



# ADRIAN J. VOLNEY, INC.

**Marine Surveyor-Yacht Consultant**

655 Barnacle Court, Englewood, FL. 34223

Mobile: (941) 356-3639. | Website: [adrianvolney.com](http://adrianvolney.com)

**Active Memberships: ABYC, NFPA, SNAME, BOAT US, TBM**

## 2017

**Grady White 251 Coastal Explorer (CE)**

**"No Name"**



**GENERAL CONDITION, INSURANCE RISK  
AND VALUE SURVEY**

**GENERAL CONDITION, INSURANCE RISK AND  
VALUE SURVEY**

**of the vessel**

**"No Name"**

**a**

**2017**

**Grady White 251 Coastal Explorer (CE)**

**CONDUCTED BY**

**Adrian J. Volney  
Marine Surveyor**

**Adrian J. Volney Inc.**

**PREPARED EXCLUSIVELY FOR:**

**Name**

**February 15, 2024**



# REPORT OF SURVEY

## Adrian J. Volney, Inc.

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February 15, 2024

File: 2478004

### General Condition and Value Survey

To: Name  
Address  
City, ST Zip

Mobile Phone: (###) ###-####  
Email: name@gmail.com

#### I. GENERAL

Name of Vessel: **"No Name"**  
 Hull Number: **#####**  
 Registration No: **FL #### AA** [DCL# | Exp 3/2023]  
 Type: 251 CE (Coastal Express)  
 Survey Conducted At: Gasparilla Marina in Placida, FL  
 Designer: Grady White Boats  
 Builder: Grady White Boats, Greenville, NC USA  
Model Year: **2017**

LOA: 24'7"	Beam: 8'5"	Draft: 1'2" dry
Approx. weight: 3,550 lbs. dry		

**Estimated Fair Market Value: (Approximately \$###,###.00)**

*Market value based on vessel's structurally and mechanically in very good condition, **considered extremely clean**, fixed extra cruising gear on board, good quality electronics as seen, and with all major recommendations complied with as per hull survey.*

**Replacement Value: (Approximately \$###,###.00)**

**Vessel to be used for:** Private and Pleasure  
**Navigation Limits:** Inland, Coastal, Offshore Islands  
*(Note: See Insurance Policy)*

## II. HULL

### Topsides:

Molded fiberglass with sandwich core construction and gel coat finish. **[Harbor Blue]**

**Condition:** Sound where inspected; however, now needing cleaning, compounding, waxing, and buffing out.



**Decks & Superstructure:** Molded fiberglass with sandwich core construction and gel coat finish.

**Condition:** Sound to the hammer where sounded.



### Hull Bottom:

Molded fiberglass with sandwich core construction and white gel coat finish. **[Sea-V-Hull]**

**Condition:** Sound to the hammer where sounded.



### Deadrise Aft:

16°

### Frames & Fastenings:

Partial bulkheads and partitions with fiberglass bondings.

### Interior:

Fiberglass soles with non-skid finish.

**Comments:** Moisture meter readings tested at hull bottom, topsides, and throughout at random and found to be within acceptable limits where applied.



### Hull Number:

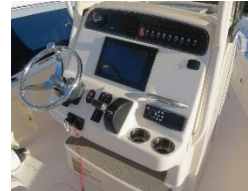
**See hull number photo and rubbing on page .....19.....**

### III. FITTINGS & EQUIPMENT

**Canvas Covers:** N/A

**Deck Hardware:** Stainless steel and aluminum.

**Steering Gear:** Stainless steel Edson Wheel.  
[\[Sea Star\] \\*](#)  
[\(\(See Recommendations\)\)](#)  
Part # HC5445-3 – 10.3 MPa  
(1,500 PSI Max)



**Ground Tackle:** Delta plow type with chain.  
**Comment:** Fast set.



**Windless:** "Lewmar" (12) Volt DC vertical type.  
[\(Proven functional\)](#)



**Compass:** Ritchie.  
[\(Proven functional\)](#)



**Horn:** Electric.  
[\(Proven functional\)](#)

**Anchor & Running Lights:** 12 Volt DC.  
[\(Proven functional\)](#)

**Life Jackets:** Nine (9) Adult Type II and Coast Guard (CG) approved.  
 Three (3) Adult Type III and Coast Guard (CG) approved.

**Life Rings:** One (1) float cushion and CG approved.

See Suggestions

**Distress Flares:** CG approved day and night type and V-pistol.  
 Out-dated as of 2015.  
[\(\(See Recommendations\)\)](#)

**Marine Toilets:**

“Dometic” fresh water flush.

**Comment:** Have secured. Fill with water and fully prove.  
((See Recommendations))

**Extra Gear:**

- # Eight foot (8') power pole. (with remote)
- # 12 Volt plug adapter.
- # Pre-wired for bow mount trolling motor.
- # Aft spreader light.
- # Fiberglass “T” Top with rod holders.
- # Forward seat cooler.
- # Baitwell in leaning post.
- # Fold down boarding ladder.
- # Bennet trim tabs.

See Equipment List Section

#### IV. GALLEY

**Location:**

N/A

## V. MACHINERY

**Main Engine Location:** At transom.

**Number & Type:** Single gas outboard at 300 HP. (3/2016)

**Make:** Yamaha.

**Model No:** F300NCA

**Serial No:** #####



**Engine Condition:** Appears clean and well maintained.

**See Mechanical Report performed by:**

Independent Marine Mechanic from Gasparilla Marina in Placida, FL.

No certified marine mechanic was on board vessel at time of this survey; however, Adrian J. Volney, Hull Surveyor has supplied a brief assessment, which should **not** be considered an engine survey for which a qualified professional mechanic should be hired.

**Special Note: To positively identify overall engine condition, both gas and diesel engines should be surveyed professionally by a marine mechanic.**  
***This is an owner's decision only. What was observed at this inspection does not qualify as an engine survey and makes no findings concerning the engine. Hull Surveyor, Adrian J. Volney and Adrian J. Volney, Inc. will not be responsible for not bringing attention to the condition of the engine or any future problems or malfunctions that may appear after the date of the survey.***

**Engine Bed:** Transom mounted.

**Engine Cooling System:** Raw water.

**Exhaust Line:** Through lower unit.

**Exhaust Silencer:** Through lower unit.

**Engine Generator:** (12) Volt DC starter generator.  
(Proven functional)

**Blowers:** N/A

**Fuel Filters:** Sierra [IB-7866] water separator type.

**Controls:** Yamaha single lever type.

**Propeller:** Salt Water series 18-T | 15-1/4 three (3) bladed stainless steel right hand.  
[Tested within limits of acceptability.](#)



**Propeller Shafts:** Stainless steel.

**Zincs:** At engine bracket and at lower drive.

**Rudders:** Outboard engine.  
**Condition:** Good where inspection possible.

**Bilge Pumps:** Two (2) 12 Volt DC and automatic.  
[\(Proven functional\)](#)

**Audible High Water Bilge Alarm:** None seen. **[Not applicable for size and type]**

**Sea Valves:** 90° type with hand operated shafts.  
[\(Proven functional\)](#)

**Engine Hours:** 489 as reported on listing sheet.

**See Trial Run Data Performed by:** No sea trail was conducted at time of this inspection. Vessel surveyed as is, where is, and while up on dry dock.

## VI. ELECTRICAL

**Storage Batteries:** Two (2) 12 Volt DC Group #27 each. [\(New 2/2024\)](#)

**Lighting:** (12) Volt DC.  
[\(Proven functional\)](#)

**Battery Installation:** In secured trays to port and starboard and under aft deck.

**Wiring:** Thermo plastic and stranded copper wire.  
**Condition:** Appears good where inspection possible.



**Circuit Breakers:** 12 Volt DC fused.

**Ground:** Negative.

**Important Note:**

***Identifying the condition of electronic equipment requires an inspection by qualified electronics personnel. This is the responsibility of the owner only. As your hull surveyor, I encourage you to have all of your electronics professionally inspected and proven in good functional order. Your hull surveyor, basically starts or fires up all units on board where possible and may only verify power and basic function to same. Electronic interfacing of one component, to or with the other, is neither carried out, nor is a computer function or evaluation performed. All electronic functions, (including but not limited to) satellite navigation, telephone and TV operation, must be proven by qualified personnel. Hull surveyor will not be held responsible for any of the above and can recommend qualified companies or individuals if needed.***

### **Main Engine Meter Recordings**

**Comment:** Engine run out to be conducted on another date and after steering system repaired.

For detailed information on this engine, see mechanical survey performed by Independent Marine Mechanic from Gasparilla Marina of Placida, FL.

## **VII. FIRE FIGHTING EQUIPMENT**

**Portable Extinguisher:** Single (1) BC Kidde dry chemical.

**Date of Inspection:** No recent.

**[\(\(See Recommendations\)\)](#)**

***Note: Gas & Diesel Engine spaces with fixed fire extinguishers. NFPA/ABYC.***

***A placard shall be affixed at each helm location and shall provide the following information: "If fixed fire extinguishing system discharges, shut down engines, generator and blowers." A remote discharge indicator shall be installed at each helm location.***

## VIII. TANKS

<b>Fuel:</b>	Gasoline.
<b>No. &amp; Capacity:</b>	Single (1) and approximately..... <div style="border: 1px solid black; padding: 2px; display: inline-block;">78 gallons</div>
<b>Shape:</b>	Rectangular and shaped with hull.
<b>Materials:</b>	Aluminum alloy.
<b>Location:</b>	Center line under helm seat and aft deck. <b>Condition:</b> Appears in <u>good</u> condition where inspection possible; however, is not full and condition of upper welds, seams or fittings above present fuel lines as well as, back side and under tank cannot be guaranteed. Have tank topped up and thoroughly inspected at this time.
<b>Water Capacity:</b>	Single (1) and approximately..... <div style="border: 1px solid black; padding: 2px; display: inline-block;">10 gallons</div>
<b>Location:</b>	Under aft deck across the beam.
<b>Material:</b>	Molded plastic. <b>Condition:</b> Appears good where inspection possible. <u>Have water tested.</u>
<b>Holding Tank:</b>	Integral with portable toilet.

**Note:** To positively identify overall tank condition, whether it be fuel, water, or holding tanks, one must pressure test according to the manufacturer's specifications. This is an owner's decision only. From what was observed at this inspection, all tanks appeared in good condition unless otherwise noted in this report. No fuel oil residue could be observed in bilges at this inspection. Suggest owners and captains determine the actual usable capacity of each tank.

## IX. COMMENTS

This is to certify that Adrian Volney, the undersigned, at the request of Name and for the account of Underwriters and Financial Institutions concerned proceeded on 2/15/2024 to Gasparilla Marina in Placida, FL and there did survey the vessel up on dry dock for the purpose of ascertaining particulars and conditions of said vessel "No Name" a Grady White 251 CE of model year 2017.

*On examination found as follows:*

As far as may be ascertained from a general overall examination of said vessel while hailed out without making removals or opening up parts normally concealed, it is the opinion of the surveyor that the hull, machinery, and equipment are in apparent very good condition, over and above recommendations, at this inspection.

## X. RISK STATUS

This vessel appears in very good condition for age and type reflecting very good care and maintenance by its present owner(s). Vessel meets CG, NFPA, and ABYC standards if the recorded recommendations are complied with as marked with an asterisk (\*) in the body of this report.

## XI. SURVEYOR'S NOTE

In my opinion this vessel appears very favorable → **in compliance with applicable recommendations.**

The comments, notes, suggestions, and /or recommendations in this report are made in accordance with accepted marine practice, USCG regulations, ABYC (American Boat & Yacht Council Safety standards for small craft), and /or NFPA (National Fire Protection Association standard 302 inclusive.) **The USCG regulations are mandatory.** The ABYS & NFPA standards are voluntary, but compliance with these standards may be required by various insurance companies, lending institutions, etc.

## XII. STATE OF FLORIDA REQUIREMENTS

Effective October 1, 1994, boaters are prohibited from discharging raw sewage into fresh water or within coastal salt water limits. Coastal salt water limits are defined as nine (9) nautical miles on the Gulf Coast and three (3) nautical miles on the Atlantic Coast. On all vessels, MSD's now in use that are capable either of flushing raw sewage directly overboard or of being pumped into a holding tank shall set the valve to direct all waste to the holding tank. The valve directing the sewage shall be secured with a tie, lock, or strap.

### XIII. EXTRA EQUIPMENT ON BOARD VESSEL AS SEEN AT TIME OF SURVEY

#### OPTIONAL EQUIPMENT ON BOARD VESSEL AS WELL AS GENERAL INVENTORY

##### MISCELLANEOUS COMMENTS FOLLOW:

##### Condition & Value

“No Name” 25 Grady White 251CE | Hull No: #####

Yamaha Model # F300NCA outboard motor 300HP | Serial No. #####

Engine hours: 489

In good condition | Trim and tilt – (Proven Functional) | Both engine zincs in good condition | Prop in good condition

***\*Hydraulic steering has a leak – dry seals. Run-out cancelled until further notice. (See photo) ((See Recommendations)) \****

##### HULL DECK AND SUPERSTRUCTURE

- # Bottom [white gel coat] in good condition.
- # Topsides and rub rails in good condition.
- # Interior fiberglass in good condition.
- # Center console roof and support poles in good condition.
- # Rails and hardware in good condition.
- # Windshield and seals in good condition.
- # Through-hulls below the waterline are clear.
- # All deck hatches, latches, and hinges in good condition.

##### CABIN APPOINTMENTS

- # ***\*The head area is in good condition. Self-contained toilet has never been used. ((See Recommendations)) \****
- # All exterior seating in good condition and cushions to same.
- # ***\*Bow table telescoping attachment stand requires service. [Latch appears frozen. Have table installed and proven]***

## **ELECTRICAL SYSTEMS**

- # Eight-foot (8') Blade power-pole with remote control – (Proven Functional)
- # Cockpit lights – (Proven Functional)
- # **\*Arch light – (Not Functional) [Haver repaired or replaced]**
- # Fusion stereo system with speakers (connected to navigation screen) – (Proven Functional)
- # Interior and exterior lighting – (Proven Functional except for arch light).

## **FRESH WATER SYSTEM**

- # Two (2) bait wells in good condition...yet to be proven in water.
- # Both bait well pumps – (Proven Functional)
- # Fore and aft bilge pumps – (Proven Functional)
- # Wash-down pump – (Proven Functional)
- # Fresh water pump - (Proven Functional)

## **ELECTRONICS AND NAVIGATION EQUIPMENT**

- # Ritchie compass in good condition.
- # Garmin navigation screen – (Proven Functional)
- # Yamaha engine data screen – to be proven at run-out.
- # Trim tabs appeared in good condition; however, are to be proven at run-out.
- # Garmin 200 VHF radio – (Proven Functional)
- # Navigation lights – (Proven Functional)
- # Anchor and stern stick light – (Proven Functional)
- # Windshield wiper – (Proven Functional)
- # Horn – (Proven Functional)
- # **\*See photo of hydraulic steering leak (above outboard engine).**

**GROUND TACKLE**

- # Windless – (Proven Functional)
- # Delta anchor with chain and rode at bow.
- # No spare anchor. See Suggestions

**SAFETY EQUIPMENT**

- # ***\*One(1) small Kidde BC type fire extinguisher full, not mounted, no tag.  
((See Recommendations)) \****
- # ***\*Launcher gun with six (6) red aerals Exp. 6/2015. ((See Recommendations)) \****
- # Life Jackets: Nine (9) adult type II | Three (3) adult type III.
- # One (1) cushion. See Suggestions

#### XIV. RECOMMENDATIONS TO BE COMPLIED WITH AT THIS NEW OWNERSHIP

**Determination of the value and condition of this vessel is based upon the owner's compliance to all of the recommendations sited here. Furthermore, no guarantees are made by Adrian J. Volney, Hull Surveyor, concerning the evaluations and repairs done by other professionals on this vessel. This includes, but is not limited to, engine surveys, electronics evaluation, and tank condition. Obtaining these evaluations by qualified personnel is the owner's responsibility and the results of their findings is solely their responsibility.**

#### **Coast Guard**

\* Have put aboard vessel, up-to-date CG approved day and night distress flares Before going to sea. **Present observed outdated.**

#### **Electrical/Electronics**

*If not performed at this time, have an electronics evaluation done by a person Qualified to do so. All of the recommendations made should be complied with. Adrian J. Volney, Hull Surveyor, cannot be held responsible for the quality of said findings nor the results of any work done.*

\* Presently sub poles seen exposed to each battery. Have all battery pole covers totally covered. This is required to meet ABYC standards.

#### **Mechanical**

*If not performed at this time, have a mechanical survey done by an independent marine mechanic. All of the mechanics recommendations should be complied with. Adrian J. Volney, Hull Surveyor, cannot be held responsible for the quality of said mechanic's findings nor the results of any work done.*

\* Both seals to outboard steering cylinder now observed leaking out fluid. This condition was to be required before vessel goes to sea. Have fully proven on run out. **[Have fully repaired or, unit replaced as and if needed]**

#### **Safety**

\* Have all portable fire extinguishers serviced and tagged for 2024-2025 to meet NFPA and ABYC standards. This is a yearly procedure.  
[Suggest a second unit as a good safety measure]

## XV. MISCELLANEOUS OBSERVATIONS

*Recommendations not considered life threatening or severe enough to warrant immediate attention but should be addressed at new owner's convenience.*

### Shipwright/Other

# Have portable toilet:

- Flushed out, serviced, and cleaned before use.
- Apply necessary chemical to water tank and prove system.
- Properly secure to its base.

## XVI. SUGGESTIONS TO ENHANCE, INCREASE SAFETY AND VESSEL EFFICIENCY

### Mechanical

# Have main engine and gears serviced at this time. Log all work from here on.

### Safety

# Have put aboard vessel, spare anchor complete with required chain and nylon rode.

# Install an audible high water bilge alarm. [A future safety measure only]

# Have put aboard vessel, a Coast Guard (CG) approved life ring or sling over and above float cushion already on board.

# Have put on board, a good quality EPIRB for all offshore cruising.

### Shipwright/Other

# Topsides observed water stained; however, not severe. Have cleaned and waxed for new owner take over.

*References on following page.....*



## REFERENCES

The following list covers most of the important governing and testing bodies in boating relating to standards and guidelines.

- |      |  |
|------|--|
| ABS  | American Bureau of Shipping<br>45 Eisenhower Drive, Paramus, NJ 07653-0910<br>1-201-368-9100   |
| ABYC | American Boat and Yacht Council, Inc.<br>3069 Solomon's Island Road, Edgewater, MD 21037<br>1-410-956-1050   |
| ASTM | American Society for Testing and Materials<br>1916 Race Street<br>Philadelphia, PA 19130   |
| NFPA | National Fire Protection Association<br>470 Atlantic Avenue<br>Boston, MA 02210  |
| SAE  | Society of Automotive Engineers, Inc.<br>400 Commonwealth Drive<br>Warrendale, PA 15096  |
| UL   | Underwriters Laboratories, Inc.<br>207 East Ohio Street<br>Chicago, IL 60611   |
| USCG | United States Coast Guard<br>Department of Transportation<br>Commander Fifth Coast Guard District<br>Federal Building, 431 Crawford Street<br>Portsmouth, VA 23705 |
| USSA | United States Sailing Association<br>Box 209<br>Newport, Rhode Island 02840-0209<br>1-401-849-5200   |

*Conditions of Acceptance on following page.....*

## **CONDITIONS OF ACCEPTANCE**

This report is submitted in good faith by Adrian J. Volney, Inc. and constitutes a description of the condition of the vessel as observed by the surveyor at the time of the inspection.

Unless otherwise mentioned, a visual inspection only has been performed without removal of panels, furniture or fixed equipment as described in this report.

All conclusions and opinions concerning this vessel that are set forth in this report were prepared by the surveyor whose signature appears on this report.

It is to be understood that the surveyor and Adrian J. Volney, Inc. assume no responsibility for any defects not reported and shall not be held liable for errors and omissions nor for any defects which may emerge at a later date.

No changes to any part or content of this report shall be made by anyone other than the surveyor, and the surveyor shall have no responsibility for any such unauthorized changes.

This report is for the exclusive use of the person or organization on whose behalf the report was prepared. This person or organization may copy and distribute the report as needed to conclude a purchase, settle a claim, obtain repair estimates, financing and insurance. The rights to the use of this report may not be sold or transferred to a third party without written permission by the surveyor. Adrian J. Volney, Inc., reserves all rights to this report and its contents and the distribution of same contents.

This report does not warrant (expressly or implicitly), or guarantee the condition of the above vessel, or its parts. Any liability shall not exceed the amount of the cost of the appraisal itself paid by the customer. You and your assigns hereby exempt and release the undersigned surveyor and Adrian J. Volney, Inc. from any and all liabilities, claims, demands, actions or causes of action whatsoever arising out of any damage, loss or injury to the vessel or to any person.

This report is not to be used for any purpose unless payment in full has been received by Adrian J. Volney, Inc. The use of and payment for this report implies an acceptance of all the above mentioned conditions.

## **DISCLAIMER**

Surveyor cannot be held responsible for damage or defects (hidden) where the eye cannot see through acts of God in the past; for example: hurricanes, tornadic activity such as water spouts, excessive wind damage, hail, and lightning strikes, etc.

**[PHOTO OF HULL NUMBER INSERTED HERE]**

**[HULL NUMBER RUBBING IMAGE INSERTED HERE]**

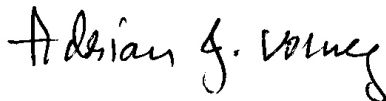
## **XVIII. REPORT CONDITIONS AND WAIVER**

This report is issued subject to the condition that it is understood and agreed that neither this office nor any surveyor or any employee thereof, is under any circumstances whatsoever to be held responsible in any way for any error in judgment, default or negligence, nor for any inaccuracy, omission, misrepresentation or misstatement in this report, and that the use of this report shall be construed to be an acceptance of the foregoing conditions.

The market and replacement values cited in this report is based on the average selling price of a vessel of this type and size, according to material at hand, considering all extras and accessories fairly depreciated. These values are intended for insurance and financial evaluation and are not intended to influence the purchaser or non-purchaser of a vessel.

This survey is based on the facts presented and discovered and based on the undersigned's opinion, with no warranty either specified or implied. This survey is issued without prejudice to the rights of whom it may concern.

Safe and happy boating always,



Date: February 15, 2024

**Adrian J. Volney, President**  
Adrian J. Volney, Inc.

**Active Memberships: ABYC NFPA, SNAME, BOAT US, TBM**

*(The following pages contain useful information for all boat owners and are not a part of the survey, but are included as a service to our valued customers)*

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## Definition of BUC CONDITION

**BUC CONDITION defines a boat that is ready for sale requiring no additional work.**

*We are not referring to the average boat that needs work. We specifically refer to the condition to which dealers and private individuals usually prepare their vessel in order to culminate the sale at what they determine to be the best market price-to-reconditioning ratio.*

### **A Boat In BUC CONDITION has:**

A clean bilge and clean bottom, free of dry rot, fittings, shafts, struts, wheels, rudders and other hardware in good condition. Deck, superstructure joiner work and hull are tight and free of leaks. Paint, varnish and gel coats are clean and smooth, free of wrinkles, cracks, gouges, not requiring excessive waxing or buffing. All electronic and mechanical accessories are in good operating order including tanks and lines, its head, ventilation, wiring, lighting and flotation meet the local or federal standards that could influence its selling price.

### **An Engine or Motor In BUC CONDITION is:**

In good working condition with no oil or water leaks and meets standard compression test. Starter, coils, magneto, spark plugs, and wiring must be free and clean of corrosion. Shafts, bearings and other moving parts are to be free and true with no excessive vibration and show evidence of lubrication. Propellers are to be free of nicks and have true pitch. Water pump, gas lines, fittings, hoses, strainers, gaskets are tight and free of leaks and jet and outboard fittings functioning properly. Paint should be free of scorching or blisters due to overheating. Carburetor and other peripherals should be properly tuned and functioning in good order.

## GFCIs: Protect Yourself from Electric Shock

The shock hazard that results from faulty 110 V AC electrical equipment is especially dangerous around water. Wet shoes or bare feet, perspiration, wet decks, and water in the bilge are the worst possible conditions for coming in contact with electricity. Add to this worn or abused electrical drills /sanders/buffers or damaged power cords and the result could be lethal. Any piece of electrically powered equipment, portable or installed, can develop an internal fault if a wire comes in contact with the cabinet or case, making it electrically charged.

An especially dangerous setting that has claimed lives in the past is working with a power tool from a float or dinghy or grabbing a wet dock line with a power tool or cord in the other hand. Plugging into a GFCI virtually eliminates the shock hazard. To go one step further in case you have to plug in where there is no GFCI available, replace old power tools with modern double insulated" models that eliminate risk of fatal shock from the tools. Better yet, try cordless tools. They are safest of all, convenient to use, and eliminate the charged extension cord which seems to have a Labrador Retriever's affinity for getting overboard.

The value of a GFCI is that it protects against shock in a way that a standard breaker (or fuse) cannot. A GFCI senses the current flow in both the hot and neutral wires. It compares the flow in the wires and detects an imbalance such as your body accidentally providing an electrical path. When it detects an imbalance of 5mA (mill amperes), it opens the circuit (turns it off) before any harm is done.

Boating safety standards call for GFCIs in certain locations on boats. The American Boat and Yacht Council (ABYC) standard has called for the use of GFCIs in boats since 1977. So does the National Fire Protection Association (NFPA) standard which states:

"Ground-fault circuit-interrupters (GFCIs) may be used on any single-phase AC circuit and shall be used for all receptacles in the head, galley, and machinery spaces and on weather decks." In other words, any place where a

person is likely to contact water and electrical equipment simultaneously is a good place for GFCI protection. ("Shall" in safety standards language means mandatory to comply with the standard.)

A circuit breaker that incorporates a GFCI is sometimes installed in an electrical panel board in place of a standard (non-GFCI) type of breaker. Or a GFCI can be added to a circuit in addition to the already installed breaker. A GFCI-type receptacle can be installed in the bulkhead replacing the old receptacles inboard. Each receptacle on that same circuit will be protected by the one GFCI. They are inexpensive, as electrical equipment goes, with prices ranging from \$23.95 for a receptacle mount type.

If they are so good, why not use them everywhere in a boat? The gadgets are so sensitive that they are intolerant of worn wiring and damp conditions typically found in boats. Very minor current leaks, that may not present a serious shock threat, can trip a GFCI—a nuisance that most skippers don't want to contend with. Minor leaks, however, should be located and corrected. With 120v/60Hz current, the level necessary to prevent a male adult from releasing his grip (let-go current) is 8-9 mA (A GFCI trips at 5 mA). It only takes about 6 mA for an adult female and less for children. For this reason, the receptacle mount and portable type are more practical for boats. The handiest type for working around a boat is a portable, plug-in model that you can use in any receptacle. That way, you know the tool or extension cord being used is protected. It senses only what you plug in, not the less-than-perfect boat wiring. It is available at BOAT/U.S. Marine Centers and through the Boating Equipment Catalog.

Insist on GFCI's to be standard equipment in the head, galley, machinery spaces, and on deck in a new boat and consider adding them on older boats. When BOAT/U.S. underwriters pointed out to a manufacturer that their boats were lacking GFCI breakers, their engineers reflected and said thanks for the reminder. "It is a good idea" they said, that they had simply overlooked

**ENFORCED AS OF AUGUST 1, 1990**

**A WASTE MANAGEMENT PLAN  
IS REQUIRED BY THE U.S. COAST GUARD  
ON ALL SHIPS OVER 40 FEET IN LENGTH\* THAT AT ANYTIME  
OPERATE OUTSIDE THE TERRITORIAL SEA (3-MILE) LIMIT.**

**\*Length means horizontal distance between the foremost part of a ship's stern  
to the aftermost part of its stern, excluding fittings and attachments.**

**THE LAW**

1. Each manned oceangoing ship\* of 40 feet or more in length, that is documented under the laws of the United States or numbered by a state and that is engaged in commerce or is equipped with a galley and berthing is required to carry a Waste Management Plan.
2. The master or person in charge of a ship shall insure that THE SHIP IS NOT OPERATED unless a Waste Management Plan is on board the ship and that each person handling garbage follows the plan.
3. Each Waste Management Plan must be in writing and provide the discharge of garbage by means that meet Annex V of MARPOL 73/78, the Act to Prevent Pollution from Ships.
4. Describe procedures for collection, processing, storing, and discharging garbage.
5. Designate the person who is in charge of carrying out the plan.

\*Oceangoing ship under Annex V of MARPOL is a ship operated under the authority of the United States or operated at anytime seaward of the outermost boundary of the territorial sea of the United States.

**ACCEPTABLE WASTE MANAGEMENT PLANS**

**\* PLAN 1**

Vessel Name \_\_\_\_\_

Person in Charge \_\_\_\_\_

**SOLID WASTE MANAGEMENT PROCEDURES:**

ALL the garbage generated on the vessel is put in a garbage bag and disposed of in the trash containers at the harbor at the end of each trip (or is given to the tender vessel to take to shore for disposal). All crew members have been oriented to the requirements of the Annex V by the captain and all new crew are specifically shown in the MARPOLV Placard and told to keep all refuse stowed on board. Passenger orientation to the vessel includes being shown the location of the trash receptacles and being informed of refuse discharge laws.

**\* PLAN 2**

Vessel Name \_\_\_\_\_

Person in Charge \_\_\_\_\_

**SOLID WASTE MANAGEMENT PROCEDURES:**

**If the vessel is outside of 12 miles from shore:**

All the garbage with the exception of food materials and paper is put in a garbage bag to be hauled to the dockside trash receptacle at trip's end. Food materials and paper generated in the galley are collected in a bucket (or in a paper bag or cardboard box) and the bucket emptied over the side (or the food-filled bag or box is thrown overboard) by a crew member.

**If the vessel is within 12 miles of shore returning to shore:**

ALL refuse materials are put in a garbage bag and at the end of the trip are hauled up to the dockside trash receptacle.

**CREW EDUCATION:** At the beginning of each session all crew members are reminded of the refuse discharge laws and shown the MARPOL V Placard. Crew is told that it is vessel policy to stow all garbage materials on board except for food and paper when the vessel is outside of 12 miles. The captain informs all new crew and passengers of the rules governing the vessel including refuse laws and refuse handling.

## IS THERE A DIFFERENCE BETWEEN #2 DIESEL FUEL AND MARINE GRADE DIESEL?

**YES!** #2 fuel oil has low specifications defined by the petroleum industry.

#2 diesel fuel contains certain amounts of water, carbon and gum residues, sulfur, paraffin wax and other impurities which are not removed in the refining process. These factors either atone or combined with Florida's climate can cause substantial problems in the operation of diesel powered yachts.

**WATER** is present in all diesel fuel. In addition to the moisture that remains through the refining and shipping process, additional water accumulates from condensation and improper storage. Moisture causes corrosion, algae growth, clogged filters and ultimately injector nozzle deterioration and complete engine failure.

**SULFUR** content has also increased in #2 diesel fuel through the use of lower grade of crude oil used to produce #2 diesel fuel. The increased sulfur content enhances corrosion which leads to increased engine wear. High sulfur in #2 diesel fuel is evident in the transom soot that appears on the transom of a yacht.

**ALGAE** forms with three elements that are present in #2 diesel fuel. These elements are air, water and a low grade fuel such as #2 diesel. Florida's climate and the low specifications for #2 diesel becomes a "Breeding Ground" in which severe diesel algae growth develops. Once the algae growth begins filters clog and Engine performance becomes affected.

## WHAT IS THE ALTERNATIVE TO #2 DIESEL?

**MARINE GRADE DIESEL FUEL** is the answer to the yacht owners problem. Marine Grade Diesel is defined by the petroleum industry as a high grade filtered fuel with highest specifications known as Marine Gas Oil. Marine Grade Diesel (M.G.O.) is coalesced to remove 100% of any water present and filtered to 2 1/2 microns to remove any contaminate matter, This filtration process allows only the highest grade of fuel to be dispensed. This process guarantees the customer that no water or contaminate matter exists. By eliminating the water content, corrosion, clogged filters and injector nozzle deterioration is minimized.

Marine Grade Diesel (M.G.O.) also contains several additives which meet the higher specifications required. Marine Grade Diesel (M.G.O.) contains a sulfur neutralizer which allows the engine to perform more efficiently and is recognized by reduced transom soot and an overall increase in performance.

Marine Grade Diesel (M.G.O.) also contains a microbioside which prohibits diesel algae spores from growing and developing serious problems inside the fuel tank which leads to clogged fitters and injector problems. The added protection of a microbioside and continued treatment will eliminate the possibility of diesel algae.

Marine Grade Diesel (M.G.O.) achieves a cetane rating of 45 which is several points higher than most #2 fuel oils sold at marinas and fuel oil companies, the 45 rating is recommended by most major marine engine manufacturers to assure the best operational performance from the engine.

Marine Grade Diesel (M.G.O.) meets the highest standards set by petroleum industry through filtration, coalescing, and additives, Marine Grade Diesel offers the boat owner the highest quality fuel available. The difference between #2 fuel oil and Marine Grade Diesel (M.G.O.) can be compared to boating in the desert or boating in Florida's beautiful waterways.

**THERE IS NO COMPARISON!**

Helping the boating public always. -  
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## Typical Power Consumption of Electrical Loads (12 Volts)

Anchor light.....	1.0 amp	Masthead light.....	1.0-1.7 amps
Anchor windlass.....	80-300 amp	Radar .....	4.0-8.0 amps
Autopilot.....	1-30 amps	Refrigeration (typical) .....	5.0-7.0 amps
Bilge blower.....	2.5 amps	Running lights (port, starboard, and stern)	3.0 amps
Bilge pump.....	5.0 amps	Sat-Nav .....	0.2-0.8 amp
Cabin fan.....	1.0 amp	Spreader lights.....	8.0 amps
Cabin light (Incandescent) .....	1.5-3.5 amp	SSB (receive) .....	1.5-2.0 amps
Depthsounder.....	0.1-0.5 amp	(transmit).....	25-35 amps
Fluorescent light.....	0.7-1.8 amp	Strobe light.....	0.7 amp
Freshwater pump.....	5.0 amps	Stereo/tape deck.....	1.0 amp
Spotlight.....	10.0 amps	VHF (receive) .....	0.7-1.5 amps
Knotmeter.....	0.1 amp	(transmit) .....	5.0-6.0 amps
Loran.....	1.0-1.5 amp	Wind speed Indicator.....	0.1 amp

Note: Inverters and microwave ovens are absent from this list. That's because modern inverters consume mere milliamps of power, while a microwave's energy consumption varies with the size of the unit and the way it is used.

## Daily Power Requirements (12 Volts) Of A Hypothetical Cruising Boat Anchored Off A Bahamian Beach

Equipment	Rating	Hours of Use (in 24 hours)	Total Load (in 24 hours)
6 lights.....	1.5 amps each	2 hours each – 12.....	18 amp-hours
1 refrigeration compressor.....	5 amps	10 hours.....	50 amp-hours
Masthead navigation lights.....	1.5 amps	8 hours.....	12 amp-hours
2 tans.....	1 amp each	5 hours each =10.....	10 amp-hours
VHF radio, tape deck, etc.....	2 amps total	5 hours total.....	10 amp-hours

**TOTAL 100 amp-hours**

### Notes:

- Power consumption will vary enormously according to the boat's intended cruising area; refrigeration and tan usage in northern climates will be a fraction of that in the tropics.
- Large items of occasional and short-term use, such as an electric anchor windlass, can in most instances be ignored, since they have little impact on the overall picture. On the rare occasions where sustained use is required, as in breaking out a deeply embedded anchor, the engine can be run during operation to provide a charging backup.

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