure a sound producing device such as a horn or whistle is on board. Navigation rules require that a sound made by an audible device be capable of a four second blast, and be audible for 1/2 mile (.80 km).

#### **Visual Distress Signals**

If you operate this vessel in coastal waters or on the Great Lakes, you must have visual distress signals for day and night use on board. At least three day/night combination pyrotechnic devices must be carried, readily accessible, in serviceable condition, and not be expired. Non-pyrotechnic substitutes include one

orange flag for day-use and one electric S-O-S signal light for night-use. Store all pyrotechnic signals in a well marked, waterproof container.

# **Additional Required Equipment**

Your vessel comes equipped with other mandated equipment such as an oil discharge and trash placard, navigation lights, and certified marine sanitation device (option).

# **Additional Safety Equipment**

In addition to the legally mandated equipment, the following items are necessary for safe boating, especially if your boat will be out of sight of land.

- First Aid kit
- Charts/maps
- GPS or LORAN
- Marine VHF radio
- Moisture repellent
- Mooring lines
- Fenders
- Waterproof flashlights
- High power spotlight
- Spare propeller
- Anchor

- Compass
- Manual bilge pump
- Spare keys
- EPIRB emergency positioning indicating radio beacon
- · Boat hook
- Extra batteries
- · Instruction manuals
- Lubricating oil
- Tool kit
- Screwdrivers, (Phillips and flat)
- Pliers, (regular, Vise-grip, tongue and groove)
- Wrenches, (box, open end, Allen and adjustable)
- Socket set, (metric and U.S.)
- Electrical tape and duct tape
- Hammer
- Spare parts kit, (spark plugs, fuses, etc.)

# **Carbon Monoxide (CO)**

Carbon monoxide (CO) is an odorless, colorless, and extremely toxic gas produced by engines, heaters, stoves or generators. When inhaled it combines with hemoglobin in the blood, preventing absorption of oxygen and is unlikely to be noticed until the person is overcome. Prolonged exposure to low concentrations or very short exposure to high concentrations can result in asphyxiation and death. Symptoms of carbon monoxide poisoning include:

- Dizziness
- Headaches
- Ringing in the ears
- Nausea

Unconsciousness

If symptoms are detected, get medical attention as soon as possible. Symptoms of carbon monoxide (CO) poisoning may be confused with seasickness or intoxication, potentially delaying the seeking of medical attention. The poisoning victim's skin often turns cherry red. If CO poisoning is suspected, have the victim breath fresh air deeply. If breathing stops, resuscitate. A victim often revives, then relapses because organs are damaged by lack of oxygen. CO can accumulate in dangerous concentrations anywhere in or around your boat including on back decks, swim platforms, or in water around generator exhaust. CO can remain in or around the boat at dangerous levels even if your engine is no longer running (see Figure 1.6.1). Remember:

- If you smell exhaust you are inhaling CO.
- Change course/speed to improve ventilation.
- Adjusting the canvas enclosure and/or vents and other opening devices can improve ventilation.

To minimize the danger of carbon monoxide accumulation:

- Do not idle the engine without moving the boat for more than 15 minutes at a time.
- Inspect the exhaust system regularly.
- Operate all fuel burning appliances, such as charcoal, propane, LPG, or CNG cooking devices in areas where fresh air can circulate.

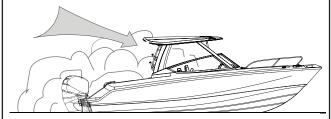
# **A** DANGER

- Fumes from the engine(s), generator(s) and other equipment and appliances that burn fuel contain carbon monoxide. Carbon monoxide can kill you. Open all doors, hatches, curtains, and windows to allow fresh air to circulate and dissipate CO present in enclosed spaces, especially when the boat is moored or anchored.
- Proper ventilation must be maintained, even during inclement weather to prevent dangerous levels of carbon monoxide build-up.
- Sleeping aboard a boat requires a working carbon monoxide detection system, preferably in each sleeping quarter.

# **A** DANGER

Even in rainy cold weather, ventilation must be maintained to avoid carbon monoxide poisoning. You will get wet and/or cold.

Carbon Monoxide Accumulation Scenarios Figure 1.6.1



WINDS BLOWING EXHAUSTS TOWARD BOAT OCCUPANTS.



BLOCKING EXHAUSTS



OPERATING WITH "BOW HIGH"



OPERATING AT SLOW SPEED OR DEAD IN WATER



GOOD AIR FLOW

# **Lifesaving Equipment**

Even strong swimmers can tire quickly in the water and drown due to exhaustion, hypothermia, or both. The buoyancy provided by a personal flotation device (PFD) allows a person that has fallen overboard to remain afloat with far less effort and body heat loss, extending the survival time required to find them.

# **Personal Flotation Devices (PFD)**

One USCG approved PFD, Type I, II or III for each person aboard or being towed on water skis, tubes, etc. The law requires that PFDs must be readily accessible, if not worn. Readily accessible means removed from storage bags and unbuckled.

# **NOTICE**

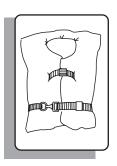
Children and non-swimmers must wear PFDs at all times when aboard.

#### **PFD Classifications**

Listed below are the several different types of PFDs, each life jacket has different purposes, choose one that will suit your purpose.



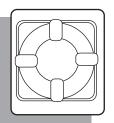
Type I, The off-shore life jacket is considered the most buoyant, it is designed to turn an unconscious person face up. Use in all types of waters where rescue may be slow, particularly in cold or rough water conditions.



Type II, Near-shore life vest, a keyhole vest with flotation filled head and neck support is also designed to turn a person face up, but the turning action is not as pronounced. Use in calm inland waters or where quick rescue is likely.



Type III, Flotation-aid Life vest is designed so that conscious wearers can turn face-up. Designed for comfort while engaged in water skiing or other forms of water activities.



**Type IV**, Throwable Devices, horseshoe buoys, ring buoys and buoyant cushions are designed to be grasped, not worn.



Type V, Special-Use devices, sailboat harnesses, white water vests, float coats, and hybrid vests which have minimum inherent buoyancy and an inflatable chamber.

Before purchasing PFDs, ensure that there is an attached tag indicating they are approved by the USCG or by your boating law enforcement agency.

The operator is responsible for instructing everyone onboard on their location and use. The best precaution is to wear the PFD at all times while on the boat.

# **Emergency Situations**

# **NOTICE**

The law requires the owner/operator to assist any person or boat in distress as long as rendering assistance does not endanger the owner/operator, the passengers or the boat.

Prevention is the safest approach. We hope that you are never involved in an emergency situation, but if you are it is imperative that you react.

## **Medical Emergency**

You may be far from professional medical help when you are boating. At least two persons on board your boat should be CPR certified, and should have taken a first aid course. Your boat should have a well stocked first aid kit on board. In many situations your radio will be your only link to reaching medical assistance. Keep the radio in working order and understand which channels are used for emergencies, these channels are constantly monitored and will be useful when situations arise. Cell phones can help in some areas, but they are limited and unreliable and should not be used in the place of a good VHF radio.

#### **Water Rescue**

In most situations a person that has fallen overboard will succumb to hypothermia if not rescued immediately. Life expectancy decreases as rescue time increases in water temperatures below 70°F (21.1°C).

There are three (3) steps that must be taken when a person has fallen overboard:

#### 1. Returning to the Victim

- Immediately make everyone onboard aware that someone is overboard and keep the victim in sight.
- Slow the boat and keep pointing toward the person overboard. At night or in low light, point the best available light source at the person.
- Throw a life ring/preserver to the victim, even if they are wearing one it will serve as another marker.

#### 2. Making Contact

- Stop or slow the boat and circle toward the person overboard.
- Try to approach heading into the wind or into the waves.
- Keep person overboard constantly in sight.

• When almost alongside, stop the engine in gear to prevent propeller windmilling.

## 3. Getting Back Aboard

- Try to reach the person overboard with a pole, or by throwing a life preserver. Never swim to them except as a last resort.
- Assist the person in boarding. Boarding should be done at the stern of the boat.
- If the person is injured or incapable of boarding by themselves, a rescuer should don a life preserver with a safety line and enter the water to assist the person onto the boat.
- Handle the person carefully, spinal injuries might have occurred and could be worsened by rough handling.
- Check for other injuries, render medical assistance immediately.

## **Unassisted Reboarding**

The reboarding ladder can be deployed to accommodate a person reboarding the boat without assistance.

#### **Fire**

Fire is a serious boating hazard. Boats will burn quickly. Do not remain onboard and fight a fire for more than a few minutes. If the fire is out of control and cannot be put out with the fire suppression equipment onboard, abandon ship immediately. The fumes released during a fire are toxic and should be avoided. Even after the fire has been extinguished, proper ventilation of the area is required to minimize exposure to harmful fumes.

# **A DANGER**

- Fires can spread quickly. Have the proper fire fighting equipment close at hand, and in good working order to respond quickly.
- Small fire extinguishers have short discharge times. Aim at the base of the fire with a sweeping motion to maximize the use of the fire extinguisher contents.



To lessen the danger of fire:

- Extinguish all smoking materials, shut off blowers, stoves, engine(s) and generator(s).
- Keep bilge area clean, oil and fuel spills should be cleaned immediately.
- If possible throw burning materials overboard.
- If fire is accessible, release the contents of the fire extinguisher(s) into the base of the fire.
- If the fire is in an enclosed compartment and you have an automatic fire extinguisher that has discharged in the compartment, wait 15 minutes before opening the compartment. Have extinguisher handy in case of a flare up.
- If possible, signal for help. Radio, visual, and audible signal should be used as needed. Also understand, that you must render assistance to any boater requesting help.
- If fire is out of control, grab all necessary survival gear, distress signals, put on personal flotation devices (PFDs) and prepare to abandon ship.
- If you do abandon ship, ensure the passengers have PFDs. Take a head count before entering the water and take another head count when in the water. Stay together.

# Flooding, Swamping and Capsizing

In the event of flooding, swamping or capsizing:

# **Flooding**

- Always wear your PFD, or have it within reach.
- If the bilge pump(s) have not automatically turned on, switch them on immediately.
- Find the source of the flooding and determine the best fix.
- Keep the bilge pumps running until the flooding is under control.
- Call for assistance if the source of the flooding cannot be controlled.
- Head back to port if possible.

## **Swamping**

- Always wear your PFD, or have it within reach.
- Swamping is usually a result of wave action, immediately get control of the helm and turn the boat into the waves.
- Swamping can also be caused by an overloaded boat.
- If the bilge pump(s) have not automatically turned ON, switch them ON immediately.
- The deck scuppers on this vessel are designed to drain the deck of water.
- Keep the bilge pumps running until the flooding is under control.
- Take a head count of all passengers.

# **Capsizing**

- Capsized is when a boat is on its side or completely upside-down (usually as a result of wave action, improper loading or load shifting).
- If the boat will not right itself, get out of the water and climb onto the exposed hull.
- Do a head count for all passengers
- Stay together.
- Usually a capsizing will happen quickly and without warning.
- Use whatever is at hand to signal for help.

The chances of flooding, swamping or capsizing can be reduced by being aware of:

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- Weather
- Water conditions
- Proper boat handling techniques
- Proper loading of the boat

#### Collision

In the event of collision:

• Cut the engine(s)

- Check on passengers
- If the bilge pump(s) have not automatically turned on, switch them on immediately.
- Determine amount of damage to boat structure.
- Call for assistance
- In the event of collision you are required to file an accident report. Contact a state enforcement agency or the nearest USCG office. If you are boating outside U.S. waters, consult the nation you are visiting for accident reporting requirements.

# **Propulsion, Control or Steering Failure**

If there is a propulsion, control or steering failure:

- Stop the engine, (shut off at ignition or pull on the emergency engine shut-off switch).
- Drop anchor outside of the channel, if possible, to prevent drifting.
- Determine if the problem can be fixed or will assistance be needed.
- Call for assistance if needed.

When loss of propulsion or steering is noticed, your quick reaction is required to prevent further damage to your boat or injuries to your passengers.

Outboard engines require propulsion to control the direction the boat will take. Without propulsion, the steering is virtually useless. If you are in a congested waterway you will need to react quickly to warn others that you have lost power, propulsion or steering control and that assistance will be needed.

# Grounding

Running aground may be avoided by paying attention to marker buoys or indicated by waves as they form into breakers when passing over a sand bar. If you do run aground, the course of action depends on how hard the boat hits bottom and whether the boat remains stranded. If it is a simple touch, you may need only to inspect the lower drive of the engine and the hull of the boat. If possible do a thorough inspection before trying to get loose; reversing your boat before this is done may cause more damage.

# Distress Signals

# **Visual Distress Signals (VDS)**

- USCG regulations require boats in coastal waters and the Great Lakes to carry a signal (VDS) for day and night use, as well as appropriate for the time of operation. Exempt from the day signals requirement, but not night signals, are boats less than 16 feet (4.8 meters), open sailboats less than 26 feet (7.9 meters) boats participating in organized events and manually propelled boats.
- If you are required to have visual distress signals, at least three safety approved pyrotechnic devices in serviceable condition must be readily accessible. They must be marked with a date showing the service life which must not be expired.
- Carry three signals for day use and three for night. Some pyrotechnic devices meet both day and night use requirements.
- Store pyrotechnic signals in a cool, dry location. Prominently mark an orange or red watertight container *distress signals*.

Other recognized visual distress signals include:

- Flames in a bucket
- Code flags November and Charlie
- Black ball/square on orange background.
- Orange flag (certified)
- Electric distress light (certified) for night use
- Dye marker (any color)
- Person waving arms (slowly)
- U.S. flag flown upside down

## **Audible Distress Signals, (ADS)**

USCG regulations require one hand, mouth or power operated whistle or horn, audible for at least 1/2 mile. Other recognized audible distress signals include:

- Radio communications
- Radio-telegraph alarm
- Position indicating radio beacon
- Morse Code S-O-S (3 short 3 long 3 short) sounded by any means.
- Fog horn sounded continuously.



#### **Radio Communications**

A radio is the boat operator's main method of receiving safety information and summoning aid. VHF-FM radio is the primary means of short range communication. Single sideband radio (SSB) is used for longer range communication.

VHF-FM channel 16 and SSB 2182 kHz are designated for emergency use. Such situations can be categorized as:

## **EMERGENCY**

"MAYDAY, MAYDAY,"- used when life or vessel is in imminent danger.

#### **URGENCY**

"PAN-PAN, PAN-PAN, PAN-PAN" (pronounced PAHN-PAHN)-used when a person or vessel is in some jeopardy less than indicated by a "MAYDAY" call.

#### **SAFETY**

"SECURITY, SECURITY" (pronounced SAY-CURE-IT-AY)-used for navigational safety or weather warning.

An emergency situation will be hectic and there will not be time to learn proper radio procedure. Learn what to do before you need to do it. If you hear a distress call, stop all radio transmissions. If you can directly assist, respond on the emergency frequency. If you cannot assist, do not transmit on that frequency. However, continue to monitor until it is obvious that help is being provided.

## Weather

# **A** DANGER

Do not attempt to boat in severe weather conditions. Death or serious injury can occur. Get to shore before the weather turns bad.

Getting caught in severe weather is hazardous. Bad weather and/or rough sea or water conditions can cause an unsafe situation. Consult local weather services for up-to-date forecasts on weather and sea conditions (see Figure 1.12.1). Television, radio, and internet can give you access to NOAA weather reports that will help you make a determination on where and when to get underway. The following are some weather related rules:

- Understand the design limitations of this vessel.
- Check the weather forecast and water conditions before leaving and while underway.
- Wear a personal flotation device (PFD)
- If bad weather is approaching, immediately seek a safe harbor.
- If bad weather is approaching, immediately seek safe harbor. If bad weather hits, seat passengers in cabin or cockpit deck. Head bow into the wind with enough power to maintain slow headway.
- If you encounter fog, determine your position, set a safe course, slow down and alert other boats of your presence with a sound signal.
- If a lightning storm approaches, the safest action is to dock and disembark. Stay out of the water during a lightning storm. If caught swimming during a storm, get back into the boat and remain there until the storm passes. Remember that lightning can strike several miles away from the storm itself. Be aware of the storm location relative to your location and the direction the storm is moving.

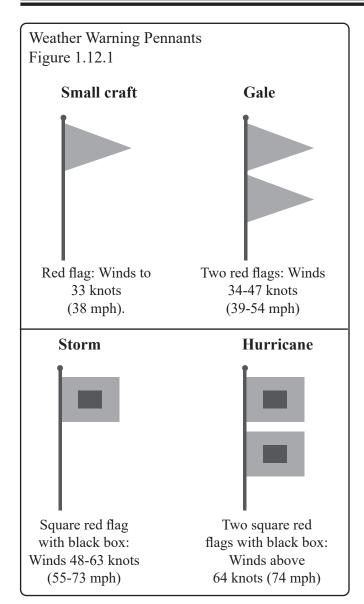
# **AWARNING**

A sudden change in wind direction or speed or an increase in wave height indicates deteriorating weather.

# **NOTICE**

Check the weather forecast and water conditions before leaving and while underway



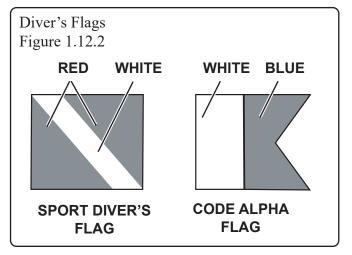




- Do not swim near a moving boat.
- Many areas prohibit swimming from a boat except in designated areas.
- Turn off engine in gear (to prevent propeller windmilling) before picking up swimmer.

#### **Diving**

Recognize and respect diving flags (see Figure 1.12.2). Keep at least 100 feet (30 meters) away.



**Sport Divers Flag** - Red flag with diagonal white stripe marks a diver in the water.

**Code Alpha Flag** - Blue and white pennant designates boat being used in dive operations.

# **Water Skiing**

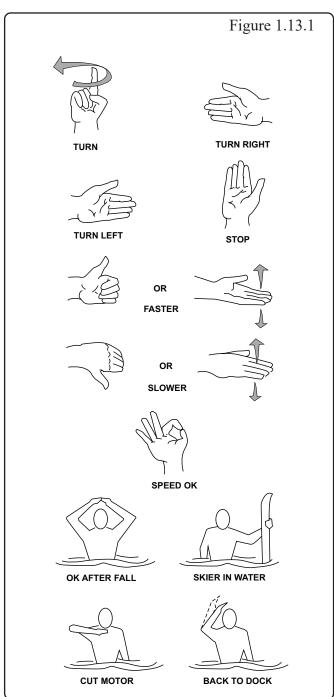
- Always have two persons in the boat, one at the controls and one who can easily and continuously look at the skier.
- Insist that anyone who water skis must know how to swim.
- Insist that skiers wear approved Personal Flotation Devices (PFD's)
- Ski only in daylight when visibility is good.
- Never drive the boat directly behind a water skier. At 22 knots (25 MPH), it takes only 5 seconds to overtake a fallen skier who was 60 meters (200 feet) in front.
- Ski only in areas where skiing is permitted.
- Observe local restrictions on towline length.
- Learn the signals to communicate with a skier. The skier is to control the boat through hand signals (see Figure 1.13.1).
- This vessel will handle differently while towing a skier. Experiment carefully to learn the difference. Skiers may start from the shore or dock, if boat traffic allows. When returning, pick up skiers from water. Do not ski back to shore or dock.
- Give immediate attention to fallen skiers.



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- Keep a downed skier in sight and on the operator's side of the boat when approaching the skier. Never back up to person in the water.
- Turn off engine before picking up skier.
- If the skier suddenly releases the tow rope, it can backlash into cockpit. Spotters who are watching the skier must be aware of this fact and be prepared to take appropriate action to avoid injury.

# **Water Skiing Signals**



**Turn** – Arm raised, circle with index finger extended.

**Turn Right** – Extend arm out from body to the right.

**Turn Left** – Extend arm out from body to the left.

**Stop** – Raise arm with palm vertical and facing forward.

**Faster** – Thumb up or palm up, move hand up and down.

**Speed OK** – Raise arm and make OK symbol with thumb and index finger

**Slow Down** – Thumb down or palm down, move hand up and down.

**OK After a Fall** – Clasp hands together overhead.

**Skier in Water** – Extend one ski vertically out of water.

**Cut Motor** – Draw finger across throat.

**Back to Dock** – Pat top of head.

# **AWARNING**

## **SWIMMING/DIVING HAZARD**

- Keep clear of areas designated only for swimmers and skin divers. Recognize markers used for such areas.
- Never swim when there is lightning in the area.



# **AWARNING**

#### **SKIING HAZARDS**

- Skiers must use a safety approved personal flotation device (PFD).
- Ski only during daylight and in good visibility.
- Avoid shallow water, other boats, navigational aids and other obstructions.
- Keep at least 100 feet (30 meters) from other objects.
- Never drive directly behind a water skier.
- A competent observer must watch the skier at all times. A competent observer is a person that has the ability to assess when a skier is in trouble, knows or understands water skiing hand signals and is capable of helping a skier.
- Keep a downed skier in constant sight.
- Turn off engine in gear before you get close to person in the water.
- Never back up to anyone in the water.
- Use caution in boat when skier is being towed. Sudden release of tow rope can cause it to backlash into the cockpit.

## **PERSONAL INJURY HAZARD**

Use the ski tow pylon only to pull water skiers and wake boarders. All other uses such as inflatables, etc, must use the stern eyes otherwise personal injury and/or equipment damage may occur."

# **▲** DANGER

## **PROPELLER SAFETY**

 Before starting the boat, walk to the stern and look in the water to assure there is no one near your propeller. People near propeller may not be visible from helm.

# **A DANGER**

#### **PROPELLER SAFETY (continued)**

- Never allow passengers to board or exit the boat from the water when engines are on.
- Educate passengers about propeller danger.
- Be especially alert when operating in congested areas; never enter swimming zones.
- Take extra precautions near boats that are towing skiers or tubers.
- Never permit passengers to ride on the bow, gunwale, transom, seatbacks, or other locations where they may fall overboard.
- Stop! If someone falls overboard. Slowly turn the boat around, and keep the person in sight as you approach. Turn engine off with boat in gear before bringing the person aboard.
- Never reverse this vessel to pick someone up out of the water.

# **Ignition Shutdown Safety Switch**

# **AWARNING**

Wear lanyard at all times when operating boat. Use it to stop only in an emergency. Do not use it to shut off the engine during normal operation.

This vessel is equipped with an engine shutdown safety switch. The switch is located at the helm. The ignition shut down safety switch incorporates a shut-off switch, switch clip, lanyard and lanyard clip, which is clipped to the operator when running (see Figure 1.15.1).

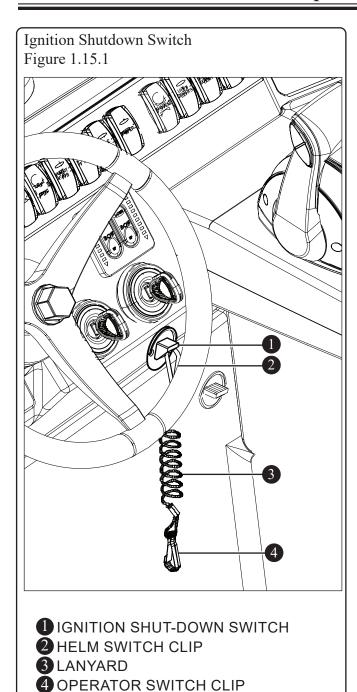
If an emergency arises and the engine must be shut down, a pull on the cord to release the clip from the shut-off will shut off the engine.

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

1-14 Z80 Vantage







The lanyard should be long enough to prevent accidental activation. Do not let the lanyard become entangled. Accidental loss of power can be hazardous, particularly while docking or in heavy seas, strong current or high winds. Passengers and crew may lose balance and the boat may lose steering control.

Should the operator fall out of the boat at planing speed, it may take several seconds for the engine and propeller to stop turning. The boat may continue to coast for several hundred feet, causing injury to anyone in its path.

### Float Plan

Float plans are important to you should you encounter problems on the water. A float plan should contain a description of this vessel along with any distinguishing features. It should describe where you will be boating, your departure time and estimated return. The number and names of passengers, and destination should also be noted.

The float plan should be given to a friend or relative, so they can give the information to a national boating agency like the USCG, in the event you do not return at the time specified on the float plan.

If there are any changes to the float plan they should be conveyed to the person holding the float plan. Once you return you should contact the person holding the float plan to let them know you are back.

### **Chart Course**

To avoid boating in unsafe areas where there are underwater obstructions, shallow water, unnavigable conditions such as dangerous currents, and others, you must chart a course. This means having and using National Oceanic and Atmospheric Administration (NOAA) charts for coastal waters, observing and understanding all navigational aids, using the knowledge and guidance of experienced boaters, and being aware of the tides and times where appropriate. If you are boating in an area you are unfamiliar with, proceed with caution and post a lookout to watch for hazards.

# **AWARNING**

Hitting an object in or under the water or boating in dangerous currents can cause serious injury or death to occupants in the boat. You must know where the hazards are and avoid them. In uncharted waters, boat very slowly and post a lookout.

If an object is struck or if you run aground:

- Shut the engine off
- Check the hull for damage
- Check propeller for damage



- If aground, consider bottom grade before moving off, (damage to the hull and propellers could be worsened).
- Determine the tides and whether that change will help or hinder your situation.
- Do not have anyone other than a trained and competent service tow your boat.

# **Environmental Considerations Fuel and Oil Spillage**

Regulations prohibit discharging fuel or oily waste in navigable waters. Discharge is defined as any action which causes a film, sheen or discoloration on the water surface, or causes a sludge or emulsion beneath the water surface. A common violation is bilge discharge. Use rags or sponges to soak up fuel or oily waste, then dispose of it properly ashore. If there is much fuel or oil in the bilge, contact a knowledgeable marine service to remove it. Never pump contaminated bilge overboard. Help protect your waters.

### **Excessive Noise**

Many areas regulate noise limits. Even if there are no laws, courtesy demands that boats operate quietly.

### Wake

Power boat wakes can endanger people and vessels. Each power boat operator is responsible for injury or damage caused by the boat's wake. Be especially careful in confined areas such as channels or marinas. Observe "no wake" warnings.

# **WARNING**

Speed hazard, watch your wake. It might capsize a smaller craft. You are responsible for damage caused by your wake.

# **A** CAUTION

Reduce speed in congested waterway. Be alert for no wake markers.

# **Homeland Security Restrictions**

Recreational boaters have a role in keeping our waterways safe and secure. Violators of the restrictions below can expect a quick and severe response.

- Do not approach within 100 yards, and slow to minimum speed within 500 yards of any U.S. Navy vessel.
- Observe and avoid all security zones. Avoid commercial port areas, especially those that involve military, cruise line or petroleum facilities. Observe and avoid other restricted areas near dams, power plants, etc.
- Do not stop or anchor beneath bridges or in channels.

# America's Waterway Watch

In March, 2005, the United States Coast Guard officially launched *America's Waterway Watch* to encourage the boating public to report suspicious activities in our nation's ports and waterways. America's Waterway Watch simply asks anyone who works, lives, or recreates on the water to keep an eye out for suspicious activities. Anyone who spots such activity is asked to call the National Response Center's 24-hour hotline or 877-24WATCH (877-249-2824). If there is immediate danger to life or property call 911 or the USCG on marine channel 16.

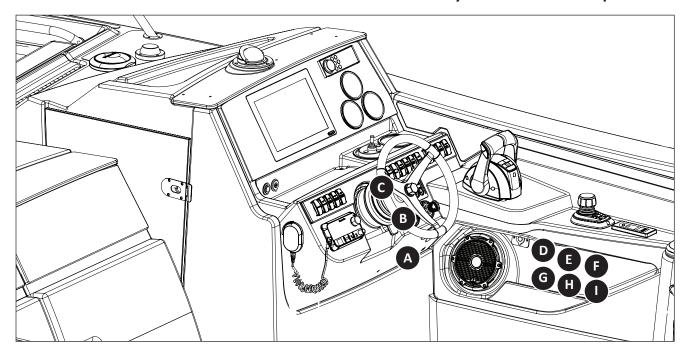
# **Safety Label Locations**

Mounted at key locations throughout the boat, safety labels advise the owner/operator of imperative safety precautions to follow when operating and/or servicing equipment. Do not remove or obstruct any label. Replace any label which becomes illegible (see *Label Locations* in this chapter).



### **Label Locations**

IMPORTANT: Replace any damaged or illegible labels. Contact your dealer to obtain replacements.



# ATTACH LANYARD



2156485

# **B MARNING**

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

1795087



Vessel's certification plate (see chapter 2, General Information).



# **EMISSIONS CONTROL SYSTEM INFORMATION**

MEETS 2020 MY CALIFORNIA EVAP EMISSIONS REGULATIONS FOR SPARK-IGNITION MARINE WATERCRAFT (SIMW) MANUFACTURER: **BOSTON WHALER, INC.** 

CALIFORNIA EVAP FAMILY: **LPNWPVSSLNT2**EMISSION CONTROL SYSTEM: **SM** 



2342707

# THIS BOAT HAS BEEN DESIGNED FOR A MAXIMUM OUTBOARD ENGINE WEIGHT OF

1400 lb / 635 kg



74308



Carbon monoxide (CO) can cause brain damage or death.

Engine and generator exhaust contains odorless, colorless CO gas.

For additional information on CO poisoning, see Owner's Manual.

At first sign of CO poisoning, get to fresh air. Signs of CO poisoning include nausea, headache, dizziness, drowsiness, and unconsciousness.

1811368



ROTATING PROPELLER
MAY CAUSE SERIOUS
INJURY OR DEATH. SHUT
OFF ENGINE WHEN
NEAR PERSONS
D ARE IN WATER

1950698

# O

# **A** WARNING

# Before activating Skyhook:

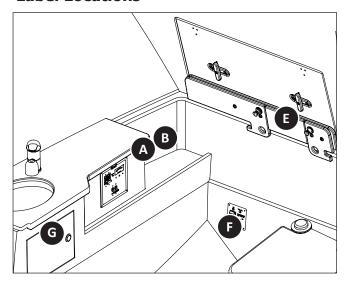
Check that no one is in the water.
 Tell passengers not to enter water.
 Skyhook makes the propellers spin.
 This can injure swimmers.

280 Vantage WHALER 1-17





### **Label Locations**



# **WARNING**

**Electrical Shock Hazard** Vessel is equipped with a DC to AC power inverter. Disconnect inverter's DC input before servicing vessel's electrical systems.

2343448



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# **A** CAUTION

Damage or personal injury can occur.

Do not use for long term storage. Max capacity: 30 lbs / 14 kg

2352117



# NOTICE

THIS BOAT IS EQUIPPED WITH AN OPTIONAL DIRECT OVERBOARD DISCHARGE VALVE. DISCHARGING OF SEWAGE DIRECTLY OVERBOARD IS FOR USE WHERE APPROVED ONLY

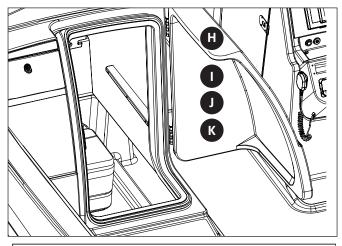
2063381



### WARNING

NO VENTILATION IS PROVIDED. **FUEL VAPORS ARE A FIRE AND EXPLOSION** HAZARD. TO AVOID INJURY OR DEATH, DO NOT STORE FUEL OR FLAMMABLE LIQUIDS HERE.

IMPORTANT: Replace any damaged or illegible labels. Contact your dealer to obtain replacements.





# Save Our Seas

It is illegal to dump plastic trash anywhere into the ocean or navigable waters of the \$25,000, a fine of \$50,000 and imprisonment for up to five years.

INSIDE 3 MILES (and in U.S. Lakes, Rivers Bays and Sounds)

PLASTICS
DUNNAGE, LINING AND PACKING
MATERIALS THAT FLOAT
ANY GARBAGE EXCEPT DISHWATER/
GRAYWATER/FRESH FISH PARTS

### 3 TO 12 MILES

PLASTICS DUNNAGE, LINNING AND PACKING MATERIALS THAT FLOAT ANY GARBAGE NOT GROUND TO LESS THAN ONE SQUARE INCH

2 TO 25 MILES PLASTICS DUNNAGE, LINING AND PACKING MATERIALS THAT FLOAT

12 TO 25 MILES PLASTICS

2029125



# **▲** WARNING

DOOR MUST BE SECURED IN THE CLOSED POSITION WHILE VESSEL IS UNDERWAY.

MRP# 2063402

2063402

CE vessels only









1691003

1812911

# **WARNING**

- Carbon Monoxide (CO) can cause brain damage or death.
- Carbon monoxide can be present in the cabin.
- Signs of CO poisoning include nausea, headache, dizziness, drowsiness, and lack of conciousness.
- Get fresh air if anyone shows signs of CO poisoning. · Get fresh air if carbon monoxide detector alarm sounds.

Carbon monoxide detector must be functioning at all times.

For Canadian vessels

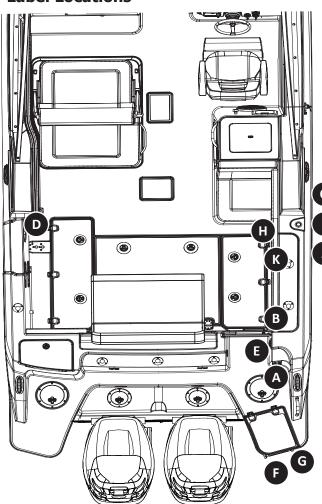
**NE STOCKEZ PAS D'ESSENCE OU** AUTRES LIQUIDES INFLAMMABLES À CET ENDROIT. LA VENTILATION N'A PAS ÉTÉ PRÉVUE POUR LES **VAPEURS EXPLOSIVES.** 

2175076

1-18 280 Vantage WHALER



### **Label Locations**





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

- 1. Turn off boat's shore power switch
- 2. Connect cable at boat first
- 3. If equipped with polarity indicator which activates, diconnect and connect polarity
- 4. Disconnect at shore outlet first
- 5. Close inlet cover tightly DO NOT ALTER SHORE POWER CABLE CONNECTIONS



2184707

0276808

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### **A** DANGER

INTERMEDIATE BREAKER FOR SHORE POWER. UNPLUG SHORE POWER BEFORE REMOVING COVER. WILL CAUSE PERSONAL INJURY OR DEATH

2029122

For Canadian vessels

LES FUITES DE CARBURANTS PRÉSENTENT UN DANGER D'INCENDIE OU D'EXPLOSION. INSPECTER RÉGULIÈREMENT LE SYSTÈME. **VÉRIFIER LES RÉSERVOIRS DE CARBURANTS** POUR DÉCELER DES FUITES OU DE LA CORROSION AU MOINS UNE FOIS L'AN.

2175077

IMPORTANT: Replace any damaged or illegible labels. Contact your dealer to obtain replacements.



# **▲** WARNING

DOOR MUST BE SECURED IN THE CLOSED POSITION WHILE VESSEL IS UNDERWAY.

2063402



### A DANGER

TRANSOM DOOR MUST BE CLOSED AND SECURE WHEN ENGINE IS RUNNING

2063385



### **À** DANGER

Carbon monoxide (CO) can cause brain damage or death.

Engine and generator exhaust contains odorless and colorless CO gas.

CO will be around the back of the boat when engines or generators are running. Move to fresh air if you feel nauseous headache, dizziness or drowsiness.

1811367



### Ask the Captain before entering the water.

This boat has a feature called Skyhook, which auto holds the boat in position.

- When Skyhook is activated:

   the propellers rotate automatically;

   propeller rotation may not be obvious;

   the boat may suddenly move in any the boat may suddenly move in any direction;
   the propellers can injure people in the water anywhere
- around the boat.

Unless the Captain gives you permission

- . do not go in the water; wind or water current can move
- swimmers into the propellers.
  do not sit or stand where you could fall overboard
  you may lose your balance if the boat moves suddenly

1903624



# WARNING

AVOID SERIOUS INJURY OR DEATH FROM FIRE, EXPLOSION OR ELECTRICAL SHOCK.

- This device must be connected to a Ground Fault Circuit Interrupter (GFCI) protected AC outlet.
- When using an extension cord, connect charger AC plug before connecting to the GFCI protected AC outlet.
- Make connection in an open atmosphere free of explosive fumes.
   Make connection in a secure manner that will avoid contact with water

2243525





Avoid serious injury or death from fire or explosion resulting from leaking fuel. Inspect system for leaks at least once a year.

The use of fuels containing ethanol higher than 10% (E-10) can damage your engine or fuel system and will void the warranty. Never use (E-85).

2096004



# **NOTICE**

### **GASOLINE RECOMMENDATIONS**

Minimum octane rating of 91 in the U.S. and Canada. Minimum octane rating of 96 outside the U.S. and Canada. Refer to engine manual for additional information.

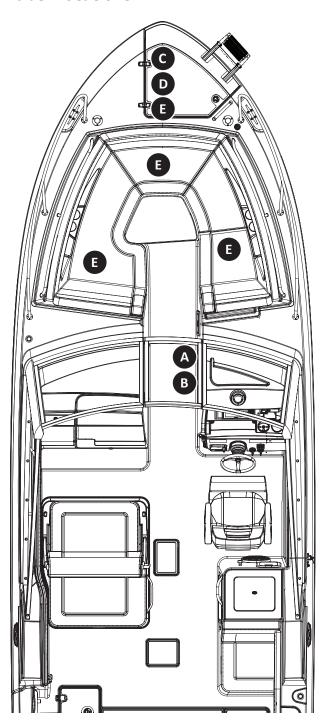
2038447





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### **Label Locations**



For Canadian vessels

# **A** AVERTISSEMENT

NE STOCKEZ PAS D'ESSENCE OU AUTRES LIQUIDES INFLAMMABLES À CET ENDROIT. LA VENTILATION N'A PAS ÉTÉ PRÉVUE POUR LES VAPEURS EXPLOSIVES.

2175076

IMPORTANT: Replace any damaged or illegible labels. Contact your dealer to obtain replacements.



# **A** WARNING

NO VENTILATION IS PROVIDED. FUEL VAPORS ARE A FIRE AND EXPLOSION HAZARD. TO AVOID INJURY OR DEATH, DO NOT STORE FUEL OR FLAMMABLE LIQUIDS HERE.

1691003



# A DANGER

STAY CLEAR OF MOVING PARTS.

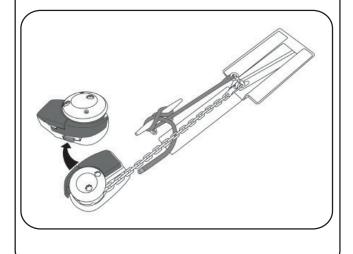
2028932



# **ACAUTION**

# **AVOID PROPERTY DAMAGE**

ENGAGE GYPSY LOCK AND ENSURE ANCHOR IS SECURED WITH LANYARD BEFORE GETTING UNDERWAY.



2147835



# **A** CAUTION

AVOID INJURY
BOAT MOVEMENT MAY CAUSE LID TO FALL
KEEP HANDS AND FEET CLEAR OF EDGES WHEN
HATCH IS OPEN

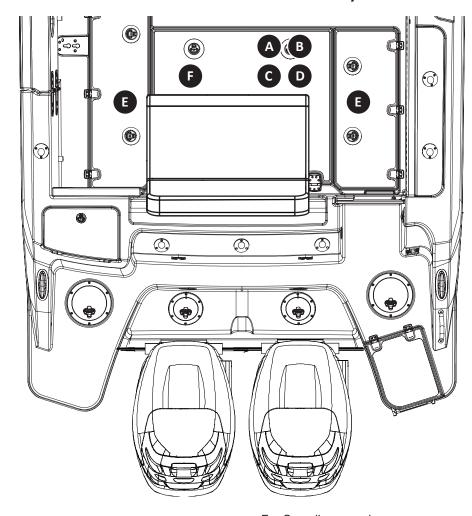
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### **Label Locations**

IMPORTANT: Replace any damaged or illegible labels. Contact your dealer to obtain replacements.



### **DISCHARGE OF OIL PROHIBITED**

THE FEDERAL WATER POLLUTION CONTROL ACT PROHIBITS THE DISCHARGE OF OIL OR OILY WASTE INTO OR UPON THE NAVIGABLE WATERS OF THE UNITED STATES OR THE WATERS OF THE CONTIGUOUS ZONE IF SUCH DISCHARGE CAUSES A FILM OR SHEEN UPON OR A DISCOLORATION OF THE SURFACE OF THE WATER OR CAUSES A SLUDGE OR EMULSION BENEATH THE SURFACE OF THE WATER.

VIOLATORS ARE SUBJECT TO A PENALTY OF \$5,000.

2063375 or (2063413 CE ONLY)



# NOTICE

THIS BOAT IS EQUIPPED WITH AN OPTIONAL DIRECT OVERBOARD DISCHARGE VALVE. DISCHARGING OF SEWAGE DIRECTLY OVERBOARD IS FOR USE WHERE APPROVED ONLY

2063381



# **A** WARNING

NO VENTILATION IS PROVIDED. **FUEL VAPORS ARE A FIRE AND EXPLOSION** HAZARD. TO AVOID INJURY OR DEATH, DO NOT STORE FUEL OR FLAMMABLE LIQUIDS HERE.

1691003

For Canadian vessels

# **ERTISSEMENT**

**NE STOCKEZ PAS D'ESSENCE OU AUTRES LIQUIDES INFLAMMABLES À** CET ENDROIT. LA VENTILATION N'A PAS ÉTÉ PRÉVUE POUR LES VAPEURS EXPLOSIVES.

2175076



# **A** CAUTION

**AVOID INJURY BOAT MOVEMENT MAY CAUSE LID TO FALL** KEEP HANDS AND FEET CLEAR OF EDGES WHEN **HATCH IS OPEN** 

1836858



Battery location plate (see chapter 4, Electrical).

2333707

280 Vantage 1-21 WHALER

# **Symbols Key**

Although not used in this manual, some of these symbols may be found on this vessel's controls, gauges, and hardware. This page is the key to what the symbols mean.



ELECTRICAL HAZARD



FIRE RISK















ENGINE OIL PRESSURE

















































ROTARY CONTROL (WIDTH OF SYMBOL INDICATES INCREASE)











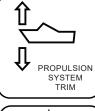










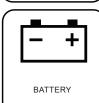




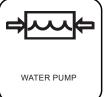
















280 Vantage

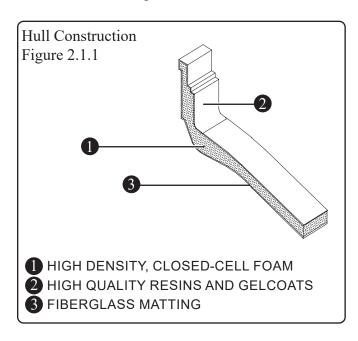


### **Construction Standards**

Boston Whaler® is dedicated to creating a superior product which provides comfort, performance, safety, and reliability. All of our boats comply with United States Coast Guard safety standards and are designed, engineered, and manufactured in accordance with applicable recommendations and guidelines from the American Boat and Yacht Council (ABYC) and certified by the National Marine Manufacturers Association (NMMA).

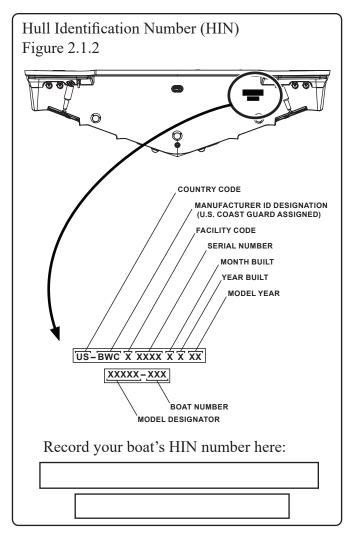
### **Hull Construction**

Boston Whaler hulls are constructed with our patented unibond-construction process (see Figure 2.1.1). This involves foam injection into a closed-mold system where the foam expands to fill all voids in the hull. When the finished product is pulled from the mold, the hull and deck are chemically bonded to form a solid, inseparable unit.



### **Hull Identification Number**

The hull identification number is located on the starboard side of the transom (see Figure 2.1.2). This is the most important identifying factor on your vessel, followed by the engine serial numbers. Be sure to reference these numbers when contacting Boston Whaler about your vessel or engines.



# **Vessel Servicing**

When your boat requires service or maintenance work it should be taken to an authorized Boston Whaler dealer. To find a dealer in your area call 800-942-5379 (domestic/international). In the unlikely event that a problem is not handled to your satisfaction, discuss any warranty related problems directly with the service manager of the dealership or your sales person. Please give the dealership an opportunity to help the service department resolve the matter for you.

# **Manufacturer's Certification**

All boats must comply with federal regulations, where applicable. The specifications and dimensions table, listed later in this chapter, indicates the maximum weight, number of persons, and maximum horsepower this vessel is rated to handle. Do not exceed these specifications.



# **A** DANGER

Never carry more weight or passengers than indicated for this vessel, regardless of the weather or water conditions.

The information present on the certification plate does not relieve the operator of responsibility. Use common sense and sound judgement when placing equipment and/or passengers in this vessel.

- Do not load to capacity in poor weather or rough water.
- The number of seats does not indicate how many people a boat can carry in poor weather and rough water.
- Above idle speed, all passengers must be seated on the seats provided.

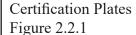
# **Certification Plates** (see Figure 2.2.1)

An <u>NMMA Certification</u> means that your Boston Whaler has been verified by the National Marine Manufacturers Association (NMMA) to be in compliance with applicable federal regulations and American Boat and Yacht Council (ABYC) standards.

A <u>Canada Compliance Notice</u> means that your Boston Whaler has been certified to comply with construction standards for small vessels by Transport Canada.

A <u>CE mark</u> means that your Boston Whaler has been certified with the applicable International Organization for Standardization directives.

An <u>Australian Builder's Plate</u> means that your Boston Whaler has been certified to comply with safety standards set by the National Marine Safety Committee.





# YACHT CERTIFICATION DESIGN COMPLIANCE WITH NAMA REQUIREMENTS IN EFFECT ON THE DATE OF CERTIFICATION IS VERIFIED. MANUFACTURER RESPONSIBLE FOR PRODUCTION CONTROL. NATIONAL MARINE MANUFACTURERS ASSOCIATION THIS BOAT COMPLIES WITH U.S. COAST GUARD SAFETY STANDARDS IN EFFECT ON THE DATE OF CERTIFICATION BOSTON WHALER, INC.

0125062

AVIS DE CONFORMITÉ CANADIEN BOSTON WHALER (BWC)

**CANADIAN COMPLIANCE NOTICE** 

EDGEWATER, FL, USA

MODEL / MODÈLE: 280 VANTAGE

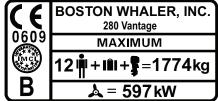
DESIGN CATEGORY B

THE MANUFACTURER DECLARES THAT THIS PRODUCT COMPLIES WITH THE PLEASURE CRAFT CONSTRUCTION REQUIREMENTS OF THE SMALL VESSEL REGULATIONS AS THEY READ ON THE DAY ON WHICH THE CONSTRUCTION OF THE VESSEL WAS STARTED OR ON THE DAY ON WHICH THE VESSEL WAS IMPORTED.

LE FABRICANT ATTESTE QUE CE BÂTIMENT EST CONFORME AUX EXIGENCES DE CONSTRUCTION DES EMBARCATIONS DE PLAISANCE DU RÉGLEMENT SUR LES PETITS BÂTIMENTS, EN VIGUEUR À LA DATE DU DÉBUT DE SA CONSTRUCTION OU À LA DATE DE SON IMPORTATION.

2333755





2333712

### **AUSTRALIAN BUILDERS PLATE**

MANUFACTURER: BOSTON WHALER, INC. - USA
MODEL: 280 VANTAGE
INFORMATION DETERMINED: ISO STANDARDS
MAX OUTBOARD: 597 kw; 635kg
MAX PERSONS: 12 = 900 kg
MAX LOAD: 1774kg

/!\ WARNING

ALTERATION OF THE BOAT'S HULL OR PERMANENT FITTINGS MAY INVALIDATE THE PARTICULARS ON THIS PLATE

2333709

NMMA PLATE

CANADA CONFORMITY PLATE

3 CE MARK (INT'L) BUILDER'S PLATE

4 AUSTRALIAN BUILDER'S PLATE

# **Certification Design Category**

# **NOTICE**

The 280 Vantage is design category B

Boats are classified into four categories depending on their propensity to withstand both the force of the wind and height of the waves. The categories (A, B, C, D) are designed to sensitize the boat operator to navigate safely. The Beaufort Scale is used to classify the force of the wind ranging from 0 (calm) to 12 (hurricane). Devised by Francis Beaufort of the British Navy, the scale offers a uniform description of the effect of different winds at sea.

A: A recreational craft given design category A is considered to be designed for winds that may exceed wind force 8 (on Beaufort scale) and significant wave heights of 4 meters and above but excluding abnormal conditions, such as storm, violent storm, hurricane, tornado and extreme sea conditions or rogue waves.

**B:** A recreational craft given design category B is considered to be designed for a wind force up to, and including, 8 and significant wave heights up to, and including 4 meters.

C: A watercraft given design category C is considered to be designed a wind force up to, and including 6 and significant wave heights up to, and including, 2 meters.

**D:** A watercraft given design category D is considered to be designed for a wind force up to, and including 4 and significant wave heights up to, and including 0.3 meters, with occasional waves of 0.5 meters.

The significant wave height is considered to be the primary factor for determining design category. Other parameters (e.g., meteorological) are descriptions of when these wave heights may be expected to occur.

# **Power Capacity**

The Specifications and Dimensions list on the following page indicates the maximum rated power listed for this vessel. Do not exceed this rating. The various engine types offered today are more powerful and require constant maintenance to stay at optimal

performance. The operator must read all information regarding the safety features, warning notices and maintenance schedules for safe operation of the engines.

The engines on this vessel have been tested and proven to be best suited for general use under normal conditions and load.

If you are re-powering your Boston Whaler, you should pay particular attention to the maximum/minimum horsepower and maximum safe engine weight load this vessel is rated for. There is a maximum engine weight label located starboard of the helm seat.

# **NOTICE**

The 280 Vantage is designed for a maximum outboard engine weight of 1400 LBS (635 kg).

# **A WARNING**

- Do not exceed the maximum engine power rating stated on the certification plate.
- Use caution while accelerating. Make sure passengers are safely seated in designated areas of the boat and all gear is stowed securely.

# **NOTICE**

Always adjust the speed and direction of the craft to the varying sea conditions.



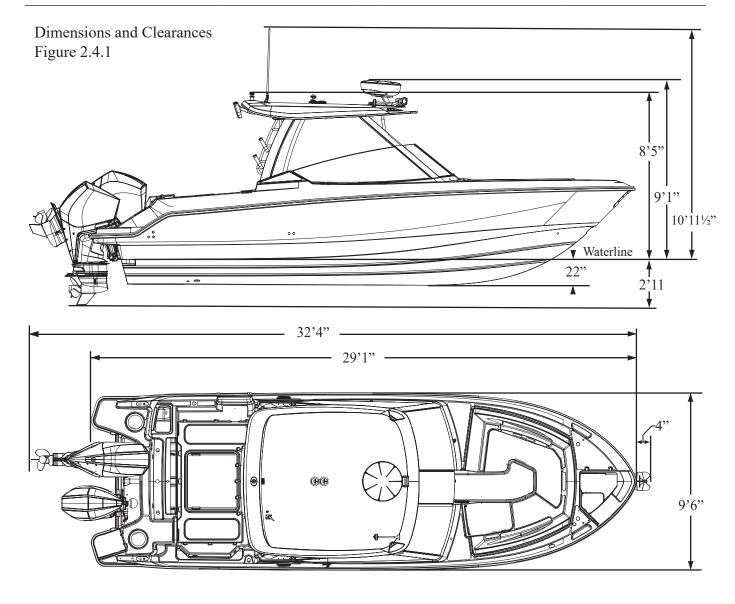


# Specifications and Dimensions (measurements are approximate and subject to variance)

Overall length (engine up)	32'4" (9.86 m)	Swamped capacity	4000 lbs (1814 kg)
Length of hull (center line)	27'9" (8.46 m)	Maximum engine weight	1400 lbs (635 kg)
Length of hull (including platform)	29'1" (8.86 m)	Max weight (passengers, engines, gear <sup>2</sup> )	3911 lbs (1774 kg)
Bridge clearance (hardtop)	8'5" (2.57 m)	Number of persons	12
Bridge clearance (radar)	9'1" (2.77 m)	Maximum horsepower	800 HP (597 kW)
Beam	9'6" (2.9 m)	Minimum horsepower	500 HP (373 kW)
Draft (hull only) <sup>1</sup>	22" (.56 m)	Fuel capacity	180 gal (681 L)
Weight (dry, no engine)	6940 lbs (3148 kg)		

<sup>&</sup>lt;sup>1</sup> Optional equipment and loading of the boat affects draft measurements. Follow the recommendations listed on the capacity plate regarding the maximum amount of weight this vessel can safely carry.

<sup>&</sup>lt;sup>2</sup> Exceeding maximum weight affects boat performance. Do not exceed the weight listed on the capacity plate.





# $\bigoplus$

# **Chapter 2 • General Information**

# **Deck Occupancy**

### Figure 2.5.1

# **Working Deck**



This area is intended for occupation only while mooring, anchoring, loading/unloading or when the boat is at rest.

### **Accommodation Deck**



Movement in this area should be done with extreme caution while the boat is underway. A sudden shift in boat direction can cause a loss of balance and lead to injury or death.



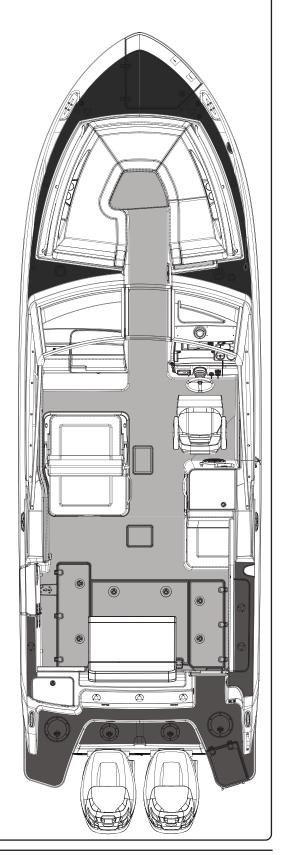
Do not stand or walk in this area. Serious injury could result. If necessary, stand or walk only where non-skid is applied.

# **A** DANGER

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

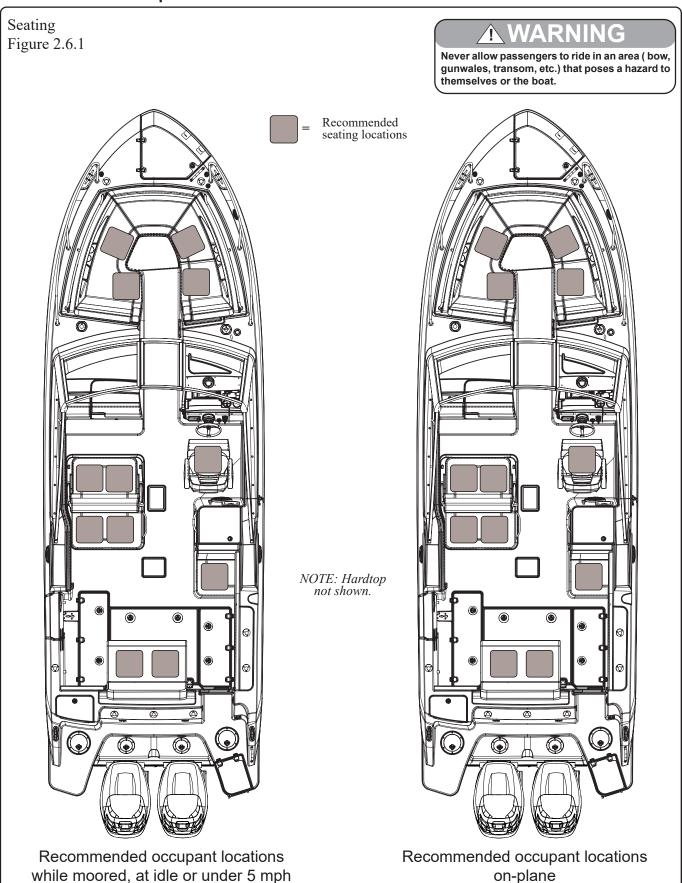
# **AWARNING**

- Gelcoat surfaces are slippery when wet. Use extreme caution when walking on wet surfaces.
- Never occupy the working decks while the boat is underway.
- Use care when waxing to ensure that walkways are not made slippery.





# **Recommended Occupant Locations**

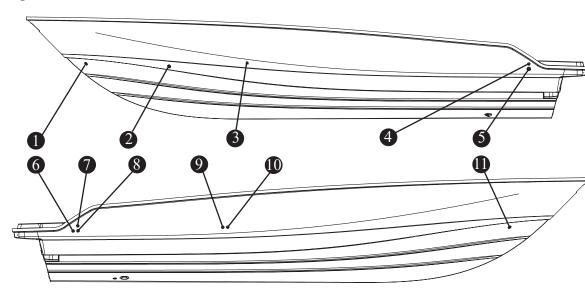


22-6 WHALER 280 Vantage

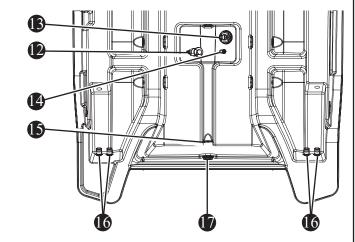
# **Location of Thru-hull Fittings**

Thru-hull Fittings

Figure 2.7.1



- ANCHOR LOCKER DRAIN
- STORAGE LOCKER DRAIN
- 3 HEAD SINK DRAIN
- **4** FISHBOX PUMPOUT
- **6** LIVEWELL DRAIN
- 6 BILGE PUMP DISCHARGE (CE OPTION)
- FISHBOX PUMPOUT
- **8** BILGE PUMP DISCHARGE
- O COOLER DRAIN
- **110** PREP STATION SINK DRAIN
- **11** BOW STORAGE LOCKER DRAIN
- RAW WATER PICKUP
- THRU-HULL TRANSDUCER (OPTION)
- 4 WASTE SYSTEM OVERBOARD DISCHARGE
- **15** GARBOARD DRAIN



- 16 DECK DRAIN SCUPPER FLAPS
- SPLASHWELL DRAIN

# **NOTICE**

- The deck drain provides self bailing capabilities while boat is static in the water and no passengers. This feature prevents accumulation of water in the cockpit.
- Depending on the boat type, underwater fittings may require drain plugs. Garboard and fishbox drain plugs must be in place before boat enters the water. Any submerged fitting must be plugged or seacock needs to be closed.
- Check thru-hull fittings and deck drain scupper flaps annually for proper seal. When boat enters
  the water, check fittings for dripping. Clean, remove, and reseal underwater fittings biannually.
- If thru-hull fittings need replacing, visit an authorized Boston Whaler dealer. Thru-hull fittings that are improperly installed can cause premature hull failure and may void the Boston Whaler limited warranty.
- A standard 1" Snap-tite plug can be used to replace the drain plug(s) in this vessel. Always carry spare plugs to be used in the event that the drain plug(s) become lost or damaged.

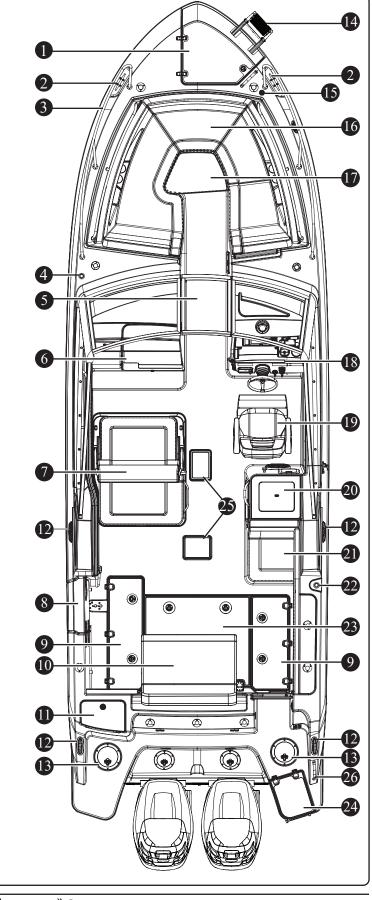
### **Features**

Deck

Figure 2.8.1



- 2 CLEAT
- **3** BOW RAIL (OPTION)
- 4 WASTE PUMPOUT (PORTABLE)
- **5** CENTER WINDSHIELD PANEL
- 6 HEAD ACCESS DOOR
- 7 CONVERTIBLE LOUNGE W/ STORAGE
- 8 DIVE DOOR
- 9 FISHBOX
- 10 FOLD DOWN BENCH
- **1** LIVEWELL
- POP UP CLEAT
- **B** ACCESS PLATE
- 14 BEACH BOARDING LADDER
- **(I)** FRESH WATER SHOWER
- **16** BOW SEATING
- 17 BOW TABLE/FILLER
- 18 HELM
- 19 HELM SEAT
- 20 PREP STATION WITH SINK
- 2 SEAT WITH COOLER
- 2 FUEL FILL
- 23 MECHANICAL ACCESS HATCH
- 24 REBOARDING LADDER
- 25 FUEL TANK INSPECTION PANEL
- **26** GRAB RAIL



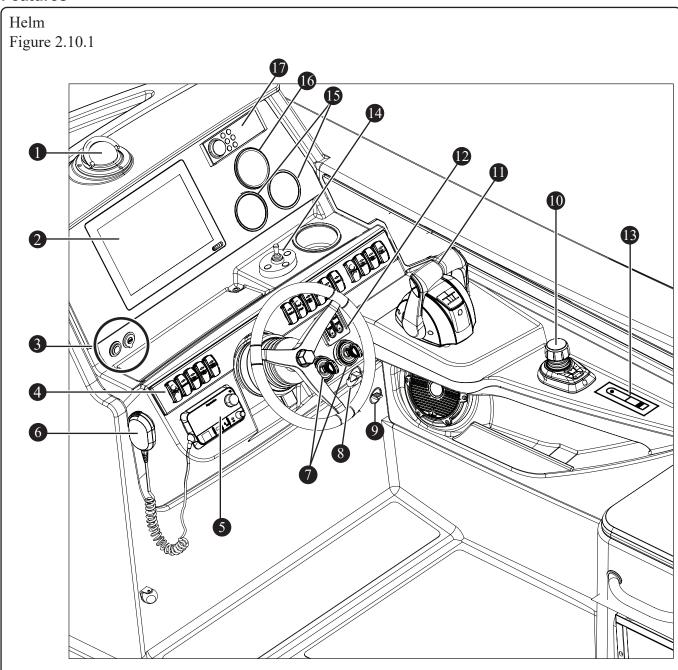


# **Features**

Cockpit and Transom Figure 2.9.1 910 1 TRASH DOOR FWD 2 BOW ACCESS DOOR 3 HEAD ACCESS DOOR 4 CONSOLE STORAGE ACCESS DOOR 5 PREP STATION 6 EQUIPT. LEAKAGE CIRCUIT INTERRUPTER (OPTION) 13 **7** SHORE POWER BREAKER (OPTION) 8 WINDLASS BREAKER 9 HOUSE BATTERY SWITCH 15 10 ENGINE BATTERY SWITCH III TRANSOM DOOR 12 FUEL FILL 16. **B** FRESH WATER FILL 14 BATTERY CHARGER PLUG (OPTION) 15 RAW-WATER WASHDOWN (OPTION) 16 WASTE PUMPOUT (OPTION) BILGE VENTS (CE OPTION) 18 FRESH WATER SHOWER 19 SHORE POWER INLET (OPTION) 20 WASTE TANK VENT (OPTION)



### **Features**



- COMPASS
- 2 RAYMARINE DISPLAY (OPTION)
- **3** 12V/USB ADAPTERS
- 4 HELM SWITCH PANEL
- **5** VHF RADIO (OPTION)
- 6 VHF RADIO HANDSET (OPTION)
- 7 IGNITION SWITCHES
- 9 ENGINE DIAGNOSTIC PORT

- 10 JOYSTICK PILOTING (OPTION)
- 11 THROTTLE/GEAR CONTROL
- TRIM SWITCHES
- **B** ACTIVE TRIM (OPTION)
- 14 SPOTLIGHT CONTROL (OPTION)
- 15 TACHOMETER
- 16 SPEEDOMETER

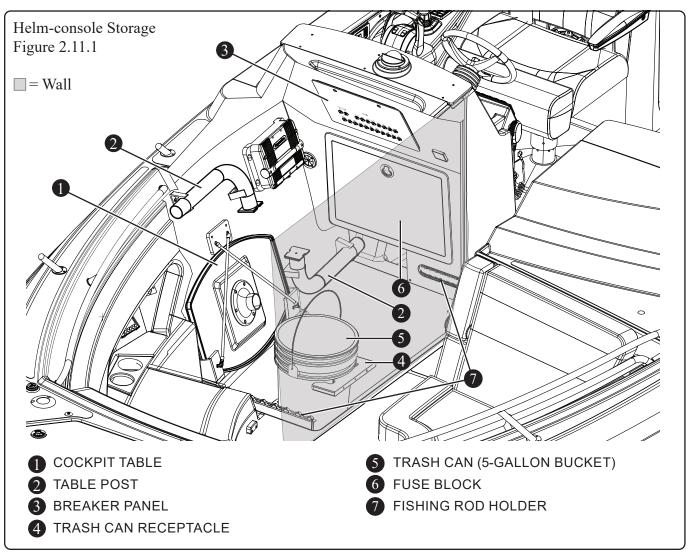


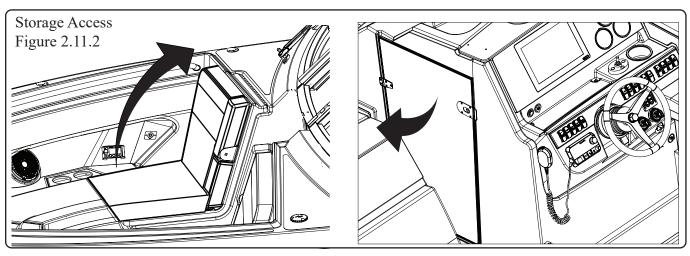
### **Features**

# **Console Storage**

The enclosed area forward of the helm console is used to store a cockpit table, table post(s), trash bucket, and fishing rods (see Figure 2.11.1 and Figure 2.11.2). It can also be used to store boat fenders or personal flotation devices (PFDs). This vessel's breaker panel and fuse block can also be found in this area.

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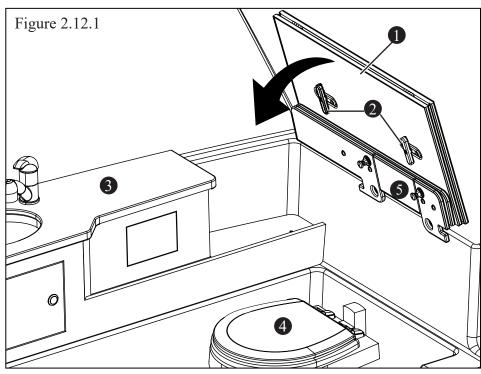
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### **Features**

# **Folding Wall Shelf**

Located in the head, the folding wall shelf (see Figure 2.12.1~Figure 2.13.2) is used to store luggage, personal flotation devices or other items, 30 lbs or less. The retaining shelf keeps items from sliding off. To operate:

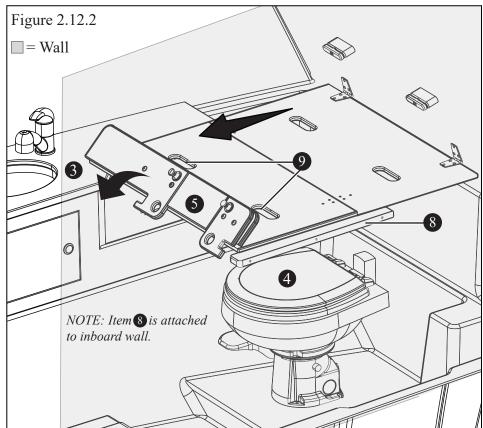
1. While pressing one hand on top of folding wall shelf (to hold against back wall), use the opposite hand to turn and release the two latches.



2. Extend shelf out to lay flat on sink countertop.

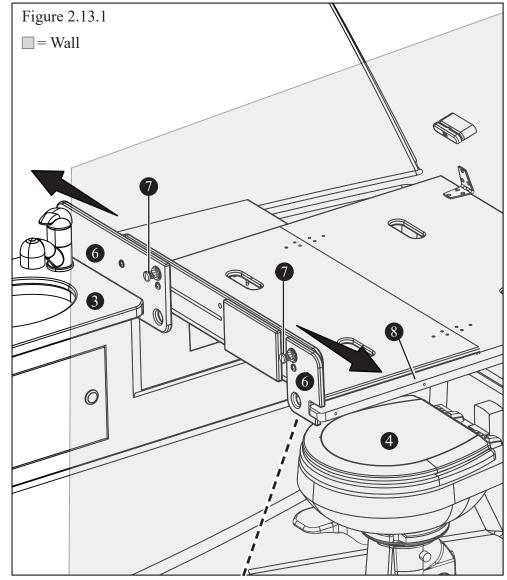
NOTE: Using a handhold may ease shelf extension.

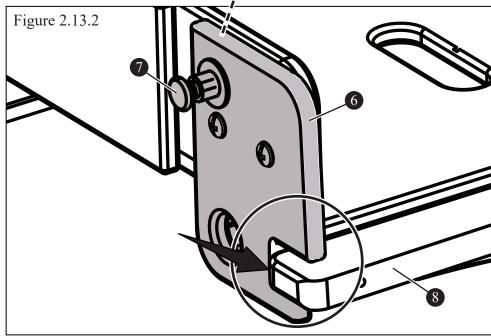
- 3. Tilt retainer shelf towards you.
- FOLDING WALL SHELF
- 2 LATCHES
- SINK COUNTERTOP
- 4 HEAD
- **5** RETAINING SHELF
- 6 SHELF SLIDE
- 7 SHELF SLIDE KNOB
- 8 WALL BRACKET
- 9 HANDHOLD



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4. Pull starboard shelf slide knob out and move shelf slide to fit over wall bracket; repeat for port side.





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# **Hardtop Features**

Figure 2.14.1 FWD UNDERSIDE OF HARDTOP

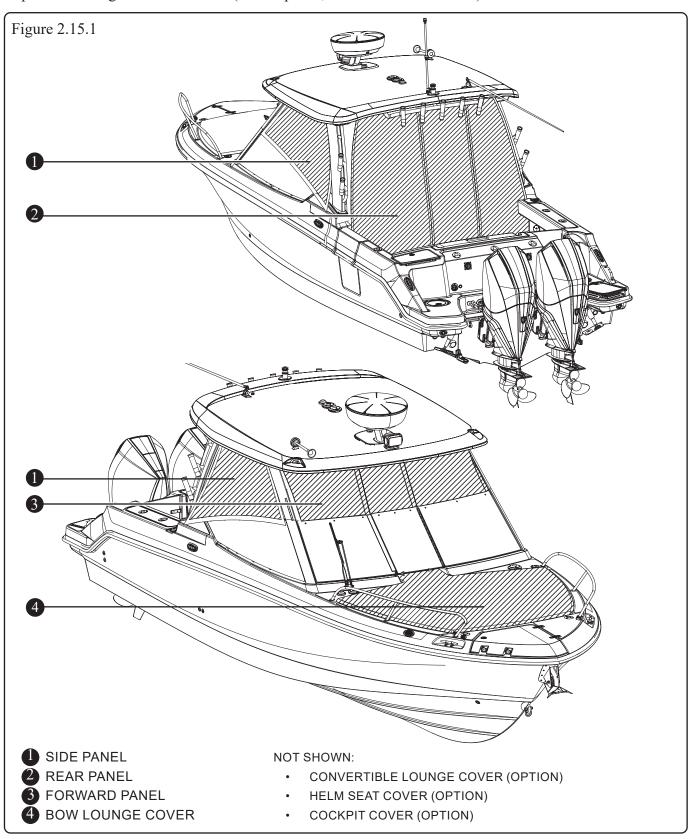
- SKI TOW PYLON
- 2 ALL-ROUND (ANCHOR) LIGHT (8 SPOTLIGHT (OPTION)
- 3 VHF ANTENNA (OPTION)
- 4 SATELLITE ANTENNA (OPTION) 10 NAVIGATION LIGHTS
- **5** MERCURY IMU (OPTION)
- **6** GPS (OPTION)

- **7** RADAR DOME (OPTION)
- 9 HORN
- ROD HOLDERS (OPTION)
- STEREO SPEAKER (OPTION)
- 13 ELECTRIC SUN SHADE (OPTION)
- ACCENT LIGHTS
- **(5)** GRAB RAIL
- 16 DOME LIGHT

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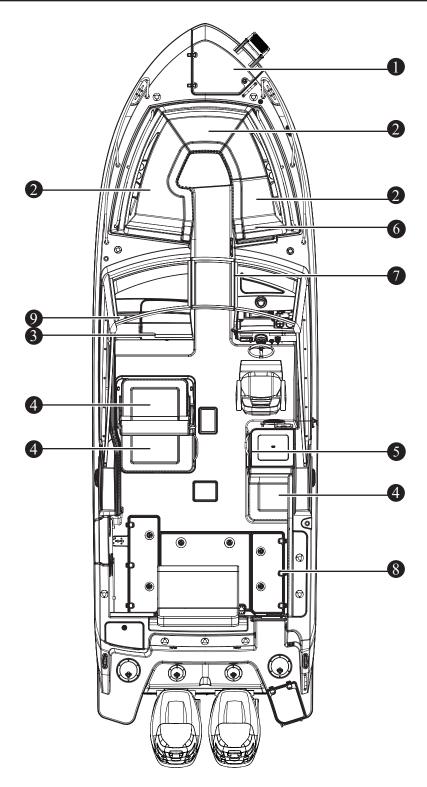
# Canvas (option)

The optional canvas set consists of side, rear and front panels, and a bow lounge cover (see Figure 2.15.1). The canvas set will keep its appearance and maintain proper working order provided you follow a few simple steps for cleaning and maintenance (see chapter 5, *Care and Maintenance*).



# **Storage**

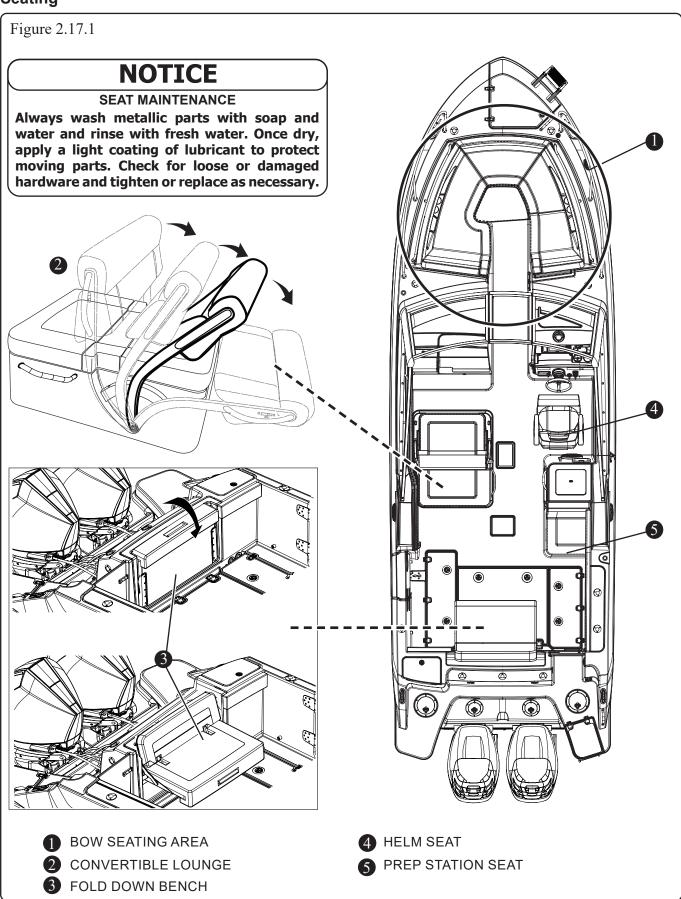
Figure 2.16.1



- ANCHOR/WINDLASS LOCKER
- 2 BOW STORAGE (UNDER CUSHIONS)
- 3 HEAD STORAGE
- 4 COCKPIT STORAGE (UNDER SEAT)
- **5** PREP CENTER STORAGE

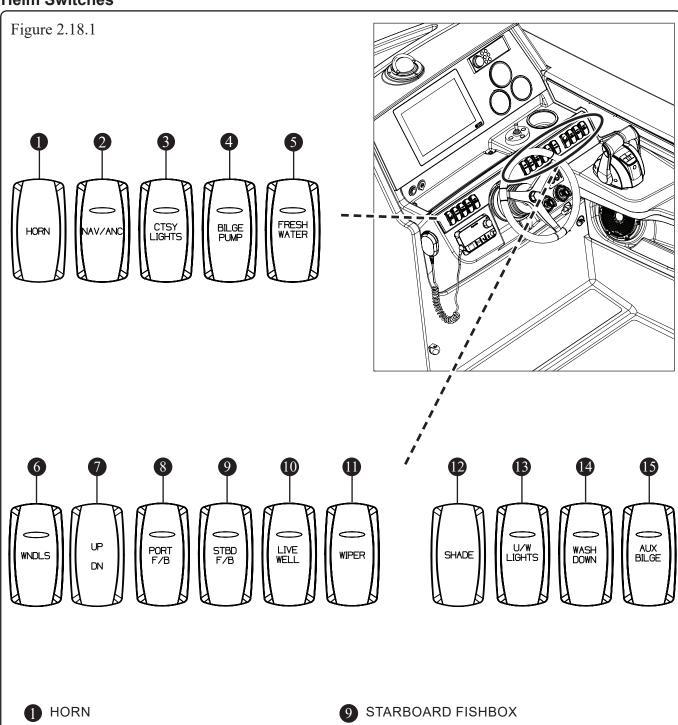
- 6 ROD STORAGE
- **7** CONSOLE STORAGE
- **8** TOE RAIL STORAGE SHELF
- **9** GLOVEBOX (OPTION)

# **Seating**



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### **Helm Switches**



- 2 NAVIGATION/ANCHOR
- 3 COURTESY LIGHTS
- 4 BILGE PUMP
- **5** FRESH WATER
- **6** WINDLASS
- WINDLASS UP/DOWN
- 8 PORT FISHBOX

- 10 LIVEWELL
- WINDSHIELD WIPER
- 12 ELECTRIC SUN SHADE
- 13 UNDERWATER LIGHTS
- RAW WATER WASHDOWN
- **15** AUXILIARY BILGE (CE OPTION)

# **Gauges**

The standard gauge set on the 280 Vantage includes Smartcraft<sup>™</sup> tachometers and a speedometer multigauge system.

By pressing the *MODE* button to change displays, the operator is able to gather important data critical to the safe operation of the boat and boat systems.

### **Tachometer**

Tachometer information includes:

- Engine break-in time
- Water pressure
- Fuel flow
- Temperature
- Engine battery voltage
- Power trim angle-water pressure
- Power trim angle
- Digital tachometer
- Hour meter

# **Speedometer**

Speedometer information includes:

- Clock-temperature
- Fuel level
- Oil level
- Traveling range
- Fuel economy
- Trip odometer
- Digital speedometer
- Barometer

To get the most out of your multi-system display features, read the manual.

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



# SmartCraft<sup>™</sup> VesselView (option)

If equipped, SmartCraft VesselView allows the operator to receive critical operational information, displayed clearly and instantly at the helm display. The system continuously monitors and reports information ranging from basic operating data to detailed vessel environment information.

### **System Calibration**

Boston Whaler or your dealer has calibrated the Smartcraft VesselView to the boat's equipment. If equipment is added, system must be recalibrated.

FOR RECALIBRATION OR MANUFACTURER INFORMATION REFER TO OWNER'S PACKET. FOR COMPLETE INSTRUCTIONS AND WARRANTY INFORMATION.

### **VesselView MOBILE**

VesselView MOBILE connects the SmartCraft data network to your Apple or android phone. With VesselView MOBILE you have the power of SmartCraft on your mobile device with all the digital data your SmartCraft engine supports plus new features such as:

- Maintenance reminders
- Mapping
- · Performance summary
- Fault code diagnostics

# **Digital Throttle/Shift**

# A CAUTION

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

# NOTICE

Wind and sea currents can change how this vessel responds while in motion. Understanding this vessel and its reactions at speed will make boating safer and more enjoyable.

This vessel is equipped with a drive-by-wire gear shift and throttle control system. The unit controls both the shifting mechanism and throttle (see Figure 2.20.1). The throttle control regulates the RPM of the engine.

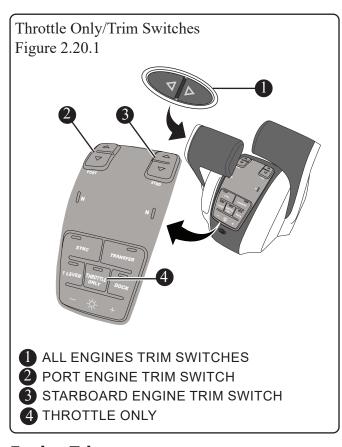






Regulating the RPM of the engine will control the speed of the boat. Moving the lever forward engages the forward gear. Continuing to move the lever forward will increase the forward speed of the boat.

Likewise, to reverse power, bring the control lever back to engage the reverse gear and increase the reverse thrust by continuing to pull back on the throttle control. The control must be in the neutral position to start your engine. Neutral is the most central position of the control unit and acts as an idle (you will hear and feel a click when neutral is engaged). While in this position, the propeller is not rotating. There is a *THROTTLE ONLY* button on the throttle control that when depressed will disengage the shifting mechanism and will allow you to operate the throttle without engaging the propeller. The button will automatically engage the shifting mechanism once the throttle control has been moved back to its center position.



# **Engine Trim**

The trim switches located on the shift control lever (see Figure 2.20.1) allows you to raise and lower the engine for optimum performance in the water and

for trailering, launching and beaching. The switch is a momentary switch, which means that constant pressure must be applied to the switch during the raising and lowering cycle.

Use the trim switch to obtain the ideal boat angle to the water surface for a given load and water condition. In most cases, best all around performance is obtained with the engine adjusted so the boat runs at between a 3 degree and 5 degree angle to the water.

# **NOTICE**

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

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

# **Active Trim (option)**

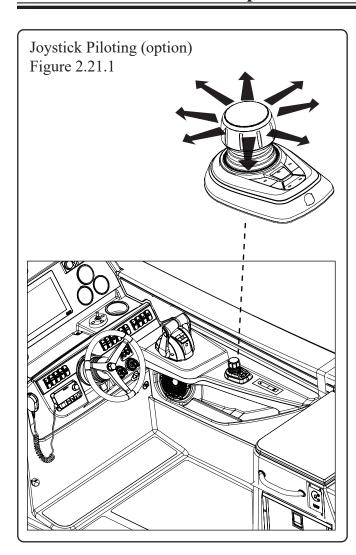
If equipped, the active trim panel is located be hind the helm's joystick control.



Active trim provides the benefit of perfect trimming without constantly monitoring and adjusting trim with changes to boat speed or when going into turns.

Active trim controls the trim in accordance with boat speed and engine RPM. This avoids potential problems such as engines trimming up (instead of down) if the propeller breaks loose in a hard turn. It also avoids issues with the engine trimming up too early or too late when the boat is getting on plane. Active trim has five selectable trim profiles that accommodate nearly any boat application. These profiles allow operators to compensate for changes in boat load, operator preference and weather conditions, while maintaining full auto operation.

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



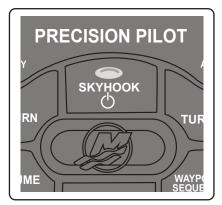
### **Joystick Piloting (option)**

Joystick technology provides vessel control and effortless maneuverability (see Figure 2.21.1). The joystick piloting system replaces the traditional bow thruster set up. Joystick piloting takes the stress out of docking, maneuvering in tight spaces and operating in less-than-ideal environments by providing the vessel operator 360-degree movement at their fingertips.

The system allows the operator to effortlessly move a multi-engine boat in any direction - including sideways, diagonally or spinning on its own axis - with a simple push or twist of a joystick. The operator controls the throttle, shifting and steering with one hand, with the joystick working in conjunction with the independently steered engines to move the boat in the desired direction. The joystick is located on the control console forward of the throttle/gearshift.

### Skyhook® Digital Anchor (option)

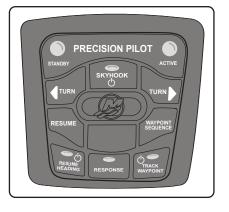
If equipped, S k y h o o k pinpoints the boat's position using a GPS satellite antenna and the engines and drives move independently to maintain the position and



heading. It's ideal for holding a boat over a fishing spot, waiting for a drawbridge to open or maintaining position while waiting to refuel at a marina.

# **Integrated Autopilot (option)**

Auto heading and waypoint sequencing make navigating to a destination simple and efficient. A built-in digital compass set on auto heading maintains course and makes



precise corrections with the touch of a finger. One degree heading adjustments can be made with a tap on the joystick. Trips with multiple stops between the starting point and final destination are possible with waypoint sequencing, which allows the operator to plot the boat's course using multiple points.

# $\Psi$

# **Chapter 2 • General Information**

# **Navigation Lighting**

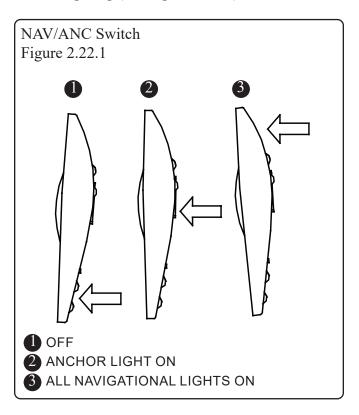
This vessel comes equipped with navigation lighting for your safety (see Figure 2.23.1). Regulations state that all boats, no matter the size, must display navigation lights. Lights must be displayed sunset to sunrise or in low visibility conditions. It's the operator's responsibility to ensure navigation lights are working and that the proper lighting is shown. When operating in reduced visibility or at night slow boat speed and keep a proper lookout. It is important that you understand navigation lights and their usage for your safety and the safety of others. This vessel's navigation lights may include an expiration date on the housing. If one is located, replace light before expiration date, even if light is functional, as lighting quality may be compromised.

# **NOTICE**

The improper sequence of navigation lighting may be as dangerous as no lighting at all.

# **Operation**

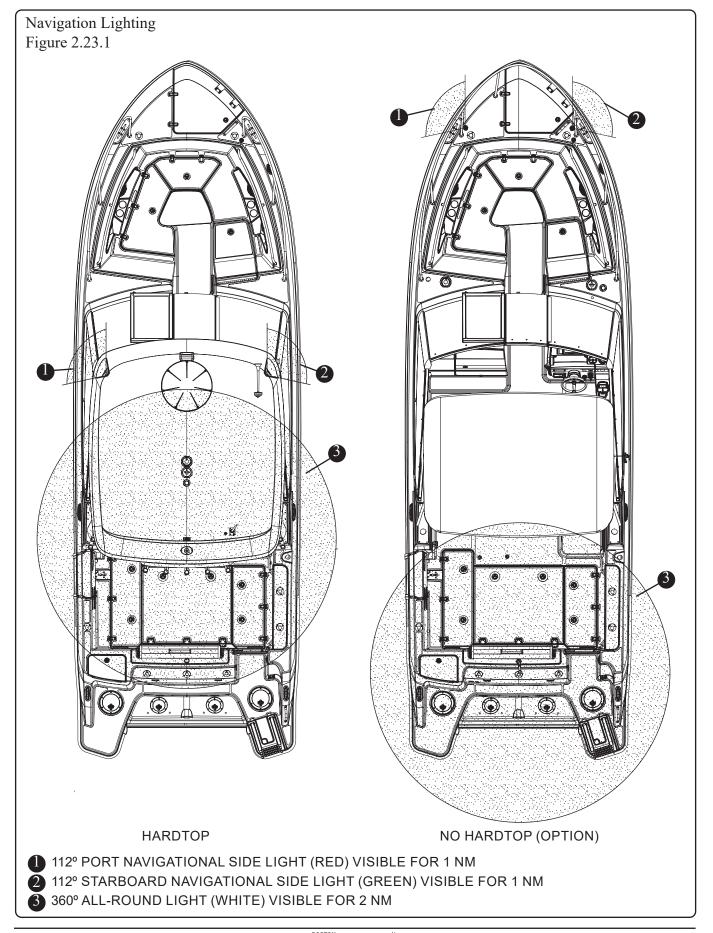
A three-position switch, located on the console switch panel marked *NAV/ANC* controls the navigation and anchor lighting (see Figure 2.22.1).



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# Ψ

# **Chapter 2 • General Information**



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### **Trim Tabs**

# **NOTICE**

Ensure continuous visibility of other boats, swimmers and obstacles during bow up transition to planing. Adjust engine to an intermediate trim as soon as boat is on plane.

This vessel is equipped with electrically powered trim tabs (see Figure 2.24.1). The trim tabs are located on the lower section of your transom and are used to correct the list of this vessel caused by uneven weight distribution, too many persons on one side of the boat, or strong cross winds.

An untrimmed boat will:

- Decrease operator visibility
- · Reduce fuel economy
- Increase wear on your engine.

While accelerating there is some loss of forward visibility before the boat is on plane, the trim tabs can be used to adjust for forward visibility while underway.

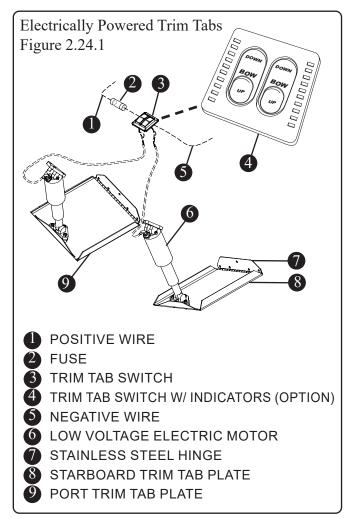
# **Operation**

The trim tabs are controlled by rocker switches located on the center part of helm console. Short momentary bursts of the rockers will achieve proper attitude of the hull. The trim tab switch is marked *bow up* and *bow down*. Using the trim tabs will:

- Level the boat; fore and aft
- Reduce resistance in the steering system
- Provide a smoother more stable ride.
- Increase speed and fuel efficiency

### **Maintenance**

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



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

# **Electric Sun Shade (option)**

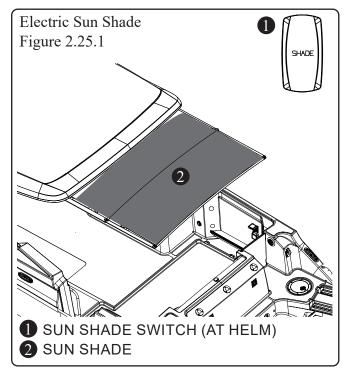
If equipped, the electrically-actuated cockpit sun shade (see Figure 2.25.1) can be deployed or retracted by depressing the *Shade* switch located on the helm switch panel. The sun shade is protected by a breaker located on the DC breaker panel. Follow the canvas care instructions in chapter 5, *Care and Maintenance*.

# ⚠ WARNING

Electric sun shade is intended for use while boat is anchored or moored and not while underway. Damage to boat or personal injury could occur if shade is used while underway.

# **NOTICE**

The sun shade has a reset functionality to enable a service technician to reset the shade position. In the event the shade does not operate at either the fully extended or fully retracted position, contact a Boston Whaler dealer for details.



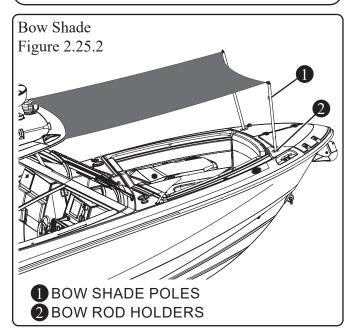
### **Bow Shade (option)**

If equipped, set up the bow shade as follows (see Figure 2.25.2):

- 1. Assemble four pole sections into two poles.
- 2. Insert poles into bow rod holders
- 3. Follow the canvas care instructions in chapter 5, *Care and Maintenance*.

# **⚠** WARNING

Bow shade is intended for use while boat is anchored or moored - not while underway. Obstruction of navigation sidelights, damage to boat or personal injury could occur if shade is used while underway.



# **Bow Tow Eye (option)**

# **▲WARNING**

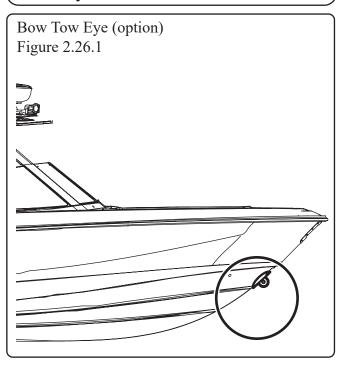
### PERSONAL INJURY HAZARD

Towing or being towed stresses the boat(s). hardware and lines. Failure of any part can seriously injure people or damage the boat(s). Do not stand directly in line with the tow line. If it were to break, it could snap back causing injury or damage to everything in its path.

The optional bow tow eye, which is located on the front hull of the boat, is reinforced with a steel-backing plate (see Figure 2.26.1). Should towing be necessary, the United States Coast Guard or a private salvage company experienced in this type of operation are better equipped to perform the service. Use another recreational boat for towing only as a last resort, as doing so may cause damage to one or both boats due to operator inexperience or other conditions such as weather and/or current. In addition, the pitch of propellers on recreational vessels is geared toward maximizing the speed of the vessel, not torque, thus making towing inefficient and stressful on the engine.

# **A** CAUTION

Never use the tow eye to remove your boat or another vessel which has run aground or for any other usage that would apply similar extreme forces to your boat.



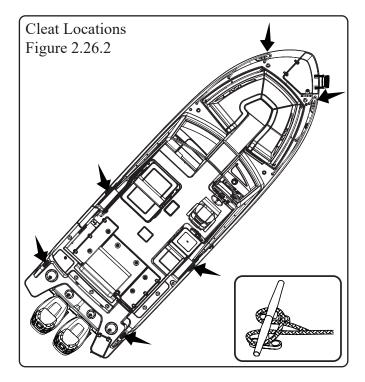
# **Docking, Lifting and Trailering**

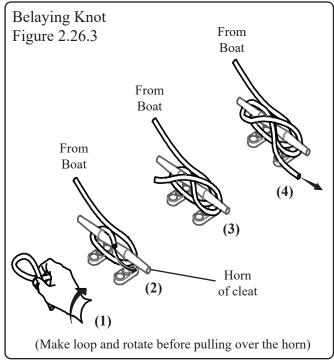
# **Docking**

This vessel has six cleats, two located at the bow, two located midship, and two located at the stern (see Figure 2.26.2). Cleats are used to secure the boat to the dock. While loading/unloading or mooring, please learn the proper way to secure the boat and how best to use the boat's mooring points. Figure 2.26.3 shows the correct method for tying a belaying knot, commonly used to secure a boat to a dock. This knot holds fast and is simple to release when needed.

### Lifting

The bow eye is used to haul out this vessel out of the water onto a trailer and hold it there. The stern eyes are used as tie down points while trailering. The bow and stern eyes may be used only for short-term lifting of the boat such as servicing (see Figure 2.27.1). For long-term lifting or storage, use flat, wide belt-type slings and spreaders long enough to keep pressure from gunwales. Do not allow slings to contact underwater fittings.





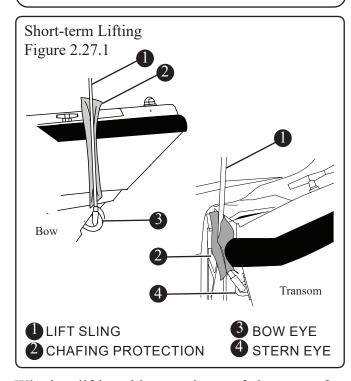


# **A** DANGER

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

# **A CAUTION**

Long-term lifting with the bow and stern eyes can cause stress on the fiberglass and gel coat and is not recommended.



Whether lifting this vessel out of the water for routine maintenance or long-term storage, consider the following:

- If using a professional lifting service, check all credentials and ask for proof of insurance.
- Use a wide, flat, belt-type sling for lifting to minimize stress on the gunwales. Careful location of the sling is required. Sling labels are installed at four spots on the gunwale that should be used as a guide for sling placements.
- If using a lifting hook, attach to bow and stern lifting eyes mounted on the transom
- Use a spreader bar on the stern eyes and use chafing protection on the top of the transom.

 All drain plugs (transom, fishwell, deck, etc.) should be pulled out and the boat positioned with the bow slightly higher than the stern so water that has accumulated in the cockpit and/ or bilge can be easily drained.

# **Trailering**

# **NOTICE**

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

The 280 Vantage has the option of being fitted with an aluminum trailer. This trailer is best suited to the boat's length and width. If you have a trailer or plan on purchasing a trailer separately; there are some points to consider, such as:

- Having a center roller and keel guards helps provide good support for the keel, and provides good fore and aft support.
- Trailers equipped with rollers instead of bunks can damage the foam sandwich hull of your boat and should never be used.
- Bunks provide more even weight distribution.

# Securing Boat to Trailer

### Safety Chain

There is a safety chain that attaches to the bow eye and will keep the boat from sliding off the trailer in the event that the winch strap or cable breaks. Hook this up first.

### **Tie-Down Straps**

Can be used to secure the boat from the stern. The tie-down straps hook into the tie-down loops on the trailer frame and to the stern eyes on the transom. Padding (or similar) chafe protection should be used wherever the tie-down straps come in contact with the hull.





# **Securing Trailer to Tow Vehicle**

# **Safety Chains**

Safety chains (see Figure 2.28.1) are connected to the trailer and should be of sufficient length to reach the frame of the tow vehicle and should be long enough to allow the tow vehicle to turn without binding or tensioning.

### **Trailer Hitch**

A properly matched trailer hitch ball and coupler is important. Ensure the coupler and the hitch ball are properly seated and locked.

# **A** DANGER

Never use only tie down straps as they are only used to help keep boat secured to the trailer. Make certain that the safety chain is properly secured to the bow eye.

# **A CAUTION**

Never use improperly matched hitch ball and coupler. Do not secure chains to bumper of tow vehicle.

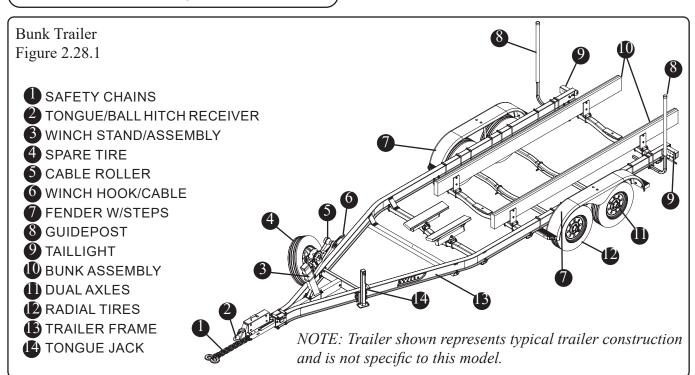
### **Engine Trailering**

Trailer your boat with the outboard tilted down in a vertical operating position. However, if additional road clearance is required due to railroad crossings, driveway clearance, trailer bounce, etc., the outboard should be tilted up and supported using an accessory outboard support device. Consult a Boston Whaler® dealer for engine support recommendations.

# **A CAUTION**

Do not rely on power trim/tilt system or tilt support lever on your outboard to maintain proper ground clearance for trailering. The outboard tilt support lever is not intended to support the outboard for trailering

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

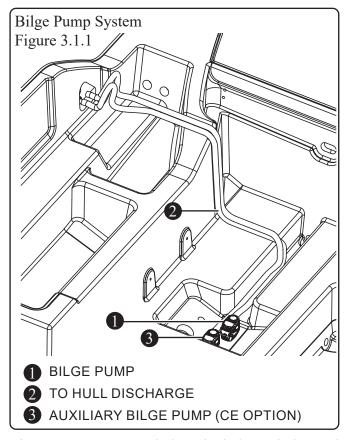


### **Bilge Pump**

Located in the mechanical access hatch (see Figure 3.1.1), the pump is rated at 1100 GPH (4164 LPH) and is activated automatically by a float switch when water reaches a predetermined level.

### **NOTICE**

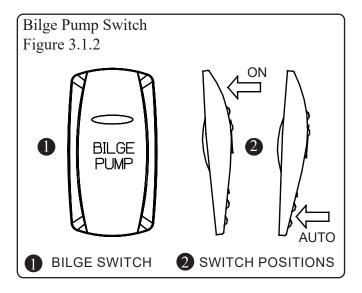
The main DC breaker should always stay in the on position. Turning the main DC breaker to the off position (see chapter 4, *Electrical, Main DC Breaker* section) completely disables the functioning of the bilge pump.



The *BILGE PUMP* switch at the helm switch panel (see Figure 3.1.2) controls pump operation. The switch should remain in the *AUTO* position when in use, unless the operator wishes to manually operate the pump by switching to the *ON* position.

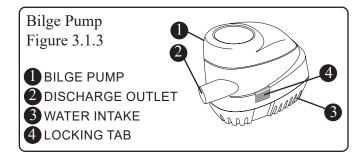
### **NOTICE**

If set to the *ON* position, bilge pump operates continuously and discharges the battery. Bilge pump is wired directly to battery, so float switch must remain clear of debris to prevent continuous operation and battery discharge.



#### **Maintenance**

Frequently inspect the area under the float switch to ensure it is free from debris and bilge oil. The float switch and pump strainer can be accessed by pressing the two locking tabs on the bilge pump (see Figure 3.1.3). and lifting off the motor cover. To clean, soak in heavy duty bilge cleaner for 10 minutes, agitating several times. Check for unrestricted operation of the float. Repeat cleaning procedure if necessary. Inspect the bilge pump water intakes and keep them free of dirt or material which may impede water flow.



If water does not come out of discharge:

- 1. Remove the motor module to see if the impeller rotates with the power on.
- 2. Remove any debris that may have accumulated in the nozzle section or strainer base.
- 3. Check hose and connection on hull side for debris and proper connections.



#### **Fuel and Oil Spills**

Regulations prohibit discharging fuel or oily waste in navigable waters. Discharge is defined as any action which causes a film, sheen or discoloration on the water surface, or causes a sludge or emulsion beneath the water surface. A common violation is bilge discharge. Violators are subject to severe penalties and may

also be responsible for the cost of cleanup which could be substantial. Use rags or sponges to soak up fuel or oily waste, then dispose of properly ashore. If a large quantity of fuel or oil is in the bilge, contact your dealer to remove it. Never pump contaminated bilge discharge overboard.

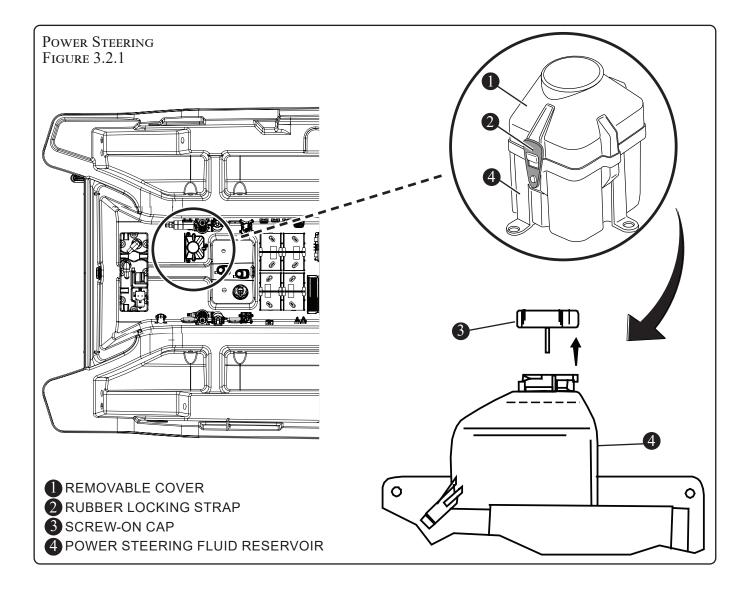


Oil and fuel spills can be dangerous and can subject offenders to severe penalties

### **Power Steering**

The engines on this vessel incorporate power assisted steering by use of hydraulics. The reservoir is located in the mechanical access hatch (see Figure 3.2.1). The system is virtually maintenance free, aside from regular fluid checks and visually inspecting the outside of the unit for signs of leaks or damage.

Check fluid level before each trip. If necessary add SAE 0W-30 synthetic power steering fluid only.



#### **Fuel System**

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

### **A CAUTION**

- Oil and fuel spills can be dangerous and can subject offenders to severe penalties.
- Leaking fuel is a fire and explosion hazard; inspect system regularly. Examine fuel tanks and exposed lines for leaks and corrosion.

### **A CAUTION**

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

### **NOTICE**

It is your responsibility to read and understand the engine manufacturer's manual in your owner's packet for complete fuel and fueling information and warnings.

The fuel system (see Figure 3.4.1) is designed to meet EPA regulations using certified components to limit fuel vapor emissions. Your fuel system provides the following benefits:

- Automotive style refueling, automatic nozzle shut-off, fuel nozzle retention. This system sends a signal to the pump nozzle to shut off before there is any spit-back or well-back through the fill opening.
- Overfill protection is included with each system, reducing the possibility of accidental fuel spills.
- Reduce hydrocarbon emissions through the use of a specially designed fuel fill. This fuel fill has a permanently attached cap with a positive closure mechanism that features an audible click, to inform you when it is sealed.

#### **Fuel Tank**

The low-permeation aluminum fuel tank (see Figure 3.4.1) has a usable fuel capacity of 180 gallons (681 liters). Review and understand all fuel related information and warnings in the owner's packet and the included safety DVD. When the fuel tank is less than one-quarter full, this can cause engine stalling due to fuel starvation or by allowing sediment to enter fuel lines. Keep tank full and monitor fuel level often.

#### **Fuel Vent**

The fuel tank vent is integrated into the fuel fill deck fitting. The VaporTec fuel pressure management system (fuel fill deck fitting, integrated check valve, fill limit vent valve, and grade valve) ensures that the fuel system maintains proper vapor pressure, which, if unchecked, can seriously damage a boat or engine. The vent serves as an over pressure/vacuum release with anti-surge and flame/spark arresting protection. Grade valves have been added to the tank to allow proper ventilation when the boat is stored, or trailered, on a moderate incline, without fuel seepage.

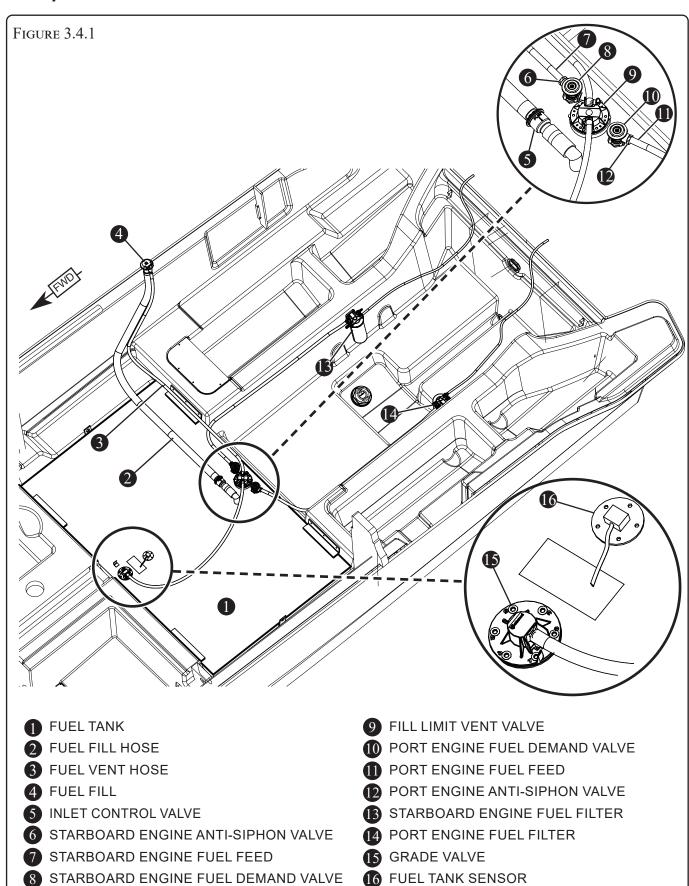
### **Fuel Distribution System**

Fuel is delivered to the engines through the fuel valves, anti-siphon valves (ASV) and the fuel lines. The fuel valves prevent built up tank pressure from being transferred to the engines while still allowing fuel to flow. The anti-siphon valve is a safety feature designed to prevent fuel from siphoning out of the tank if the fuel line were to be cut or broken below the level of the fuel in the tank.

#### **Filling the Tank**

The fuel system is designed to automatically shut off the fuel nozzle when the tank is full, similar to an automotive fuel system. The tank is filled when the fuel fill nozzle has shut itself off the second time. The SecureStop automatic fuel shut off system (fuel fill deck fitting, integrated check valve, fill limit vent valve), ensures a clean a trouble-free fill-up. Attempting to fill the tank past this point may cause some components to malfunction.

### **Fuel System**



### **AWARNING**

Use of a portable fuel container to fill fuel tank can result in overfilling and circumvent the safety features designed into fuel tank.

### **AWARNING**

Modification of any fuel system components or replacement of these components with unauthorized parts may result in overpressurization of fuel system and circumvent safety features designed into tank.

### **NOTICE**

Record this vessel's fuel capacity and consumption. Drastic changes in consumption and mileage may indicate a problem.

### **A** DANGER

- Static electricity can ignite gasoline vapors causing serious injury, death and/or destruction of property.
- Check for leaks in tubing, connections and hoses. Avoid all forms of ignition when the fuel fumes are noticed.
- Correct the cause of leaks and ventilate the area to insure that no fumes remain prior to energizing any electrical equipment, smoking and/or starting the engines.

### **NOTICE**

Fuel gauge reads accurately only when boat is level (not underway).

#### **Static Electricity**

Static electricity can ignite gasoline vapors. Use extreme caution when fueling from a source other than marinas and gas stations. This vessel's bonding system protects it from creating and discharging static electricity. Keep vessel in contact with the water or a land-based grounding system. To reduce static electricity while refueling:

- Never fuel boat in unsafe conditions such as suspended on a sling or in a situation that increases the likelihood of static discharge.
- Never use homemade containers to fill tanks.

- Fuel carried on-board outside of a fixed fuel system should be stored in an approved container or in a portable tank such as provided for outboard engines and be stowed safely outside of the engine or living compartment(s).
- Shut down the engines, motors and fans prior to taking on fuel. Any ignition sources should be extinguished before filling the fuel tank.
- Close all ports, windows, doors and hatches.
- Fueling should never be done at night except in well lit areas.
- Always keep fuel nozzle in contact with edge of the fuel tank opening when filling.
- Ventilate areas where gasoline vapors could collect before starting the engine.
- Wipe up any spillage completely and dispose of rags or waste on shore.
- Secure the fill cap tightly.
- Portable tanks should only be filled while on shore, never on board the boat.

REFER TO THE *SAFETY* DVD IN YOUR OWNER'S PACKET FOR MORE INFORMATION.

#### **Ethanol Blended Fuels**

### **A CAUTION**

The use of fuels containing ethanol higher than 10 percent (E-10) can damage your engine and/ or fuel system and will void the warranty.

Ethanol's high-octane rating may be useful in increasing the octane level of unleaded gasoline. The fuel system components of Mercury engines have been tested to perform with a 10 percent maximum level of ethanol-blended gasoline. Special precautions should be considered with the use of fuel containing ethanol in your system. Fuels with ethanol can attack some fuel system components, such as tanks and lines, if they are not constructed from ethanol compatible materials. This can lead to operational problems or safety issues such as clogged filters, leaks or engine damage.



This vessel was manufactured and shipped from the factory with ethanol compatible materials. Before introducing gasoline with ethanol into your fuel tank, ask your dealer if any components have been added or replaced that are not recommended by Boston Whaler, Mercury, or may not be ethanol compatible. It is best to maintain a full tank of fuel when the vessel is not in use. This will reduce air flow in and out of the tank due to changes in temperature as well as limiting ethanol exposure to humidity and condensation in the tank.

### **Phase Separation**

Humidity and condensation create water in your fuel tank which can adversely effect the ethanol blended fuel. A condition called phase separation can occur if water is drawn into the fuel beyond the saturation point. The presence of water in the fuel beyond the saturation level will cause most of the ethanol in the fuel to separate from the bulk fuel and drop to the bottom of the tank, significantly reducing the level of ethanol in the fuel mixture in the upper level (phase). If the lower level (phase), consisting of water and ethanol, is deep enough to reach the fuel inlet, it could be pumped directly to the engine(s) and cause significant problems. Engine problems can also result from the reduced ethanol/fuel mixture left in the upper phase of the tank. There is no practical additive known that can prevent or correct phase separation. The only solution is to keep water from accumulating in the tank. If phase separation does occur, your only remedy is to drain the fuel, clean and dry the tank completely and refill with a fresh, dry load of fuel.

#### **Fuel/Water Separators**

Fuel water separators (filters) are provided for both engines. The addition of another in-line filter to the system may create a possible flow restriction that can starve the engine(s) of fuel. It is advisable to carry extra on-engine filters in case filter plugging from debris in the fuel tank becomes a problem during boating. Consult your Boston Whaler dealer for recommendations regarding filters that meet Mercury's specifications.

#### **Maintenance**

Periodically inspect for the presence of water in the

fuel tank. If any is found, all water must be removed and the tank completely dried before refilling the tank with any fuel containing ethanol.

### **Boat Storage**

Long periods of storage and/or non-use, common to boats, create unique problems. When preparing to store a boat for an extended period of two months or more, it is best to completely remove all fuel from the tank. If not possible, maintaining a full tank of fuel with a fuel stabilizer added to provide fuel stability and corrosion protection is recommended. Use of fuel stabilizer:

- Add fuel stabilizer/treatment per manufacturer's instruction.
- Run engine(s) for 10 minutes.
- Shut off fuel valve; run engine until it stops.
- Top off fuel tank, leaving space for expansion.
- Do not cap the tank vent.

Maintaining a partially full tank during storage is not recommended because the void above the fuel allows air movement that allows condensation to form.

### **Starting the Engines**

# **ACAUTION**

Never start or operate engine(s) (even momentarily) without water circulating through all the cooling water intake holes in the gear case to prevent damage to the water pump (running dry) or engine overheating.

#### **Pre-start Check**

- Operator should know boating safety, safe navigation, and boat operating procedures.
- Ensure the lower unit of the engine is in the water.
- Be sure the emergency engine shutoff switch is in the *RUN* position.
- Be sure gear shift and throttle control levers are in the *NEUTRAL* position.

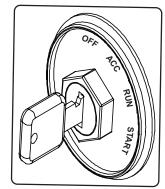
The ignition key switches located starboard of the helm incorporates the following settings:

*OFF*=No power to engine, instrument panels, etc.

ACC (accessory) = Power to instrumentation

**RUN** = Engine(s) running

**START** = Start engine(s)



Turn the ignition key to the *START* position and release the key. The electronic starting system will automatically crank the engine for starting. If the engine fails to start, the engine stops cranking. Turn the key to *START* position again until engine starts.

### **Stopping the Engines**

Make sure the boat is securely moored to the dock before shutting down the engine. Shift gearshift/ throttle control to the *NEUTRAL* position and turn key switch to the *OFF* position.

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

### **Fresh Water System**

### **NOTICE**

- Be sure to fill water tank from a source known to provide safe, pure drinking water.
- If you do not use the freshwater system for long periods of time or only use it seasonally it is recommended that you disinfect the system before using it.

The freshwater system includes: pump, plumbing, holding tank and connections for water service to the shower located on the starboard side of the aft cockpit, the utility center sprayer, the bow shower and the head faucet (see Figure 3.8.1). The 20 gallon (76 liter) freshwater tank's fill cap is located on the aft starboard side of the boat. Fill the tank only from a source known to provide safe, pure drinking water. Use only a plastic hose to fill the water tank. Using a rubber hose can give the water a disagreeable taste.

Before you fill the freshwater system it is vital that it be properly disinfected. Ask your dealer if this has been done. The following procedure is recommended to disinfect the freshwater system:

- 1. Flush the entire system thoroughly by allowing potable water to flow through it.
- 2. Drain the system completely.
- 3. Fill the entire system with an approved disinfecting solution (check with your dealer for recommendations) and follow the method prescribed by the manufacturer.
- 4. After disinfecting, drain the entire system.
- 5. Flush the entire system thoroughly several more times with potable water.
- 6. Now the system is ready for use, fill with potable water.

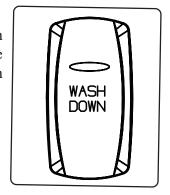
This should be done annually or before first use after being stored for an extended period of time.

### **Raw Water Washdown (option)**

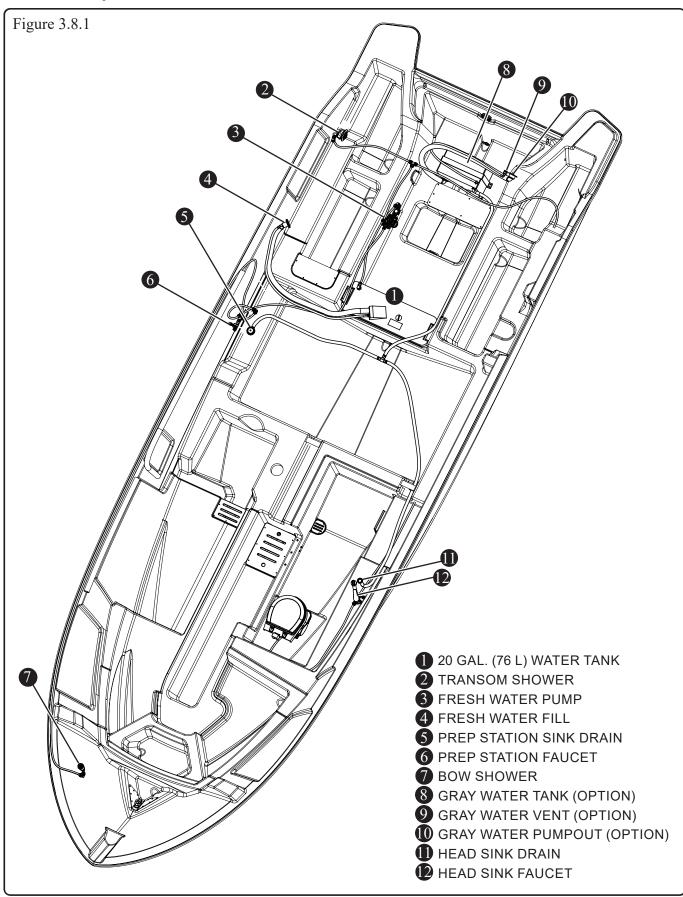
The raw water deck fitting is located on the port side of the aft cockpit (see Figure 3.10.1). The fitting allows for connection of a common garden hose. The cap is tethered to the fitting and on the connection when not in use.

#### Operation

The raw water washdown pump is activated by the *WASH DOWN* switch on the helm switch panel.



#### **Freshwater System**



#### **Raw Water System Maintenance**

Check fittings and hoses for system integrity to prevent leaks. The system should be run at least every other month to keep the pumps' impellers in good condition. When the boat is out of the water, clean the seacock intake(s) on the bottom aft of the hull free of any debris or build-up.

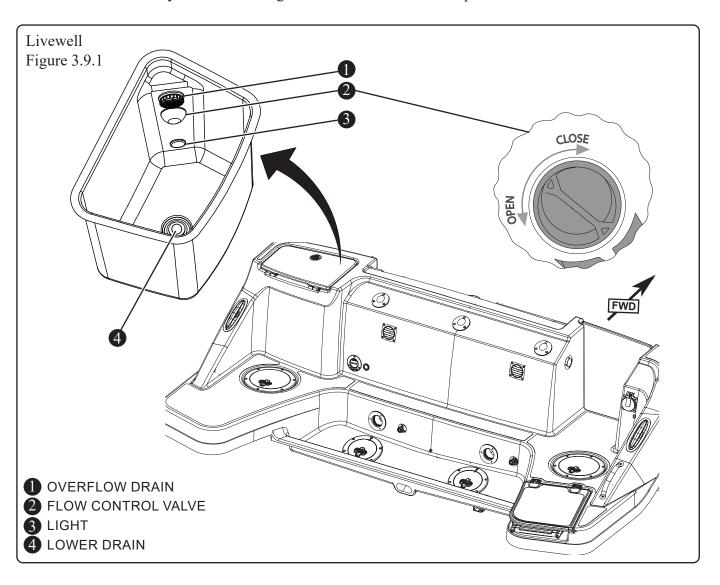
Chapter 3 • Systems Overview and Operation

#### Livewell

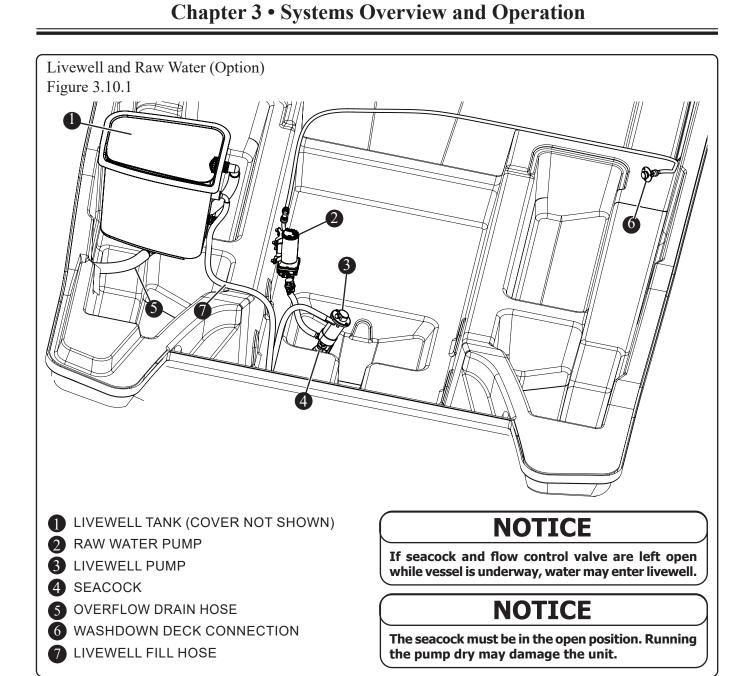
The livewell located on the port side of the stern deck keeps baitfish alive by circulating fresh seawater through the tank (see Figure 3.9.1 and Figure 3.10.1). Before operating the system, ensure the intake seacock and flow control valve are in the open position. The seacock (see Figure 3.10.1) can be accessed through the mechanical access hatch. The flow control valve allows water flow adjustment into the livewell tank. Turn the handle clockwise to stop the flow of water. Fill the livewell by pressing the switch marked *LIVEWELL* on the helm switch panel. A drain tube connects to the livewell overflow drains and directs overflow water to a transom thru-hull drain. Regulate the amount of water in the livewell by inserting the drain plug into the lower drain thus raising the level of water to the overflow drain.

#### **Maintenance**

Maintenance of the livewell system requires periodic inspection of the raw water intake strainer and all hose connections. Clean away debris and/or tighten hose connections as required.







#### **Environmental Considerations**

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

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### **Head with Deck Pumpout**

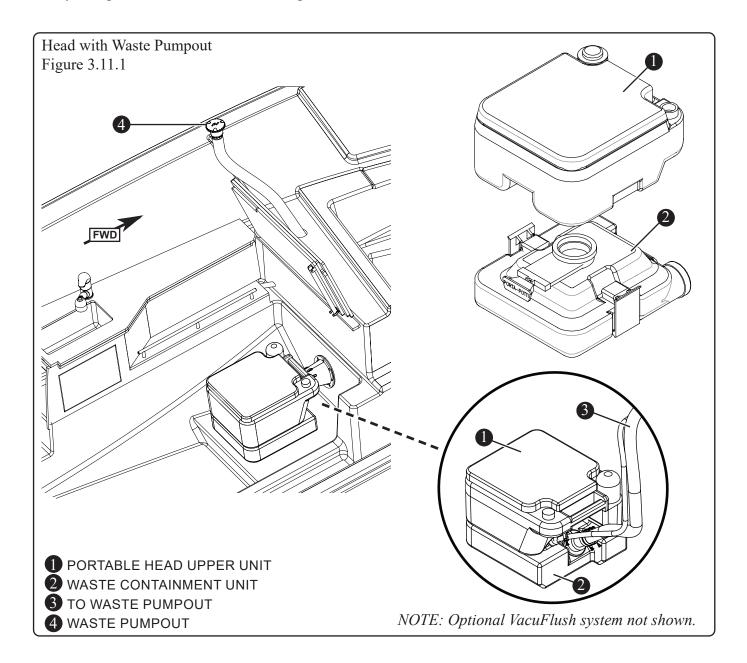
This vessel is fitted with a portable head with deck pumpout (see Figure 3.11.1). The system is located in the head and has a lower tank and an upper tank. Waste is directed to the waste containment unit which holds 2.8 gallons (10.6 liters).

### **Dockside Pumpout**

The waste pumpout is located on the port deck, forward of the windshield and is marked *WASTE* (see Figure 3.11.1). Open the cover with a multi-pin key included in the owner's packet. Most dockside facilities have a connection to fit this boat. Dockside discharge is always the preferred method of waste disposal.

### **NOTICE**

Severe state and federal penalties are levied for discharging raw sewage and/or solid waste in waters where it is not permitted.

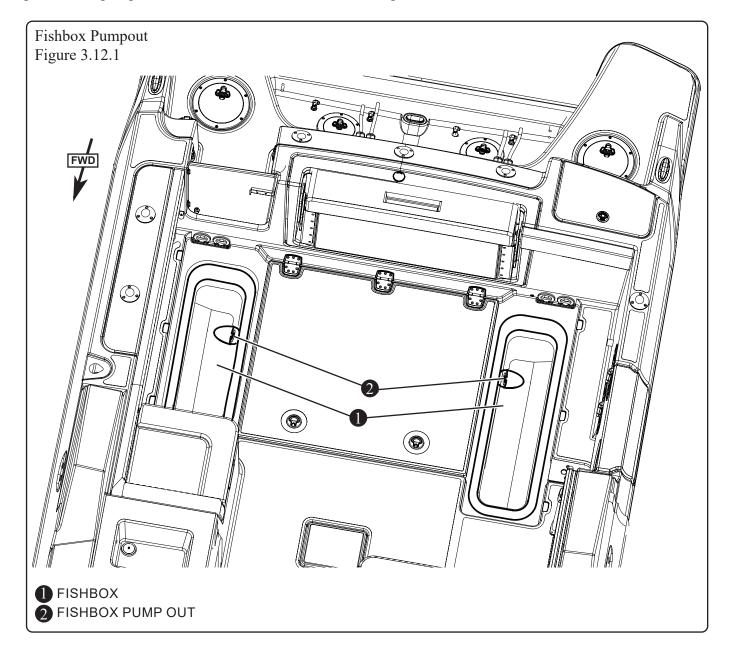


### **VacuFlush Head System (option)**

If equipped, the 280 Vantage has a waste containment/disposal system (not shown). The system includes a VacuFlush toilet, a 6 gallon (22.7 liter) holding tank with vacuum pump, macerator, lockable discharge seacock, dockside waste pumpout fitting, and a thru-hull vent.

### **Fishbox with Pump Out Discharge**

The two 40-gallon, deep-well fishboxes located port and starboard in transom area utilize a pump system for each box to discharge water overboard by way of thru-hull fittings port and starboard. In addition, there is a bottom drain with a plug in each of the compartments (see Figure 3.12.1). The discharge pumps can be accessed through the mechanical access hatch. The pumps are independently activated by the *PORT F/B* and *STBD F/B* switches on the helm switch panel and are protected by breakers located on the battery switch panel. If the pumps fail to activate when the switches are depressed check the breakers first and reset if needed.



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#### VacuFlush System

The macerator/discharge pump (see Figure 3.13.1) draws solid and liquid waste from the holding tank and discharges it overboard through the macerator seacock located in the aft bilge. The macerator is designed to handle waste, toilet/facial tissue and does not pump solid waste. The key used to actuate the overboard discharge unit can be found in the owner's packet.

### **NOTICE**

This boat is equipped with an overboard discharge seacock. Severe state and federal penalties are levied for discharging raw sewage and solid waste in waters where it is not permitted.

The macerator can be disabled by attaching a wire tie or padlock to the seacock or removing the seacock handle while in a closed position, which would avoid potential fines.

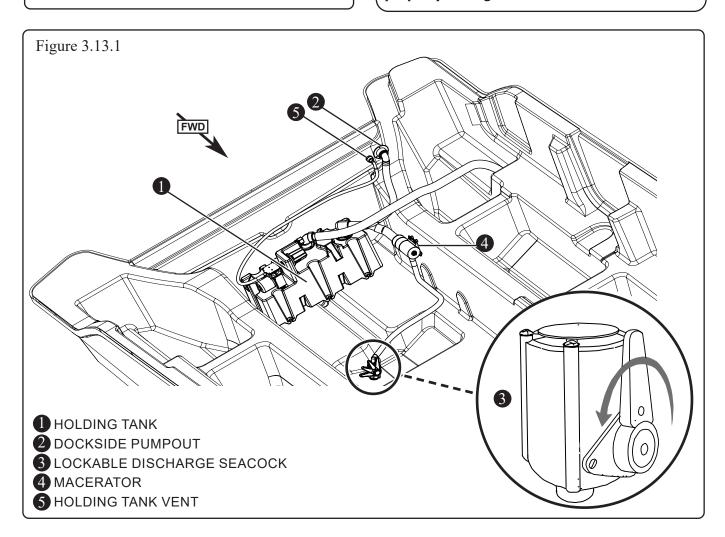
It is illegal for any vessel to dump plastic trash anywhere in the ocean or navigable waters of the United States.

### **NOTICE**

The low water consumption waste system requires the use of special paper to prevent clogs. The manufacturer has provided information regarding the type of paper that must be used. Never use residential tissue paper in your marine waste system.

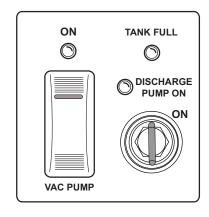
### A CAUTION

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



#### **Macerator**

The control panel is located on the wall of the head compartment and controls the macerator. If the FULL light is on you must empty the holding tank before the system functions properly.



#### **Macerator operation:**

- Ensure discharge seacock is open.
- Insert macerator key (included in owner's packet) into head panel.
- De-energize vacuum pump by pressing the *VAC PUMP* switch.
- Depress lever on toilet to deplete vacuum.
- Turn the key switch on, press the discharge button (push and hold to discharge) until the entire contents of the tank has been discharged.
- Release the discharge switch, turn off the key switch, and remove the key.
- Energize system by pressing the *VAC PUMP* switch. The button will remain depressed.
- The system is now ready for normal operation.

There are bodies of water where discharge of raw sewage is prohibited. Keep the seacock lock engaged (see Figure 3.13.1) when in waters where discharge is not permitted.

Contact your dealer or local United States Coast Guard station for information on overboard discharge in your area and the penalties for non-compliance. Demonstrating that you have disabled the macerator by locking the system and/or removing the seacock handle may help you avoid a fine. To lock the discharge seacock, rotate handle until the hole in the handle is aligned with the locking plate hole; insert a padlock (not included).

#### **Maintenance**

After long periods of non-use, the macerator pump may not turn freely. Regular use of the system reduces the chances of this occurring. If the system does require maintenance contact your dealer.

### **NOTICE**

The low water consumption waste system requires the use of quick dissolve paper to prevent clogs. The manufacturer has provided information regarding the type of paper that must be used. Never use residential tissue paper in your marine waste system.

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

### **NOTICE**

Close macerator discharge seacock prior to using the dockside discharge function.

### **ACAUTION**

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

Prior to discharging VacuFlush sewage:

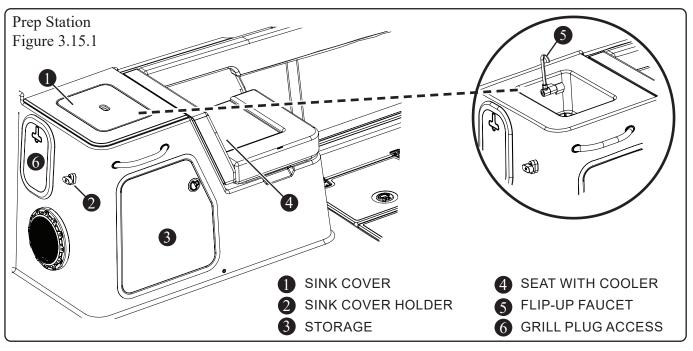
- De-energize pump by pressing the off switch.
- Depress lever on toilet to deplete vacuum.
- After completion of discharge, energize pump by pressing the on switch.



### **Prep Station/Summer Kitchen**

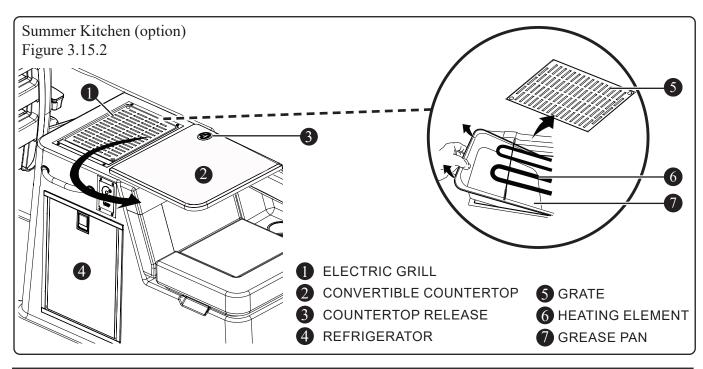
This vessel comes standard with a prep station (see Figure 3.15.1) that includes a covered sink with fold-out faucet/sprayer and dedicated storage.

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The summer kitchen option includes a grill, refrigerator or both. The grill cover converts to a swing-out countertop that can be used for food preparation (see Figure 3.15.2). To operate:

- 1. Raise countertop by pulling up on countertop release; countertop should pop up slightly.
- 2. Rotate countertop to reveal grill; countertop release locks in place.
- 3. To lower countertop, push down on countertop release and rotate to cover grill.
- 4. Push down firmly on countertop release to lock in place.

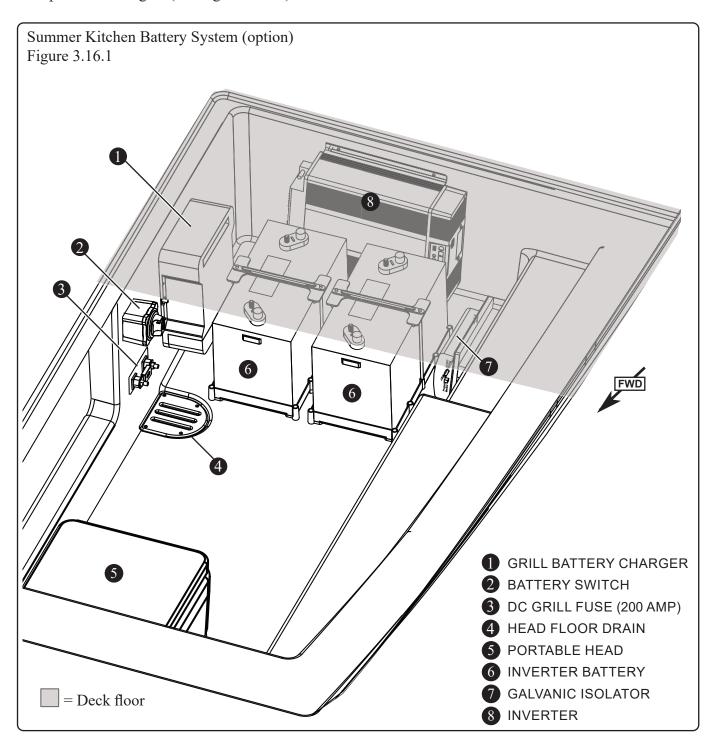


### **Electric Grill (option)**

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

The electric grill (see Figure 3.15.2) is powered by two 12-volt batteries located in the head (see Figure 3.16.1). Fully charged batteries power the grill for one hour on high heat and 1.5 hours on medium heat. Add one cup of water to the grease pan (see Figure 3.15.2) to prevent pan from smoking.

The summer kitchen option includes connections to shore power and an inverter for operation of the electric grill. The inverter is linked together with the 12-volt batteries, a grill battery charger, battery switch, and fuse-protected DC grill (see Figure 3.16.1).



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#### **Using Dockside Power For Grill**

- 1. Ensure *SHORE POWER MAIN* is off (see Figure 3.18.1).
- 2. Connect shore power cable from shore power inlet to dockside outlet (see Figure 3.17.1).
- 3. Turn on *SHORE POWER MAIN* switch (see Figure 3.18.1).
- 4. Confirm *REVERSE* polarity light is off (see Figure 3.18.1). If on, an error has occurred.
- 5. Turn *MAIN CHRG*, *GRILL CHRG*, *and INVERTER* switches on (see Figure 3.18.1).
- 6. Turn *GRILL* switch on (see Figure 3.18.1). The grill is now ready for use.

#### To turn off grill:

- 1. Turn *GRILL* switch off (see Figure 3.18.1).
- 2. Turn *SHORE POWER MAIN* switch off (see Figure 3.18.1).
- 3. Disconnect shore power cable from shore power inlet and dockside outlet (see Figure 3.17.1).

### **Using Battery Power For Grill**

- 1. Turn on battery switch (located in the head compartment) as shown in Figure 3.16.1.
- 2. Cycle through the *Inverter On/Off* button modes until the DC mode indicator light is on (see Figure 3.18.1).
- 3. Turn *GRILL* switch on (see Figure 3.18.1). The grill is now ready for use.

#### To turn off grill:

- 1. Turn *GRILL* switch off.
- 2. Cycle through the *Inverter On/Off* button modes until the DC mode indicator light is off (see Figure 3.18.1).
- 3. Turn battery switch off (see Figure 3.16.1).

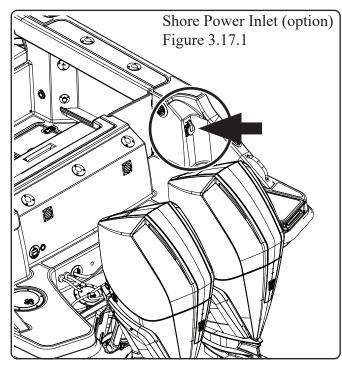
### **Refrigerator Operation (option)**

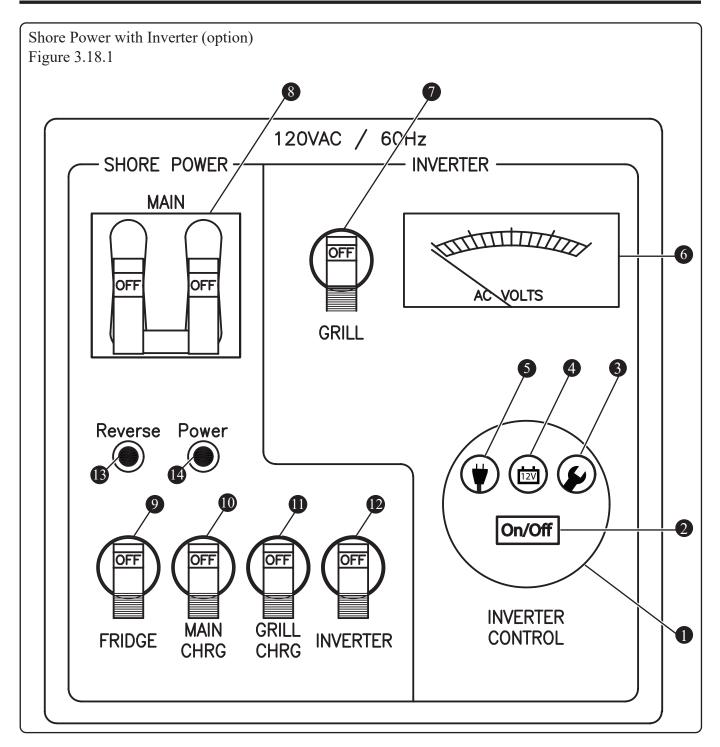
REFER TO THE OWNER'S PACKET FOR COMPLETE INSTRUCTIONS AND WARRANTY INFORMATION.

#### **Using Dockside Power For Refrigerator**

NOTE: Depending on your boat's options, please refer to either Figure 3.18.1 or 3.19.1.

- 1. Ensure SHORE POWER MAIN is off.
- 2. Connect shore power cable from shore power inlet to dockside outlet (see Figure 3.17.1).
- 3. Turn on SHORE POWER MAIN switch (see Figure 3.18.1 or Figure 3.19.1).
- 4. Confirm *REVERSE* polarity light is off (see Figure 3.18.1 or Figure 3.19.1). If on, an error has occurred.
- 5. Turn FRIDGE switch on (see Figure 3.18.1 or Figure 3.19.1). The refrigerator is now ready for use.



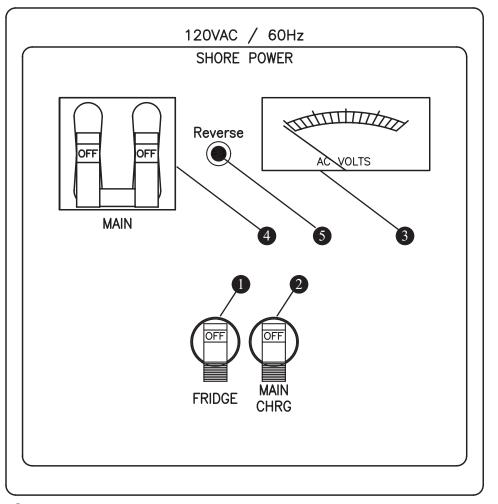


- INVERTER CONTROL
- 2 INVERTER ON / OFF
- 3 FAULT INDICATOR
- 4 DC MODE INDICATOR
- **5** AC MODE INDICATOR
- 6 AC VOLTMETER
- 7 GRILL ON / OFF SWITCH

- 8 SHORE POWER MAIN BREAKER
- 9 REFRIGERATOR AC SWITCH
- **MAIN BATTERY CHARGER SWITCH**
- **M** GRILL CHARGER SWITCH
- **INVERTER SWITCH**
- **B** REVERSE POLARITY INDICATOR
- 14 POWER INDICATOR

Shore Power without Inverter (option)

Figure 3.19.1



- REFRIGERATOR AC SWITCH
- 4 SHORE POWER MAIN BREAKER
- MAIN BATTERY CHARGER SWITCH 5 REVERSE POLARITY INDICATOR

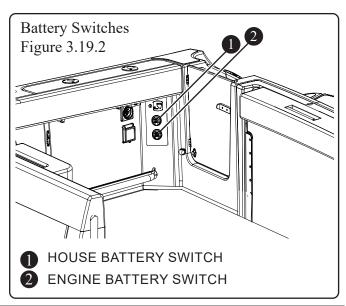
3 AC VOLTMETER

#### To turn off refrigerator:

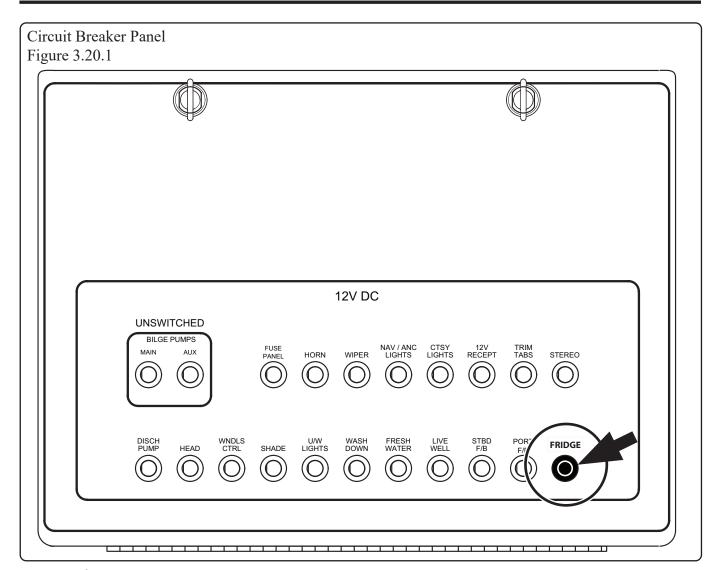
- 1. Turn FRIDGE switch off (see Figure 3.18.1 or Figure 3.19.1).
- 2. Turn off SHORE POWER MAIN switch.
- 3. Disconnect shore power cable from shore power inlet and dockside outlet (see Figure 3.17.1).

#### **Using Battery Power for Refrigerator**

- 1. If not already on, turn on house battery switch located at starboard transom (see Figure 3.19.2).
- 2. Depress (button in) switchable *FRIDGE* breaker button located in console storage area (see Figure 3.20.1). The refrigerator is now ready for use.



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To turn off:

1. Press (button out) switchable FRIDGE breaker located in console storage area (see Figure 3.20.1).

### **NOTICE**

To avoid draining the batteries, the FRIDGE switchable breaker must be turned off.

#### **Grill Maintenance**

Below the heating element is a reusable grease pan used to collect liquids associated with grilling. Empty the grease pan after each use. To remove the grease pan (see Figure 3.15.2):

- 1. Remove grate.
- 2. Lift heating element.
- 3. Slide out grease pan.

When reinserting the pan, ensure that it is positioned centrally under the heating element and that the sides of the pan do not extend beyond the sides of the grill.

#### **Automatic Shut-Off**

There is an automatic shut-off switch located at the back of the grill. When the cover is closed the shut-off switch is engaged and power to the grill is turned off. Do not override the automatic shut-off switch.

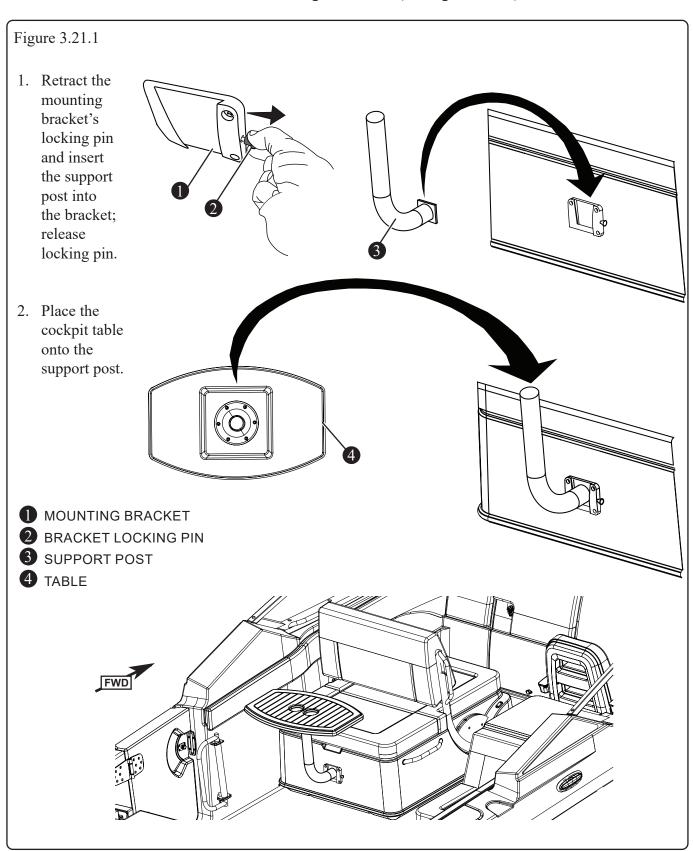
3-20 280 Vantage WHALER





### **Cockpit Table (option)**

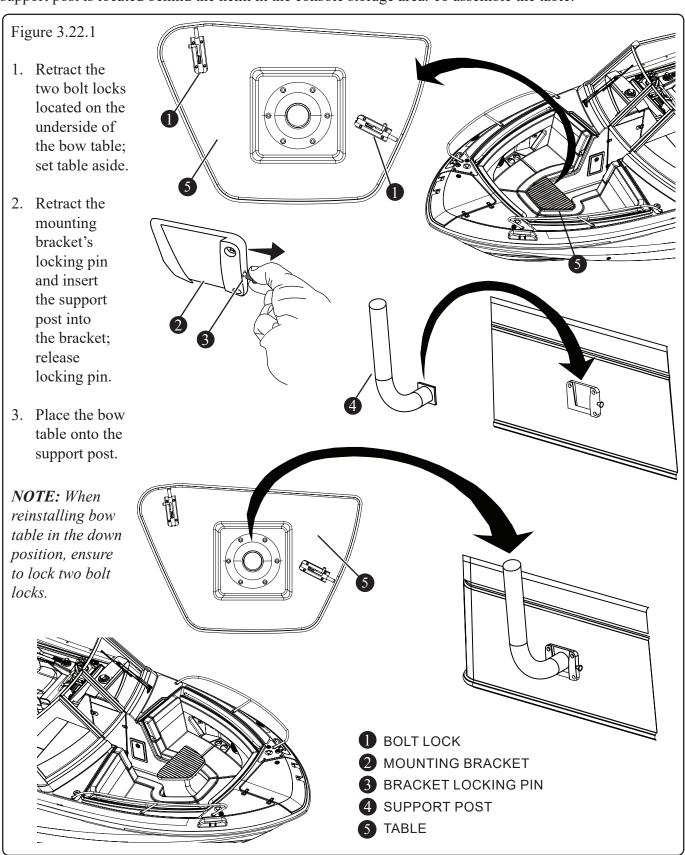
If equipped, the cockpit table is assembled on the aft wall of the convertible lounge. The table components are located behind the helm in the console storage. To install (see Figure 3.21.1):



280 Vantage WHALER 3-21

### **Bow Table (option)**

If equipped, the bow table serves as a filler platform for the bow lounge (see Figure 3.22.1). The table's support post is located behind the helm in the console storage area. To assemble the table:



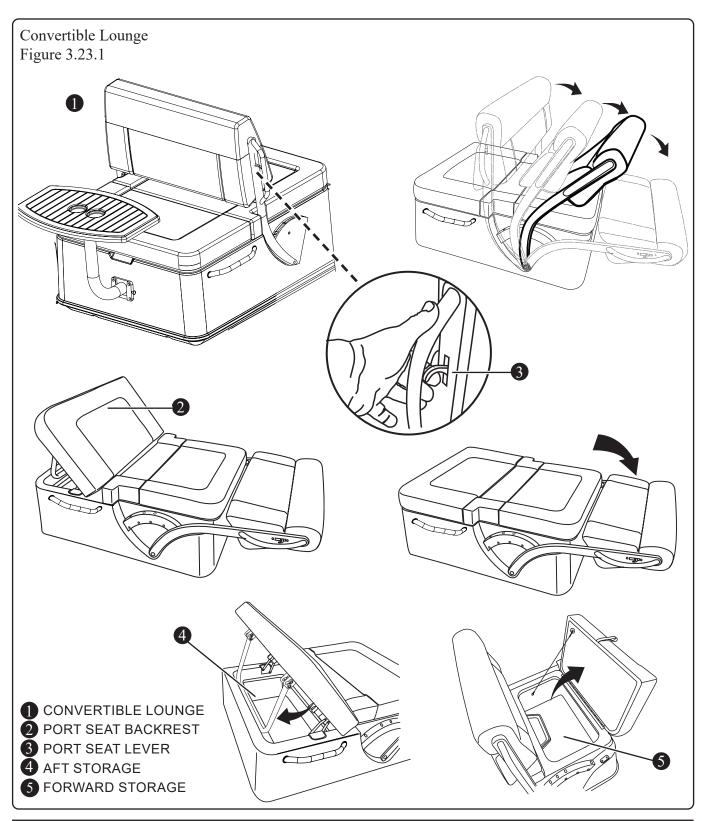
3-22 WHALER 280 Vantage

### **Convertible Lounge**

The convertible port seat and lounge combination offers multiple set-up configurations including a fully horizontal position (see Figure 3.23.1). An optional table can be added to the cockpit, thus creating a dining or activity area.

## **A** CAUTION

Make sure the port seat backrest is locked in place to prevent movement.





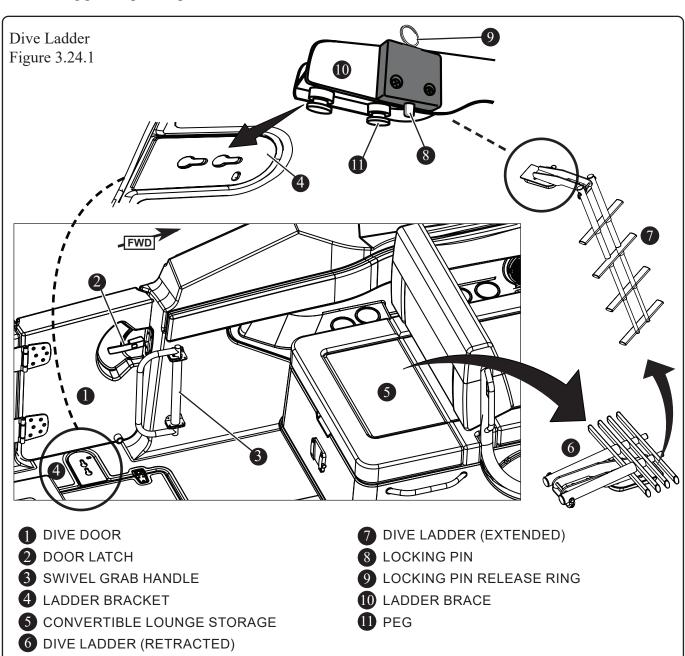
#### **Dive Door and Ladder**

This vessel includes a port side dive door. Use the swivel grab handle for assistance when entering or exiting the water. To position grab handle, lift up and swivel into place. The dive ladder, which is stowed in the base of the convertible lounge, can be attached to the boat via the ladder bracket. To install dive ladder (see Figure 3.24.1):

- Align ladder brace with ladder bracket slots.
- Insert brace pegs into deck bracket.
- Secure ladder into place by pushing brace outboard until it seats firmly into bracket and locking pin snaps into place.

### A DANGER

Do not deploy dive ladder when boat is in motion or engines are running. To avoid risk of injury or death, shut off engines before entering water.





### **A** DANGER

Ensure dive door is closed and securely latched when boat is underway.

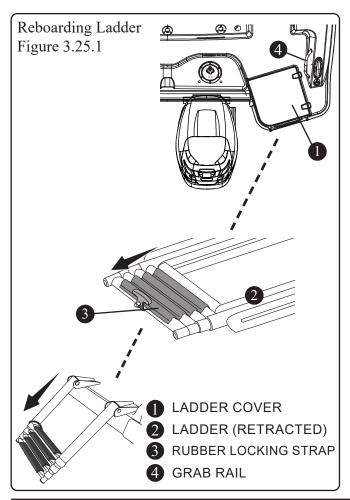
To uninstall dive ladder:

- 1. Pull up and hold the locking pin release ring.
- 2. Pull dive ladder brace inboard and lift up and out of the deck bracket.
- 3. Using bungee straps, secure ladder into place on the base of the bench seat.

### **Reboarding Ladder**

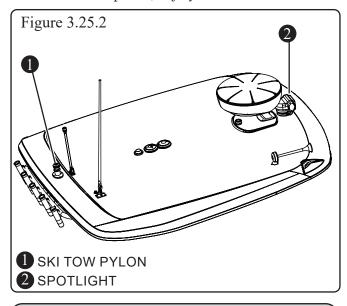
The reboarding ladder is located under the ladder cover on the aft starboard deck of the boat (see Figure 3.25.1). The ladder can be accessed without the cover raised. To deploy the reboarding ladder:

- 1. Release cover's rubber locking strap
- 2. Pull ladder out and extend down
- 3. Extend ladder rungs.



### **Ski Tow Pylon**

The fiberglass hardtop's ski tow pylon is used for skiing or wakeboarding only (see Figure 3.25.2). If engaged in tubing or such other recreational towing, attach the tow rope to the stern eyes at the transom. Read and understand the safety rules for recreational activities in Chapter 1, *Safety*.



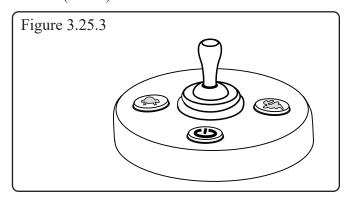
## **ACAUTION**

Do not use ski tow pylon with any equipment tied to the tow rope.

### Spotlight (option)

The spotlight is mounted forward on the hardtop (see Figure 3.25.2) and is controlled by a remote toggle located at the helm (see Figure 3.25.3).

- Turn unit on by depressing power button.
- Use toggle to aim spotlight.
- Adjust the speed of the spotlight's rotation by depressing either the slow (turtle) button or the fast (rabbit) button.



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### **Beach Boarding Ladder (option)**

This beach boarding ladder, which is stored in the anchor/windlass locker (see Figure 3.26.1), is used to get on and off the boat when the ladder is securely lodged in the soil/sand. It is not designed for water based boarding. To deploy ladder:

- 1. Flip anchor/windlass locker cover open.
- 2. Remove Velcro strap from ladder and extend ladder out; close cover.
- 3. Pull out ladder and extend down

To retrieve ladder:

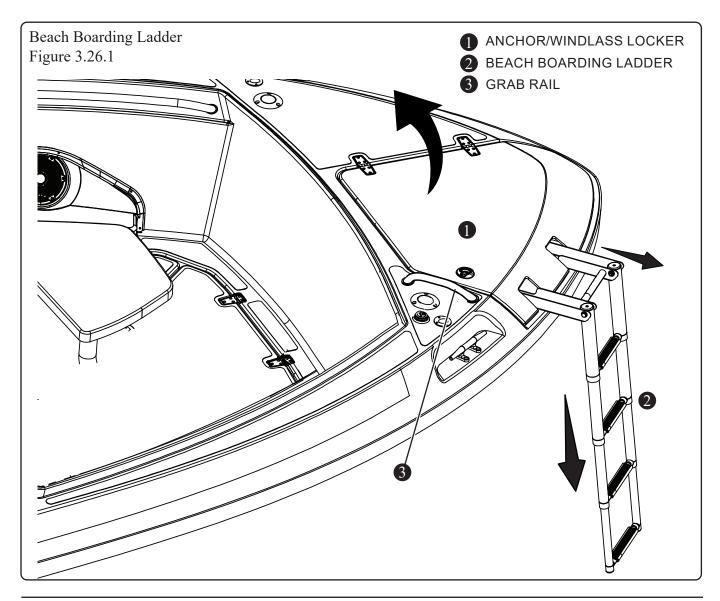
- 4. Pull ladder up and retract into track.
- 5. Open cover and flip ladder inward.
- 6. Replace strap and close cover.

### **NOTICE**

The beach boarding ladder is not to be used to board the boat from the water.

## **ACAUTION**

Be sure that the anchor and/or anchor rode is deployed and secured before using the beach boarding ladder.



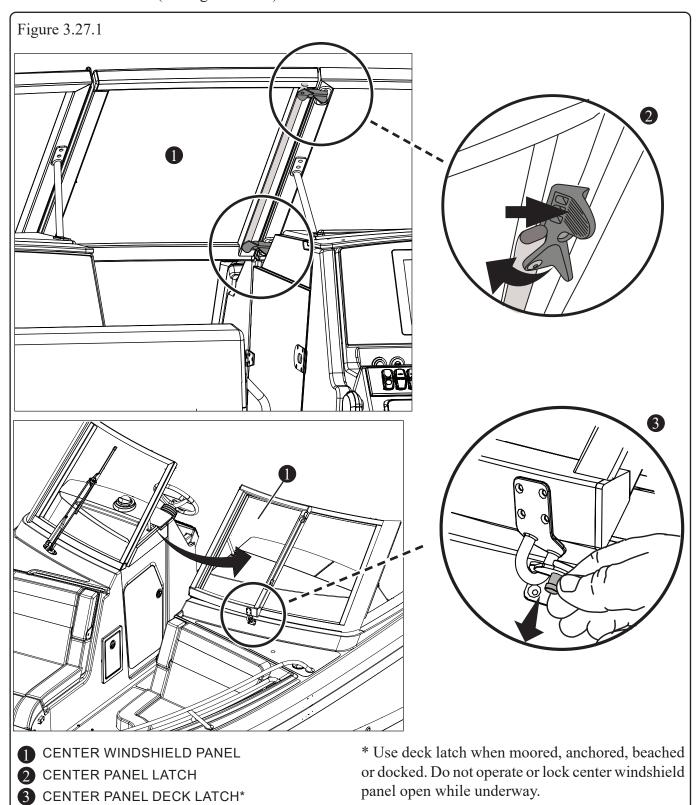


#### Windshield

The tempered glass windshield on this vessel has three panels, including a center windshield panel that can be pivoted to the side, allowing walk through access to the bow area (see Figure 3.27.1).

## **A** CAUTION

Always secure and lock the center windshield panel in the closed position while underway.



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### **Entertainment System (option)**

The entertainment system consists of a stereo/radio, waterproof speakers, remote controls, and USB inputs. The bluetooth-enabled stereo is located at the helm. The remote control is located in the starboard forward pocket. Control volume and menu functions with the remote or the stereo.

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

### **Cockpit Speaker Zones**

Zone 1: Hardtop, helm, and subwoofer speakers

Zone 2: Bow speakers

### Operation

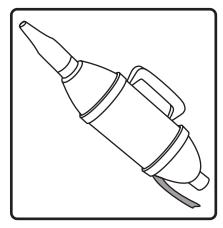
- Press the stereo remote *Menu* button to switch to the sound adjustment display.
- Use the *Rotary Encoder* to select the desired zones and select *ON*.

**NOTE**: Zone 1 cannot be turned OFF.

- Select *Zone 1* then *Link Zone 1 + 2*. Select *ON* to activate. Linking zone one and two allows volume control over both zones simultaneously. The zone set up for zone one and two can be configured separately when in this mode.
- Select *Volume Limit* to set the desired output volume for each individual zone.
- Rotate the Rotary Encoder control clockwise to increase volume and counter clockwise to decrease volume.

#### **Air Compressor (option)**

This vessel can be equipped with a high-volume air compressor with tapered adapter to fit valves up to 1-1/4" diameter. This is used for inflating and deflating inflatables and delivers 20 cu.



ft./minute. The unit has a 10-foot electrical cord that plugs into a 12V receptacle. A carrying/holding case is provided so it can sit flat on the floor of any of the storage compartments.

### **Anchoring**

### **AWARNING**

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

Collision hazard - Anchor only in areas where the boat will not disrupt other boats. Do not anchor in a channel or tie up to navigational aids as it is both dangerous and illegal.

### **AWARNING**

Keep hands, feet, hair and loose clothing clear of moving parts (anchor, rode, etc.). Entanglement may cause severe bodily injury.

### **A** CAUTION

Be careful trailing lines do not foul the propeller.

### **NOTICE**

Before using the anchor be sure the anchor line is securely attached to the eye in the bottom of the anchor locker and to the anchor itself.

### **Anchoring Operation**

To anchor, turn bow into the wind or current and put the engines in neutral. When the boat comes to a stop, lower the anchor from the bow (see Figure 3.29.1). Proper anchoring requires knowledge of rode and scope and understanding the relationship between rode, scope and anchor performance.

**Rode:** The rode is the line connecting the anchor to the boat. Nylon line is ideal because it is light, strong and stretches, it also can be stored wet and is easy to handle. Add a length of chain between the anchor and the nylon line to help set the anchor more easily.



To avoid property damage, engage gypsy lock and ensure anchor is secured with lanyard before getting underway.

### **NOTICE**

Turn on anchor light when at anchor or drifting (not under power) at night or in low visibility.

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

**Scope:** The scope is technically defined as the ratio of rode length to the vertical distance from the bow to the sea floor. Scope also depends on the type of anchor, tides, winds, sea conditions and type of sea floor the anchor is in. To determine how much rode to use when anchoring, use this common formula: Rode length = (bow height + water depth) × scope

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The minimum is 5:1 for calm conditions; normal is 7:1, and severe conditions may require 10:1.

#### **Example:**

Rode length =  $(3 \text{ feet} + 10 \text{ feet}) \times 7^*$ 

Rode length = 13 feet × 7\*

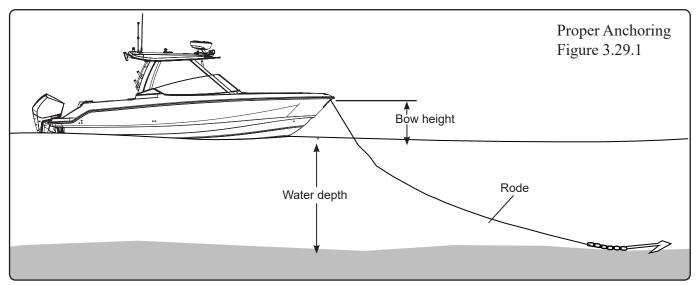
Rode length = 91 feet

\* Scope may range from 5 to 10 or more. However, less than 5, the anchor will break out too easily.

#### **Considerations**

280 Vantage

Wind and sea conditions can affect the boat. Because the boat is not moving through the water, there is no control. Be sure that the anchor will hold under all circumstances if you are leaving the boat. Understand the principles of rode and scope and their effect on anchor performance. Because there are a variety of anchors with different uses, discuss with your dealer the right anchor for this vessel.



Rode length = (bow height + water depth) × scope



3-29



#### **Lowering the Anchor**

- Be sure there is adequate rode.
- Secure rode to both the anchor and the boat.
- Keep feet clear of lines.

Stop completely before lowering the anchor.

**NOTE:** Refer to the windlass operator's manual for anchoring instructions.

### **Setting the Anchor**

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

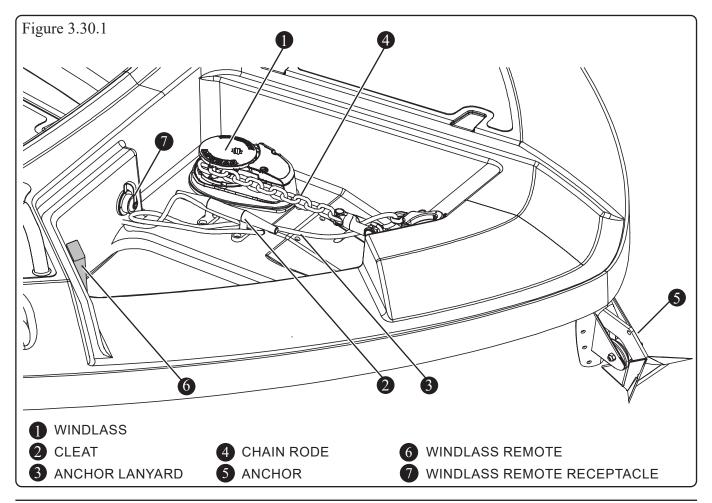
- Reverse the engine slowly to drive the anchor in and to prevent it from dragging
- Secure the rode to a bitt or cleat

#### **Weighing the Anchor**

To weigh or retrieve the anchor, start the boat and run slowly up to the anchor, taking up the rode as you go. The anchor will usually break out when the rode becomes vertical. Coil lines to let them dry before stowing. The bow storage compartment located in the starboard bow should be used to stow the anchor line.

#### **Anchor Lanyard**

Do not depend on the windlass to hold the anchor in place. Always secure the anchor with the anchor lanyard, a line attached to the anchor eye and fastened to the bow pulpit cleat when the anchor is stowed and the boat is underway (see Figure 3.30.1).





#### **Anchor Windlass**

### **NOTICE**

Read and fully understand anchor windlass instructions in the owner's packet before operating the anchor windlass.

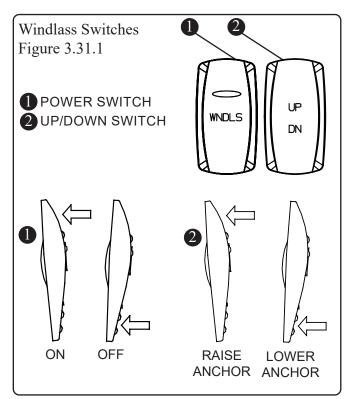
Prior to use, ensure safety lanyard is removed from anchor chain and is clear of rode as it plays out or is retrieved.

The anchor windlass located at the bow of this vessel facilitates the anchoring of this vessel by raising and lowering the anchor. The windlass can be operated from the helm, from the bow with remote control, or manually.

NOTE: To operate the windlass from the helm and with the use of the remote, the windlass breaker on the battery switch panel must be turned on.

#### **Helm Operation**

The anchor windlass is controlled at the helm by two switches on the helm switch panel (see Figure 3.31.1). The *Windlass* switch powers the windlass on and off. The *Up/Down* switch is a momentary type switch, which means that there must be constant pressure applied to operate the anchor windlass and raise or lower the anchor.



#### **Lowering/Raising Anchor**

Pushing the lower part of the *Up/Down* switch powers the anchor windlass down. Make certain that the anchor lanyard is detached from the chain and is clear of any moving parts of the anchor windlass. Pushing the upper part of the switch *Up/Down* switch powers the anchor windlass up. Once the anchor and rode is secure in the up position, the anchor safety lanyard can be re-attached to the rode.

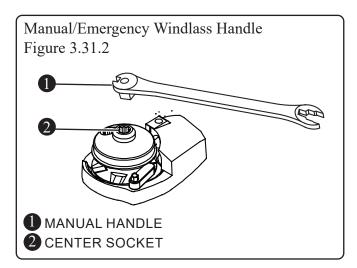
#### **Operating the Windlass with Remote**

The anchor windlass can be operated from the bow with the use of the windlass remote which is stowed in the anchor locker (see Figure 3.29.1). To use:

- 1. Turn on windlass power switch on helm switch panel (see Figure 3.31.1).
- 2. Plug in remote power cable in anchor locker receptacle and rotate plug clockwise to lock.
- 3. To raise anchor, press and hold on the *UP* button on the remote.
- 4. To lower the anchor, press and hold on the *DOWN* button on the remote.

#### **Manual Windlass**

In the event that there is a loss of power to the windlass the anchor can be raised and/or lowered manually by using the manual handle (see Figure 3.31.2). To use, insert handle into windlass' center socket for manual deployment of the anchor. Turning the handle counterclockwise lowers the anchor, while turning it clockwise raises it. Be sure to attach the safety lanyard when the anchor is stowed in the anchor well.



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### **DC Electrical System**

This vessel's electrical system is powered by a series of batteries. The batteries are charged by the engine when running.

Battery power is used for engine ignition and trim/ tilt systems, helm switch panel, lighting/navigation, livewell, fresh water system, windlass, fishbox pumps, and wipers.

#### **Batteries**

### **A** DANGER

Batteries contain hazardous substances which can cause serious injury. Avoid contact with skin, eyes, and clothing. If contact occurs, immediately flush with large quantities of water and obtain medical assistance.

### **NOTICE**

Always store the batteries in the battery trays. Use the retaining lid and nylon lock nuts to keep the batteries secure while underway.

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

The following table is for reference purposes only. Use only AGM batteries with Verado engines.

Application	Group	Volts	MCA*	RC 25	Qty.
USA (SAE)	31	12	800	135 min	4

<sup>\*</sup> Marine Cranking Amps

Application	Group	Volts	CCA*	Reserve	Qty.
Intn'l (EN)	31	12	975	65Ah	4

<sup>\*</sup> Cold Cranking Amps

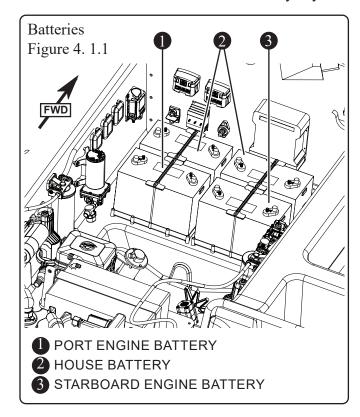
### **NOTICE**

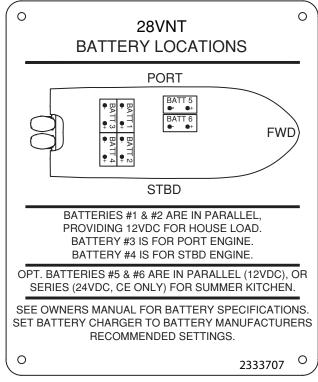
Ensure that your batteries meet Mercury's AGM and CCA requirements

#### **Battery Trays**

Four batteries are located in the mechanical access hatch (see Figure 4.1.1) and two are in the head (if shore power or summer kitchen options are included). Batteries should always be secured in the battery trays provided and secured in place by the retaining brackets. The trays ensure that while underway the batteries do not move around, thus causing damage to components fitted in the same area.

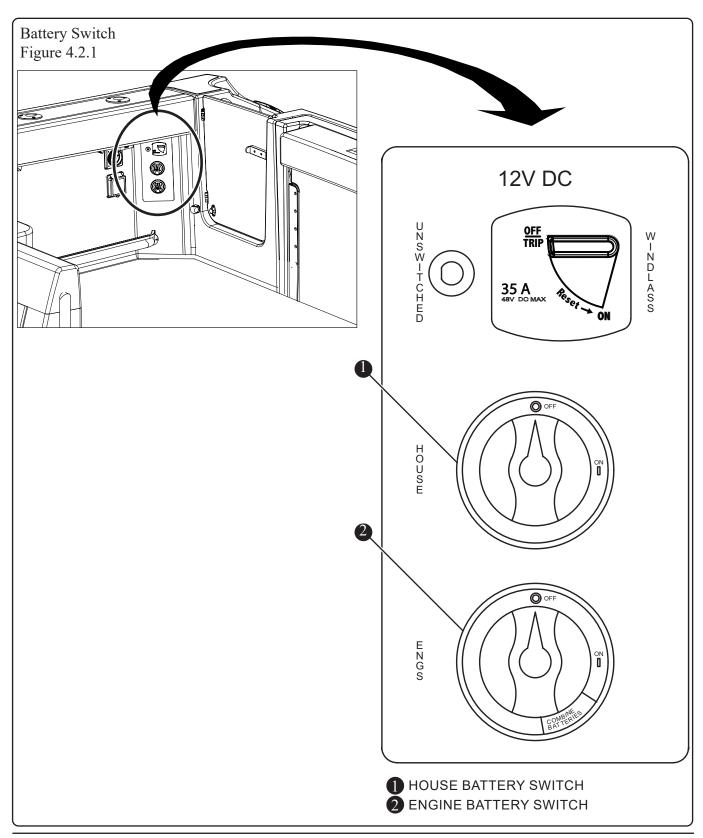
The batteries can be removed from the trays by first removing the negative wires followed by the positive wires. Then remove the retainer on the battery tray.





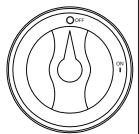
#### **Battery Switches**

This vessel uses two battery selector switches (see Figure 4.2.1). One controls delivery of DC power from the house batteries. The other controls delivery of DC power to the engines. The battery switch panel is located in the starboard aft cockpit. The battery switch settings are detailed in Figure 4.3.1 and Figure 4.3.2.

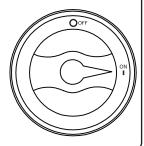


House Battery Switch Settings Figure 4.3.1

*OFF* - No power to the indicated equipment.



*ON* - Power to the indicated equipment.

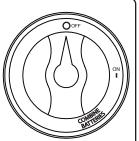


### **NOTICE**

Even with the house battery switch turned off, the bilge pump will remain operational. Clean power for the digital throttle system will still draw power from both the port and starboard engine batteries.

Engine Battery Switch Settings Figure 4.3.2

*OFF* - No power to the indicated equipment.



*ON* - Power to engines.



COMBINE BATTERIESThis parallels engine

batteries to assist with engine starting.



### **AWARNING**

Do not operate boat with batteries in combine batteries position once the engines are started or serious engine electrical damage may result.

### $oldsymbol{\Delta}$ WARNING

Use the combine batteries position only if all batteries are near the same voltage. If one battery is strong and the others weak, high current could cause battery damage.



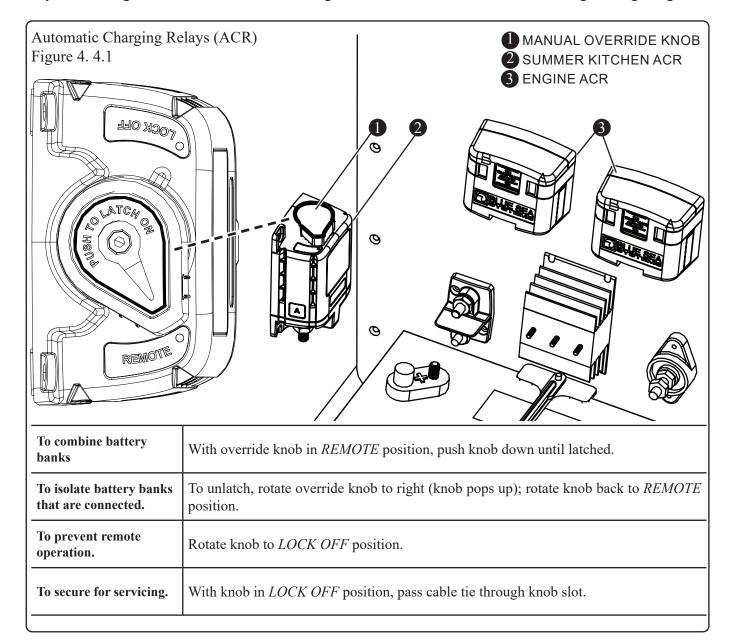


### **Automatic Charging Relays (ACR)**

Batteries are automatically connected in parallel through the use of automatic charging relays when a sufficient charging source is present. The battery banks are automatically separated when the charging source falls below a certain voltage level for a predetermined amount of time. The use of automatic charging relays eliminates the need for the operator to monitor battery voltage and decide whether or not to parallel the battery banks. It also minimizes the chance of a dead engine battery if the paralleling switch were left in the combined position without a sufficient charging source present.

#### **Manual Control Override**

The summer kitchen option uses a automatic charging relay (ACR) with a manual control override knob located inside the mechanical access hatch (see Figure 4.4.1). If the engines are running while the grill is on an audible clicking sound may be heard inside the mechanical access hatch. To eliminate the sound, turn the ACR switch to the off position. This also stops the engines from charging the summer kitchen batteries while they are running. To allow the batteries to charge, turn the switch back on when no longer using the grill.

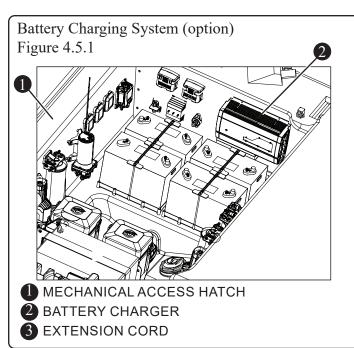


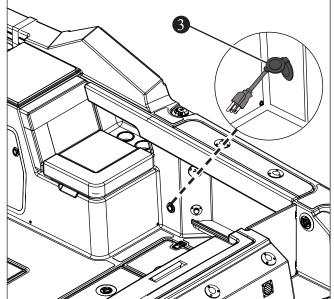
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#### **Dockside Battery Charging (option)**

This vessel may be equipped with a battery charging system (see Figure 4.5.1). Connect the extension cord to an outlet to charge the batteries. Completely draining the batteries before recharging shortens battery life. If a battery remains discharged long enough it becomes impossible to charge. To maintain:

- Inspect each battery and charging system before use for loose connections or wiring.
- Coat the terminals with dielectric grease.
- Remove the batteries from the boat during cold weather or long term storage.
- Keep the batteries dry.







- Never use an open flame in the battery storage area.
- Avoid striking sparks near the battery.
- A battery will explode if flame or spark ignites hydrogen given off during charging.
- The battery should always be disconnected before doing any work or maintenance on the electrical system.
- Never reset a breaker without first determining and correcting the cause of the trip. Should a circuit repeatedly trip, have a qualified electrician determine and correct the cause.
- If equipped with a battery switch, you will need to stop the engine before moving the switch to the off position.

## **A** DANGER

To avoid serious injury or death from fire explosion or electrical shock, the charger must be connected to a ground fault circuit interrupter protected outlet.

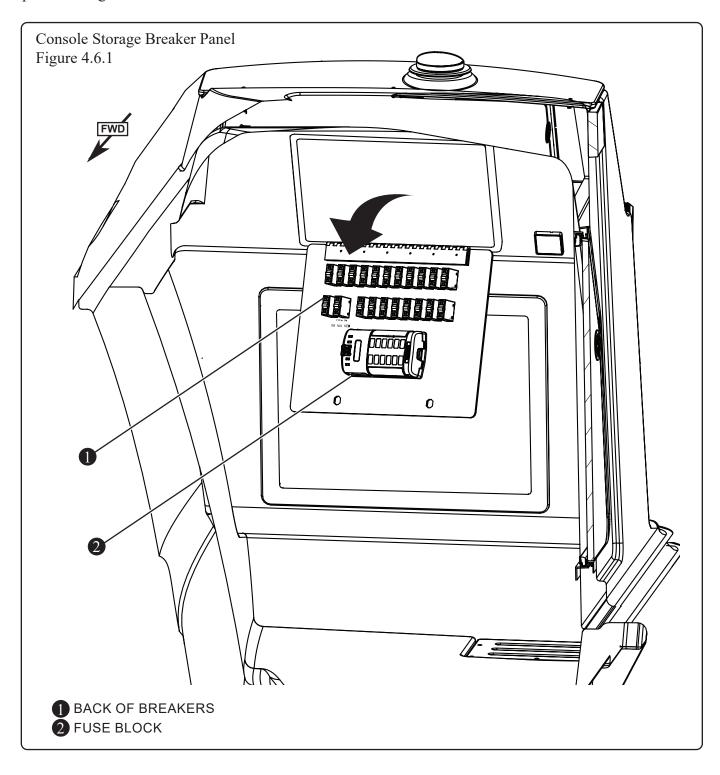
### **NOTICE**

You can connect a heavy duty UL approved extension cord to the charger. After connecting the extension cord to the charger proceed to plug the extension cord to a nearby 120VAC ground fault circuit interrupter outlet. Always remove the extension cord from the 120VAC outlet first when charging is completed, followed by unplugging the charger.

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

#### **Fuse Block**

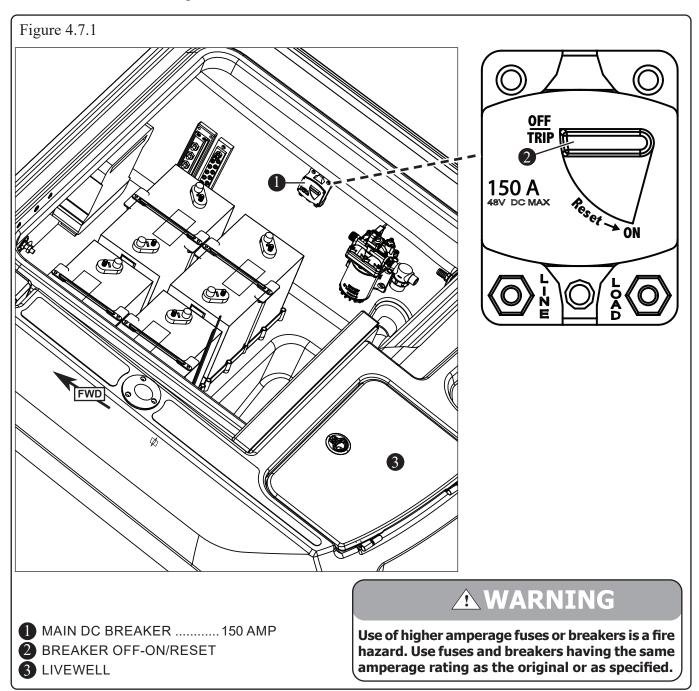
The fuse block can be accessed through the breaker panel on the upper aft wall of the console storage (see Figure 4.6.1; also see Figure 4.8.1). In the event you need to replace a fuse, use only the same amperage as the original. It is recommended that you carry spare fuses. If a fuse is replaced with one of lower amperage, it will not be sufficient to carry the electrical load of the equipment it is connected to and will cause fuse failure or breaker tripping. If a fuse is replaced with one of higher amperage, it will not provide adequate protection against an electrical malfunction and will create a fire hazard.





#### **Main DC Breaker**

The main DC breaker off-on/reset switch is located in the mechanical access hatch (see Figure 4.7.1). If the main DC breaker trips determine and correct the problem prior to resetting the breaker. To reset the breaker, rotate the switch to the *ON* position.



#### **Breaker Panel**

The breaker panel is located in the console storage (see Figure 4.8.1). If a component breaker trips, determine and correct the problem before resetting the breaker. Should a circuit breaker trip repeatedly, have a qualified electrician correct the problem.

Figure 4.8.1 12V DC UNSWITCHED  $\bigcirc$ B A B B B B B 20 20 CONSOLE STORAGE 13 DISCHARGE PUMP ...... 20 AMP 14 HEAD...... 5 AMP BREAKER PANEL WINDLASS...... 5 AMP BILGE PUMP MAIN....... 6 AMP 4 BILGE PUMP AUXILIARY...... 6 AMP 16 SUN SHADE...... 5 AMP 17 UNDERWATER LIGHTS ...... 15 AMP 5 FUSE PANEL ......40 AMP 6 HORN ......10 AMP RAW WATER WASH DOWN...... 15 AMP FRESH WATER PUMP...... 10 AMP 7 WIPER...... 5 AMP 8 NAVIGATION LIGHTS......5 AMP 20 LIVEWELL PUMP ...... 5 AMP 9 COURTESY LIGHTS......5 AMP STARBOARD FISHBOX PUMP....... 10 AMP 12 VOLT RECEPTACLE ......15 AMP PORT FISHBOX PUMP...... 10 AMP 11 TRIM TABS......20 AMP REFRIGERATOR (SWITCHABLE).....15 AMP 

#### **Shore Power, Summer Kitchen (option)**

The summer kitchen option includes a 120V/30A shore power system which provides dockside power to operate the electrical system and charge batteries. Use the supplied 50 ft. power cord to connect this vessel to a dockside power source. See Figure 4.9.1 for the location of the shore power intermediate breaker. The shore power main breaker is located in the panel shown in Figure 4.9.2.

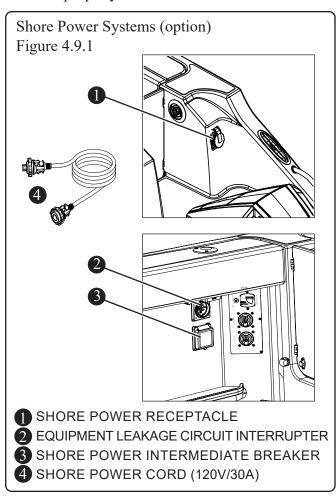
### **A** CAUTION

#### To minimize shock hazard:

- Ensure shore power main switch is turned off before connecting the power cord set.
- Connect cord set to boat inlet first, then to shore inlet.
- Never alter cord set connectors.

#### **Shore Power Hookup**

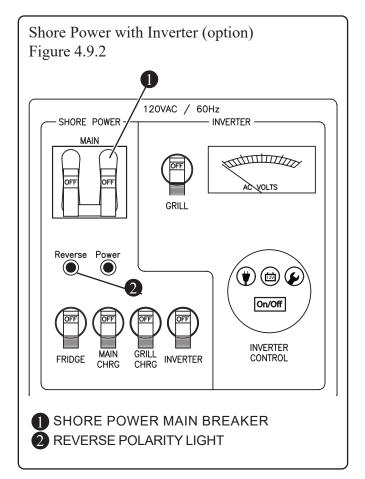
Before making shore power connections ensure this vessel is properly moored. To use:



- 1. Connect the female connector to the boat's shore power receptacle.
- 2. Connect the male connector to the dockside panel.
- 3. Check breaker panel; do not continue if the reverse polarity light is on (see Figure 4.9.2).
- 4. Remove cord set and report the situation to the dock master.
- 5. If the reverse polarity light is not on, switch shore power breaker on (see Figure 4.9.2).

In addition to supplying alternative power to your boat, shore power hookup gives you the ability to charge your batteries without running the engines. The system is automatic and little or no maintenance is required.

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



#### **Equipment Leakage Circuit Interrupter (option)**

## **A** DANGER

Equipment leakage circuit interrupter receptacle won't protect against line-to-line or line-to-neutral faults, short circuits or overloads.

If equipped with shore power the system includes an equipment leakage circuit interrupter (ELCI), which is located on aft wall portside in the aft cockpit (see Figure 4.8.1).

The circuit interrupter is designed to protect people from line-to-ground shock hazards which may occur from defective, misused or neglected electrical equipment. The circuit interrupter won't prevent line-to-ground electric shock, but does limit the time of exposure to a period considered safe for healthy persons. If an imbalance of current is sensed, the circuit interrupter trips when the ground fault exceeds 0.030 amps. This tripping action occurs within a fraction of a second to prevent serious injury.

#### **ELCI Testing and Troubleshooting**

NOTE: Test before each use

Normal operating state: Sensing device's green LED is on and circuit breaker is in the *on* position. Test procedure:

- 1. Press *test* button. Green led should turn off and red LED should turn on; circuit breaker should trip to *off* position.
- 2. If sensing device's LED or breaker does not trip or change state, do not use. Consult an electrician for assistance.
- 3. Press *reset* button. Red LED should turn off and green LED should turn on.
- 4. Manually reset (switch) circuit breaker to *on* position to restore circuit power.

## **AWARNING**

If above tests fail, do not use. Consult a qualified electrician for repair or replacement.

#### **Galvanic Isolator (option)**

## **ACAUTION**

Under normal conditions the sacrificial anodes on this vessel should last one season. If abnormal deterioration of the anodes occur a problem exists and should be corrected immediately.

If equipped with shore power, this system includes a galvanic isolator which blocks low voltage DC on the shore power ground wire. The galvanic isolator prevents dockside electrolytic voltages from damaging the metal parts of this vessel which come in contact with the water. Additionally, the galvanic isolator will safely conduct high currents (above 1.5 volts) to ground in the event of a short circuit or power leakage on this vessel.

#### **Maintenance**

The galvanic isolator unit is highly reliable. It should, however, be tested once per season, and re-tested after a condition that may have influenced it, such as a lightning strike in the vicinity, or on-board electrical short that either caused a circuit breaker or fuse to blow.

#### **NAUTIC-ON™** Remote Connectivity\*(option)

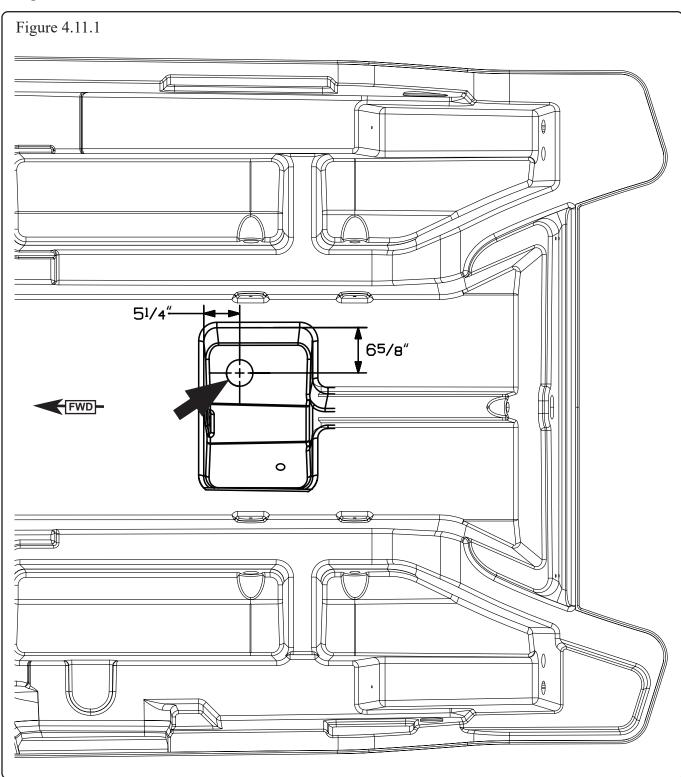
- 24/7 access to your boat's information using the NAUTIC-ON app.
- Monitor house and engine battery state and bilge pump activity.
- Review live engine data and diagnostics.
- Track location with smart bread crumbing and geofence.
- View weather conditions at the boat.
- \*A limited subscription is included and thereafter the service is subscription based.

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

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#### **Transducer (option)**

If equipped, the transducer is located in the mechanical access hatch and acts as an antenna for the sonar system, sending sound waves through the water, bouncing off objects, and returning a signal. Should after market installation be required, contact a Boston Whaler dealer for details on the mounting location shown in Figure 4.11.1.







#### Wiring

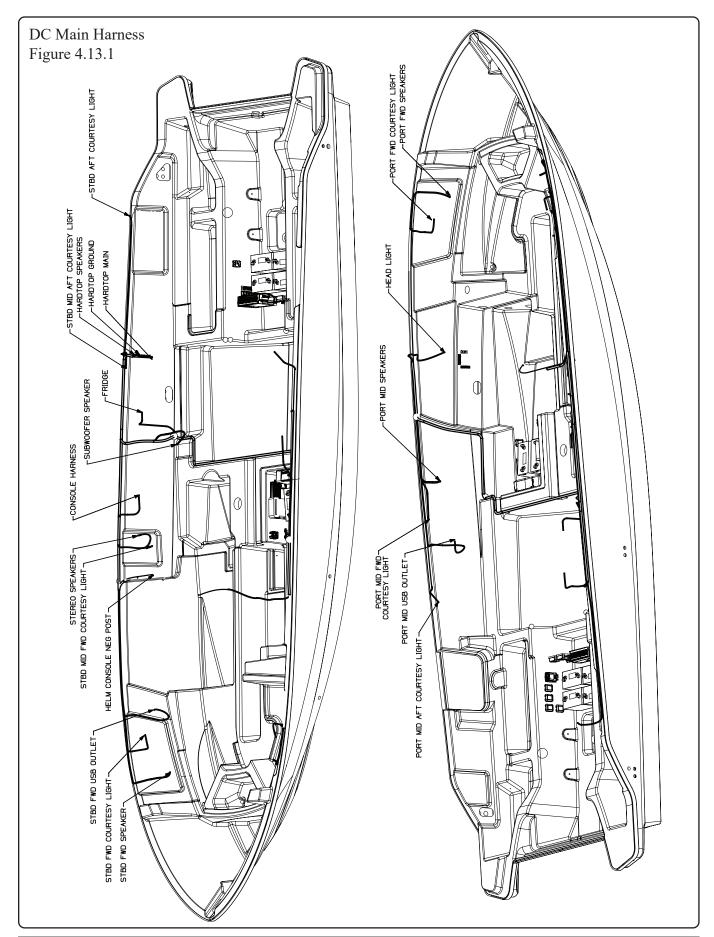
Boston Whaler adheres to electrical wiring requirements that meet ABYC E-11 standards. The following table details the color and function of wiring used.

#### **Wire Color Chart for DC and Special Circuit**

COLOR	FUNCTION	COLOR	FUNCTION
RED	MAIN FEEDS/PORT 30 AMP	BRN/WHT	MACERATOR
	RECEPTACLE, +12V MAIN,	BRN/YEL	LIVEWELL PUMP
	12V RECEPTACLE	GRY	RUNNING LIGHTS
BRN/BLK	STARBOARD FISHBOX PUMP	GRY/BLK	ACC 1
BRN/VIO	FORWARD FISHBOX PUMP	GRY/BLU	ACC 2
BRN/YEL	LIVEWELL PUMP	GRY/GRN	ACC 3
	(HIGH CURRENT)	GRY/RED	AFT MAST/ACC 4
BRN/BLU	PORT FISHBOX PUMP	GRY/WHT	ALL ROUND/FWD MAST LIGHT
BLK	GROUND	GRN	GROUNDING/BONDING
BLK/YEL	STOP CIRCUIT	ORN	REFRIGERATOR or CENTER
BLK/WHT	GEN SHUTDOWN		WIPER, STARBOARD 30 AMP
BLU	COMPASS		RECEPTACLE
BLU/BLK	DOME LIGHT	ORN/BLU	HORN
BLU/GRN	SPREADER LIGHT	ORN/BRN	STARBOARD WIPER PARK
BLU/ORN	LIVEWELL LIGHT	ORN/GRN	STARBOARD WIPER
BLU/RED	COURTESY LIGHTS	ORN/RED	PORT WIPER
BLU/VIO	CABIN LIGHTS	ORN/VIO	VACUUM PUMP
BRN	BILGE PUMP (SWITCHED)	ORN/WHT	CENTER WIPER
BRN/BLK	STARBOARD FISHBOX PUMP	PINK	FUEL SENDER
BRN/BLU	PORT FISHBOX PUMP	VIO	IGNITION
BRN/GRY	RAW WATER	WHT	CO MONITOR/ELECTRIC TRIM
BRN/GRN	FRESH WATER		TAB (SWITCHED)
BRN/ORN	SUMP PUMP	YLW	BLOWER/STEREO MEMORY
BRN/RED	BILGE PUMP (UNSWITCHED)	YLW/RED	START
BRN/VIO	FORWARD FISHBOX PUMP		

#### **Electrical Schematics**

The harnesses and schematics on the following pages are for reference and to be used by Boston Whaler service technicians. Boston Whaler reserves the right to change or update the electrical system on any model at any time without notice. In addition, Boston Whaler is not obligated to make any updates to units built prior to a change.

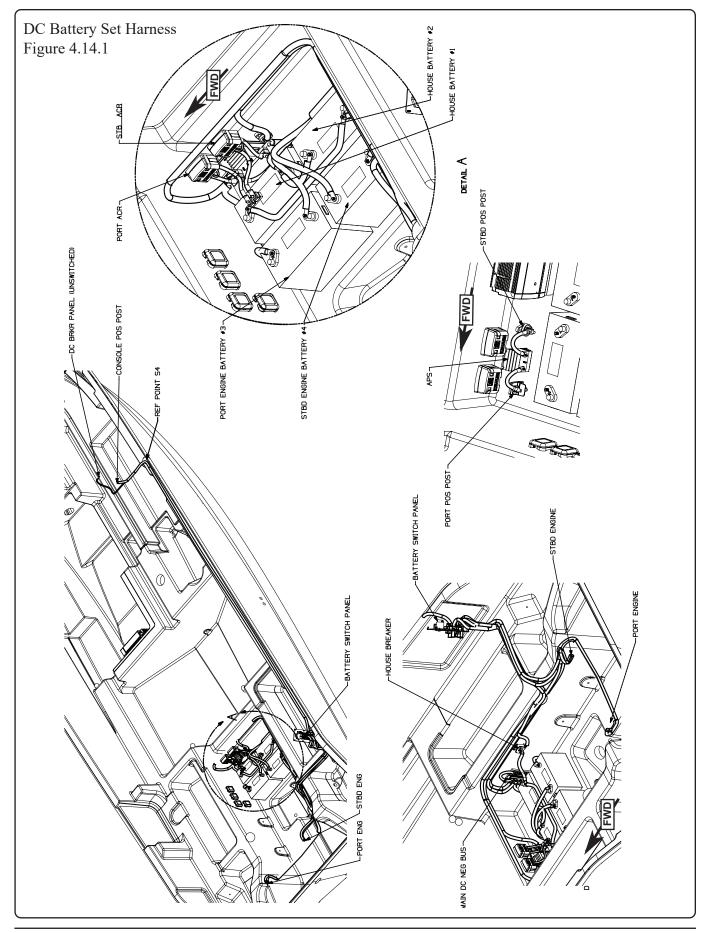








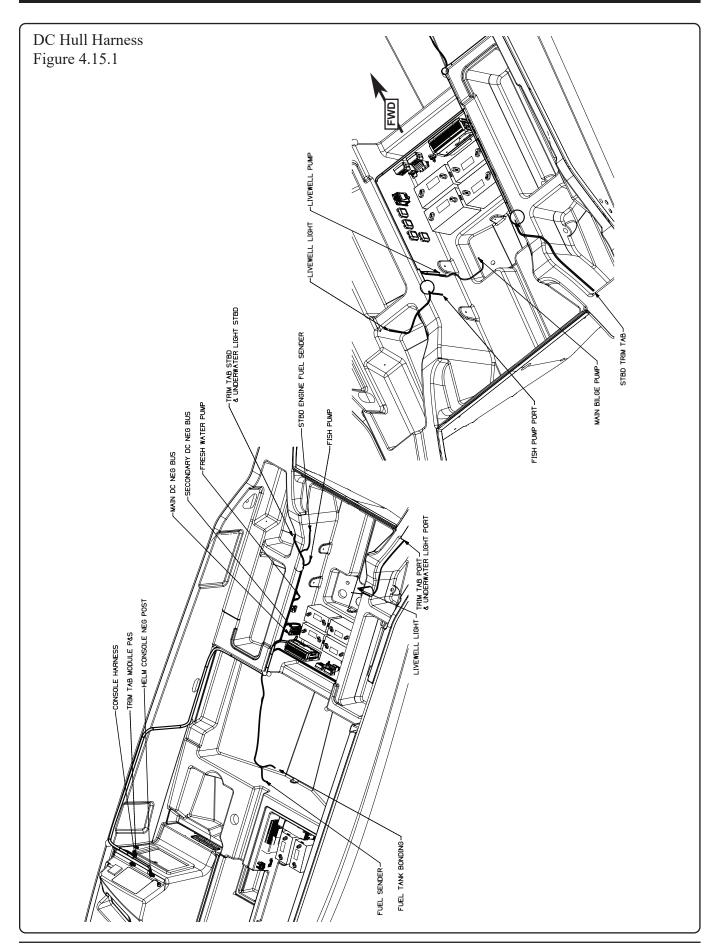
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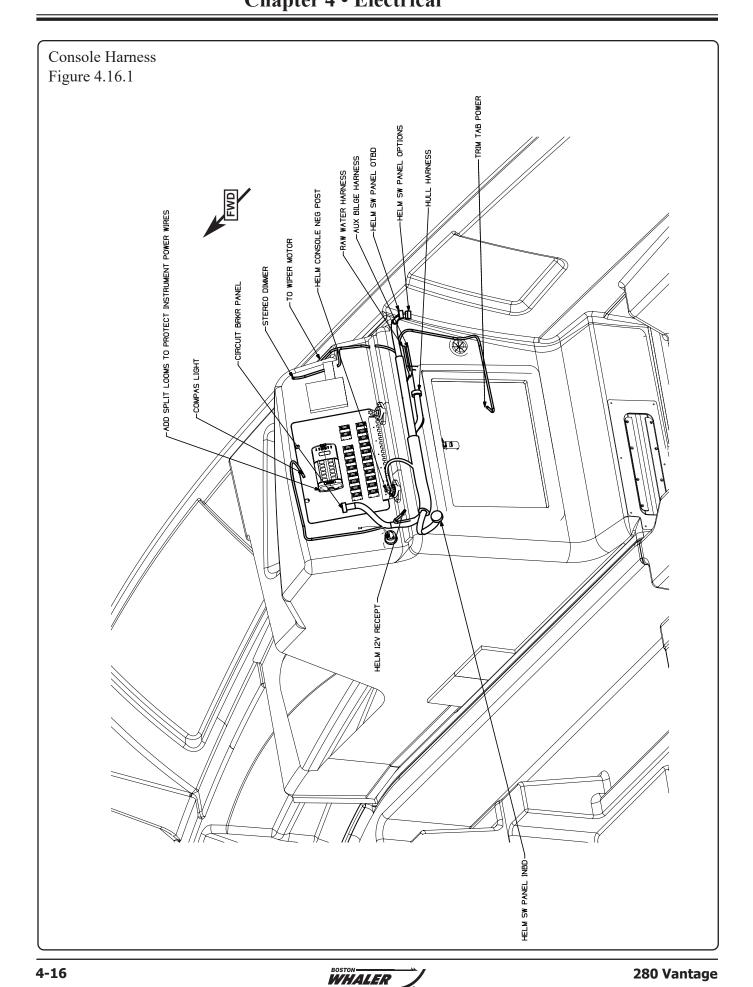
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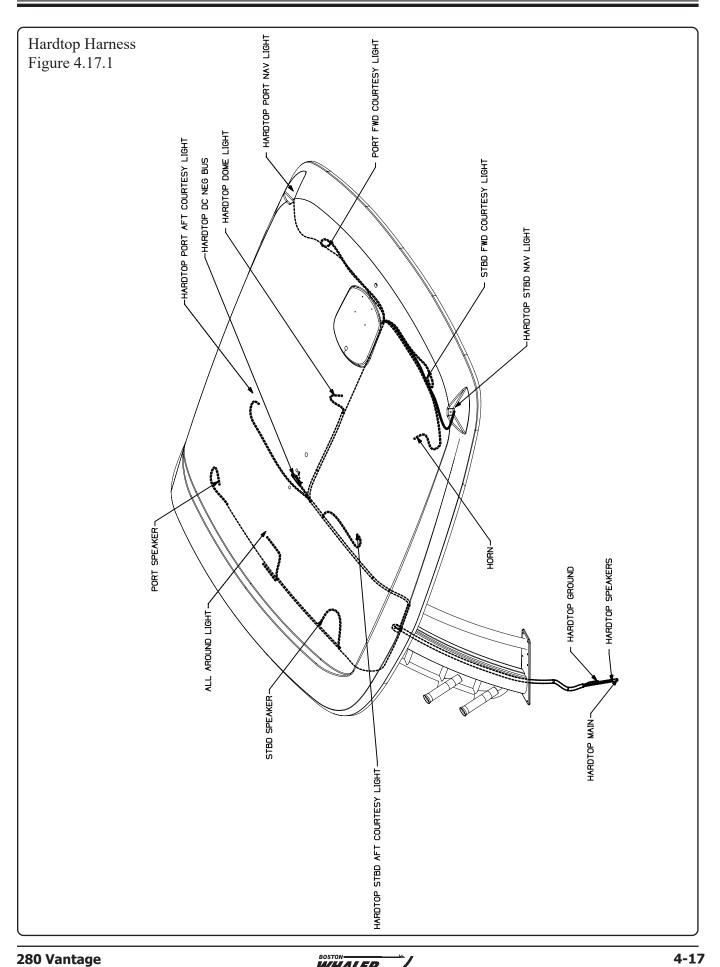
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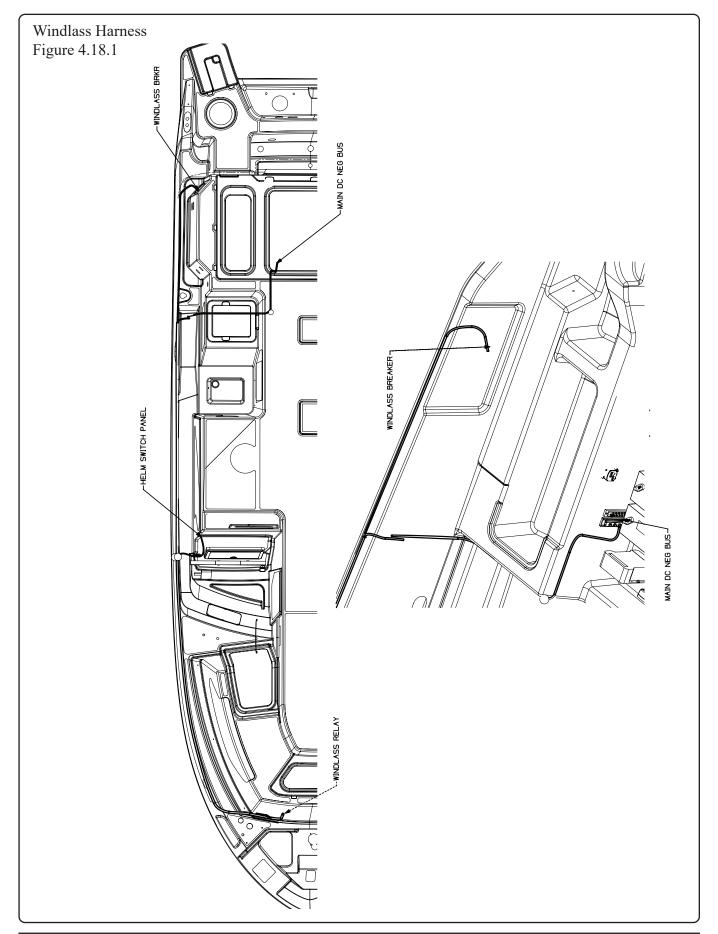
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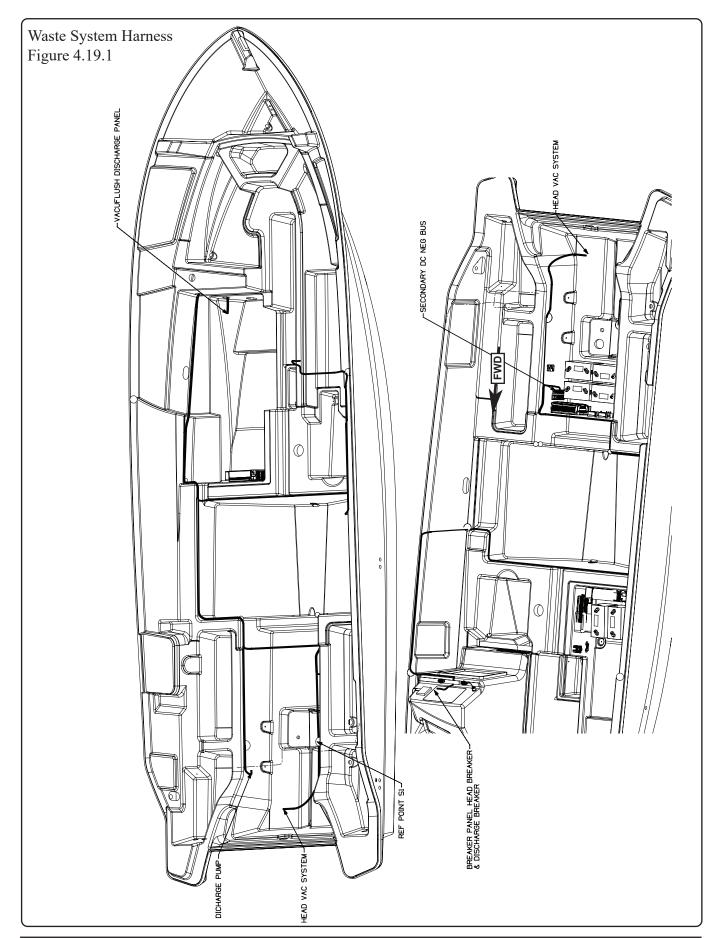
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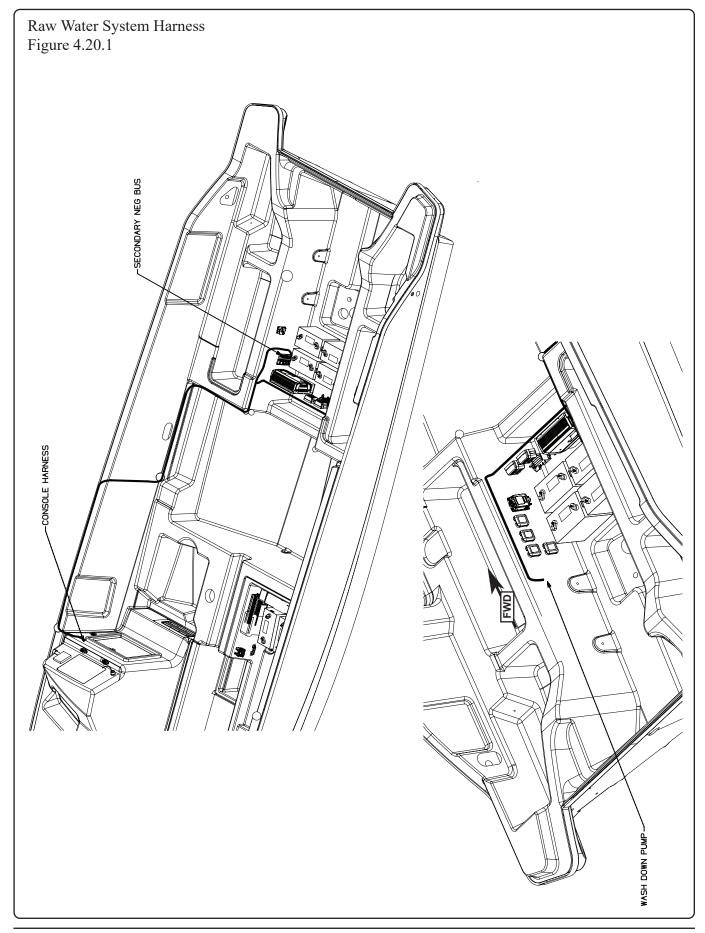
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## **Chapter 4 • Electrical**



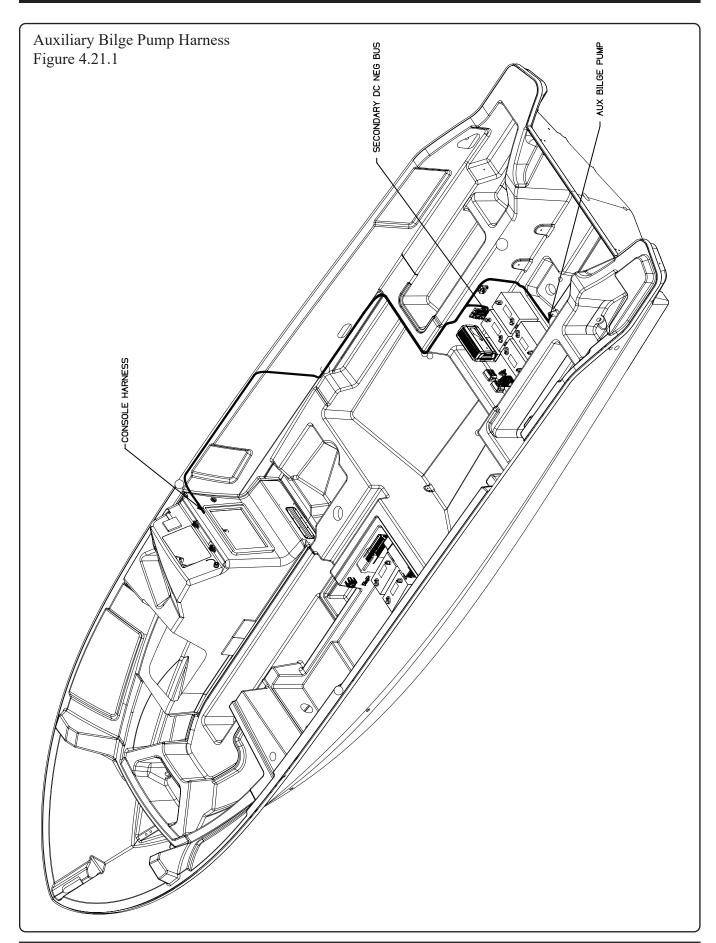
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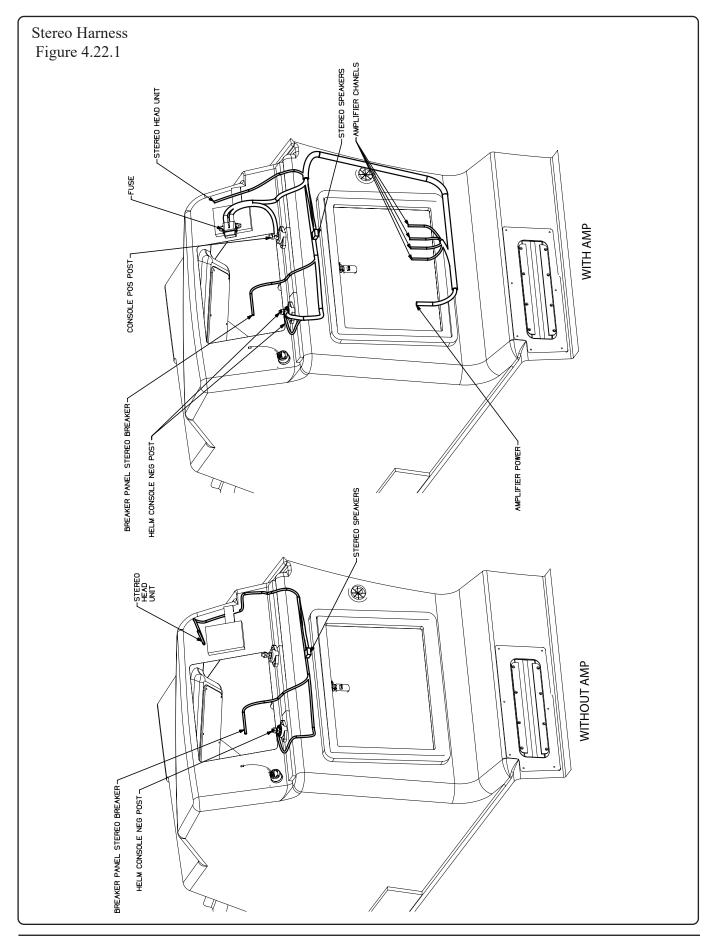
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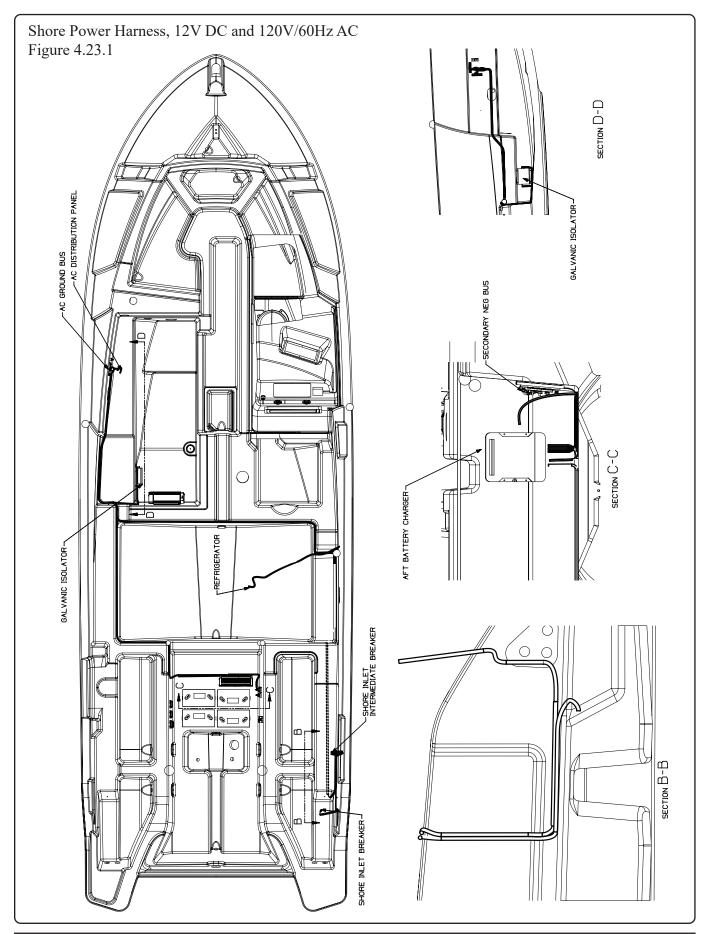
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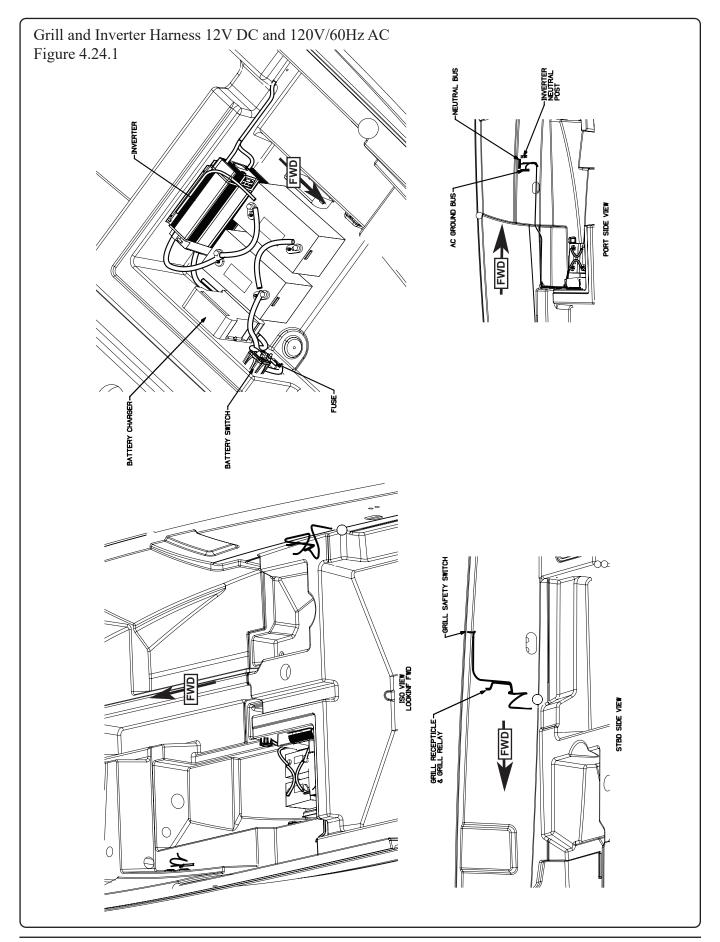




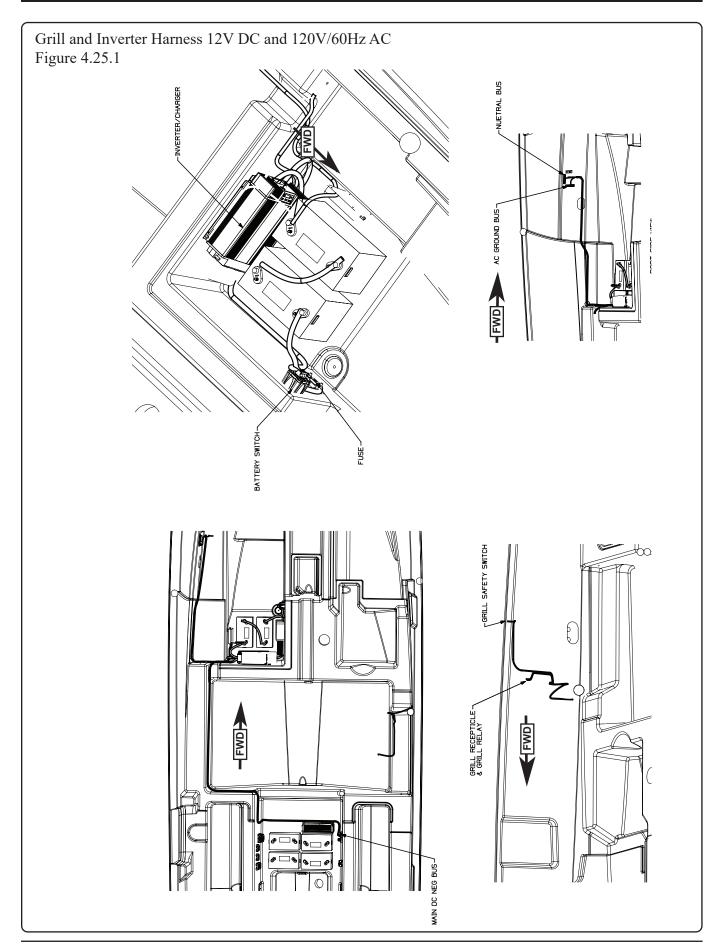


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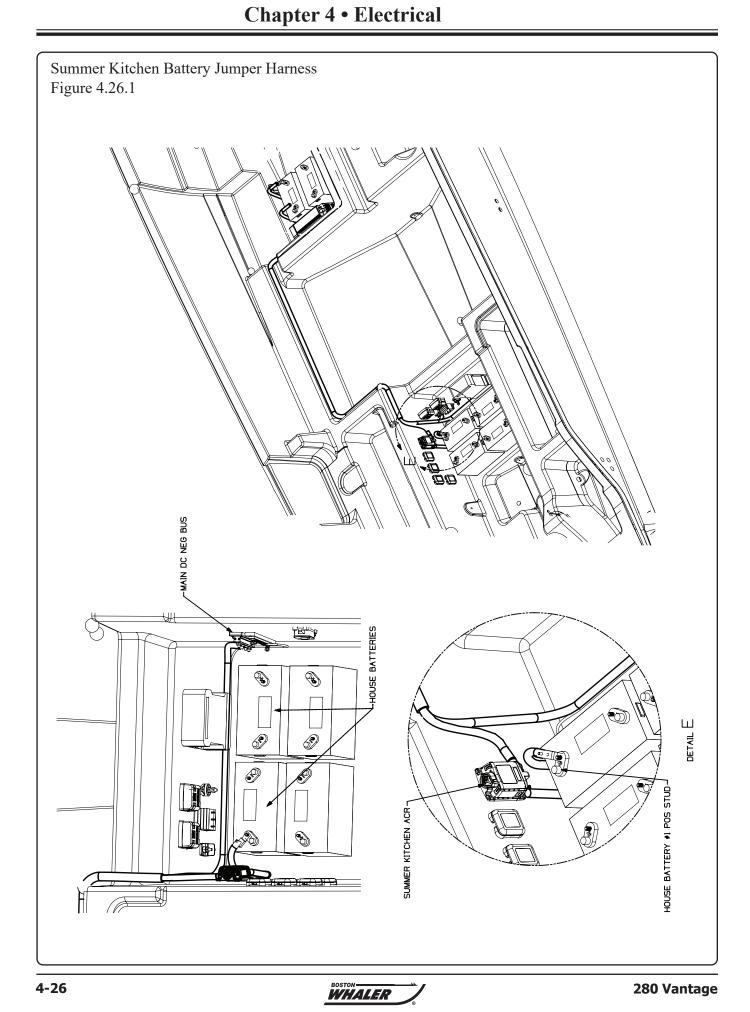
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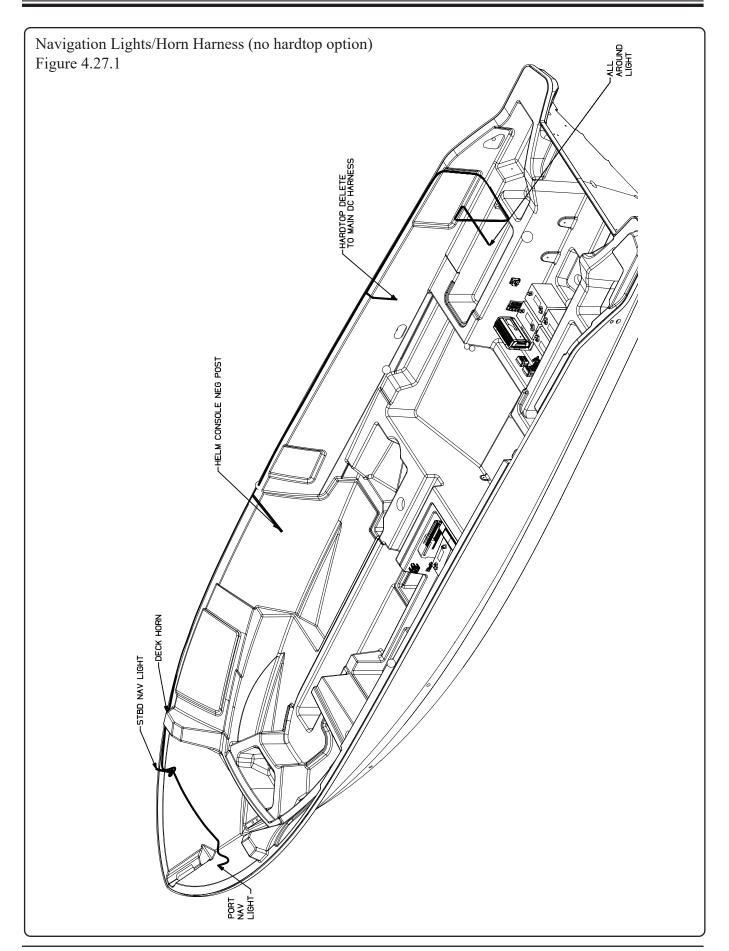
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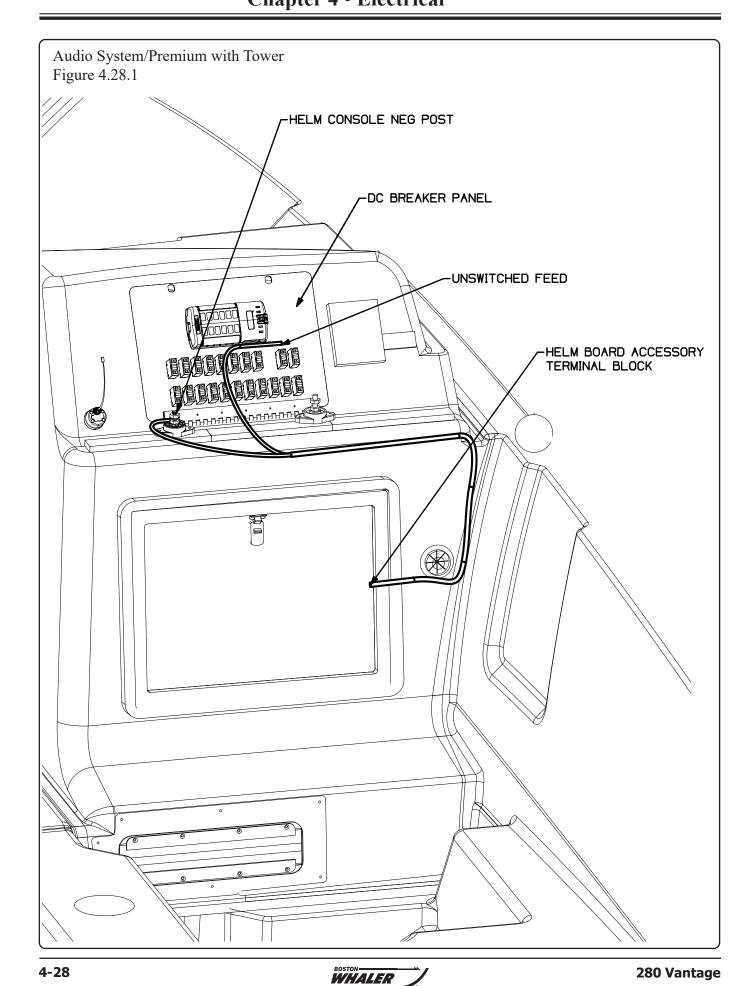


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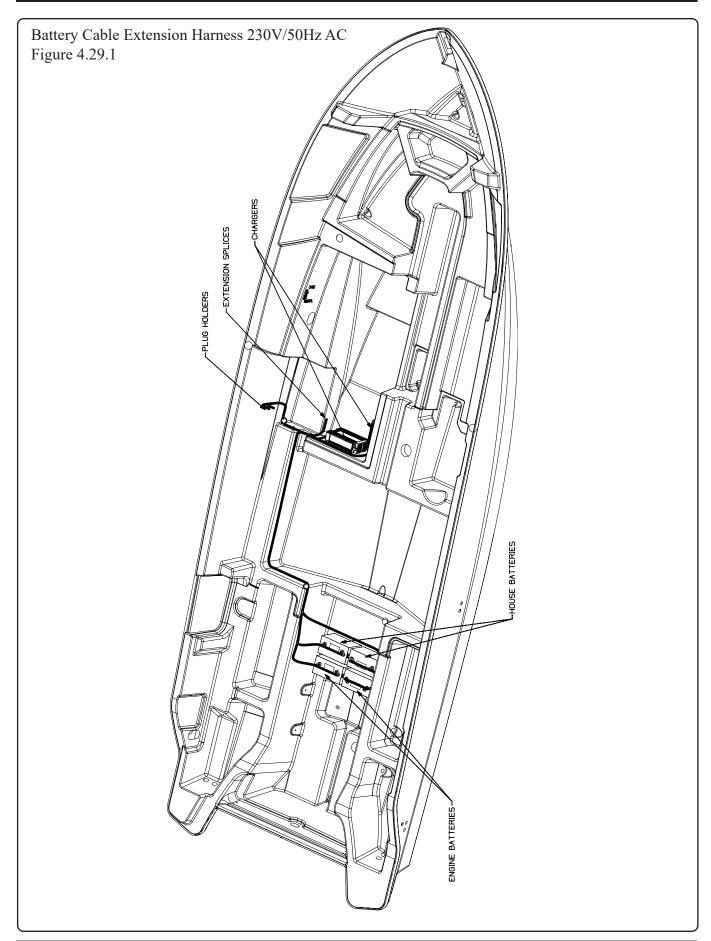




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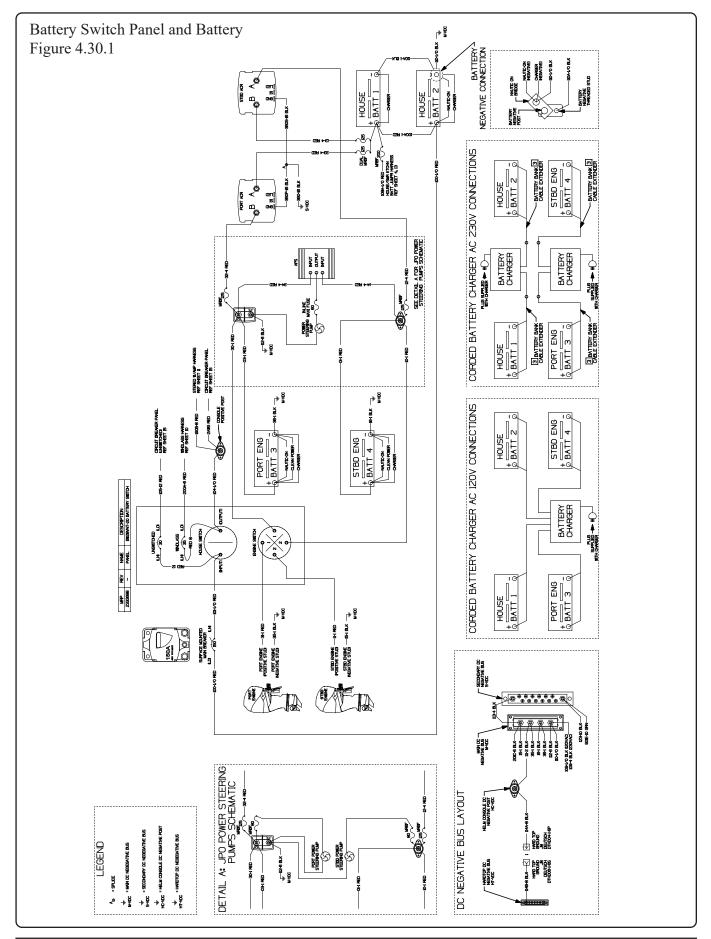








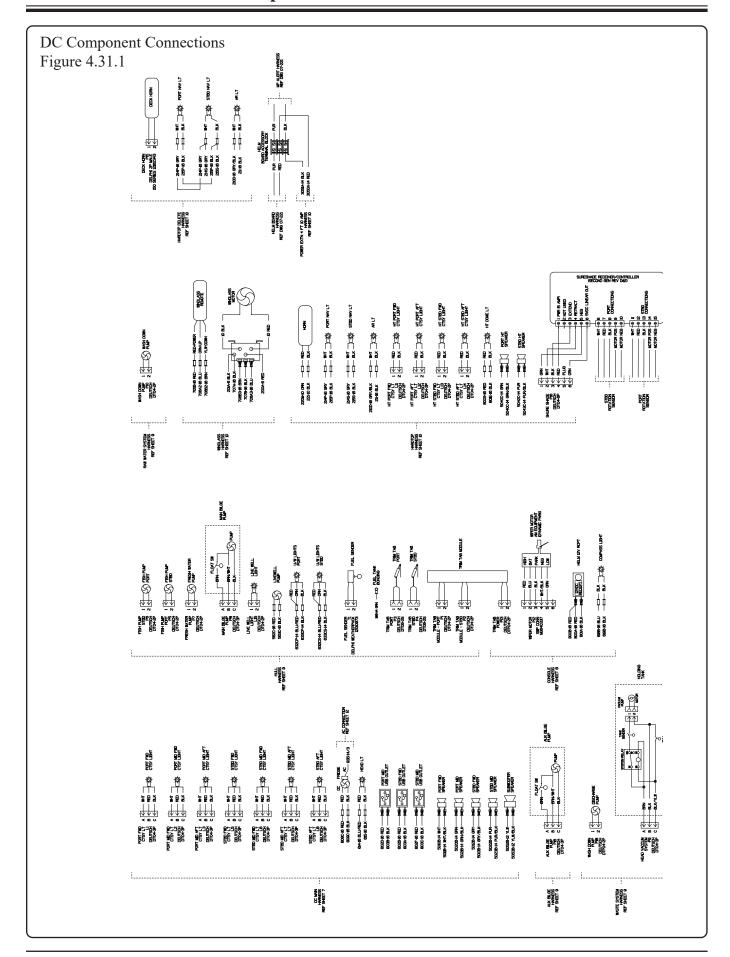
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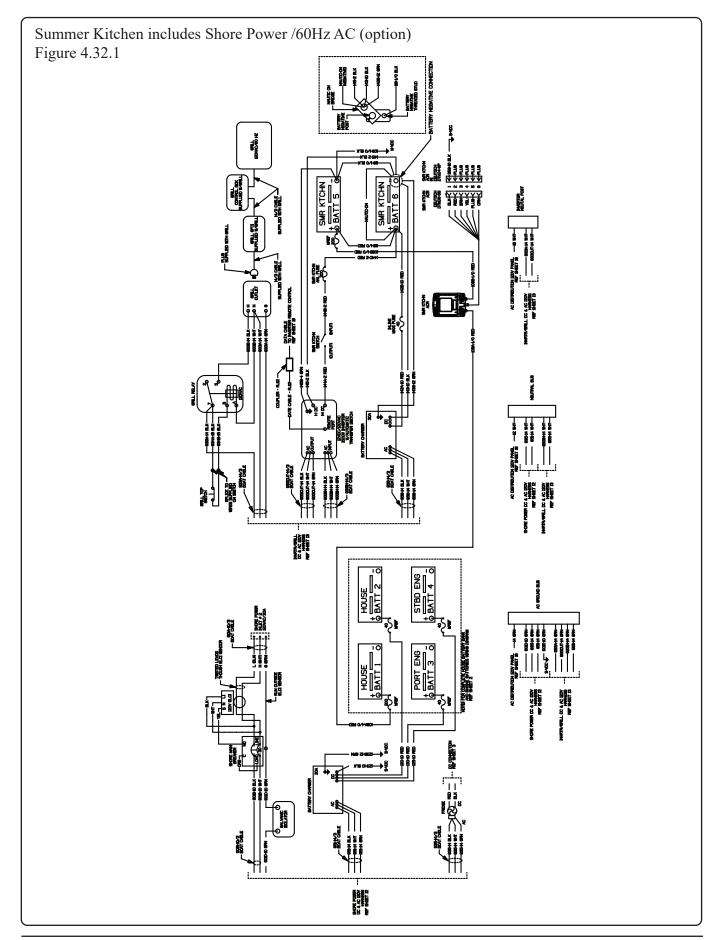
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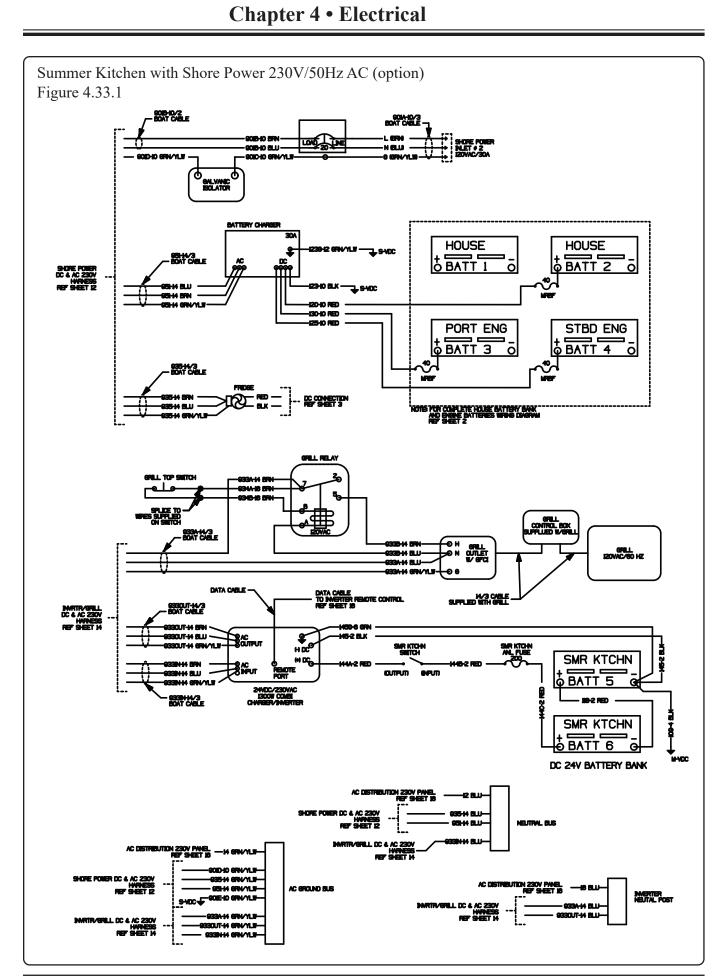


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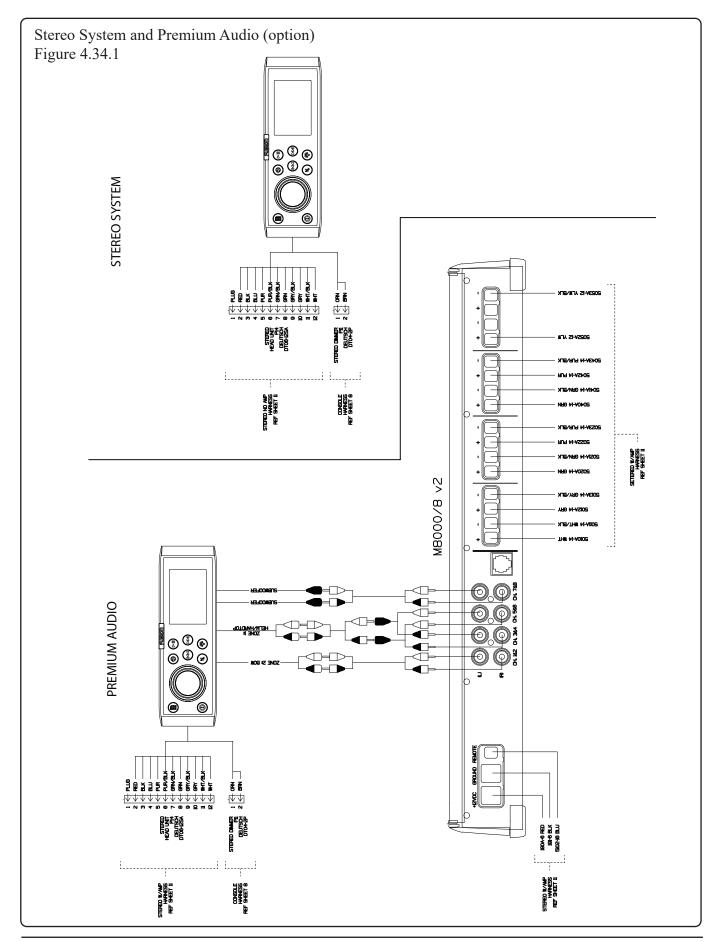
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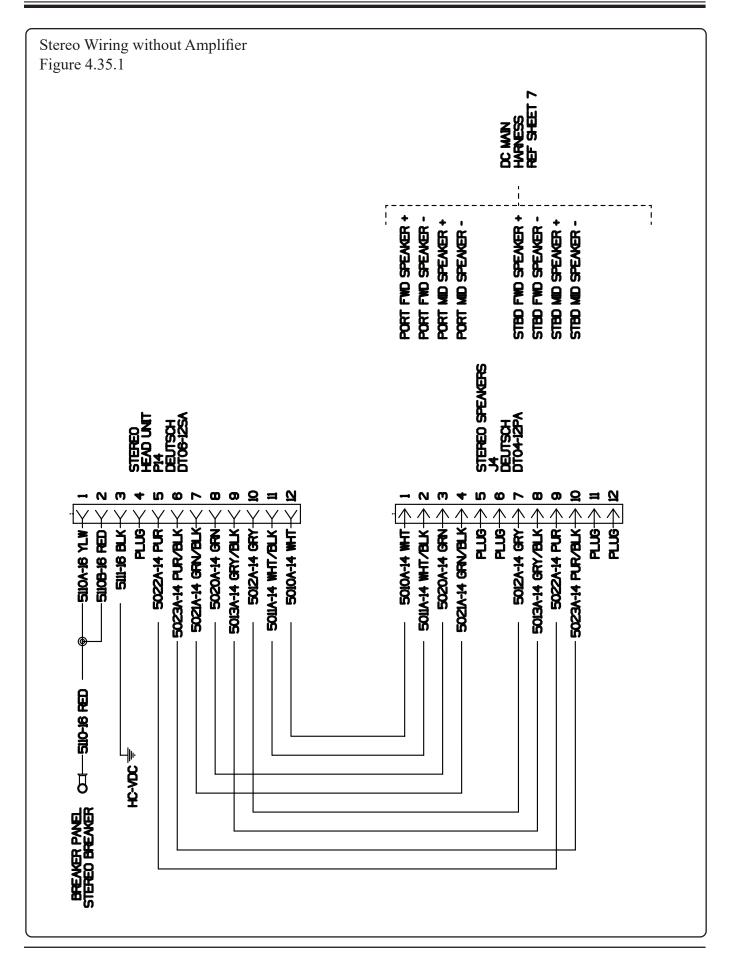


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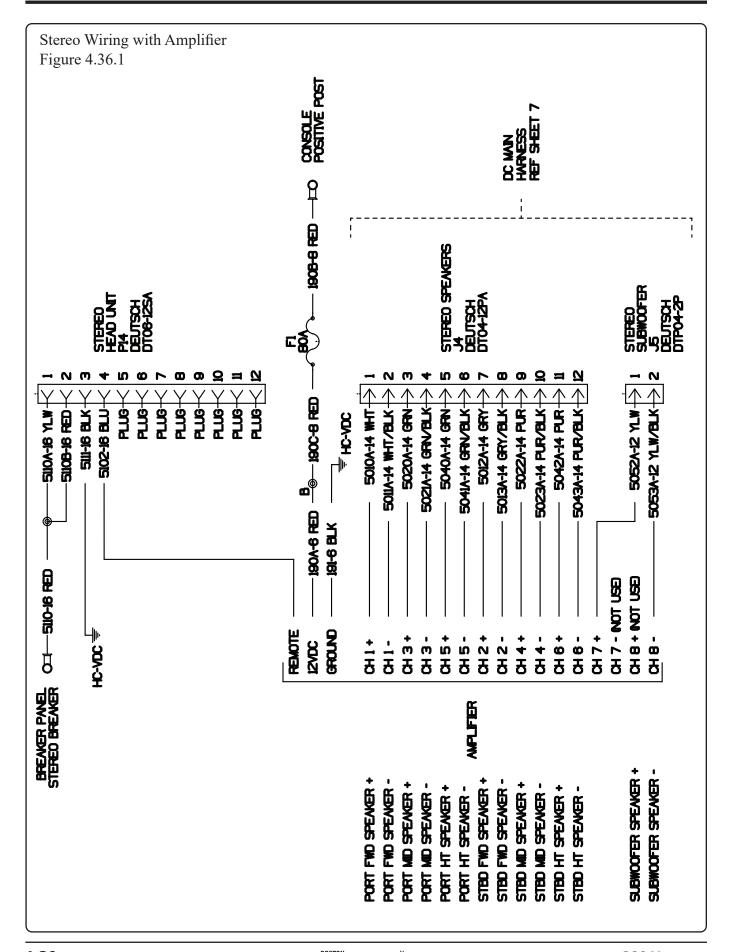


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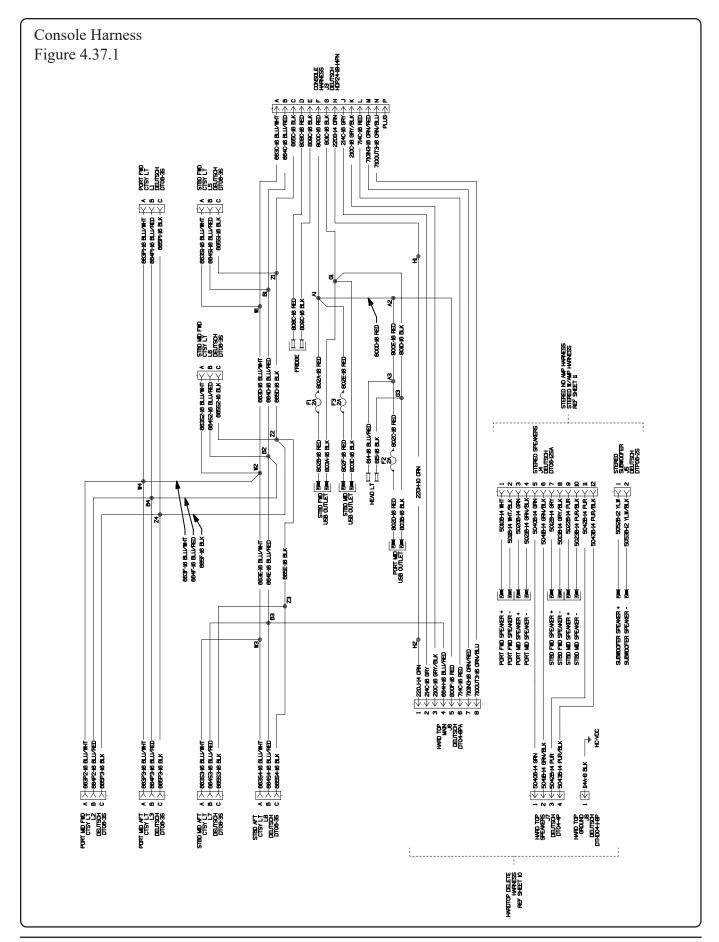
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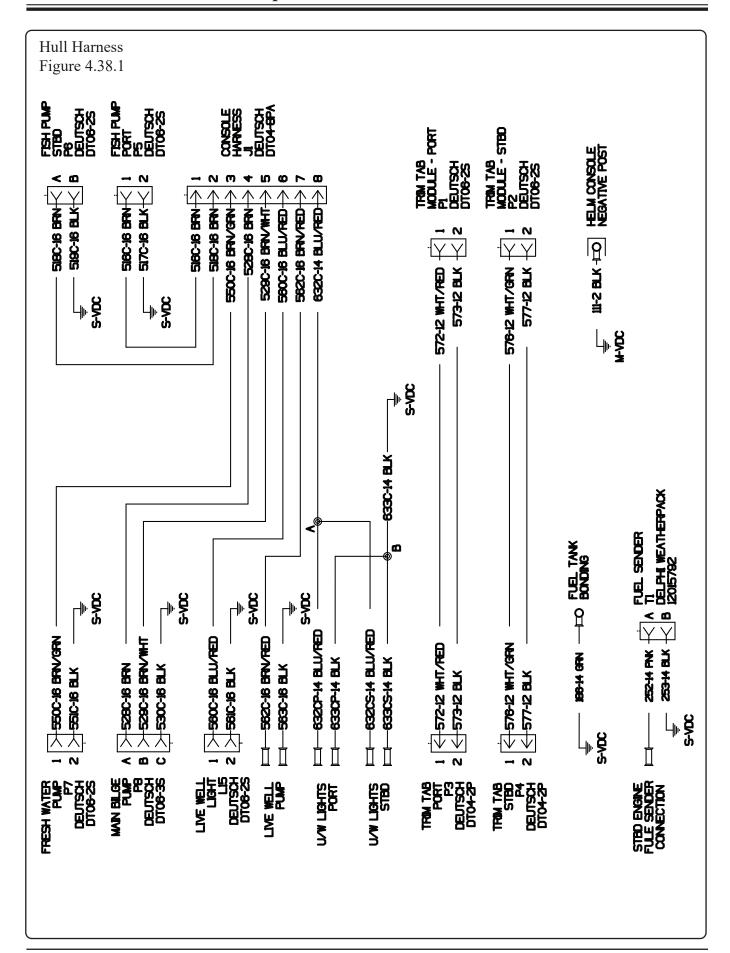
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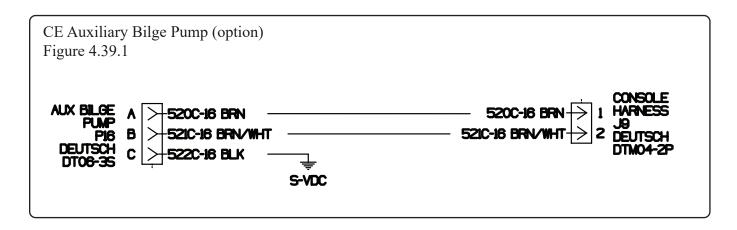
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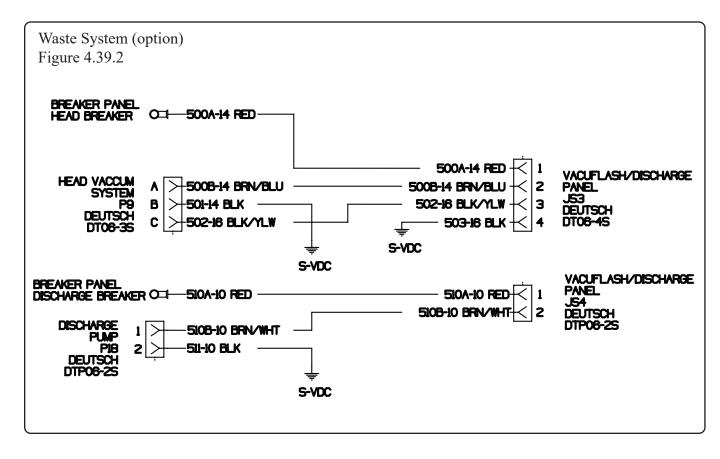


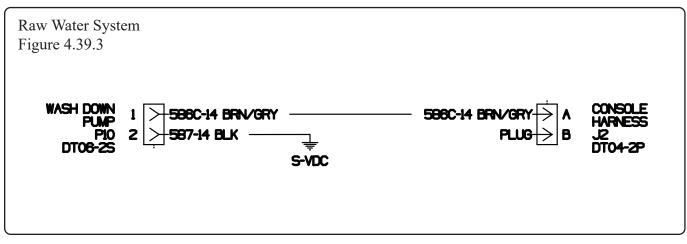
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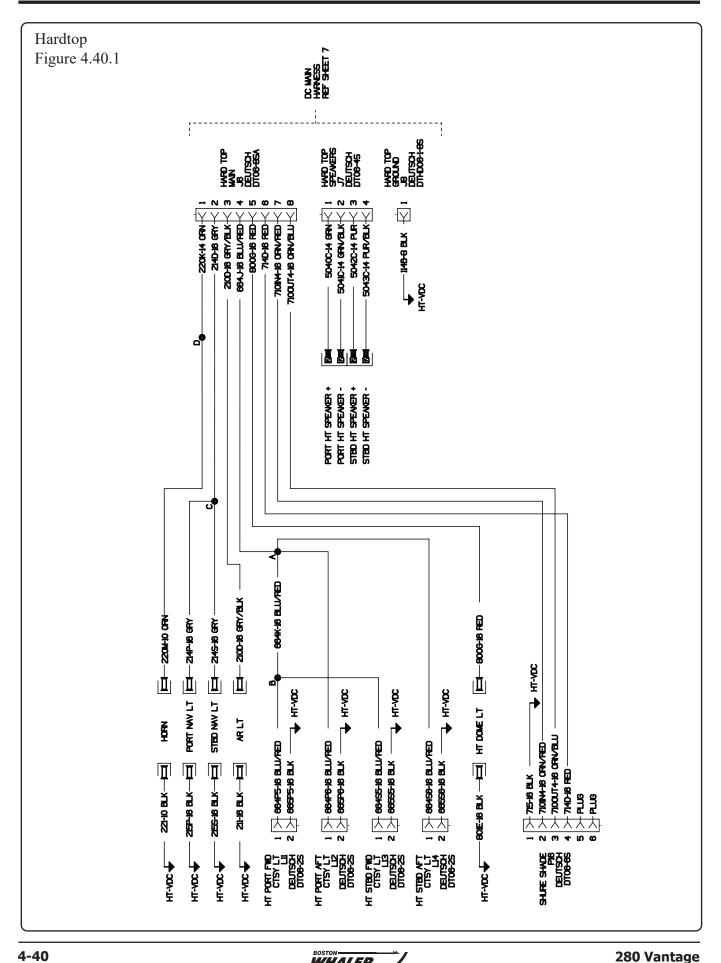




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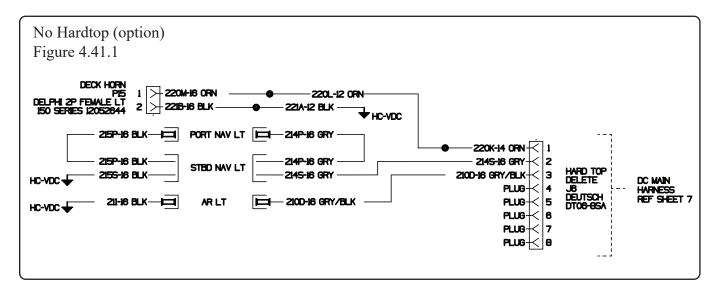


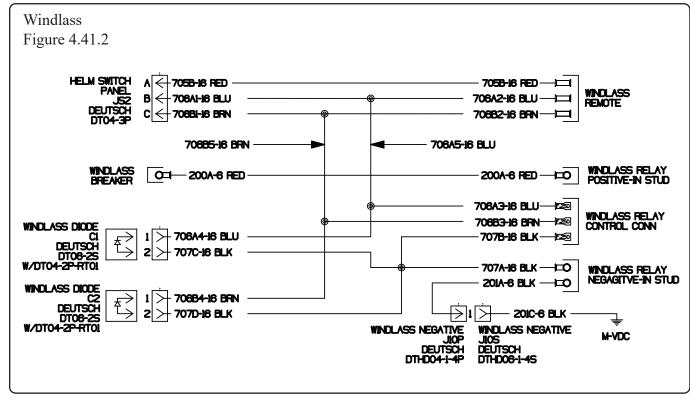
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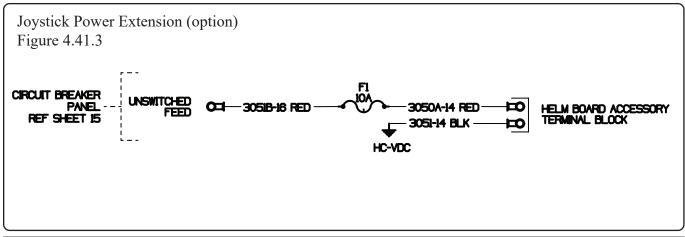


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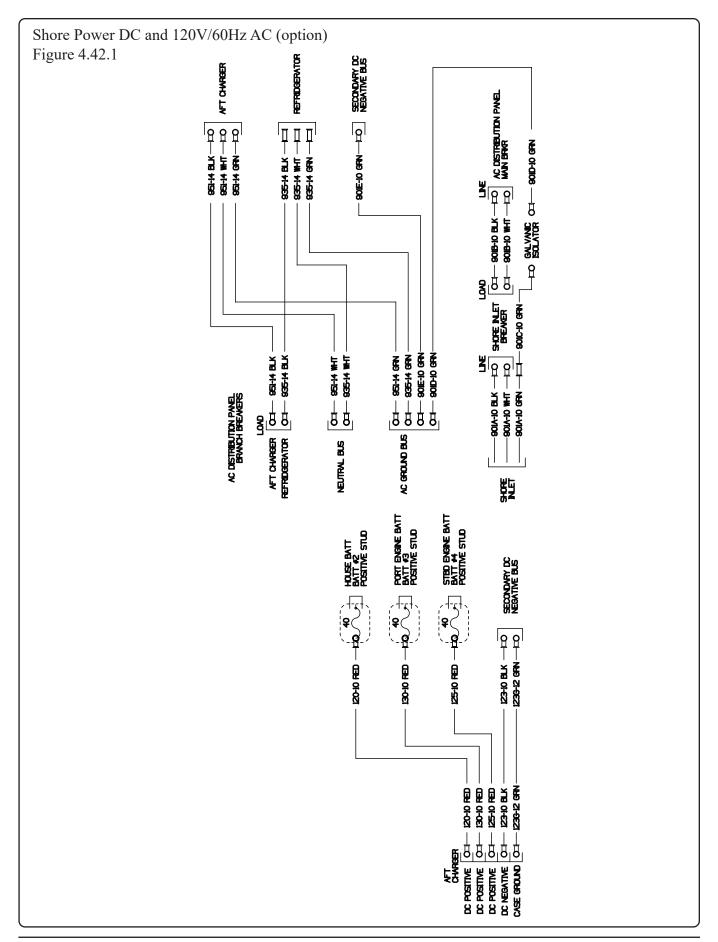




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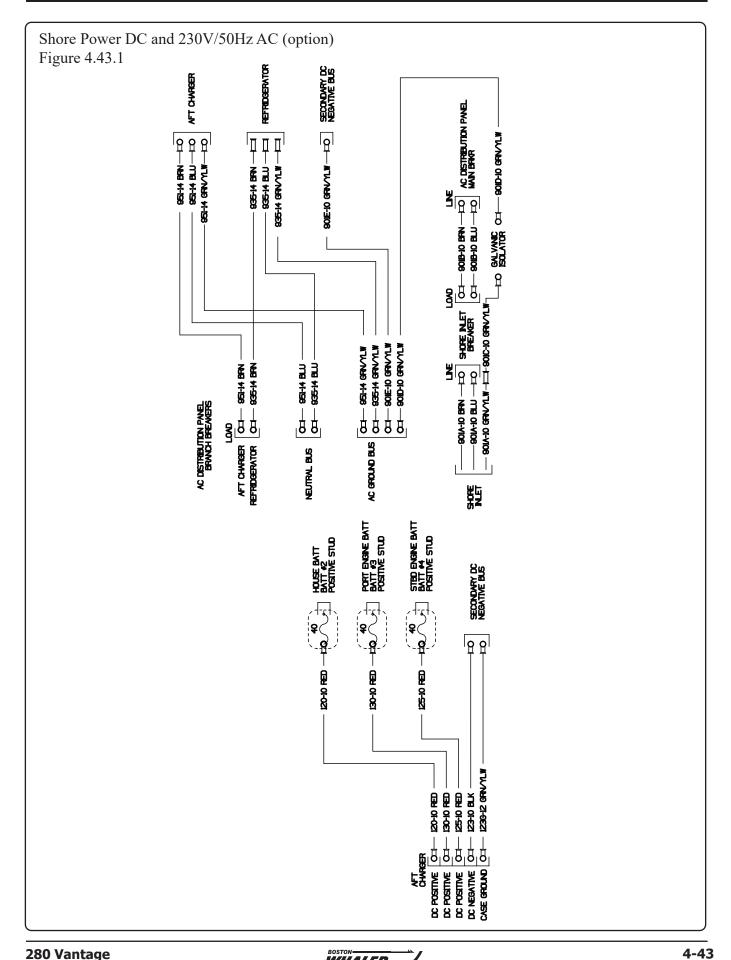
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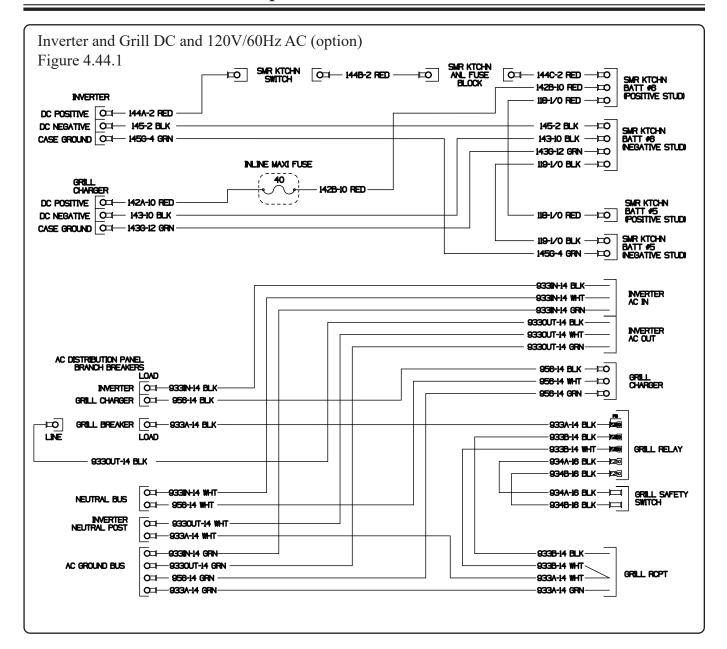
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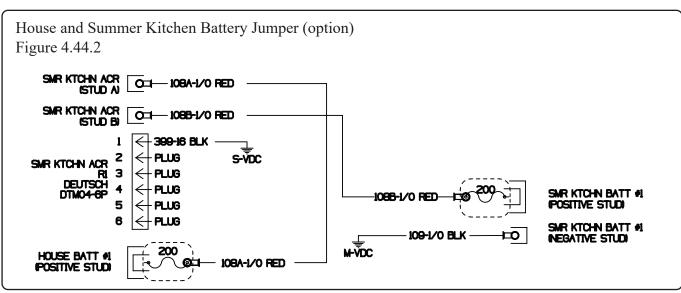


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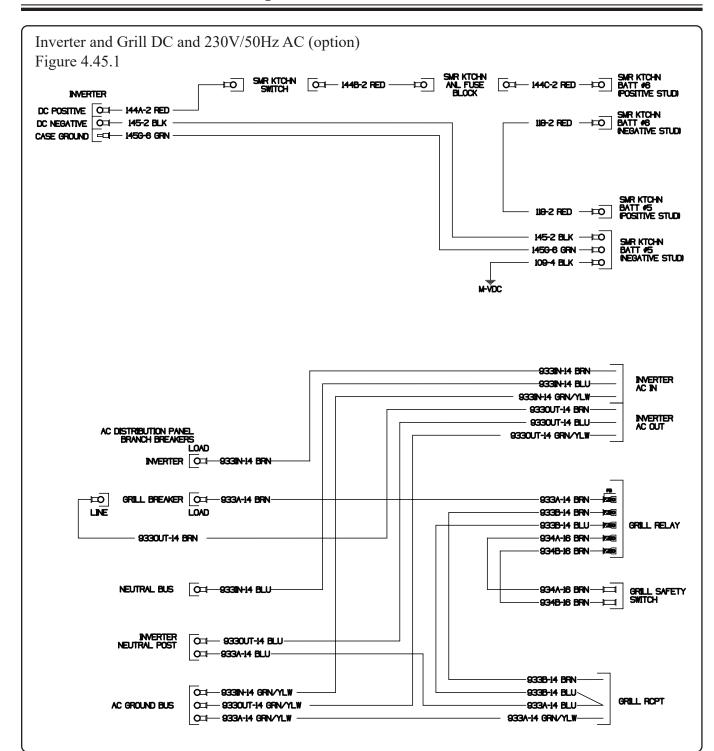




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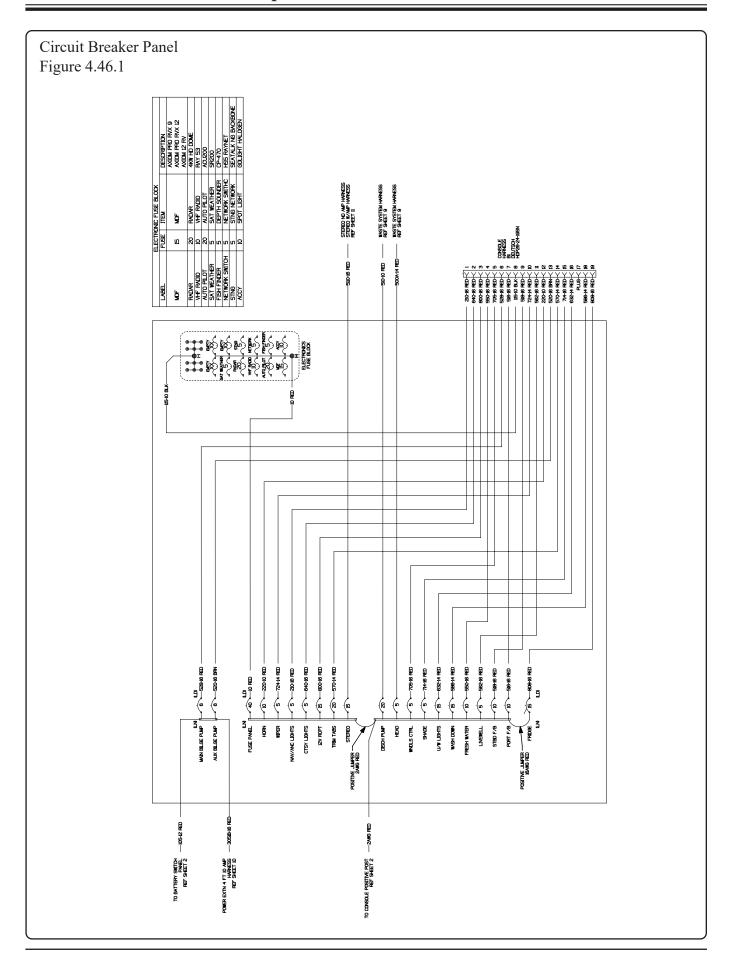








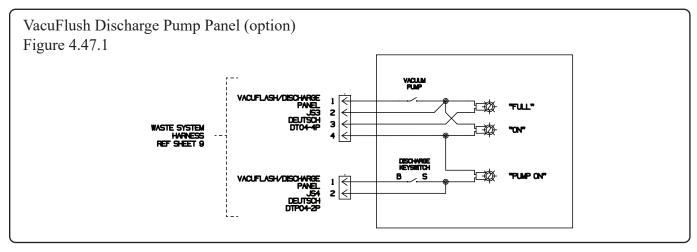
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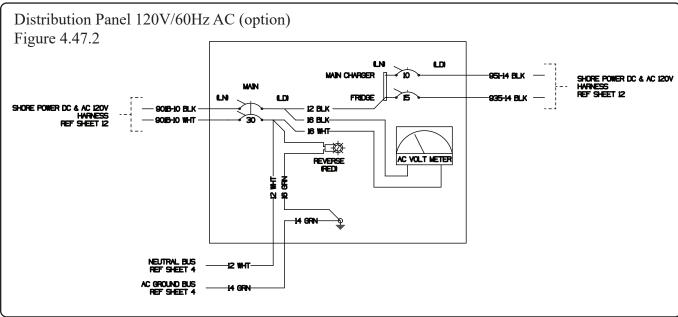


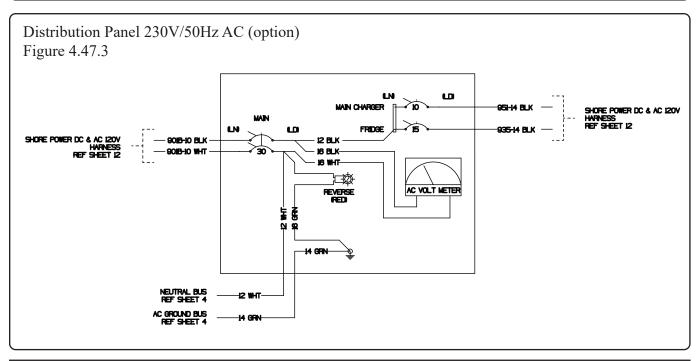










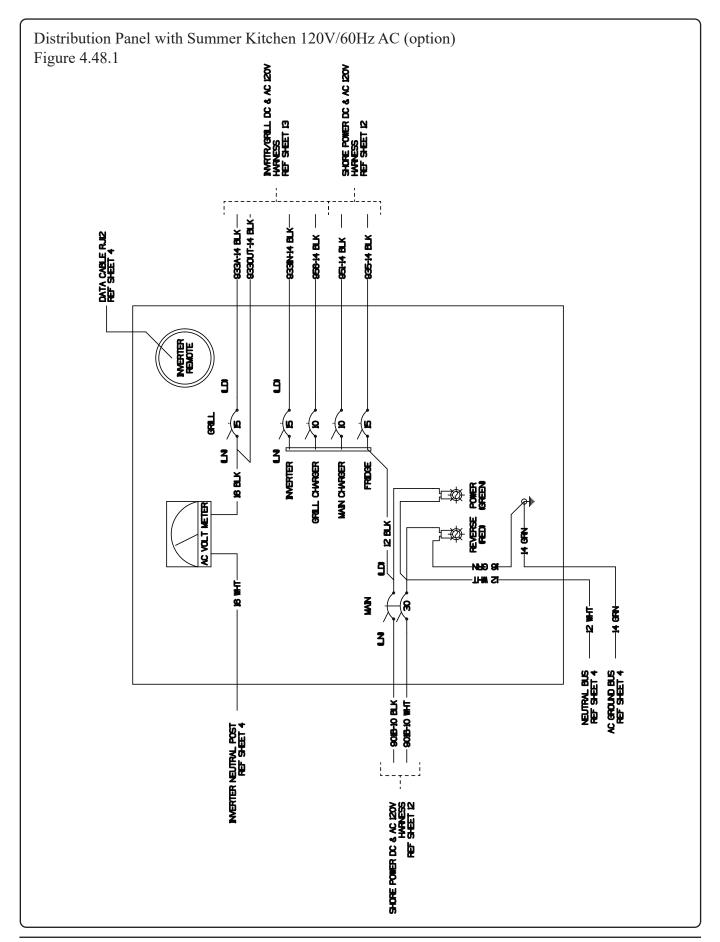






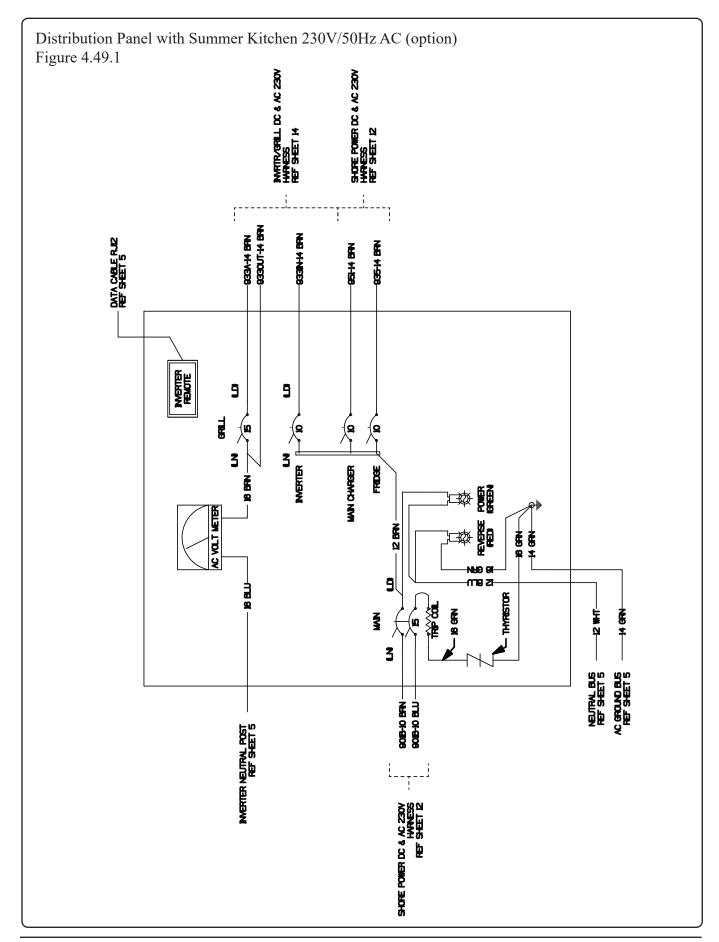


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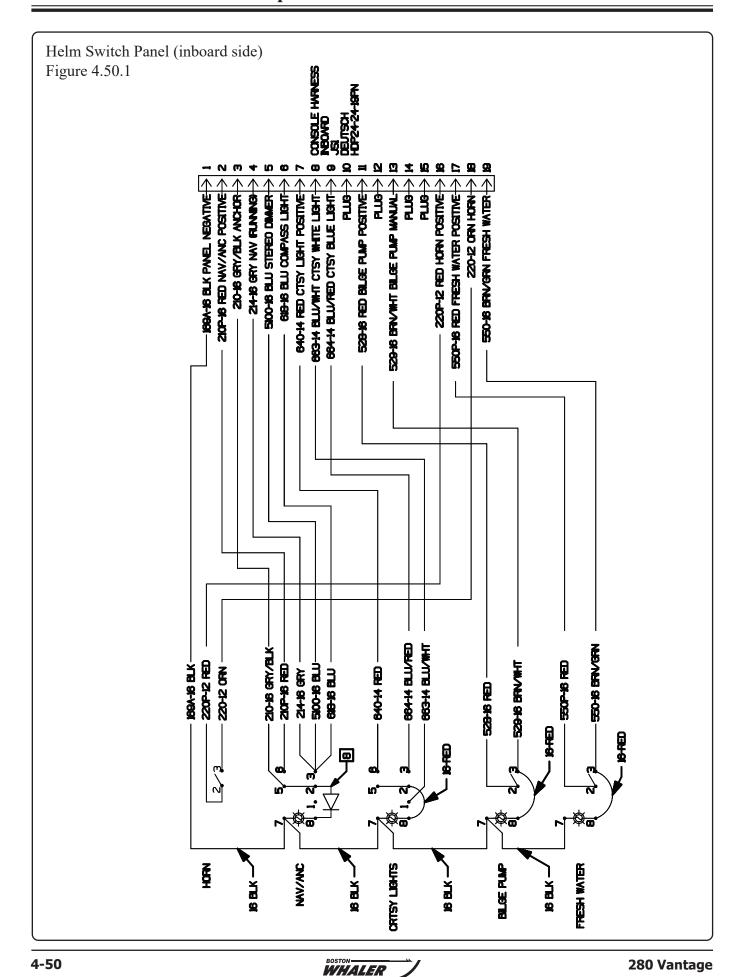


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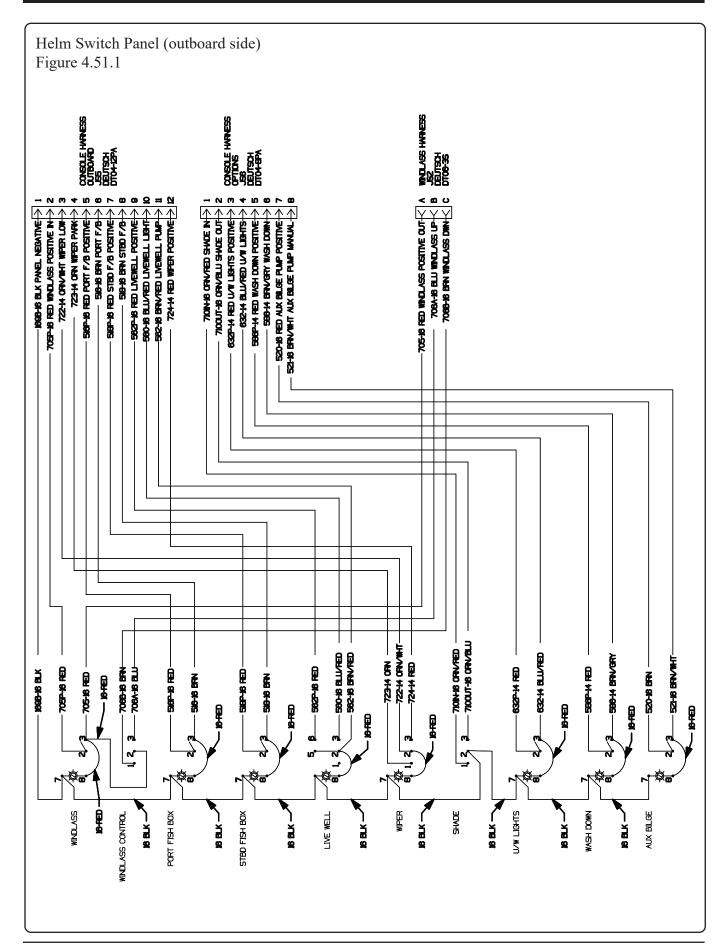
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#### **Routine Care and Maintenance**

### **NOTICE**

Refer to the individual manufacturers' manuals for important information regarding service, care and maintenance of your boat, equipment and components. Failure to do so may in some cases void the warranty.

Owner's manuals for your boat and each of the various components and equipment can be found in your owner's packet.

### **A** DANGER

When using solvents read all information from the solvent manufacturer regarding safety and handling of the material.

Wear proper protective equipment to ensure your personal safety.

Only use solvents in a well ventilated area and keep all solvents away from open flame and any other forms of ignition.

Routine inspection, service and maintenance of your boat. Boat systems and components are vital to assure your safety, as well as prolonging the life of your boat. You should develop regular routines for inspecting and servicing your boat.

Regularly inspect and test hardware, fittings, windshields, hatches, seams, etc. for proper seal. Reseal and/or readjust/tighten fittings, latches, etc. as needed.

The interval between necessary service or maintenance is highly variable, depending on the environment in which your boat will be used. For example, corrosion of boat parts and components will occur far more rapidly in a salt water environment than on a boat which is used in fresh water.

This section provides only general guidelines for the care and cleaning of your boat. It is your responsibility to determine whether maintenance and care intervals need to be accelerated due to your boat usage and/or operating environment.

#### Hull

Fresh water, saltwater and water temperature can all affect the types of growth that you will find on your boat's hull.

Any growth will affect the boat's performance and overall look. If it has been a while between inspections you might notice algae or slime growth on the hull. This can be cleaned with a coarse towel or soft bristle brush. The growth should be cleaned immediately after the boat has been removed from the water. If the growth is allowed to dry it will be much harder to remove.

Compounding may be necessary to remove more stubborn stains and chalking from the surface of your boat. If compounding is necessary it must be done after a thorough washing and prior to waxing. If the growth is more severe, you may need to enlist the services of a professional hull cleaning company. Contact your Boston Whaler<sup>®</sup> dealer for recommendations on a compatible rubbing compound or a professional hull cleaning company in your area.

### **Waxing Gel Coat Surfaces**

### **NOTICE**

Waxing of the exterior surfaces is recommended to be done at least twice a year to protect the gel coat.

Waxing is necessary to provide added protection to the gel coat. Periodic cleaning and waxing ensures your boat will be protected and look good longer.

Do not wax over dirt. Make sure the surface of your boat has received a thorough washing and rinsing and is clean before waxing. If a rubbing compound has been necessary, make sure that any minor scratches or surface pitting is cleaned of compound residue. Use a good quality carnauba wax or a high quality wax designed for marine gel coat. Apply several coats.

#### **Hull Maintenance**

If using a pressure washer to clean the hull and deck surfaces of your boat it is important that you use the wide fan nozzle only and move the spray head in a continuous motion. Do not concentrate the high

pressure on a small area of the boat surface and never use the fine pinpoint nozzle as the concentrated stream can cause damage to the surface of your boat.

It is also recommended that your refrain from pressure washing the console as high pressure may compromise the integrity of the electronics and gauges as well as other equipment installed on your boat. Also avoid pressure washing any caulk seams.

When staining from build-up does occur, use only cleaning agents that are recommended for marine gel coat for use on those stubborn stains. Never use an abrasive cleaner to wash your boat's hull. Never use an abrasive pad to attempt to remove stubborn stains. Never use strong solvents to clean.

Never apply tape or any other type of adhesives directly to the painted surfaces on your boat.

Use care when covering your boat's painted surfaces as tarps and other such covers can trap dirt and cause chafing. It is best to use a frame of either aluminum or wood to keep the cover up and allow air to circulate.

### **Hull Blistering**

Due to the quality of the materials used in the hulls of Boston Whalers, blistering is rarely ever seen. Blistering is caused by water soluble materials in the hull laminate. The fiberglass and resin structure of your boat is porous. However, intrusion of water into the gel coat will take some time. The effect of osmotic pressure allows water to impregnate below the gel coat and substrate thus forming a blister.

There have been extensive university studies funded by the United States Coast Guard regarding the cause and effect of blistering in the gel coat of fiberglass boats. Fiberglass blisters can form anywhere from near surface layers of the gel coat to very deep into the fiberglass structure. The damage can range from cosmetic to catastrophic. The studies seemed to point toward long term immersion of the hull in warm water as a primary cause of hull blisters. Stress cracks on the hull below the waterline also contribute to the formation of hull blisters.

#### **Prevention**

There are a variety of ways to prevent the formation of

hull blistering. Epoxy coatings can be applied to the hull, followed by hull painting. An alkyd-urethane-silicone marine paint can also be used to aid in the prevention of hull blisters.

Reducing the amount of time that your boat stays in the water also helps prevent hull blisters from forming. Use of a trailer or boat lift will reduce the likelihood of hull blisters forming. Be sure to use a bunk type lift or trailer for storage of the boat out of water.

Contact a Boston Whaler dealer for more information on the prevention and treatment of hull blisters.

### **Bottom Painting**

### **A** DANGER

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

### **NOTICE**

If blisters are present in the hull, they need to be properly cleaned and dried out before any barrier protection can be applied.

If your boat will spend most of its time in the water, painting the bottom of your boat's hull is a good way to slow the formation of hull blisters and to keep bottom growth (fouling) under control. If you will be trailering the boat to and from the water, you might want to forgo the painting.

The following is an abbreviated section on bottom hull painting. A Boston Whaler dealer should have information on properly painting your boat's hull or recommendations on qualified hull painters.

#### **Bottom Painting a Bare Hull**

### **A** CAUTION

Do not paint over sacrificial anodes. This action renders them useless and lead to deterioration of the underwater metal parts of your boat.

Some bottom paints contain metals that can cause corrosion of the outboard engine. Leave a minimum of 3/4" unpainted around all engine parts. Use only a paint specifically designed for aluminum engines as anti-fouling protection.

Since the boat has never been painted preparation is the key to successful hull painting. Take extra care and time in preparation before proceeding to paint. Begin by scrubbing the surface thoroughly with a stiff brush using an all-purpose marine soap and water to remove loose dirt and contamination. Flush with fresh water to remove all soap residue.

The gelcoat will have to be dewaxed of mold release wax before sanding can begin, otherwise the wax will be dragged into the scratches and will reduce the adhesion properties of the paint.

Remove any mold release wax that may be present using fiberglass surface prep solvent and a scrub pad. Scrub only a few square feet at a time. Flush with fresh water. If the water beads up or separates, continue scrubbing the surface. When the water sheets off, the wax contaminate has been removed.

After the dewaxing is complete, application of a primer coat is recommended. Pay close attention to scratches, nicks and dings in the surface. If necessary, fill any repair areas with a watertight epoxy filler. After filler is cured, sand with 80 grit paper until smooth. Remove the sanding residue using a fiberglass solvent wash. The paint can be applied after sanding and cleaning is complete.

### **AWARNING**

Proper ventilation and capture of the dust created by sanding is essential. The dust created by sanding is toxic and should not be inhaled. A proper fitting respirator must be used. Do not use a paper filter mask.

Follow the paint manufacturer's recommendations for application.

### **Bottom Painting a Pre-Painted Hull**

### **AWARNING**

Bottom paint is designed to resist algae growth which means it has chemicals embedded in the paint that are harmful if ingested. Take all necessary precautions required before painting or repainting your boat's hull.

If the hull bottom is already painted, you must be sure to test the paint's adhesion to the already painted surface. If the paints are incompatible, the new paint will not adhere to the hull bottom or the paint will "lift" the old paint. Never apply paint without first preparing the old painted surface following the paint manufacturer's recommendations.

Follow the paint manufacturer's recommendation for applying the paint. Humidity and weather will play a role in how and when the paint is applied. Several thin layers are better than one thick layer.

To determine the waterline, you will need to place the boat in water with a full load of fuel and gear. Mark the waterline and measure above the marked line 1" to 3" for placement of the tape line.

Make sure that there is enough paint left to cover areas that were not accessible, (slings, jack stands etc.) and paint accordingly. Follow the paint manufacturer's recommendation for do's and don'ts after the painting is complete.

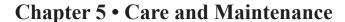
### **NOTICE**

Masking tape is not recommended for the types of paint you will be using.

### **NOTICE**

Painting your boat's hull will adversely affect the boat's speed and performance and may require re-propping if the maximum engine RPMs drop below the engine model/mfg recommended operating range.





#### **Rubrails**

The rubrail on your boat is constructed of an injected high density PVC vinyl material which laboratory tests have proven to be highly resistant to staining, fading and cracking.

As resilient as this material is, you still need to follow some basic maintenance precautions.

General maintenance requires a thorough cleaning with mild soap and water. Do not use any cleaning agents which contain chemicals.

Although the outer shell is tough and durable, there is a chance that it can be breached. Use care when docking or exposing the rubrail to conditions which may cause damage such as docking against heavily barnacle-encrusted pilings.

Some tears (cleanly sliced) can be repaired with a super glue type product.

Thoroughly clean and dry the affected area. Apply glue and hold the surfaces together.

Areas which have been torn or are affected by heavy abrasion will have to have the damaged section replaced. Please see your Boston Whaler dealer for this type of repair.

#### Fiberglass and Non-Skid

To protect your deck and non-skid areas from the deteriorating affects of the sun, oxidation, water spots and pollution, use a good quality fiberglass and non-skid deck wax every two to three months.

When applied to your deck and non-skid areas, as recommended by the manufacturer, the wax forms a protective non-slick surface which will keep debris from sticking. Dirt, soot, bird droppings, and even fish blood will rinse right off.

### **NOTICE**

Never use abrasive cleaners, detergents or soft scrub type cleaners to wash your boats surfaces.

Never use abrasive pads, brushes or sponges to attempt to remove stubborn stains.

Never use strong solvents or detergents which contain chlorine.

#### **Stainless Steel**

The cleaner your stainless trim and fittings can be kept, the greater the assurance of optimum corrosion resistance. Without proper care even the best stainless steel will corrode.

Stainless steel is strong and corrosion resistant, but still requires maintenance to keep its appearance. Frequent routine cleaning of your stainless steel with a mild soap and water solution and coating with a good grade cleaning wax will help maintain the finish.

- Wash with mild soap and lukewarm water.
- Dry thoroughly.
- Apply cleaning wax with a soft, dry cloth.
- Allow wax to dry, then polish and buff.

Even the finest cleaning powders can scratch or burnish a mill-rolled surface. On polished finishes, rubbing or wiping should be done in the direction of the polish lines, not across them.

Crevice corrosion, a brownish coloring which occurs where two pieces of stainless hardware meet is caused by impurities in water and air. It can be easily cleaned with a grade marine polish using a sponge, cloth or small bristled brush (for nooks and crannies).

### **NOTICE**

Never use abrasive cleaners, detergents or soft scrub type cleaners to wash your boats surfaces.

Never use abrasive pads, brushes or sponges to attempt to remove stubborn stains.

Never use strong solvents or detergents which contain chlorine.

Never use silver cleaners.

#### **Seats**

Always wash metallic parts with soap and water and rinse thoroughly with fresh water. Once dry, apply a light coating of lubricant to protect moving parts.

Check for loose or damaged hardware and tighten or replace as necessary.

#### **Aluminum**

Preventative maintenance is essential to life of the metals on your boat. The presence of salt particles and moisture is the major cause of white spots, pitting and corrosion.

The use of harsh chemicals can also cause deterioration. Manufacturers and applicators of protective coatings will not warrant protective coatings on metals in the marine environment. Proper owner maintenance is required to reduce deterioration which will result in most cases by failure to wash down and wipe dry after each use and/or the use of abrasive, acidic or other improper cleaners.

Wash completely using a soft cloth and mild detergent to remove salt particles. Hosing alone will not dislodge all particles. Do not allow soap to dry as it may cause stains on coated surfaces. Make sure to wash and dry the full circumference of aluminum parts.

Apply an aluminum protectant at least twice each year, more frequently as conditions warrant. Neglect will cause pitting of the surface which cannot be reversed.

Inspect and repair or replace all damaged nylon

bushings, washers or other hardware designed to prevent contact with dissimilar metals.

Whenever electrical or electronic changes are made to the boat, a qualified marine technician should check aluminum parts for stray currents. Make sure all electronic equipment is properly grounded with adequate sized wire.

#### **Cushions**

## **A** CAUTION

Solvents are flammable. Exercise proper care. Wear rubber gloves during all cleaning activity.

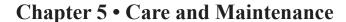
Use caution when cleaning around buttons, stitching and wooden or decorative trim as these solvents could seriously damage such areas.

Saltwater, salt residue, dirt, ultra-violet rays etc. will take their toll on vinyl products causing them to lose their luster and texture.

The cushions on your boat are made of durable OMNOVA vinyl upholstery which is protected by a finish called PreFixx. PreFixx will keep your cushions looking new far longer than most other vinyl upholstery. To clean cushions:

- Remove ordinary dirt and smudges with a mild soap and water solution. Dry with a soft, lintfree cloth or towel.
- More difficult stains can be cleaned using rubbing alcohol (isopropyl alcohol).
   Rinse cleaned area with fresh water and dry with a clean, soft, lint-free cloth or towel.
- Seemingly permanent stains like ballpoint ink can be cleaned with active solvents such as nail polish remover when applied with a soft cloth or damp sponge and rubbed. Rinse cleaned area with fresh water and dry with a clean, soft, lint-free cloth or towel.

The vinyl material and superior finish has been tested to resist heavy abrasion. Complete cleaning instructions are included in the owner's packet. Read



all information provided by the cushion manufacturer regarding the proper cleaning and maintenance.

Your cushions are not waterproof. They are constructed of open-cell foam and will absorb and hold water. Do not leave the cushions in standing water or exposed to heavy, prolonged rain.

If, in the event your cushions become waterlogged, remove the foam from the cushion, press as much water as you can from the foam and allow to air dry.

To prevent mildew, keep the vinyl dry and make sure that moisture does not accumulate between the cushions.

### **Instrument Gauges**

When gauges are exposed to a saltwater environment, salt crystals may form on the bezel and plastic covers. Remove the salt crystals with a soft damp cloth. Clean with a mild household detergent or plastic cleaner.

Never use abrasives or rough, dirty cloths to clean plastic parts. A mild household detergent or plastic cleaner should be used. Wipe clean with a damp chamois.

FOR MORE INFORMATION, CONTACT MERCURY MARINE CUSTOMER SERVICE AT 920-929-5040

#### **Canvas**

### **NOTICE**

Do not use detergents, bleach or solvents to clean your canvas.

To keep your canvas and metal parts in good working condition and in good appearance, you will need to keep them clean.

The fabric should be cleaned regularly before substances such as dirt, pollen, etc. are allowed to accumulate on and become embedded in the fabric. The canvas can be cleaned without being removed from the installation.

Chafing, fiber wear from dirt and grit and deterioration from ultraviolet light can cause your canvas to degrade over time.

#### **Maintaining Appearance**

 After each use, especially if used in salt water areas, rinse the canvas completely with fresh cold water.

#### On a regular basis

- Brush off any loose dirt, pollen, etc.
- Hose down with fresh cold water and clean with a mild solution of a natural soap in lukewarm water (maximum 100°F / 38°C).
- Allow the canvas to soak. Do not allow the soap to dry.
- Rinse thoroughly with fresh water.
- Let the canvas dry completely. Do not store any of the canvas pieces while wet.

The effects of ultraviolet light can sometimes be reduced by chemical treatment of canvas items.

Consult your Boston Whaler dealer or check your canvas manufacturer's manual before using any chemical treatments on your canvas.

#### **Stubborn Stains**

Soak fabric for approximately twenty minutes in a mild solution consisting of no more than 1/2 cup (4 oz.) of bleach and 1/4 cup (2 oz.) of natural soap per gallon of lukewarm water (not to exceed 100° F / 38° C).

Rinse thoroughly in cold water several times. Allow the fabric to air dry completely.

### **NOTICE**

Failure to remove all of the soap solution can cause deterioration of seams and prevent fabric from proper retreating.

Retreat the fabric using an air curing product such as 303 High Tech Fabric Guard to ensure water and stain repellency.

All canvas should be stored flat or rolled in a clean, dry space.

### **Zippers and Hardware**

Lubricate zippers and fasteners periodically with a clear silicone spray. In the absence of silicone spray, a wax candle can be used to lubricate the zipper track.

Replace any missing fasteners or any fasteners showing signs of corrosion.

### **NOTICE**

Do not use petroleum based products, such as petroleum jelly, on the zippers or fasteners.

### **Acrylic Windscreen**

 Rinse windscreen thoroughly with clear water to remove any dust, dirt particles, salt water or environmental agents before applying cleaning products.

Use your bare hand, with plenty of water, to feel and dislodge any stuck-on dirt or foreign particles.

This should be done frequently to avoid build up of salt water, dirt and other environmental contaminants.

- Using a soft non-abrasive cloth, wash windows inside and out with a mild soap (Woolite, Joy, Palmolive, etc.) and water solution. Rinse completely with cool water.
- Do not use detergents.
- Blot dry with a soft cloth or chamois to prevent water spots.

The use of a polycarbonate protective cleaner/restorer is recommended to keep your acrylic scratch resistant, clean and minimize the deteriorating effects of sunlight.

### **NOTICE**

Never use a dry cloth or duster or glass cleaning solutions on acrylic.

Do not use solvents such as acetone, silicone spray, benzine, carbon tetrachloride, fire extinguisher fluid, dry cleaning fluid, lacquer thinner, glass cleaning solution or harsh detergents on acrylic.

The above substances will attack the surface of the acrylic.

### **Solid Surface Countertops**

Corian brand, solid-surface countertops were developed to be durable and long lasting.

#### **Routine Care**

Soapy water, ammonia-based cleaners or commercial solid surface cleaners, if used routinely, will remove most dirt and residue from the countertop.

#### **Minor Cuts and Scratches**

Rub the scratch in a straight line with a fine grit sand paper periodically switch rubbing direction 90 degrees until all of the scratch is removed. Rinse top with water. Select the next lighter grit paper and rub over a large area to blend in the sanding. Continue the process using successively finer grits until desired gloss level is achieved. Wipe surface with damp cloth and let dry.

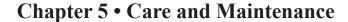
#### **Heat Damage**

Corian has excellent heat resistant properties. However, as with all countertop materials, it is important to minimize direct exposure to intense heat. We recommend the use of trivets or hot pads when placing hot objects on the countertop.

#### **Other Damage**

In most cases Corian can be repaired if accidentally damaged. However, to prevent any permanent damage to your countertop avoid exposing the surface to strong chemicals, such as paint removers, oven cleaners, nail polish remover, etc. If contact occurs quickly flush the surface with water. Avoid cutting directly on the countertop.





#### Refurbishing

Over time and use your countertop may acquire a patina, changing the appearance of the finish. Using a general countertop polish rub the entire surface in a circular motion, rinse with clear water and wipe dry.

#### **Powder Coating Touch-Up**

If it is necessary to apply touch-up paint on areas of the finish that have been scratched or damaged the powder material supplier should be contacted for their recommendation of the proper touch-up material to use.

Single component acrylic enamel (spray enamel) touch-up paint is commonly used for repair of minor damage in the powder coated finish. In some cases a two-component catalyzed paint system may be required to achieve the desired repair. In all cases, perform a color and adhesion test in an inconspicuous area of the finish to assure compatibility before applying the paint to the damaged area.

#### **Touch-up Procedure**

- Clean surface of dirt, oil, grease, etc.
- Sand lightly with 400 grit wet/dry abrasive paper.
- Remove sanding dust with a lint-free cloth dampened with mineral spirits.
- Temperature of surface and paint must be at room temperature (between 70 to 90 degrees is ideal).
- Apply paint to minor scratches by spraying a small amount of paint into the container's cap. Using a small brush, carefully apply the paint sparingly to the properly prepared surface. Do not apply heavy coat all at once. Apply several light coats allowing the paint to dry until tacky between each coat

### **NOTICE**

For the best results, use Orbit Industries touch-up paint, RAL 9010 Pure White.

**Orbit Industries: 800-448-3885** 

### **NOTICE**

The visual, mechanical, chemical as well as corrosion protective and weather resistance properties of repaired areas ARE NOT equal to those of the original powder coating and are not suitable for long term performance.

### **NOTICE**

If painting over exposed or bare metal, a chemical pretreatment process and/or primer sealer is recommended.

Follow manufacturer's recommendations.

### NOTICE

It is highly recommended that you do not penetrate the powder coating on your boat by securing equipment or other objects onto the coated surface. If necessary, contact the manufacturer for repair recommendations.

FOR MORE INFORMATION, CONTACT APEX POWDER COATING, INC CUSTOMER SERVICE AT 864-288-2739

### **Long Term Storage and Winterization**

Long periods of storage, winter lay-up and/or nonuse, common to boats, create unique problems. When preparing to store a boat for extended periods of two months or more it is best to make sure that the boat and its systems are properly conditioned for such extended periods of non-usage.

The guidelines presented on the following pages give basic instructions on winterizing your boat and boat systems. If inexperienced with the process of winterization it is best to hire the services of a professional.

In addition, always consult the owner's manuals of the various systems and equipment on your boat for the manufacturer's recommendations on winterizing and long term storage.







#### **Engine**

### **A** CAUTION

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

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

- Replace engine oil and filter, running the engine to drain out as much old oil as possible.
- Flush engine with fresh water using flush muffs or similar device attached to raw water pickup.
- Let all water drain from engine.
- Fog engine while running. Spray until it stalls.
- Run fuel which has been treated with conditioner and stabilizer through engine.
- Replace lower unit gear oil. Check for moisture in old oil, a sign of deteriorating seals.
- Remove prop and grease shaft and threads.
- Treat all grease fittings with recommended lubricant.
- Lightly lubricate exterior of engine or polish with a good wax.
- Check engine mount bolts; ensure bolts are torqued to 55 ft/lbs.
- Follow all recommendations in engine manufacturers operation manual.

#### **Fuel System**

Tank(s), hoses, and fuel pumps should be treated to help prevent the formation of varnish and gum.

Temperature extremes will cause condensation to accumulate in an empty or partially filled fuel tank leading to fuel contamination and/or premature wear of your system.

Fill the tank completely (100 percent) full and add fuel stabilizer and conditioner, following the manufacturer's recommendations, to provide fuel stability and corrosion protection.

### **NOTICE**

Pay particular attention to the information provided in ethanol-blended fuel in Chapter 3 of this manual.

#### **After Long Term Storage**

At least annually, inspect your fuel system for leaks. You should check the fuel tank area below the floor for liquid fuel, or a strong odor of gasoline before each outing, but at least once a year you should open each access port to any of the fuel system components to inspect them for leakage. If any leakage or seeping of fuel around any fuel system fitting is found, or there is a strong odor of gasoline, Do not turn on or off any electrical appliances or attempt to start your boat; open all hatches to allow the compartment to ventilate, and call a qualified service/repair person for inspection and repair of the leak before using your boat.

#### **Electrical System**

- Check all connections and tighten if necessary.
- Apply an anti-corrosion spray on all connections.





#### **Batteries**

### **NOTICE**

Follow the manufacturer's recommendations for long term storage of your battery(s).

Engine and house electrical systems on our boats have become increasingly more complex and are reliant on a good source of power. The house source of power typically comes from a battery bank comprised of two or three batteries in parallel. The charging source for the batteries while away from the dock is the engines; or if equipped a generator a generator and the generator is on, battery chargers. As the engines/generator are providing a charge output to the house bank through the automatic charging relays (ACRs), keep in mind the following battery recommendations

### Mixing Fresh, Used and Dead Batteries

The fresh battery will deliver current into a dead battery which has high resistance. This results in excessive heat in the used/dead battery, which can cause further damage, leakage, or rupture. A used battery will drain energy from the new one, reducing the total amount of battery power available.

### **Mixing Battery Types**

Different battery types are designed for different purposes. Mixing an AGM battery with a lead acid battery will not improve performance. This results in reduced performance, may damage your devices, or cause battery leakage or rupture.

#### **Mixing Battery Brands**

Different battery brands may not have the same specifications like marine cranking amps (MCA) or cold cranking amps (CCA). This results in excessive heat, which may then cause damage, leakage or rupture in one of the batteries. We recommend using the same type of batteries throughout a boat.

#### **Deck**

Clean the deck with soap, hot water and a stiff brush to clean up any oil spills.

#### **Drainage**

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

#### **Protecting Valuables**

Remove any valuables or anything that can be easily removed from the boat such as electronics, lines, PFDs, fenders, cushions, etc. and store elsewhere.

#### Cove

When covering your boat it is best to use a frame of either aluminum or wood to keep the cover up. This allows air to circulate and discourages water from pooling on the cover.

### **NOTICE**

Do not use a bimini top in lieu of a cover. Damage and aging will occur while providing no protection for your boat.

Vents along the entire length of the cover allows condensation to escape. Placing a series of foam pads between the hull and cover also aids in circulation and reduce condensation. To help keep your boat dry and mildew free, consider placing commercial odor and moisture absorbing products under the cover.

#### **Trailer Storage**

Repeatedly immersing the trailer in water during boat launching can cause a variety of problems. Water seeping into the wheel hubs will cause the grease to emulsify and can prematurely corrode the bearings. Check with the trailer manufacturer for scheduled maintenance of your trailer.

### **Environment**

Antifreeze and other winterizing fluids can be toxic to aquatic life and cause harmful effects to plant life. Improper disposal of, or spillage of antifreeze and/ or any winterization fluids can cause environmental problems when allowed to empty into waterways or on the ground. Furthermore, it is illegal, punishable at minimum by fines. Used antifreeze or any winterization fluids, should not be disposed of into sanitary sewers or publicly owned treatment plants. Persons who have any questions regarding recycling antifreeze or other toxic fluids should write or call their state's EPA office.

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#### **Reinforcement Locations**

This boat has been manufactured with reinforcement in various locations throughout the deck (see Figures 5.11.1 and 5.12.1). In the event you wish to add equipment to your boat which requires you to penetrate



Do not attempt to secure equipment in any location other than those that are illustrated.

the deck with fasteners, the diagram above illustrates the size, location and type of the reinforcement available. The chart below provides a description of the material and recommended fasteners to secure equipment.

Materials and Locations Figure 5.11.1

Reinforcement	Construction	<b>Equipment Weight</b>	Fastener Type*
Plywood	Standard boat building material	Light	Self-tapping screws
Trevira	Thick spun bound polyester fabric	Light	Sheet Metal screws
Sparalloy	High density plastic	Medium	Self-tapping screws
Phenolic	Fiberglass reinforced composite board	Heavy	Drill and tap

<sup>\*</sup> In all cases it is recommended to drill and countersink a pilot hole to prevent damage to the gelcoat surface.

#### **Reinforcement Location Dimensions (see Figure 5.12.1)**

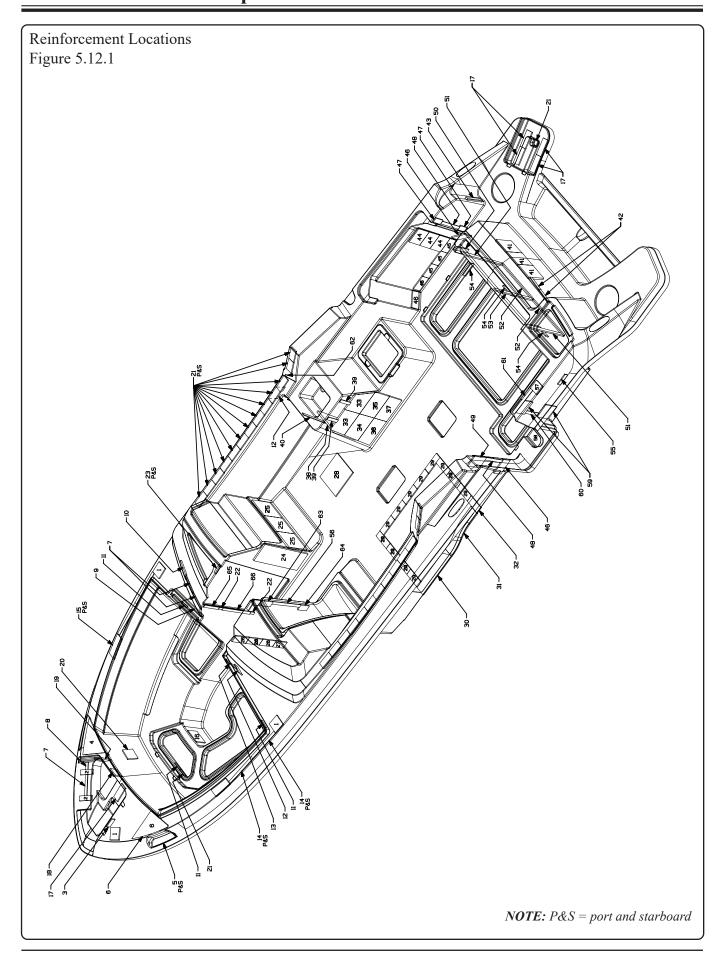
1	1/2" phenolic 5" × 5"	23	3/8" phenolic 1.25" × 4"	45	1/2" plywood 4" × 6.5"
2	1/2" phenolic 2" × 7"	24	3/4" plywood 8.5" × 24"	46	1/2" phenolic 4" × 7"
3	3/8" phenolic 2" × 4"	25	3/4" plywood 10" × 10"	47	1/2" phenolic 2" × 4"
4	1/2" phenolic 12.75" × 15.125"	26	1/2" plywood 3" × 9"	48	1/4" plywood 1.25" × 10"
5	1/2" phenolic 3" × 13.625"	27	1/2" plywood 3" × 6.5"	49	1/2" phenolic 5" × 7"
6	1/2" phenolic 11.5" × 15"	28	1/2" phenolic 12.5" × 12.5"	50	1/2" plywood 1.75" × 7"
7	1/4" plywood 1.25" × 8.5"	29	1/2" phenolic 2.75" × 8"	51	1/2" plywood 2" × 21.5"
8	1/4" plywood 1.25" × 3"	30	1/2" phenolic 4.5" × 20"	52	1/2" plywood 1.125" × 22.250"
9	1/2" plywood 1" × 20"	31	1/2" phenolic 6.875" × 20"	53	1/2" plywood 1.5" × 21.875"
10	1/2" plywood 3.5" × 7"	32	1/2" phenolic 2.75" × 7.25"	54	3/8" phenolic 1.75" × 4"
11	3/8" phenolic .75" × 4"	33	3/4" plywood 8.375" × 11"	55	3/8" phenolic 1.75" × 5"
12	3/8" phenolic 3" × 4.75"	34	3/4" plywood 8.375" × 11.75"	56	1/4" plywood 1.25" × 16.5"
13	1/4" plywood 1.25" × 9"	35	3/4" plywood 8.375" × 11.25"	57	1/2" phenolic 4" × 4"
14	1/4" plywood 1.25" × 15"	36	3/4" plywood 7.125" × 12.375"	58	3/8" phenolic 4.125" × 7.875"
15	1/2" phenolic 3.75" × 8.5"	37	3/4" plywood 7.125" × 11"	59	1/2" phenolic 6" × 7"
16	3/8" phenolic 5" × 7"	38	3/4" plywood 13" × 14"	60	1/4" plywood 1.25" × 8"
17	1/2" phenolic 3" × 7"	39	1/4" plywood 1.25" × 5.5"	61	1/4" plywood 1.25" × 12"
18	1/2" plywood 4" × 4"	40	1/4" plywood 1.25" × 14"	62	1/4" plywood 1.25" × 6.75"
19	1/2" plywood 3.5" × 6"	41	3/4" plywood 8" × 8"	63	1/2" phenolic 2.5" × 11"
20	1/2" plywood 5" × 5"	42	1/4" plywood 1.25" × 7"	64	1/2" phenolic 2.5" × 5"
21	3/8" phenolic 2.125" × 2.125"	43	3/4" plywood 1.5" × 8"	65	1/4" plywood 1.25" × 7.75"
22	3/8" phenolic 1" × 2"	44	1/2" plywood 6" × 7"	66	1/4" plywood 1.25" × 14.75"

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