

# The Dock Frog Marine Survey & Consultation

## “Endurance 37”



The Dock Frog, LLC.

PO BOX 704 Tacoma, WA 98401  
(253) 306-8337

# **Report of Marine Survey**

## **“ Endurance 37”**

### ***Survey Conducted By:***

Lafayette M. Duvall  
The Dock Frog, LLC.  
Marine Survey & Consultation  
PO BOX 704  
Tacoma, WA 98401  
info@thedockfrog.com  
www.thedockfrog.com

### ***Survey prepared exclusively for:***

EXAMPLE

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# I. INTRODUCTION

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## SCOPE OF SURVEY

Acting at the request of **EXAMPLE**, the attending surveyor conducted a Condition and Valuation (C&V) Marine Survey of the Endurance 37, on **DATE**, from 1100 to 1530, where she was blocked on the hard at **MARINA**. A copy of the ship's papers were on board. The Hull Identification Number HIN XXXXXX was verified from the ships papers. There was no USCG documentation number. Non-destructive percussion testing was performed on all surface areas to determine delamination or soft spots. An out-of-the water inspection of underwater machinery and the exterior of the hulls wetted surface area was performed. The sea trial was conducted on **DATE** from 10:00 to 11:00 a basic engine survey was performed. Active water leaks were sighted but no oil or coolant leaks were observed. No mechanical engine survey was performed. The reason for the survey was to ascertain the physical condition and value of the vessel. AC (shore power) and DC (battery power) were used to check operation of the electrical systems specified in this report only.

No reference or information should be construed to indicate any of the following:

1. Evaluation of the internal condition of the engines or the propulsion systems operating capacity.
2. Electronic equipment checked for "power up" only and was not field or bench tested.

Unless specifically stated otherwise in this report, this surveyor visually inspected this vessel without removal of any fasteners, fixed or semi-fixed structures or equipment, and has not disassembled any hull structures, electronics, instruments, or machinery for inspection or testing. Therefore, due to this visual inspection this survey report does not cover latent defects not readily discovered without such removals and disassembly's. Locked compartments or otherwise inaccessible areas also precluded visual inspection. Owners are advised to open up such areas periodically for self-inspection. Further, no determination of stability characteristics or inherent structural integrity has been made and no opinion is expressed with respect thereto. This survey report represents the condition of the vessel on the above date(s), and is the unbiased opinion of the undersigned, but it is not to be considered an inventory or a warranty either specified or implied.

Where installation of double hose clamps are recommended throughout this report, it is understood that double hose clamps should only be installed where there is sufficient length of tailpiece/pipe available and hose length overlap to allow correct installation. No clamp shall be installed closer than 1/4" to the end of the hose and must fully engage the tailpiece/pipe or fitting. Any clamp extending over the end may cause the hose to be cut internally or force the hose off the fitting and is an incorrect installation. Solid, unperforated type hose clamps utilizing 316 stainless steel with rolled edges are recommended for all hose to pipe joints particularly when located below the waterline.

# CONDUCT OF SURVEY

**THE MANDATORY STANDARDS PROMULGATED BY THE UNITED STATES COAST GUARD (USCG), UNDER THE AUTHORITY OF TITLE 46 UNITED STATES CODE (USC); TITLE 33 AND TITLE 46, CODE OF FEDERAL REGULATIONS (CFR), AND THE VOLUNTARY STANDARDS AND RECOMMENDED PRACTICES DEVELOPED BY THE AMERICAN BOAT AND YACHT COUNCIL (ABYC) AND THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAVE BEEN USED AS GUIDELINES IN THE CONDUCT OF THIS SURVEY**

Images supplied with this report were produced with a Canon PowerShot A2200 digital camera and represent a true and accurate representation of the subject at the time the image was taken.

## **NOTE:**

**1. This report is issued for the exclusive use of the individual(s), financial institution(s) and/or insurance company(ies) as may be specifically identified (named) upon this surveyor's report and may contain information that is privileged, confidential and exempt from disclosure under applicable law. Any entities or persons that are not identified herein are hereby advised that any dissemination, distribution or copying of this report is strictly prohibited; no such entity or person shall have any right to rely upon the contents of this surveyor's report.**

**2. In the event that this surveyor is called upon, after rendering a Marine Survey Report, to explain, modify or supplement the report, or its contents, or should the surveyor be called upon to render expert advise, testimony or to provide survey expertise in any dispute in litigation (or not), the surveyor will be compensated by the owner/insured in accordance with the fees customarily charged in the surveying industry.**

## **LIMITED LIABILITY:**

**1. The survey, which is the subject of this report, was conducted in accordance with generally accepted marine standards and criteria utilized in the marine surveying industry. Persons or entities entitled to rely upon this report are advised that this surveyor is not an engineer nor does he posses any specialized knowledge beyond the degree of skill commonly possessed by others in the same employment.**

**2. Surveyor shall have no liability for consequential damages, no liability for personal injury damages, no liability for property loss damages, no liability for punitive damages, all of which shall be deemed to have been knowingly and voluntarily waived upon use of this survey report.**

**3. In no event shall the legal liability of the undersigned exceed the fee paid for this survey report, regardless of claims or suits and regardless of whether under theory of tort, contract, products liability, admiralty, or otherwise.**

## **VESSEL DESCRIPTION**

The Endurance 37 was designed by Peter Ibold, as a heavy blue water cruiser. This particular model has been professionally modified to have a larger aft cabin and a cutter rig with a tabernacle deck stepped mast. The vessel is well laid out with a pilot house style helm just inside the gangway, with the Galley to Port and nav-station to STBD, and sleeping for 6 with 2 berths in the forward cabin, 2 1/4 berths in the main saloon and a double berth in the aft cabin. Though this boat does show its age with a little work and upgrading of systems this vessel would be an excellent and comfortable choice for any kind of open water navigation. This is an impressive sturdy boat with a good design.

Prepared exclusively for: Sample

## II. GENERAL INFORMATION

NAME OF VESSEL	None
TYPE OF SURVEY	Condition and Valuation
<b>OVERALL VESSEL RATING</b>	Fair
<b>ESTIMATED MARKET VALUE</b>	\$28,900.00
<b>ESTIMATED REPLACEMENT COST</b>	\$317,000.00
YEAR/MAKE/MODEL OF VESSEL *	1978/Endurance 37
DESIGNER/BUILDER*	Peter Ibold
HULL IDENTIFICATION NUMBER (HIN)	XXXXX
HAILING PORT	None
USCG DOCUMENTATION NUMBER	None
STATE VALIDATION STICKER NUMBER/ REGISTRATION	XXXXXX
OWNER	Owner
OWNER'S ADDRESS	
PLACE OF SURVEY	
DATE/TIME OF SURVEY	
HULL MATERIAL*	FRP (Fiber Reinforced Plastic)
HULL TYPE*	Full keel displacement.
LENGTH OVER ALL (L.O.A)*	40'
LOAD LENGTH WATERLINE (L.W.L)*	26'
BEAM*	11'
DRAFT*	5'
DISPLACEMENT/ BALLAST*	18,000Lbs./4,400Lbs.
SAIL AREA*	423
PROPULSION SYSTEM*	Sail/ Single diesel
INTENDED USE**	Passage making
INTENDED CRUISING AREA**	Puget sound / Pacific ocean.

**ASTERISKS DENOTE SOURCE OF INFORMATION:**

**\*PER MANUFACTURER SPECIFICATIONS**

**\*\*PER PURCHASER OF VESSEL**

# DEFINITION OF TERMS

The following terms and words have the following meanings as used in this report Survey:

**APPEARS:** Indicates that a very close inspection of the particular system, component or item was not possible due to constraints imposed upon the surveyor (e.g. no power available, inability to remove panels, or requirements for nondestructive testing). The deficiencies reported herein reflect the conditions observed at the time the survey was conducted.

**FIT FOR INTENDED SERVICE:** Service for which it was designed and manufactured by the naval architect and or builder.

**FIT FOR INTENDED USE:** Use which is intended by survey purchaser (present or prospective owner).

**SERVICEABLE or ADEQUATE:** Sufficient for a specific requirement.

**POWERS UP:** Power was applied only. This does not refer to the operation of any system or component unless specifically noted.

**EXCELLENT CONDITION:** New or like new.

**GOOD CONDITION:** Nearly new, only minor cosmetic discrepancies noted and standard maintenance or cleaning needed.

**FAIR CONDITION:** Denotes that system, component or item is usable as is with minor repairs and or standard maintenance needed.

**POOR CONDITION:** Unusable as is. Requires significant repairs or replacement of system, component or item to be considered functional.

**USE OF ASTERISKS \*A, \*B, \*C.:** In the body of the report will indicate that a finding will be listed in the Findings and Recommendations section pertaining to the asterisked item, following the body of the report.

# III. SYSTEMS

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## HULL COMPOSITION AND STRUCTURE

HULL IDENTIFICATION NUMBER:

XXXXX

TYPE:

Displacement full keel

MATERIAL:

FRP (Fiber Reinforced Plastic)

EXTERIOR HULL:

Painted white finish with paint blisters sighted along 1" above boot strap \*B1

BULKHEADS:

Plywood bulkheads sighted to be in unfinished but good condition.

STEM:

Molded FRP sighted to be in good condition.

TRANSOM :

FRP transom with two port windows sighted to be in good condition.

BILGE:

FRP with debris and oil sighted \*B2

## DECK CONSTRUCTION / FITTINGS

TYPE:

Molded FRP deck with non slip deck paint sighted to be in fair condition.

HULL TO DECK JOINT:

Internal flange FRP reinforced.

STANCHIONS / LIFELINES:

S/S custom welded Stanchions with single wire life line, minor tea staining, sighted to be in good condition.

BOW PULPIT :

Custom welded S/S sighted to be in good condition.

**PUSHPIT:**

N/A

**TOE RAILS:**

Molded FRP with Teak cap-rail varnish was worn sighted to be in fair condition \*C1.

**BOWSPRIT:**

Welded S/S sighted to be in good condition.

**ANCHOR PLATFORM:**

Welded S/S sighted to be in good condition.

**SCUPPERS:**

2 Thru-deck scuppers sighted in cockpit going to Thru-hull outlets, and 4 molded scuppers in toe-rail 2 on each side Port and STBD sighted to be in good condition.

**CHOCKS AND CLEATS:**

3 Aluminum cleats sighted 1 each side Port and STBD amidships on deck and 1 above transom on aft deck all sighted to be in fair condition.

**WINDLASS/GIPSY:**

1 Mc Murray electric windlass was not wired or mounted.\*B3.

**HAUSE PIPES:**

2 Molded hause pipes in toe rail at bow sighted to be in good condition.

**DECK SURFACE:**

Non-skid painted deck areas sights to be in fair condition.

**GRAB RAILS:**

None sighted.

## **SUPERSTRUCTURE**

**MATERIAL:**

Molded FRP was sighted to be in fair condition with minor spider cracking sighted. \*C2.

**HOUSE TO DECK JOINT:**

Molded FRP house and deck assembly sighted to be in good condition.

#### HATCHES:

2 Hatches 1 over aft cabin and 1 over forward cabin teak framed with tinted Lexan tops were sighted to be in fair condition with repairs needed to hardware and brightwork. \*B4.

#### VENTILLATION:

4 S/S Mushroom style vents sighted, 2 above aft cabin and 2 above main saloon sighted to be in good condition.

#### WINDOWS / PORTS / DOORS:

2 teak framed non opening port windows each side of aft cabin 2 teak framed port windows on transom, 6 round bronze framed opening port holes 3 each side of cabin sighted to be in fair condition, 2 bronze oval opening port holes 1 each side of cabin, and 4 bronze framed squared opening porthole 2 each side of cabin sighted to be in fair condition. \*C1.

#### MOISTURE CONTENT:

N/A

## COCKPIT

#### TYPE:

Center cockpit design molded FRP sighted to be in good condition.

#### DECK/ SOLE:

Molded FRP sole with teak insert sighted to be in fair condition.

## RIGGING

### STANDING RIGGING

#### MAST(S):

Aluminum tabernacle stepped mast with external track sighted to be in fair condition.

#### MAST STEPS/COMPRESSION POST:

Tabernacle style aluminum deck step and varnished wood compression post sighted to be in fair condition.

#### SPREADERS:

Aluminum spreaders sighted to be in fair condition.

#### BOOMS:

2 aluminum booms 1 staysail 1 mainsail sighted to be in fair condition.

#### BOW SPRIT:

Welded S/S Bowsprit sighted to be in good condition.

#### SHROUDS AND STAYS:

S/S shrouds and stays sighted to be in fair condition with bobstay sighted to be in poor condition with a wasted anode and heavy corrosion at waterline.

#### CHAIN PLATES:

S/S external chainplates were sighted to be in fair condition with mounting hardware sighted to be misaligned and bottom of chain plate separating from hull. Internal chainplates could not be sighted. \*B5.

#### TURNBUCKLES:

S/S "Hasselfors" turnbuckles sighted to be in good condition.

#### TOGGLES:

S/S toggles sighted to be in good condition.

#### TERMINAL ENDS AND TANGS:

S/S Mechanical swage fittings with S/S tangs all sighted to be in good condition.

### **RUNNING RIGGING**

#### WINCHES:

2, Barlow 16's on main mast in fair condition, 1, Gibb 6 on main mast in fair condition, 2, Enkes 22's on Port and STBD of cockpit in fair condition, and 1 Lewmar 30 on cabin top in poor condition. \*B6

#### TRACKS AND CARS:

Aluminum T track travelers were sighted to be in fair condition with stopper end missing. \*B7.

#### SHEETS:

Sighted to be in poor condition. \*A1.

#### HALYARDS/ TOPPING LIFTS:

Sighted to be in poor condition. \*A1.

#### TURNING BLOCKS:

Sighted to be in good condition.

## **SAILS**

### **INVENTORY:**

1,Genoa, 2, jib sails, 1, storm jib and, 1, battened mainsail were not pulled out but sighted to be in fair condition in storage. \*C3.

### **REEFING SYSTEM:**

None sighted.

### **CANVAS:**

Blue sail cover canvas sighted to be in fair condition.

## **GROUND TACKLE**

### **ANCHORS:**

1, 25 KG Bruce anchor sighted to be in good condition.

### **RODE MATERIAL:**

3/8 chain rode of unknown length was not seized at anchor. \*B8.

## **ADDITIONAL EQUIPMENT AND ACCESSORIES**

### **FENDERS / DOCK LINES:**

were sighted to be in good condition.

### **DINGHY:**

None sighted.

### **OUTBOARD ENGINE:**

None sighted.

## **SAFETY EQUIPMENT**

### **PFD'S (PERSONAL FLOATATION DEVICES):**

1 type IV "Life sling" not properly attached, and 1 Type III sighted to be in good condition.

### **VISUAL DISTRESS SIGNALS:**

Sighted to be expired. \*A2.

### **SOUND PRODUCING DEVICES:**

None sighted. \*A3.

### **FIRE EXTINGUISHERS:**

4 extinguishers sighted none had current inspection tag. \*A4.

### **SEA ANCHOR(PARACHUTE):**

None sighted. \*C4.

### **NAVIGATIONAL RULES:**

None sighted.\*C5.

### **USCG REQUIRED PLACARDS:**

None sighted. \*A5.

### **WARNING ALARMS:**

None sighted.

### **SMOKE/CO DETECTOR:**

1 sighted but was not functioning. \*A6.

### **NAVIGATIONAL LIGHTS:**

Sighted to be in good condition.

### **BILGE PUMPS:**

Switch was sighted bilge pump not sighted or tested due to oil in bilge. \*A7.

## **LPG SYSTEM**

None Sighted.

# **ELECTRONICS AND NAVIGATION EQUIPMENT**

## **SHIPS ELECTRONICS**

### **UHF/VHF/SSB:**

I-com, IC-152 VHF radio was powered on and appeared to be in good condition.

### **GPS / FISHFINDER:**

2 Garmin multi function units. 1 Echomap 50s was powered and appeared to be in good condition and, 1 GPSmap 162 was not powered but appeared to be in good condition.

### **BINNACLE:**

S/S Ritchie binnacle sighted to be in good condition.

### **RADAR:**

Radar tower and Radome was sighted on the Port stern deck but no unit was installed at the time of survey.

## **ELECTRONICS(ENTERTAINMENT)**

### **STEREO:**

Kenwood AM/FM/CD player was powered and appeared to be in good condition.

# **CABIN APPOINTMENTS**

## **INTERIOR DESCRIPTION**

### **ACCOMMODATIONS:**

2 cabins with 1 double berth in aft cabin, 2 single berths in forward cabin and, 2 1/4 berths in main saloon. 1 head on STBD forward of aft cabin.

### **HEAD:**

1 head on STBD side forward of aft cabin under cockpit. with S/S single basin sink and Pex style plumbing sighted to be in good condition.

### **INTERIOR BULKHEADS:**

Combination of painted and vinyl over ply were unfinished but sighted to be in fair condition. \*B9.

### **JOINERY AND FINISH:**

Was sighted to be in fair to poor condition. \*B9.

#### **CABIN BRIGHT WORK:**

Teak bright work was sighted to be in fair to poor condition. \*B9.

#### **FURNISHINGS & UPHOLSTERY:**

Teak finished furnishing and foam cushions with cloth covering was sighted to be in fair condition.

#### **HEADLINERS:**

A combination of painted plywood in pilot house area sighted to be in fair condition, vinyl over ply in settee aft cabin and forward cabin sighted to be in fair to poor condition.\*B9 . and unfinished sprayed in foam in head and galley area over refrigerator with hardware exposed and cracking sighted to be in poor condition. \*A8.

#### **LIGHT FIXTURES:**

Combination of led and incandescent dome lighting were powered on and appeared to be in good condition.

#### **CABIN SOLE:**

Teak and holly laminate ply over ply sub decking sighted to be in fair condition.

## **GALLEY**

#### **GALLEY SINK:**

Twin basin S/S sink was sighted to be in good condition.

#### **COUNTERTOP:**

Laminate counter top was sighted to be in good condition.

#### **MICROWAVE:**

1 Quasar Lifestyle II was not powered but appeared to be in fair condition.

#### **STOVE/OVEN:**

None sighted.

#### **REFRIGERATION:**

Built in icebox/ refrigerator with refrigerator plate was powered on and appeared to be functioning.

## **STEERING SYSTEM**

#### **NUMBER OF STATIONS:**

2, 1 external with S/S wheel and, 1 internal with wooden spoked wheel.

“Endurance 37” surveyed by Lafayette Duvall, Tacoma, WA 98401

TYPE:

Wagner hydraulic steering was sighted to be actively leaking fluid at lower helm station and at rudder hydraulic ram.\*A9

RUDDERSTOCK / PACKING GLAND:

Sighted to be in fair condition.

UPPER RUDDER BEARING SUPPORT:

None sighted.

## **PROPULSION SYSTEM/ FUEL SYSTEM**

### **MAIN ENGINE**

TYPE:

Yanmar 3GM30 3 Cylinder naturally aspirated freshwater cooled diesel.

INDICATED HOURS:

200 (As per broker/owner)

THROTTLE CONTROLS:

Cable style controls sighted to be in good condition.

EMERGENCY SHUT DOWN:

Keyed shut down at engine control panel.

ENGINE MOUNTS AND BED:

Engine mounts were sighted to be worn with excessive play on engine by hand. \*B10.

DRIP PANS:

None sighted.\*C6.

LUBRICATION:

Was sighted to be in fair condition.

EXHAUST SYSTEM:

Heat riser on engine showed signs of heavy corrosion. \*A10.

INSULATION:

None sighted.

ENGINE ALARMS:

was not tested at the time of survey and had electricians tape covering. \*B11

RAW WATER STRAINERS:

None sighted. \*A11.

HOSES AND CLAMPS:

Sanitation hose was used for engine pickup \*A12. Clamps are S/S band style and were sighted to be in good condition.

BELTS AND PULLEYS:

were sighted to be in good condition.

HEAT EXCHANGERS:

Appeared to be in good condition.

SEACOCKS:

Bronze seacocks were tested and appeared to be in good condition.

TRANSMISSION(S):

KM-3A.

DRIVE TYPE:

Direct.

GEAR RATIO:

Not sighted

FLUID:

Not sighted.

CONTROLS:

Cable style controls sighted to be in good condition.

PROP SHAFT:

S/S 1 1/4" sighted to be in fair condition.

STUFFING BOX:

Dripless with lubrication reservoir sighted to be in fair condition.

# FUEL SYSTEM

FUEL TYPE:  
Diesel.

MATERIAL: WELDED S/S.

NUMBER OF TANKS: 1

TANKS CAPACITY: 72 GAL.

SECURED: YES

LOCATION:  
Under gangway / pilot house station cabin sole amidships.

FILL PIPE LOCATIONS:  
Color coded and labeled thru-deck fittings sighted to be in fair condition.

FILL PIPE MATERIAL:  
1 1/2" Copper lines on both the Port and STBD sides of fuel tank.

HOSE CONNECTIONS, CLAMPS:  
S/S band clamps were sighted to be in good condition.

FUEL LINES AND RETURN LINES:  
Combination of copper and A-1 fuel line sighted to be in good condition.

VENT MATERIAL & LOCATION:  
Combination of copper and A-1 fuel line mounted to STBD side of gangway was labeled and sighted to be in good condition.

SHUT-OFF VALVE: SIGHTED AT FUEL MANIFOLD.

FUEL FILTERS:  
1 Racor spin on style filter with clear bowl located forward of engine on bulkhead under gangway was sighted to be in good condition.

## **DC ELECTRICAL SYSTEMS**

### **BATTERY(IES)/ BANK(S):**

3 Group. 27 wet cell marine batteries 1 engine bank and 2 in house bank under STBD settee. forward of Navigation station. sighted to be in fair condition.

1 loose Group 27 wet cell battery was sighted in STBD forward lazarette. \*B12.

### **BOXES/ SECUREMENT:**

Battery in engine compartment was not secured or in box, and house bank was not secured. \*A13.

### **CHARGING SYSTEM:**

ProMariner Pro sport 20 plus charger was powered and sighted to be in good condition.

### **BATTERY SELECTOR SWITCH(S):**

1 Cole Hershee rotary style selector switch on settee bulkhead forward of navigation station was sighted to be in good condition.

### **DC PANEL/BREAKERS/FUSES:**

Breaker style panel located under the navigation station on the STBD side of the gangway was clearly labeled and appeared to be in good condition.

### **VOLTMETER/AMMETER:**

Sighted at main breaker panel was powered on and appeared to be in good condition.

### **WIRING:**

Was sighted to be unsupported in areas with exposed or disconnected wires sighted and improper connections used. Sighted to be in poor condition. \*A14.

## **AC ELECTRICAL SYSTEMS**

### **SHORE POWER INLET:**

125V 30Amp. AC inlet is located on the STBD cabin side sighted to be in fair condition. Fuse was not sighted within 7" of Shore power inlet \*A15

### **DISTRIBUTION PANEL/BREAKERS:**

Breaker style panel located on the STBD side under navigation station. was clearly labeled and appeared to be in good condition.

### **VOLTMETER/AMMETER:**

Located at main breaker panel, was powered on and appeared to be functioning.

**GALVANIC ISOLATOR:**

None sighted \*B13

**OUTLETS:**

were powered on and tested with Klien tools RT100 polarity tester and sights to be hot neutral polarity reversed. \*A16.

**GFCI (S):**

None sighted . \*A17.

**WIRING:**

Was sighted to be unsupported in area with wire nuts, unconnected wiring and, household solid wiring was sighted in areas. sighted to be in poor condition. \*A14.

**BONDING SYSTEM:**

None sighted. \*B14.

## **FRESH WATER SYSTEM(S)**

**MUNICIPAL WATER SUPPLY:**

None sighted.

**OVER PRESSURE PROTECTION:**

None sighted.

**WATER TANK(S):**

2 Built in 25 Gal. on either side of gangway amidships below cabin sole.

**ACCESS:**

Access to Port water tank under galley sole no access sighted to STBD tank. \*C8

**WATER FILTRATION:**

Inline filter sighted \*C

**PRESSURIZED SYSTEM:**

Jabsco flow master pump was not properly secured but sighted to be in new condition.

**WATER MAKER:**

None sighted.

**HOT WATER:**

1 Mobitherm hot water heater was not secured and not powered. \*B15.

## **MARINE SANITATION SYSTEMS**

**HEAD(S):**

1 Jabsco manual head sighted to be in good condition.

**MSD TYPE:**

III

**HOLDING TANK(S):**

1 15 Gal built into keel below engine.

**OVERBOARD DISCHARGE:**

Jabsco macerator pump was not hooked into DC system and not tested but was sighted to be new.\*B16.

**Y VALVE:**

2 Jabsco Lockable Y-valves were located 1 before Macerator pump and, 1 under head neither were locked at the time of survey.\*A18

**PUMP OUT:**

1 fabled S/S thru-deck in cockpit sole sighted to be in good condition.

## **OUT OF WATER SURVEY**

**HULL:**

Displacement FRP hull was sighted to be in good condition.

**BOTTOM PAINT:**

Was sighted to be in poor condition.\*B17.

**RUNNING GEAR:**

Was sighted to be in good condition.

**PROPELLER:**

was sighted to be in poor condition with pitting and corrosion sighted.\*A19.

**RUDDER:**

FRP skew hung rudder was sighted to be in good condition.

**SKEG:**

S/S Skeg was painted over and showed signs of corrosion but appeared to be in fair condition. \*B18.

**ANODES:**

Were sighted to be wasted. \*B19.

**THRU-HULLS:**

Were sighted to have mild galvanic corrosion. \*B20.

## **SEA TRIAL**

**OVERVIEW:**

A sea trial was conducted on 25 July 2017 from 10:00 to 11:00 From the vessels slip at capital city yachts to the Budd inlet under good conditions with 2 kts. of wind from the North. The engine idled at 1K RPM. With a speed of 3.5 Kts. And a top speed of 6 Kts at 2K RPM.

**ENGINE:**

Was cold started without excessive cranking, water flow was good and exhaust was clear.

**EXHAUST SYSTEM:**

There was an active leak sighted at the vented loop connection exhaust riser at higher rpm and at the hardware at all speeds. \*A20.

**RAW WATER:**

A active leak was sighted at the raw water intake pump both at rest and while underway, it appeared that the hose was impinged at the pump. \*A21.

**STEERAGE:**

The internal helm was disconnected at the time of survey. The upper helm station was sighted to be in good condition a minor leak was sighted at the rudder control arm. \*A9.

**SAILS:**

All sails on deck were hoisted and appeared to be in worn but fair condition. \*C11.

**RIGGING:**

Standing rigging was sighted to be loose but in fair condition, running rigging was operable but in poor condition. \*A1.

## **IV. FINDINGS AND RECOMMENDATIONS**

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**DEFICIENCIES NOTED UNDER “SAFETY” SHOULD BE ADDRESSED BEFORE THE VESSEL IS NEXT UNDERWAY. THESE FINDINGS REPRESENT AN ENDANGERMENT TO PERSONNEL AND OR THE VESSEL’S SAFE AND PROPER OPERATING CONDITION.**

***FINDINGS MAY ALSO BE IN VIOLATION OF U.S.C.G REGULATIONS.***

DEFICIENCIES NOTED UNDER “**OTHER DEFICIENCIES**” SHOULD BE CORRECTED IN THE NEAR FUTURE SO AS TO MAINTAIN STANDARDS AND HELP THE VESSEL MAINTAIN IT’S VALUE.

DEFICIENCIES WILL BE LISTED UNDER THE APPROPRIATE HEADING:

- (A) SAFETY DEFICIENCIES**
- (B) OTHER DEFICIENCIES**
- (C) SURVEYORS NOTES AND OBSERVATIONS**

## (A) SAFETY FINDINGS

<b>A1</b>	Running rigging in poor condition	Renew all worn and damaged components for safe sailing.
<b>A2</b>	Signal flares out of date	Renew IAW 33 CFR 175.101
<b>A3</b>	No sound device sighted	Renew IAW 33 CFR 83
<b>A4</b>	Fire extinguishers not dated or out of date.	Inspect rectify or renew as needed IAW 46 CFR 25
<b>A5</b>	USCG required placards not sighted.	Renew IAW 33 CFR151/155
<b>A6</b>	Smoke detector inoperable no CO detector sighted	Renew IAW ABYC A-24
<b>A7</b>	Bilge pumps not tested at time of survey	Test and renew
<b>A8</b>	Thru-deck hardware and hanging hooks in headliner walking areas	Remove or cover to avoid crew injury.
<b>A9</b>	Hydraulic lines on steerage leaking at lower helm and at rudder control arm.	Renew
<b>A10</b>	Exhaust riser on engine heavily corroded	Renew
<b>A11</b>	No sea strainer sighted on raw water intake to engine.	Renew as needed to avoid engine damage.
<b>A12</b>	Improper hose type on raw water intake to engine.	Renew
<b>A13</b>	Batteries unsecured	Renew IAW USCG 183.420
<b>A14</b>	AC/DC wiring not properly routed or connected.	Renew IAW ABYC E-11
<b>A15</b>	No breaker or fuse sighted within 7" of shore power inlet.	Renew IAW ABYC E-11
<b>A16</b>	Reverse polarity sighted on all AC outlets.	Renew IAW ABYC E-11
<b>A17</b>	No GFCI's sighted	Renew IAW ABYC E-11
<b>A18</b>	Y-valves on black water system not locked out.	Renew IAW 33CFR 159
<b>A19</b>	Propellor showing signs of corrosion.	Renew
<b>A20</b>	Active leak sighted on exhaust riser during sea trial	Renew
<b>A21</b>	Active leak sighted at raw water pump	Renew

## (B) OTHER DEFICIENCIES

<b>B1</b>	Paint blistered along boot strap 1” above waterline.	Renew as needed.
<b>B2</b>	Oil and debris sighted in bilge.	Clean and renew as needed
<b>B3</b>	Windlass not secured or powered	Install, test and renew as needed
<b>B4</b>	Forward and aft hatch hardware in poor condition.	Renew as needed
<b>B5</b>	Chain plate hardware not seated properly internal chainplates not sighted.	Inspect and renew as needed.
<b>B6</b>	Lewmar 30 winch on cabin top inoperable, other winches in need of maintenance.	Renew as needed
<b>B7</b>	Track ends missing on main and head sail travelers.	Renew as needed
<b>B8</b>	Anchor rode not measured. Anchor not properly seized .	Inspect and renew for safe anchoring.
<b>B9</b>	Interior joinery and bright work unfinished or damaged.	Renew as needed.
<b>B10</b>	Engine mounts in poor condition.	Renew
<b>B11</b>	Engine and alarms not tested.	Inspect and renew as needed
<b>B12</b>	Loose battery sighted in STBD settee.	Remove
<b>B13</b>	No galvanic isolator sighted.	Renew IAW ABYC E-11
<b>B14</b>	No bonding system sighted.	Renew IAW ABYC E-11
<b>B15</b>	Hot water heater unsecured.	Secure as needed
<b>B16</b>	Black water macerator pump not connected.	Renew 33 CFR 159
<b>B17</b>	Bottom paint in poor condition.	Renew
<b>B18</b>	Skeg painted over and showing signs of corrosion.	Inspect and renew as needed
<b>B19</b>	Anodes wasted	Renew
<b>B20</b>	Thru-hulls showing signs of galvanic corrosion.	Inspect and renew as needed

## (C) SURVEYORS NOTES AND RECCOMENDATIONS

<b>C1</b>	Bright work in poor condition.	Renew as needed
<b>C2</b>	Mild spider cracking in surfaces.	Renew as needed
<b>C3</b>	Sail inventory not completed.	Complete inventory and inspection f sails as needed.
<b>C4</b>	Sea anchor EPIRB and life raft not sighted	Renew as needed for safe cruising in open ocean crossing.
<b>C5</b>	Navigational rules not sighted.	Renew as needed for safe cruising in open ocean crossing.
<b>C6</b>	Oil pan / oil absorbent pads not sighted	Renew as needed to prevent overboard discharge.
<b>C7</b>	Shore cable maintenance.	With the outbreaks of marina fires located around the shore power system make sure maintenance is done to prevent fire.
<b>C8</b>	STBD side water tank inaccessible.	Create an access panel to perform maintenance / cleaning of water tank.
<b>C9</b>	Fuel rail not clearly labeled	Label as needed.
<b>C10</b>	Disconnected thru-deck stove pipe.	Remove as needed to clear deck of unnecessary items.
<b>C11</b>	Sails sighted to be in worn but fair condition	Renew sails before going to open waters.

## V. SUMMARY AND VALUATION

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### STATEMENT OF OVERALL VESSEL RATING OF CONDITION

It is the surveyor's experience that develops an opinion of the **OVERALL VESSEL RATING OF CONDITION** After the survey has been completed and the findings have been organized in a logical manner.

The grading of condition, developed by **BUC and MARKET RESEARCH**, and accepted in the marine industry, for a vessel at the time of survey, determines the adjustment to the range of base values for a similar vessel sold within a given time period, as a consideration to determine Market Value.

THE FOLLOWING IS THE ACCEPTED MARINE GRADING SYSTEM OF CONDITION:

**"EXCELLENT (BRISTOL) CONDITION"**, is a vessel that is maintained in mint or Bristol fashion – usually better than factory new – loaded with extras – a rarity.

**"ABOVE AVERAGE CONDITION"**, has had above average care and is equipped with extra electrical and electronic gear.

**"AVERAGE CONDITION"**, ready for sale requiring no additional work and normally equipped for its size.

**"FAIR CONDITION"**, requires usual maintenance to prepare for sale.

**"POOR CONDITION"**, requires substantial yard work and is devoid of extras.

**"RESTORABLE CONDITION"**, enough of the hull and engine exists to restore the boat to usable condition.

As a result of my investigation, as shown in the **SYSTEMS AND FINDINGS AND RECOMMENDATIONS** sections of this **REPORT OF SURVEY**, and by the virtue of my experience, my opinion is:

**OVERALL VESSEL RATING:**

**CONDITION**

**Fair**

# STATEMENT OF VALUATION

1. The "FAIR MARKET VALUE" is the most probable price in terms of money which a vessel should bring in a competitive market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not effected by undue stimulus.

My analyses, using BUC and market research my opinions and conclusions were developed, and this report has been prepared in consideration of the Uniform Standards of Professional Appraisal Practice. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer conditions whereby:

- a. Buyer and seller are typically motivated.
- b. Both parties are well informed or well advised, and each acting in what they consider their own best interest.
- c. A reasonable time is allowed for exposure in the open market.
- d. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
- e. The price represents a normal consideration for the vessel sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

## SOURCES FOR VALUATION

- a. BUC
- b. yachtworld.com
- c. craigslist.com
- d. region

The closest comparable vessels in the same condition are: \$25,000-\$45,000

Therefore, after consideration of the reliability of the data, the extent of the necessary adjustments and condition of the vessel, it is your Surveyor's opinion that the "FAIR MARKET VALUE" of the vessel "Endurance 37" is:

**\$28,900.00**

2. The "ESTIMATED REPLACEMENT COST" indicates the retail cost of a new vessel of the same make/model with similar equipment offered by the same manufacturer. "ESTIMATED REPLACEMENT COST" of the subject vessel is:

**\$317,000.00**

## SUMMARY

In accordance with the request for a marine survey of the “Endurance 37” for the purpose of evaluating it’s present condition and estimating it’s fair market value and replacement cost, I herewith submit my conclusion based on the preceding report. The subject vessel was personally inspected by the undersigned on 21 July 2017, and was found be a well constructed, fairly maintained vessel, with the proper renewal and upgrade of all systems noted in the findings and recommendations section of this report of survey, this will be a well appointed and comfortable vessel for ”passage making ”. The owners of “ Endurance 37” have been conscientious in their maintenance; this can be clearly seen throughout the vessel. Subject to correction of deficiencies listed in section **IV, (A) Safety**, the vessel is currently considered to be suitable for the use of recreational cruising in protected waters. **It is the opinion of this Surveyor that the vessel ”Endurance 37” should NOT be operated until the safety deficiencies (A) are renewed.** Other deficiencies in the list should be attended to as soon as possible.

## SURVEYOR’S CERTIFICATION

I certify that, to the best of my knowledge and belief:

The statements of fact contained in this report are true and correct.

The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions and conclusions.

I have no present or prospective interest in the vessel that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.

My compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of stipulate result or the occurrence of subsequent event.

I have made a personal inspection of the vessel that is the subject of this report.

This report is submitted without prejudice and for the benefit of whom it may concern.

Attending Surveyor: Lafayette M. Duvall

**SIGNATURE:** EXAMPLE

**DATE:** 20 July 2017

**Amended with sea trial on 25 July 2017**

## VI. PHOTOGRAPHIC APENDIX



**STBD side view**



**Bobstay at hull**



**Hull STBD**



**Hull Port**



**STBD rudder and Propellor**



**Skeg**



**Thru Hull Fitting**



**Exhaust port Thru-hull**



**Bow Sprit**



**STBD Chain plate**



**Port chain plate**



**Unmounted windlass**



**Tabernacle mast step**



**Running rigging sun damaged**



**Cockpit and gangway**



**Engine control panel**



**Main saloon/ compression post**



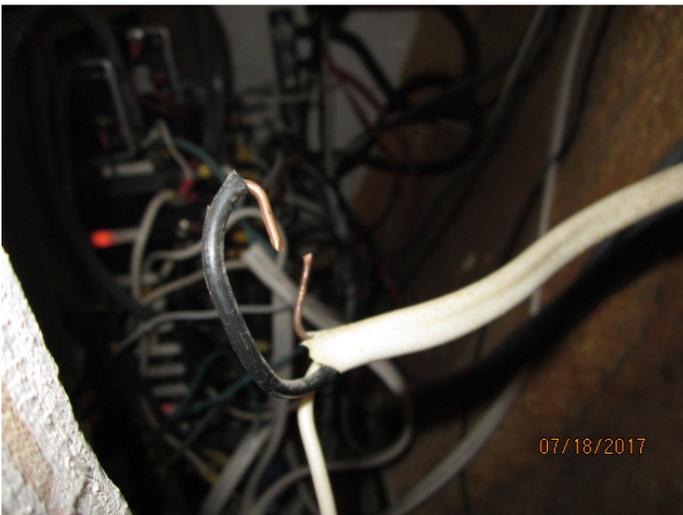
**Fuel rail**



**Unsupported AC wiring**



**AC/DC Panel**



**Unprotected household AC wiring**



**Wire nut on DC wiring/Water pump**



**Unsecured house battery**



**Unlocked blackwater y-valve**