

**From:** [N.C](#)  
**To:** [insphotos@boat.us](mailto:insphotos@boat.us)  
**Subject:** Application number: 3985989-02  
**Date:** Monday, December 21, 2015 5:32:38 PM  
**Attachments:** [120915JC.pdf](#)

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To whom it may concern

Regarding insurance quote application # 3985989-02 for Nathan Carman

Fw: JC amended survey report

Attached is a copy of a recent survey the was performed on the vessel by an accredited marine surveyor within the last two weeks. I hereby submit it for your review in order for coverage to be activated.

Regards,  
Nathan Carman  
(802) 258-7186

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**From:** bernard feeney  
**Sent:** Thursday, December 17, 2015 11:51 AM  
**To:** N. C.  
**Subject:** JC amended survey report  
Nathan, Attached is the amended report to reflect the sea trial results. Good luck with the boat.  
Regards, Bernie Feeney

Bernie

**GULF OF MAINE BOAT SURVEYORS**  
MARINE SURVEYOR AND CONSULTANT

**1973 JC Boats 31**  
***"JC No 1 Plug"***



BERNARD J FEENEY MARINE SURVEYOR AMS # 1095  
INDEPENDENT MARINE SURVEY SERVICE  
MEMBER OF SOCIETY OF ACCREDITED MARINE SURVEYORS

197 Pleasant St. Whitman, MA 02382  
(617) 823-2936

# **Report of Marine Survey**

**Of The Vessel**

***"JC No 1 Plug"***

**1973 JC Boats 31**

Conducted by

Bernard J Feeney, SAMS, AMS. #1095

Mr. Nathan Carman

December 09, 2015

BERNARD J FEENEY MARINE SURVEYOR AMS # 1095  
INDEPENDENT MARINE SURVEY SERVICE  
MEMBER OF SOCIETY OF ACCREDITED MARINE SURVEYORS

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# I. INTRODUCTION

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## SCOPE OF SURVEY

Acting at the request of Nathan Carman, the attending surveyor did attend onboard the 1973 JC Sport fisherman 31, beginning on, 12-09-2015 where an "out-of-the-water-survey" WAS conducted at 319 Court St, Plymouth, Ma. The ship's papers were not on board at the time of the survey. The Hull Identification Number (HIN) WAS NOT verified from the transom due to shrink wrap coverage. A sea trial WAS performed on 12-16-2015. An out-of-the-water inspection of underwater machinery and the exterior of the hulls wetted surface area WAS performed on 12-09-2015. The reason for the survey, was to ascertain the physical condition and value of the vessel. Moisture readings taken and referenced throughout the body of the report, were taken with the GRP 33 Moisture meter. DC power WAS used to check operation of the electrical systems specified in this report only. No reference or information should be construed to indicate evaluation of the internal condition of the engines or the propulsion system's operating capacity.

This vessel was surveyed without removals of any parts, including fittings, tacked carpet, screwed or nailed boards, anchors and chain, fixed partitions, instruments, clothing, spare parts and miscellaneous materials in the bilges and lockers, or other fixed or semi-fixed items. Locked compartments or otherwise inaccessible areas would also preclude inspection. Owner is advised to open up all such areas for further 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 dates, and is the unbiased opinion of the undersigned, but it is not to be considered an inventory or a warranty either specified or implied.

**NOTE:** It is recommend and understood that the diesel engine be surveyed/inspected by a qualified Engine Surveyor to determine the internal condition of the engines, gears and pumps, heat exchangers, coolers, etc. if the client requires such data or if the sea trial results warrant such actions. No statement of the engines operational reliability or internal condition is offered. The sea trial data is of the observed indicators using the vessels instrumentation for reference and is only offered as observations from specific function testing at that time in place.

## 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.**

The use of the word "appears" is intended to indicate that a close or complete inspection was not possible or it was not deemed appropriate at the time of this survey. The deficiencies reported herein reflect the conditions observed at the time the survey was conducted.

Use of asterisks \* 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.

## VESSEL DESCRIPTION

1973 JC 31, it was indicated that this vessel was the hull "plug" constructed for the fabrication of the original hull mold of the JC 31. The "plug" was covered both outer and inner surfaces with FRP laminates and finished as a lobster boat. The current owner bought the vessel and completely gutted the hull and cabin structures as well as a major refit was performed over a three year period. With a replacement used engine, new running gear, rebuilt internal structures and decking of wood, FRP and aluminum components, the vessel was sighted to be in serviceable condition. After issues sighted in this reports findings sections, "A" and "B" are attended to, the vessel is considered to be suitable for it's intended use and an acceptable risk.

## II. GENERAL INFORMATION

### GENERAL INFORMATION

FILE NUMBER: .....	120915JC
SURVEY PREPARED FOR: .....	Mr. Nathan Carman
<hr/>	
TYPE OF SURVEY: .....	Condition and value for pre-purchase.
OVERALL VESSEL RATING: .....	**** AVERAGE
ESTIMATED MARKET VALUE: .....	\$66,200
ESTIMATED REPLACEMENT COST: .....	\$185,000
YEAR BUILT: .....	1973
HULL IDENTIFICATION NUMBER (HIN): .....	MSZMT205J303 as per title.
OWNER: .....	Mr. Brian Woods, 317 R Court St, Plymouth, Ma. 02360
PLACE OF SURVEY: .....	319 Court St, Plymouth, Ma 02360.
DATE/TIME OF SURVEY: .....	December 09, 2015
HULL MATERIAL: .....	Mahogany planked FRP encapsulated.
HULL TYPE: .....	Planing, Modified-V bottom, lifting chines, and flared bow.
LENGTH OVER ALL (L.O.A.): .....	31' 4"
(LOAD) LENGTH WATERLINE (L.W.L.): .....	29' 2"
BEAM: .....	11' 2"
DRAFT: .....	3' 6"
DISPLACEMENT: .....	Reported to be approx 12000 lbs.
OVERHEAD CLEARANCE: .....	The owner is advised to secure the overhead clearance of the vessel after full commissioning with all structures/antennas in place for navigating bridges and other overhead obstructions.
PROPULSION SYSTEM: .....	Diesel screw
FUEL TYPE: .....	Diesel.
FUEL CAPACITY: .....	Reported to be 380 gals.
DC POWER: .....	12 volt lead acid type batteries.
INTENDED USE/BUYER: .....	Recreational near coastal cruising and sport fishing.
BUYER'S EXPERIENCE: .....	Not Determined.
INTENDED CRUISING AREA: .....	New England waters

### DEFINITION OF TERMS

The terms and words used in this report have the following meanings as used in this *Report of 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 not to conduct destructive tests).

#### FIT FOR INTENDED USE:

Use which is intended by Survey Purchaser(present or prospective owner).

#### SERVICEABLE: ADEQUATE:

## II. GENERAL INFORMATION

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### DEFINITION OF TERMS: *(continued)*

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 indicated.

#### EXCELLENT CONDITION:

New or like new.

#### GOOD CONDITION:

Nearly new, with only minor cosmetic or structural discrepancies noted.

#### FAIR CONDITION:

Denotes that system, component or item is functional as is with minor repairs. (MONITOR OFTEN)

#### POOR CONDITION:

Unusable as is. Requires repairs or replacement of system, component or item to be considered functional.

#### USE OF \*:

Use of \* in the body of this report will indicate that a finding will be listed in the "*Findings and Recommendations*" section pertaining to the \* item.

Asterisks \* in this General Information section refers to the source of such information as follows:

- \* **Per Manufacturer's Specifications**
- \*\***Refer to Summary and Valuation Section**
- \*\*\* **Per USCG Documentation**
- \*\*\*\* **Per Buc Book**



# III. SYSTEMS

## HULL DECK AND SUPERSTRUCTURE

### HULL CONSTRUCTION

\* TYPE: [C1, C2] Reported to be mahogany wood core FRP encapsulated.

Planing hull with a modified-V, lifting chines, and flared bow.

The hull was sighted to have a white gelcoat finish, serviceable, and black bottom anti fouling paint, serviceable. The vessel was shrink wrapped at the time of the survey, complete inspection and analysis was not conducted due to limiting constraints.

The moisture testing and percussion sounding was performed and some areas of elevated moisture indications were sighted, the percussion soundings revealed a few areas of voids (delamination) under the outer FRP laminates.

The topside's were not inspected due to the shrink wrap covering.

A small damaged area at the lower bow was sighted, a chip of the gelcoat.



120915JC 011.JPG



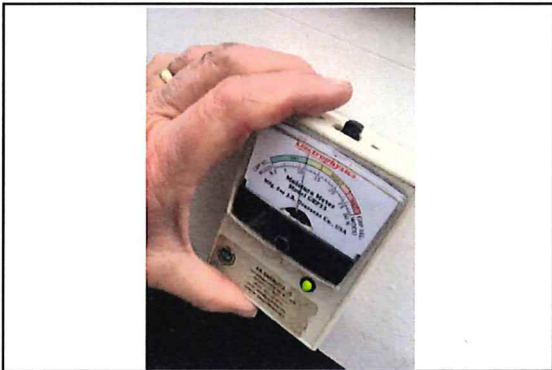
120915JC 012.JPG



120915JC 013.JPG



120915JC 015.JPG



120915JC 016.JPG



120915JC 017.JPG

### III. SYSTEMS

#### HULL DECK AND SUPERSTRUCTURE

##### HULL CONSTRUCTION (continued)

\* TYPE: (continued)



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120915JC 019.JPG



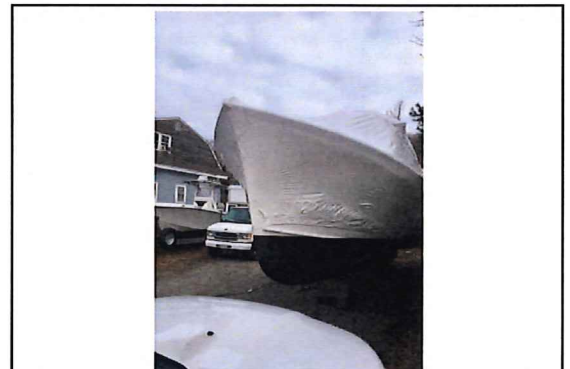
120915JC 020.JPG



120915JC 021.JPG



120915JC 023.JPG



120915JC 007.JPG

### III. SYSTEMS

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#### HULL DECK AND SUPERSTRUCTURE

##### HULL CONSTRUCTION (continued)

\* TYPE: (continued)



120915JC 008.JPG

**EXTERIOR HULL:** White gelcoat with a black anti fouling type paint, serviceable where sighted.

Two Bennett type trim tabs were sighted with four actuation cylinders, the control was sighted at the helm and the pump unit was sighted in the lazarette, powered up. Appear serviceable.

Two PVC type bow spray rails were sighted, appear serviceable.

Lifting chines were sighted from amidships to the stern at the chine, appear serviceable.



120915JC 004.JPG

\* **BULKHEADS:** [C3] Three bulkheads were sighted, reported to have been replaced at the time of the refit, sighted as new, plywood FRP covered with dimensional PT lumber framing, all appear serviceable.

Moisture testing of the bulkheads revealed no anomalies, the forward bulkhead had one area of elevated moisture indications over the access hatch.

### III. SYSTEMS

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#### HULL DECK AND SUPERSTRUCTURE

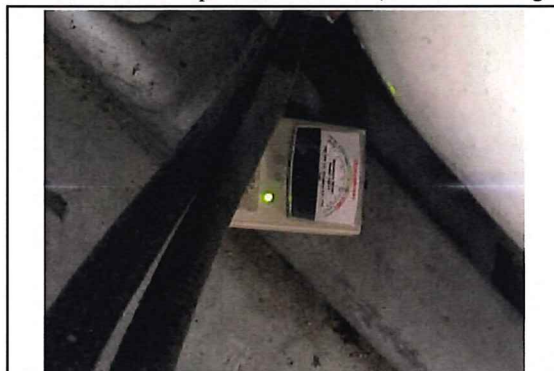
##### HULL CONSTRUCTION (continued)

##### \* BULKHEADS: (continued)



120915JC 023.JPG

**STRINGERS:** Hull stiffness provided by four FRP composite cored longitudinal stringers. Complete inspection not possible due to limited access. Appeared serviceable where observed.  
Moisture tested and percussion sounded, no anomalies sighted.



120915JC 065.JPG

**STEM:** The stem was sighted thru the chain locker, moisture tested ( 10-15% indications ), percussion sounded with no anomalies noted. The stem was sighted to be FRP covered, the core material was not identified. Limited access precluded complete inspection.

**TRANSOM:** Reinforced, FRP composite construction.

A single thru hull wet exhaust fitting was sighted as well as a thru hull fitting as the drain for an internal stand pipe system, both appear serviceable.

Moisture testing and percussion sounding were performed. (see previous notes in hull type section)



### III. SYSTEMS

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#### HULL DECK AND SUPERSTRUCTURE

##### HULL CONSTRUCTION (continued)

\* TRANSOM: (continued)



120915JC 004.JPG

**BILGE:** A smooth gray surface was used in the shallow bilge area, condition was generally clean. The bilge area was sighted to have been newly painted.

**CHAIN LOCKER (DRAINAGE):** Not sighted.

**KEEL:** Percussion sounding and moisture testing of the keel surfaces internally were performed where access was possible thru hatches and engine spaces, a complete inspection was not conducted. Moisture indicators were noted to be in the 10 -15% range, no issues sighted. No anomalies were noted from the percussion soundings in accessible areas. The lazarette area was wet with anti freeze fluids and no testing of this area was performed.



120915JC 056.JPG

**KEEL EXTERNAL:** Reported to be FRP covered mahogany constructed wet flood type, down east design with skeg supported rudder. Limited access precluded a complete inspection. Percussion sounding as well as moisture testing was performed, (the vessel bottom was finished with anti fouling paint, paints will sometimes "store" moisture in the area between the hull and paint surfaces giving false moisture indications as well as the owner indicated that the bottom had been barrier coated) some elevated moisture indications were sighted and percussion sounding indicated areas of FRP issues and were noted. A sample of the hull construction schedule was offered by the owner as a plug removed for a thru hull installation, the core material appear dry with adequate FRP laminates for hull strength. (see photo)

### III. SYSTEMS

#### HULL DECK AND SUPERSTRUCTURE

##### HULL CONSTRUCTION (continued)

\* KEEL EXTERNAL: (continued)



120915JC 003.JPG

**BALLAST (KEEL BOLTS):** None sighted.

**FLOOR TIMBER CONSTRUCTION:** Sawn PT lumber, plywood, and covered FRP components, serviceable where sighted thru deck hatches and engine space opening.  
Limited access precluded a complete inspection.

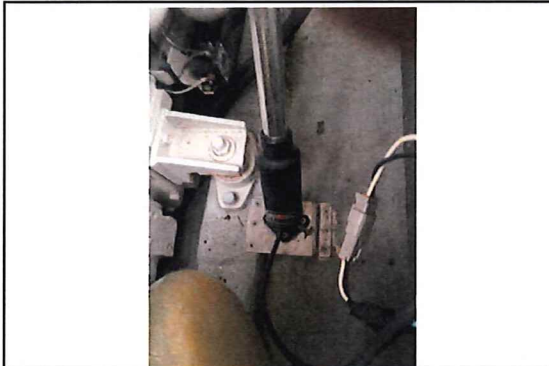
**LIMBER HOLES:** Limber holes are of adequate size and clear where sighted.

**FRAMES (RIBS):** Not sighted due to FRP encapsulation.

**NOTE:** The vessel's hull was reported to have been the original wood plug for the JC 31 hull mold construction. Reported to have been constructed from mahogany and appears to be of a strip plank design, the frame/keel material was not determined due to the complete internal and external encapsulation with FRP laminates. Further the FRP to hull bonding system and schedule could not be determined without destructive testing. The one hull "plug" noted earlier gives some indication of the construction schedule. The owner is advised to further investigate if the construction and hull internal condition is of concern before purchasing the vessel.

##### DECK CONSTRUCTION

**TYPE:** Two deck systems were sighted, the aft cockpit was sighted to be a wood framed and plywood sheathed deck with an FRP covering. A non skid surface was sighted, appears serviceable. The owner reported that the deck had been replaced within the last three years. PT lumber was sighted as the frame materials.  
The main deck and foredeck were sighted to be constructed of aluminum as well as the pilot house. New plywood bulkheads and PT lumber was sighted as the supporting structures for the deck plates. The owner reported that the deck plates were secured to the frames and hull cleats with stainless steel screws and 5200 bedding compound, this was noted at the time of the survey, appears serviceable.  
The pilot house was sighted to be hinged on the engine space hatch and was elevated with two Lenco 12v hatch lifting units, powered up, appear serviceable. Full movement of the engine hatch was not possible due to the shrink wrap restrictions.  
A large fish hold was sighted forward deck area, no clean out system was sighted, appears serviceable.



120915JC 063.JPG

## III. SYSTEMS

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### HULL DECK AND SUPERSTRUCTURE

#### DECK CONSTRUCTION *(continued)*

- \* **OTHER:** [C4] The pilot house was sighted to be welded aluminum framed and sheathed, appears serviceable.
  - Tinted safety glass was sighted, rubber set with two windshield wipers. The windshield wiper units were noted to be new and not connected at the time of the survey. 360' visibility from the helm station.
  - Antenna mountings sighted on the top of the wheel house.
  - Hand rails sighted both sides of the structure, appear serviceable.

#### HULL-TO-DECK JOINT

**TYPE:** An overlap type joint was sighted with the aluminum cap secured to the hull FRP coaming with stainless steel fasteners. Aluminum supports and bracing were sighted as well as a HD rubber rub rail system, appears serviceable. Limited access due to the shrink wrap precluded a complete inspection of the rub rail.

**BEDDING COMPOUND:** Not sighted.

#### DECK FITTINGS

**VENTILATION:** Engine space ventilation is provided by the aluminum side panels inside the hull at the midships area, appears adequate.

**SCUPPERS:** Two cockpit scuppers were sighted aft at the transom with back up baffles externally installed, appears serviceable and of adequate size to de-water the cockpit under normal use.

**CHOCKS AND CLEATS:** Four cleats with four hawse pipes sighted, appear adequate for this size vessel and serviceable. A bow cleat was not sighted due to the shrink wrap.

**HATCHES:** Three round aluminum type water tight designed hatches were sighted. The twist dogs functioned, no testing of their water tight integrity was performed.

**GRAB RAIL:** Adequate hand rails thru-out the vessel were sighted.

**ANCHOR PLATFORM:** Not sighted due to the shrink wrap covering.

#### SUPERSTRUCTURE

**JOINERY STRESS:** None Sighted.

#### BRIDGE DECK

**SEATS:** No seats sighted.

#### ADDITIONAL EQUIPMENT AND ACCESSORIES

**GENERAL EQUIPMENT:** Boat hook sighted.

Stainless steel Bennett type dual piston trim tabs, powered up, appear serviceable.

**FENDERS:** None sighted on the vessel at the time of the survey.

**DOCK LINES:** None sighted on the vessel at the time of the survey.

### CABIN APPOINTMENTS

#### INTERIOR DESCRIPTION:

**WATER INTRUSION SIGNS:** None Sighted.

**HEADS:** No head sighted on the vessel.

### PROPULSION

#### MAIN ENGINES

**TYPE:** Cummins 6BTA six cylinder diesel engine.



### III. SYSTEMS

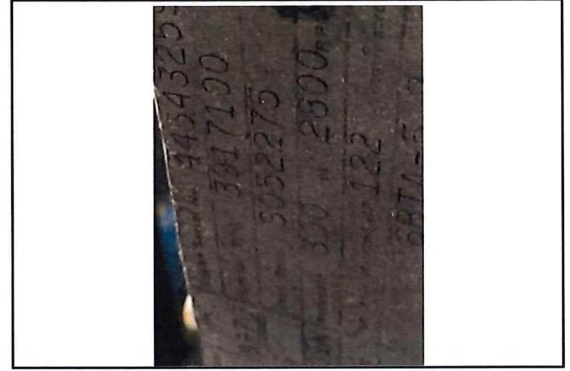
#### PROPULSION

##### MAIN ENGINES (continued)

\* TYPE: (continued)



120915JC 055.JPG



120915JC 091.JPG



120915JC 086.JPG

**MANUFACTURER:** Cummins Corp.  
10/29/90 as per engine data plate.

**SERIAL NUMBERS:** 44543259 as per engine data plate.

**LABELS AND NOTICES:** None sighted

**HORSEPOWER:** Reportedly 300 horsepower at 2800 rpm as per data plate.

**INDICATED HOURS:** No official hour data available.  
Owner indicated that there was less than 2000 hours on the engine.

**THROTTLE CONTROLS:** Morse mechanical lever/cable type, at the helm station, appear serviceable.

**EMERGENCY SHUT DOWN:** Manual type pull at the helm.

**ENGINE MOUNTS AND BED:** The engine mounts were sighted to be of the mfg. adjustable type secured to the vessel stringers, serviceable.

**DRIP PANS:** None Sighted. Engine fluid and loose debris falls into bilge area.

**LUBRICATION:** Level and Condition: Appears serviceable. Filters: Engine mounted spin on/off canister type filters.

**EXHAUST SYSTEM:** Raw water cooled type with a wet elbow, FRP type surge chamber, FRP tubing and a muffler ( no sighted ), with hose connections and double clamped where sighted, appears serviceable.

### III. SYSTEMS

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#### PROPULSION

##### MAIN ENGINES *(continued)*

##### \* EXHAUST SYSTEM: *(continued)*



120915JC 060.JPG

**INSULATION:** None sighted.

**PROP SHAFTS:** 1 3/4" stainless steel, appears serviceable.

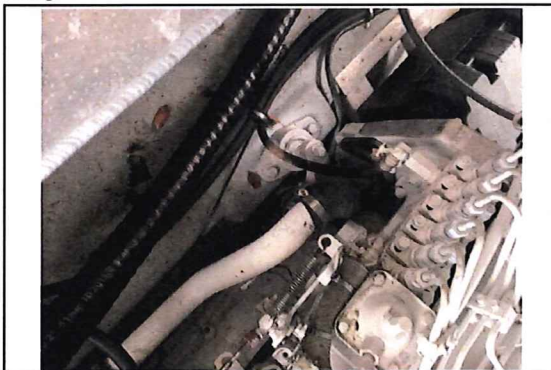
**ENGINE ALARMS:** None noted.

**STUFFING BOX:** Dripless type, appears serviceable.



120915JC 043.JPG

\* **CONDITION AND DEFICIENCIES:** [C5] The raw water pump outlet hose to the after cooler was sighted to be fastened with only one clamp.



120915JC 066.JPG

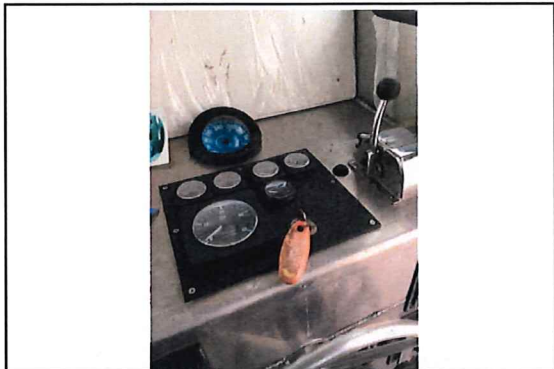
## III. SYSTEMS

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### PROPULSION

#### MAIN ENGINES (*continued*)

**NOTE:** A Cummins gauge cluster was sighted, functioned and appears serviceable.



120915JC 075.JPG

#### COOLING SYSTEM

**TYPE:** Freshwater reservoir type cooling with raw water cooled wet exhaust.

**RAW WATER STRAINERS:** Bronze alloy with sight glass. Appears serviceable.



120915JC 026.JPG

**COOLANT LEVEL:** Normal level observed.

**BELTS AND PULLEYS:** Belt condition appears serviceable.

**SEACOCKS AND STRAINERS:** One raw water sea cock was sighted port side aft engine space, appears serviceable. Disconnected at the time of the survey for winterization, functioned, appears serviceable.

#### TRANSMISSIONS

**TYPE:** Reported to be Twin Disc type with a reduction ratio of 1.59 to 1.  
The data plate was corroded and no complete data was secured.

### III. SYSTEMS

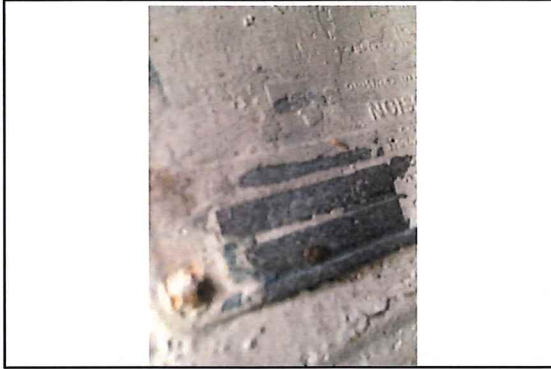
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#### PROPULSION

##### TRANSMISSIONS *(continued)*

\* TYPE: *(continued)*



120915JC 054.JPG

**FLUID LEVEL AND CONDITION:** Normal level indicated on dipstick. Appears serviceable.

**CONTROLS:** Morse type mechanical cable and linkage.

**COUPLER (SAFETY WIRE):** None sighted, used lock washers. Appears serviceable.

**COOLER:** Yes: External engine mounted raw water heat exchanger. Appears serviceable.

#### FUEL SYSTEM

##### MAIN ENGINE(S) FUEL SYSTEM

**FUEL TYPE:** Diesel.

**MATERIAL:** Reportedly Aluminum.

**NUMBER OF TANKS:** Three, reported to have a total capacity of 380 gals.

Three fuel fills were sighted, one each side cap rails and one aft main deck starboard side, all marked for DIESEL.



120915JC 061.JPG

**SECURED:** Wood framed with aluminum tabbing appears serviceable.

**LOCATION:** Port and starboard outboard engine space and one centerline aft engine space.

**MANUFACTURING LABEL:** None Sighted.

**FILL PIPE MATERIAL:** Type A2 USCG approved hose. Appears serviceable.

**HOSE CONNECTIONS, CLAMPS:** Double clamped where sighted, grade USCG type A2. Appears serviceable.



### III. SYSTEMS

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#### FUEL SYSTEM

##### MAIN ENGINE(S) FUEL SYSTEM *(continued)*

\* **FUEL MANIFOLD VALVES:** [C6] Bronze type valves properly marked, operable, located under the forward hatch port side, appear serviceable.

The fuel transfer valves were not marked as to their functions.



120915JC 028.JPG

**SHUT-OFF VALVE:** Located at the bottom of each tank, appear serviceable.

**FUEL FILTERS:** A Racor type 900 series was sighted as well as an engine spin on type. Condition and service records not available at the time of the survey.

**The owner is advised to carry spare fuel filters on board the vessel with the appropriate tools necessary to change same as well as familiarize himself with the changing procedures.**



120915JC 027.JPG

**NOTE:** There did not appear to have a fuel system for indicating the level in each tank.

#### ELECTRICAL SYSTEMS

##### ELECTRICAL SYSTEM (D.C. SYSTEM)

\* **VOLTAGE:** [C7] Lead acid battery powered 12 volt system. Two batteries were sighted in the engine space in plastic boxes, the boxes were not sighted to be strapped down.

A rotary selector switch was sighted in the wheel house, appears serviceable.

### III. SYSTEMS

#### ELECTRICAL SYSTEMS

##### ELECTRICAL SYSTEM (D.C. SYSTEM) (continued)

\* VOLTAGE: (continued)



120915JC 030.JPG



120915JC 077.JPG

PANEL: Two toggle swig switch panel were sighted with fuse protection, appears serviceable.



120915JC 076.JPG

TYPE CONNECTORS: Round Lugs: Captive type, where sighted. Condition: Appears serviceable.

\* ROUTING/SUPPORT: [C8] The running lights' wires were sighted to be channeled thru the aluminum frame and were sighted not to be protected from chafing



120915JC 072.JPG

CHARGING SYSTEM: Alternator on main engine.

## III. SYSTEMS

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### STEERING SYSTEM

#### STEERING SYSTEM

**TYPE:** Hydraulic type, Sea Star helm and piston at tiller arm.

**NUMBER OF STATIONS:** One (1) main helm station.

**LINES AND FITTINGS:** Reinforced flexible hose, with metallic fittings. Appears serviceable.

**ACTUATOR CYLINDER:** Appears serviceable.

**MOUNTING:** Cylinder and ram actuator are well secured. Hull mounted bracing appears adequate.

**RUDDER STOCK:** Bronze cast rudder, appears serviceable.

**PACKING GLAND:** Bronze hex nut type packing gland. Appeared serviceable. Monitor frequently.



120915JC 056.JPG

### GROUND TACKLE

#### GROUND TACKLE

**ANCHORS:** A Danforth type anchor with 5/16" chain and an undetermined length of 3/4" rode was sighted in the forward chain locker, appears adequate for this size vessel and serviceable.

A second anchor of adequate size with rode is recommended to be carried on board the vessel as a spare for emergency use.

### ELECTRONICS AND NAVIGATION EQUIPMENT

#### ELECTRONICS AND NAVIGATION EQUIPMENT

**COMPASSES:** Richie 4", appears serviceable.

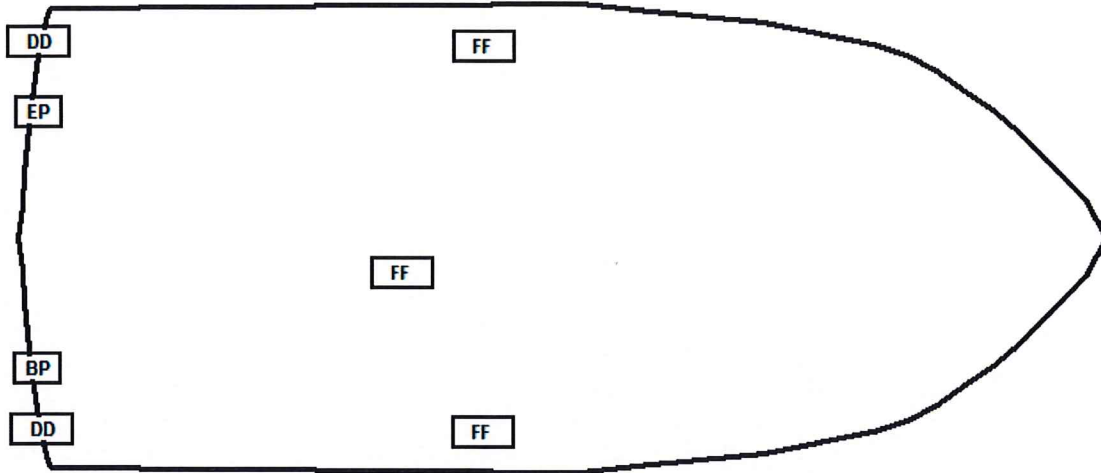
**ANTENNAS:** The antennas were sighted to be disconnected assembled for winter storage.

### III. SYSTEMS

#### THRU-HULLS

##### THRU-HULLS:

##### THRU-HULLS ABOVE WATER LINE (DIAGRAM):



Abbreviation	Description
BP	Bilge Pumps
DD	Deck Drains
EP	Exhst Ports
FF	Fuel Fill

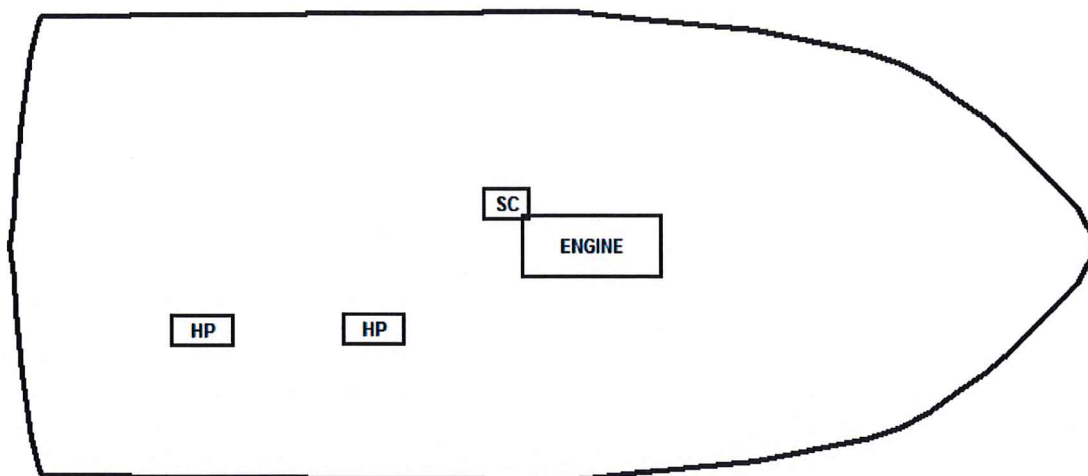
**\*\*Red Icon(s) with white text indicates inoperable item.**

### III. SYSTEMS

#### THRU-HULLS

THRU-HULLS: (continued)

THRU-HULLS BELOW WATER LINE (DIAGRAM):



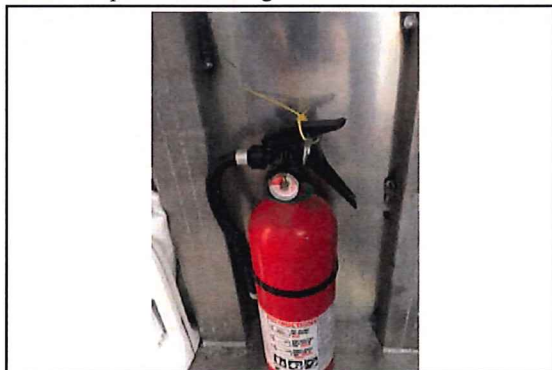
Abbreviation	Description
ENGINE	Engine
HP	Hull Plug
SC	Seacock

\*\*Red Icon(s) with white text indicates inoperable item.

#### SAFETY EQUIPMENT

SAFETY EQUIPMENT (UNITED STATES COAST GUARD)

**FIRE EXTINGUISHERS:** One approved type located in the wheel house.  
A second optional fire extinguisher should be located at the helm.



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**NAVIGATION LIGHTS:** Navigation lights operable.

\* "NO OIL DISCHARGE" PLAQUE: [C9] None Sighted.



### III. SYSTEMS

#### SAFETY EQUIPMENT

##### SAFETY EQUIPMENT (UNITED STATES COAST GUARD) *(continued)*

\* **NOTE:** [A1] There was no safety equipment on the vessel at the time of the survey, the owner is advised to comply with USCG safety requirements for this type/size vessel in the area he will be operating.

##### AUXILIARY SAFETY EQUIPMENT

**EP.I.R.B.:** None Sighted. But highly recommended.

**BILGE WATER ALARM AND SAFETY SWITCHES:** No. This item is very highly recommended.

**FIRST AID KIT:** No. This is highly recommended.

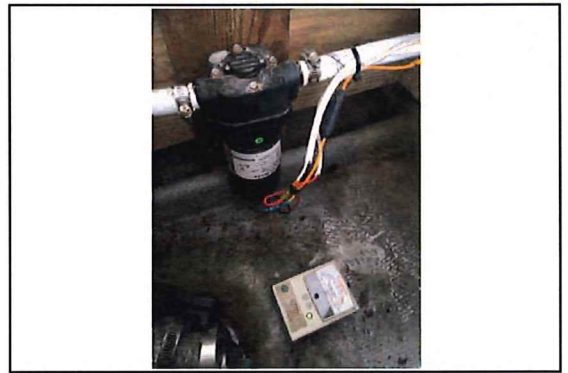
**MAN OVERBOARD SYSTEM:** No. This item is highly recommended.

##### BILGE PUMPS

**LIST:** Two bilge pumps sighted, one midships in the engine space, a 12v diaphragm type with an in line filter, powered up, manual only operation. One Rule type with an automatic float switch in the lazarette, powered up in both manual and automatic modes, appear serviceable.



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#### OUT OF WATER INSPECTION

##### BELOW WATERLINE MACHINERY

**PROPELLER(S):** A four blade bronze propeller was sighted, measured to be 20" diameter, the owner indicated that the pitch was 19". Two spare propellers were sighted in the forward bilge area, one four blade (20 x 20) and one three blade (no size secured), appear serviceable



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### III. SYSTEMS

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#### OUT OF WATER INSPECTION

##### BELOW WATERLINE MACHINERY *(continued)*

##### \* PROPELLER(S): *(continued)*



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**SHAFT BEARING (CUTLESS BEARING):** Cutlass bearing showed no signs of sloppiness or end play.

**SKEGS:** A stainless steel strut was sighted, appears serviceable.

**ZINCS:** Shaft, rudder and strut zincs appeared to be new.

##### **CONDITION OF HULL (WETTED SURFACE)**

**BLISTERS:** None Sighted.

**CONDITION OF BOTTOM PAINT:** Bottom well painted. Condition good.



### III. SYSTEMS

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#### SEATRIAL REPORT

##### INTRODUCTION

**INTRODUCTION:** A sea trial was performed on 12-16-2015 at Brewer's Marine, Plymouth, Ma.

The owner, Nathan Carman and this surveyor were present.

The vessel was started with the usual cold start exhaust smoke, water flow sighted at the exhaust outlet was considered to be normal. The engine was operated to normal temperatures before casting off for sea trial performance testing.

The steering system was noted to not function properly, the owner purged and filled the steering helm reservoir, the system functioned properly after this service.

The vessel was operated at headway speed to the main harbor exit channel. First performance attempt was interrupted with a failure of a hose clamp connecting the turbocharger to the aftercooler lower fitting. The owner returned the vessel to the marina dock to repair. A second sea trial attempt was performed and the following are the performance data recorded.

RPM	oil pressure	coolant temperature	voltage
1200	90 psi	170'	14.2
1500	90 psi	175'	14.2
2000	95 psi	180'	14.2
2400	95 psi	180'	14.2
2600	95 psi	180'	14.2
2800 (WOT)	95 psi	180'	14.2

The engine was operated at WOT for approx five minutes with steady coolant temperatures and oil pressure noted. Bringing the engine to idle immediately after WOT operation no "after boil" was noted, the engine temp reduced to 170' with a few minutes and the oil pressure was noted at a steady 45 psi. Within mfg. specifications. There were no electronics on the vessel at the time of the sea trial to record speed data.

The transmission functioned with no anomalies noted. The controls operated with normal effort.

The trim tabs were operated thru their range of function, serviceable.

The rudder box gland was sighted to be leaking more than normal, the owner is advised to monitor this issue and after the packing has had time to wet out adjust for normal operation.

## IV. FINDINGS AND RECOMMENDATIONS

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Deficiencies noted under "SAFETY" should be addressed before 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 to help the vessel to retain its value.

Deficiencies will be listed under the appropriate heading:

- A. SAFETY DEFICIENCIES
- B. OTHER DEFICIENCIES NEEDING ATTENTION
- C. SURVEYORS NOTES AND OBSERVATIONS

### A. SAFETY DEFICIENCIES:

#### FINDINGS

#### RECOMMENDATIONS

#### A.1 (PAGE 20) NOTE:

**There was no safety equipment on the vessel at the time of the survey, the owner is advised to comply with USCG safety requirements for this type/size vessel in the area he will be operating.**

*Comply with USCG Safety Regulations.*

### C. SURVEYOR'S NOTES AND OBSERVATIONS:

#### FINDINGS

#### RECOMMENDATIONS

#### C.1 (PAGE 4) TYPE:

**A small damaged area at the lower bow was sighted, a chip of the gelcoat.**

*Further investigate and repair as necessary.*

#### C.2 (PAGE 4) TYPE:

**The moisture testing and percussion sounding was performed and some areas of elevated moisture indications were sighted, the percussion soundings revealed a few areas of voids (delamination) under the outer FRP laminates.**

*Monitor for future maintenance scheduling.*

#### C.3 (PAGE 6) BULKHEADS:

**Moisture testing of the bulkheads revealed no anomalies, the forward bulkhead had one area of elevated moisture indications over the access hatch.**

*Monitor for future maintenance scheduling.*

#### C.4 (PAGE 10) OTHER:

**The winds hield wiper units were noted to be new and not connected at the time of the survey.**

*Investigate further and install as necessary.*

#### C.5 (PAGE 12) CONDITION AND DEFICIENCIES:

**The raw water pump outlet hose to the after cooler was sighted to be fastened with only one clamp.**

*Further investigate and repair as necessary. The hose should be fastened with two clamps if the pump fitting allows or a single clamp of HD type with a wider band.*

#### C.6 (PAGE 15) FUEL MANIFOLD VALVES:

**Bronze type valves properly marked, operable, located under the forward hatch port side, appear serviceable. The fuel transfer valves were not marked as to their functions.**

*The owner should familiarize himself with the function of the fuel valves and draw a diagram of the plumbing schematic and display this near the valves.*

## IV. FINDINGS AND RECOMMENDATIONS

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### C. SURVEYOR'S NOTES AND OBSERVATIONS:

#### FINDINGS

#### RECOMMENDATIONS

#### C.7 (PAGE 15) VOLTAGE:

Two batteries were sighted in the engine space in plastic boxes, the boxes were not sighted to be strapped down.

*Further investigate and repair as necessary. The battery boxes must be secured to the vessel structure as per ABYC standards.*

#### C.8 (PAGE 16) ROUTING/SUPPORT:

The running lights' wires were sighted to be channeled thru the aluminum frame and were sighted not to be protected from chafing.

*Further investigate and repair as necessary.*

#### C.9 (PAGE 19) "NO OIL DISCHARGE" PLAQUE:

No oil plaque was sighted.

*Secure oil plaque and install in the vessel engine space or wheel house.*

**NOTE:** It is recommended that a E.P.I. R.B. be acquired and placed onboard. A type 406 is highly recommended, but any USCG approved E.P.I.R.B. is a very good idea.

## 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 a the survey has been completed and the findings have been organized in a logical manner.

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

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

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

**"RESTORABLE CONDITION"**, enough of 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** section of this **REPORT OF SURVEY**, and by virtue of my experience, my opinion is

**OVERALL VESSEL RATING:**                     **AVERAGE**                    

### 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 and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus.

Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under 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.

This vessel was difficult to assess a value as the hull, engine and refit were all dated to different years and the vessel could be considered a custom/one of a kind. My approach was to separate the main three components for their individual values today giving consideration to their respective "new/built" dates. (HULL, ENGINE and REFIT MATERIALS and LABOR considerations) The methodology was to interpolate a value using the Martin Scale of Depreciation based on the best information for the components original costs as well as a common sense approach to consider the current market of supply and demand for this type of vessel.

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 subject vessel is:

**66200**

*Sixty Six Thousand Two Hundred Dollars*

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:

**185000**

*One Hundred Eighty Five Thousand Dollars*



## V. SUMMARY AND VALUATION

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### **SUMMARY:**

In accordance with the request for a marine survey of the 1973 JC 31, for the purpose of evaluating its present condition and estimating its 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 12-09-2015 and was found to be a well constructed and appointed vessel. Subject to correction of deficiencies listed in section IV A. (Safety) and B. (Other Deficiencies), the vessel is considered to be suitable for its intended use. The (Surveyor's notes and observations list), section C, should be attended to in a timely fashion.

### **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.

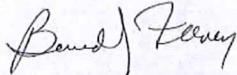
My compensation is not contingent upon the reporting of a predetermined value or direction in value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulate result, or the occurrence of a subsequent event.

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.

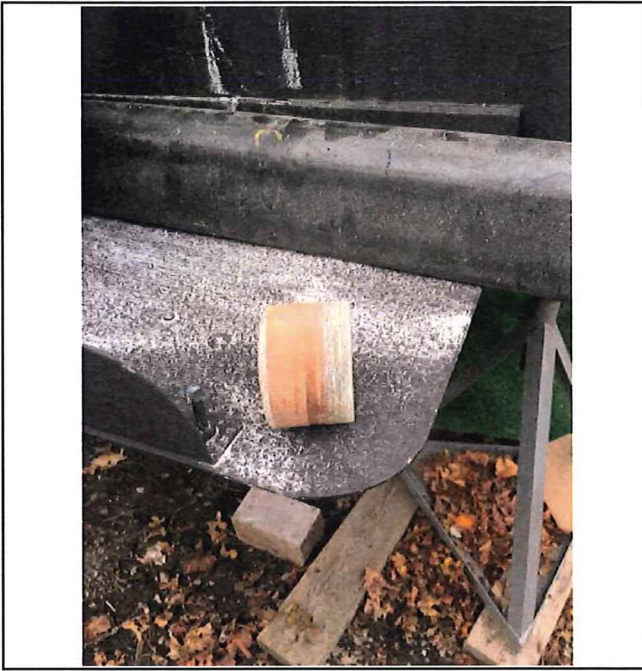
*Bernard J. Feeney, SAMS, AMS, # 1095*

ATTENDING SURVEYOR:

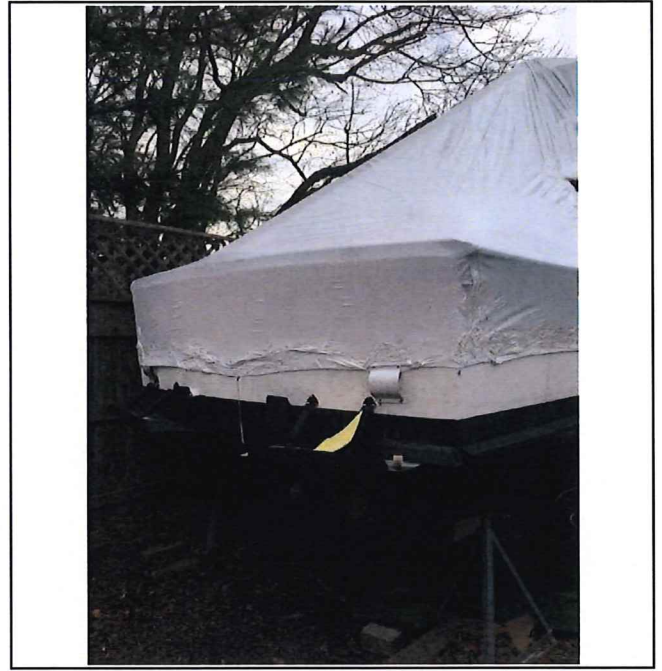


A rectangular box containing a handwritten signature in cursive script that reads "Bernard J. Feeney".

## VI. PHOTOGRAPHS



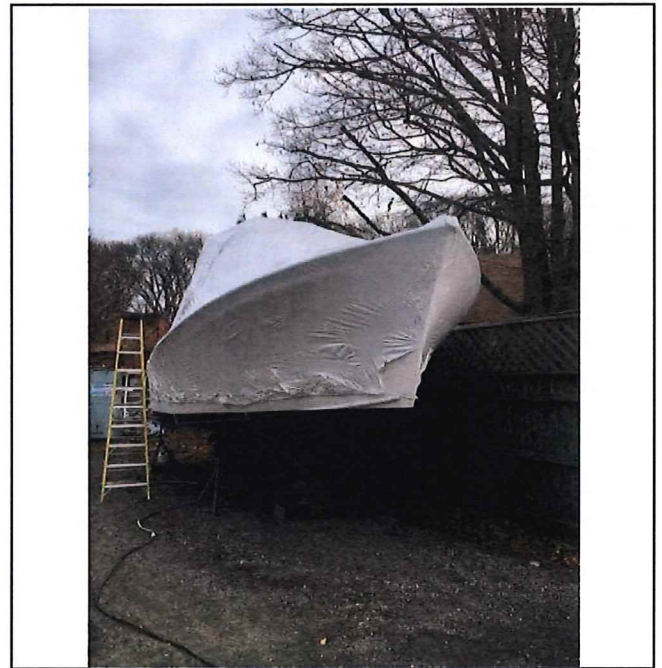
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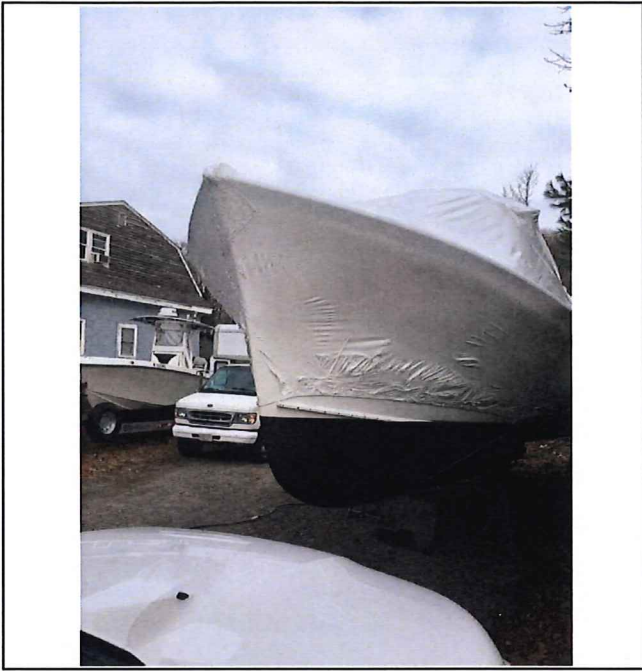
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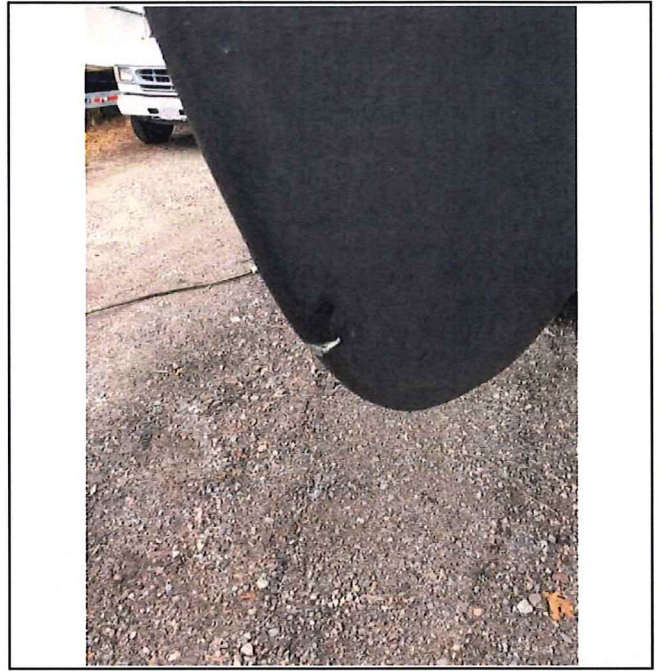
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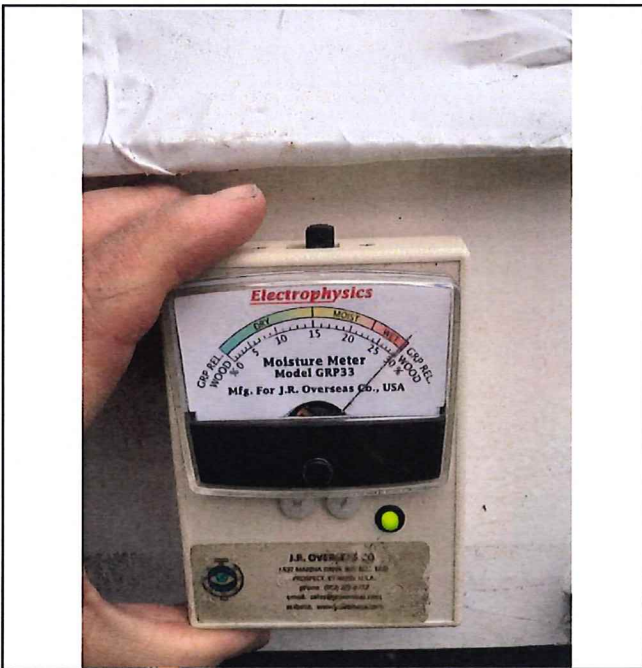
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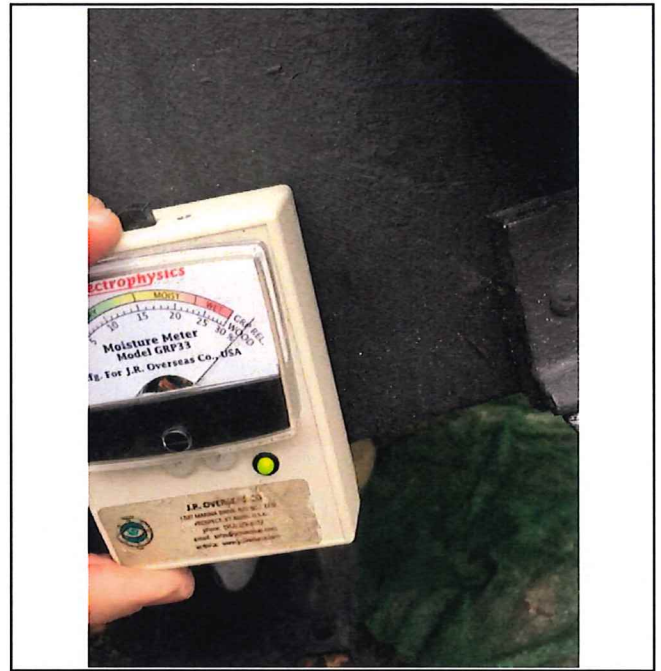
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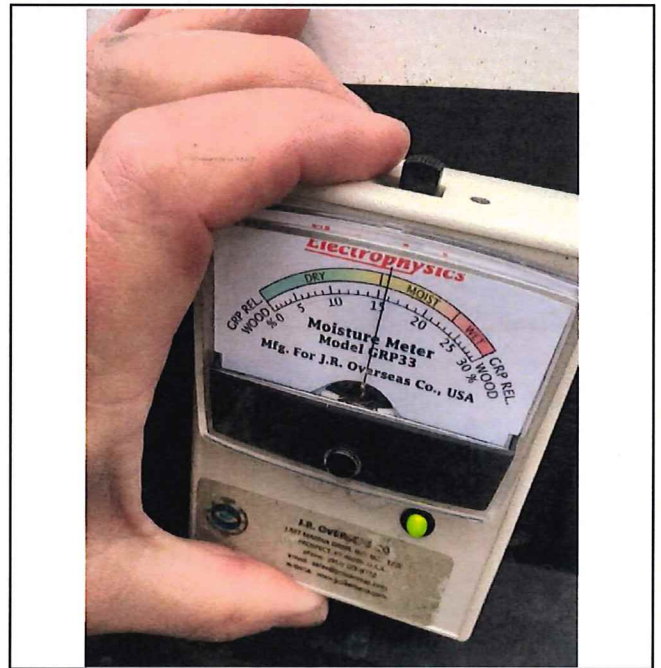
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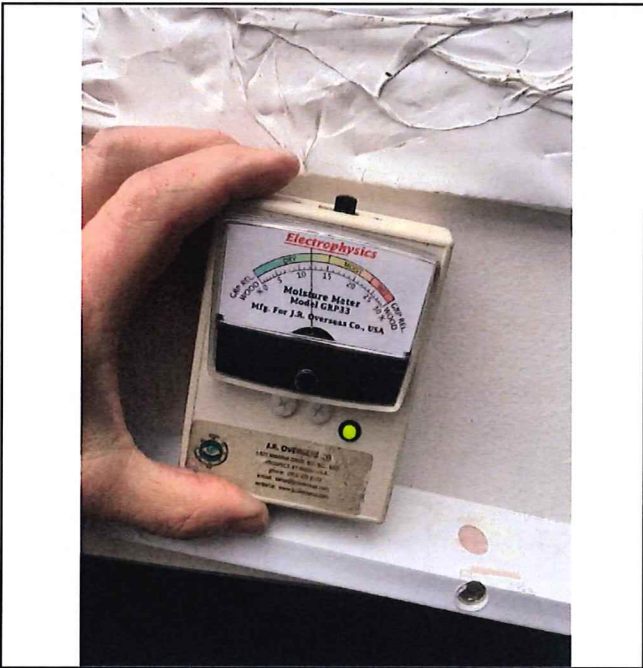
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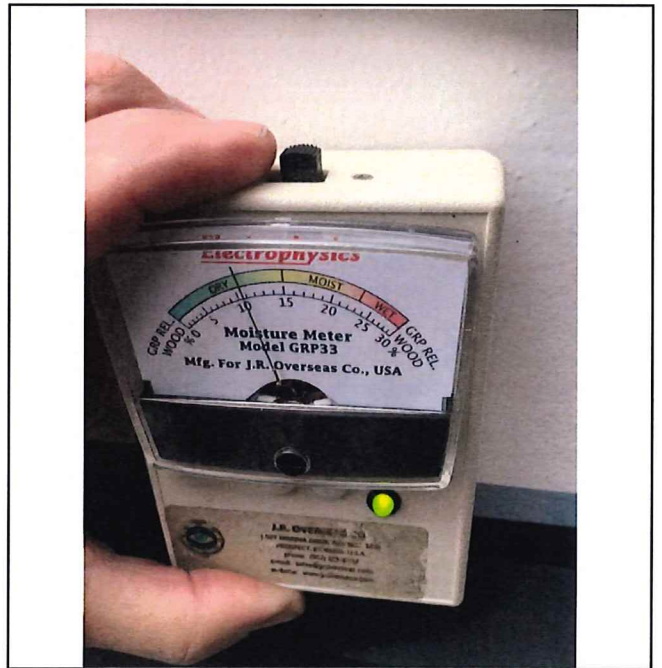
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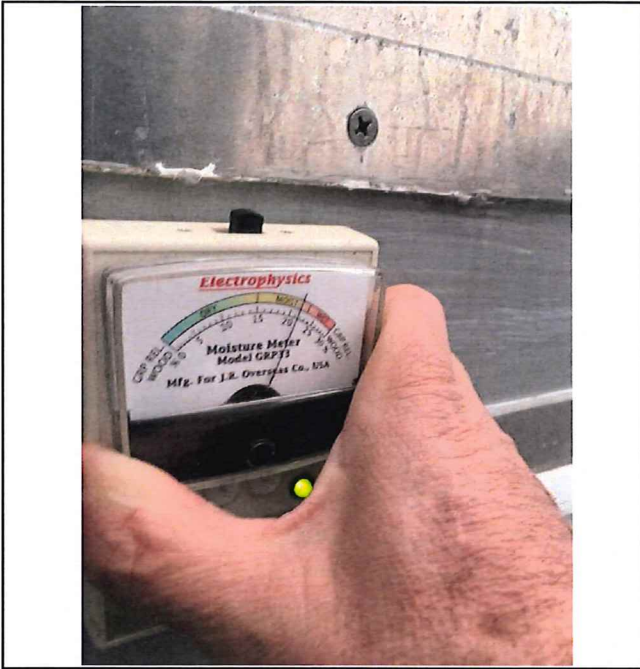
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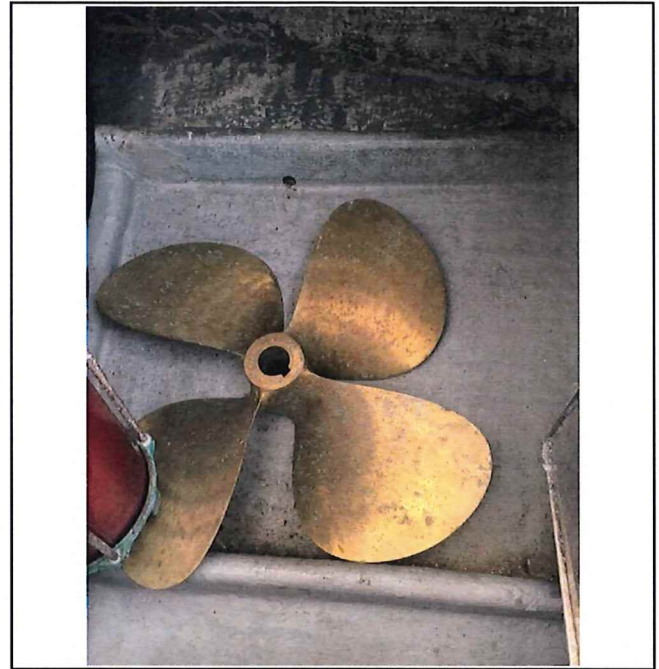
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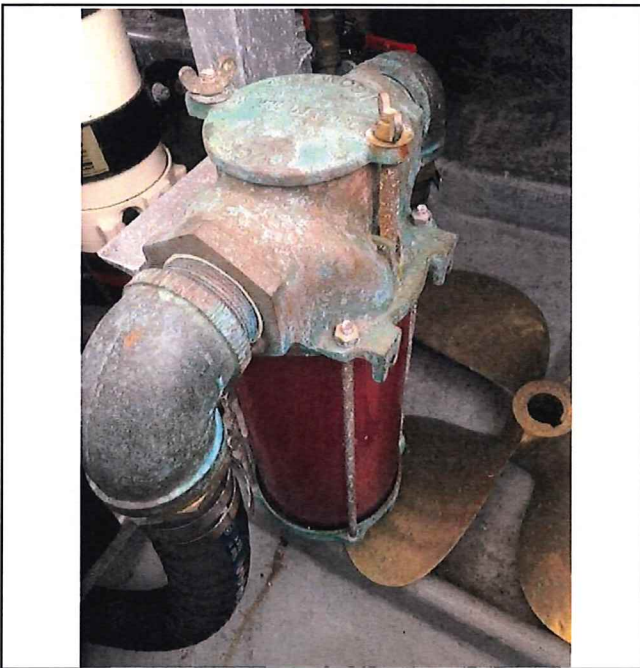
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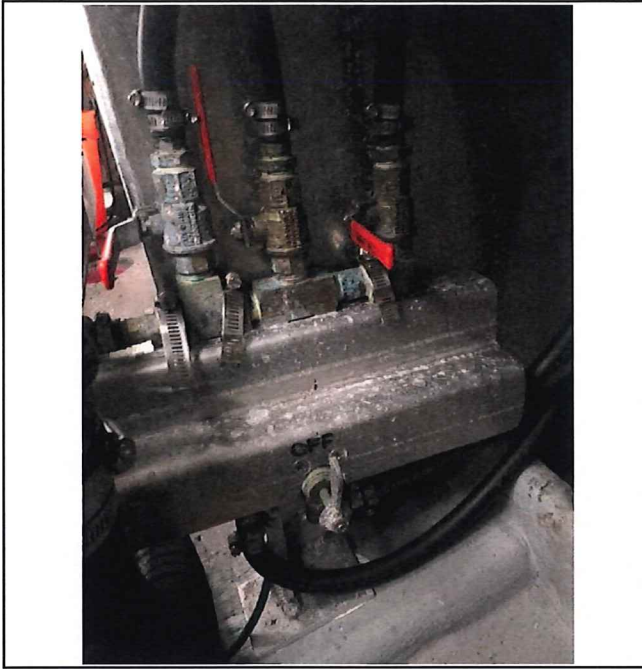


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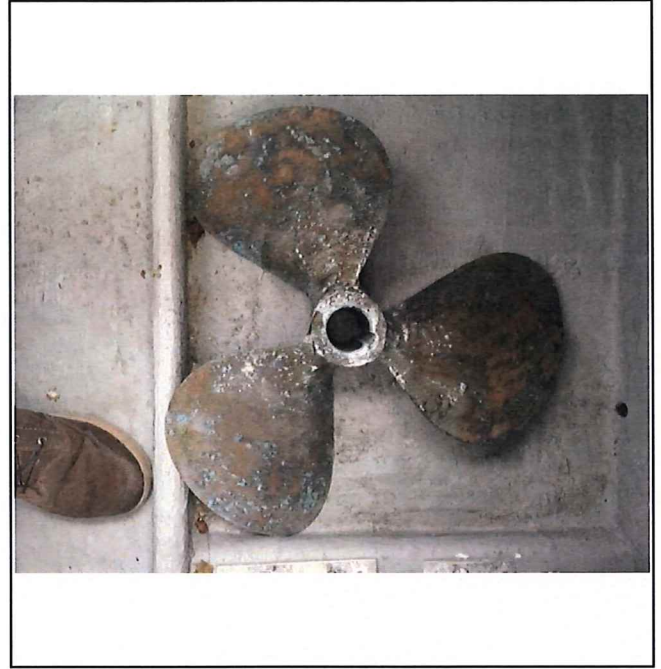


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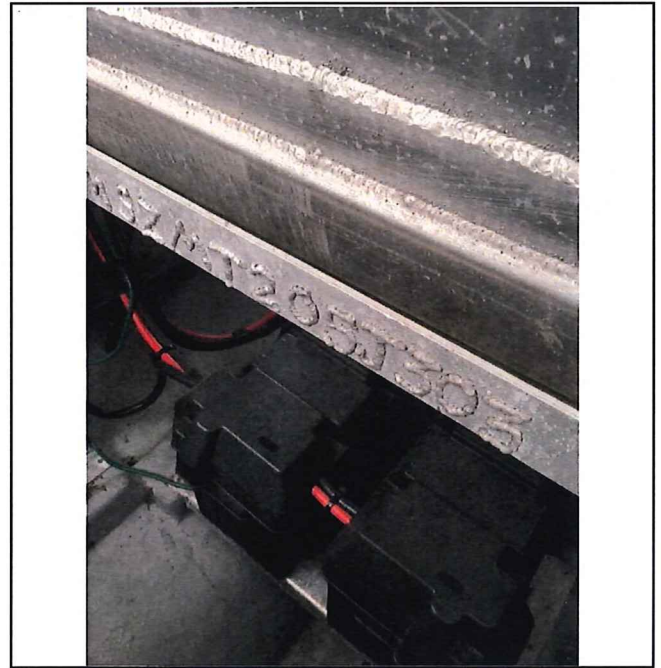
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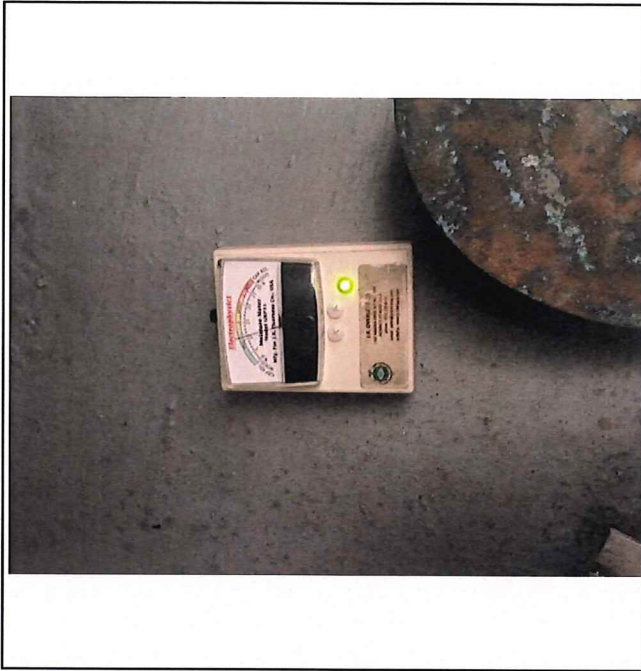
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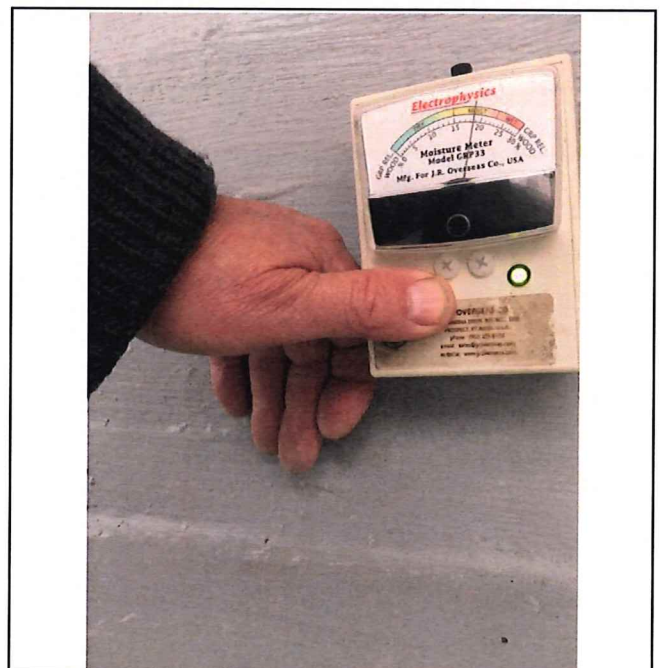
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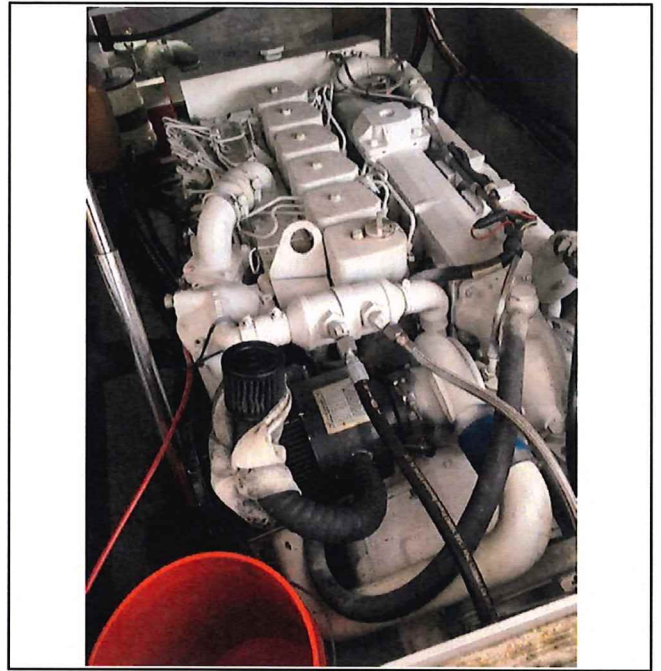


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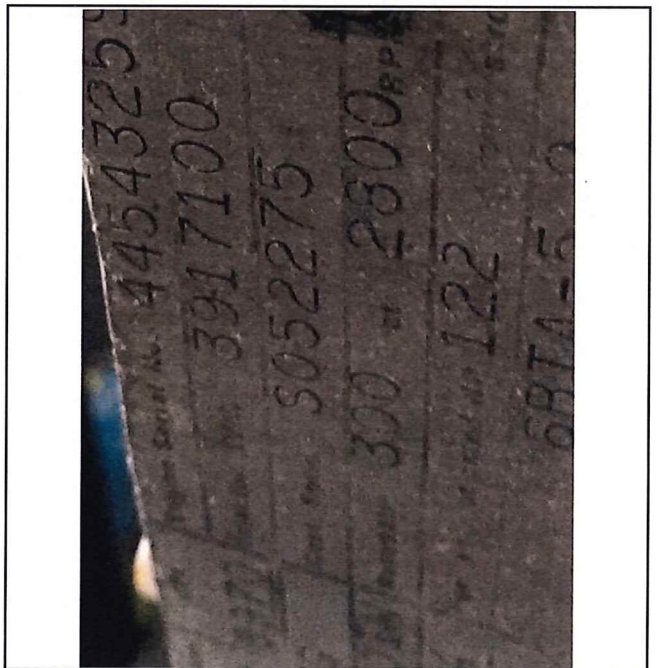
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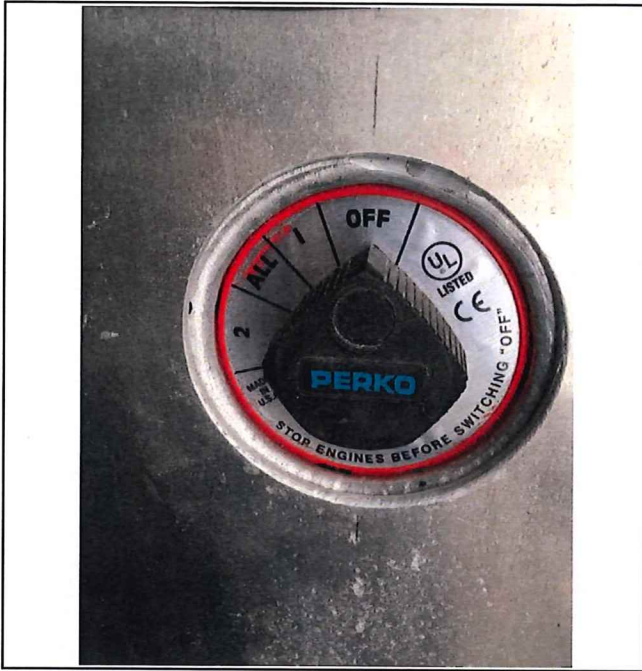
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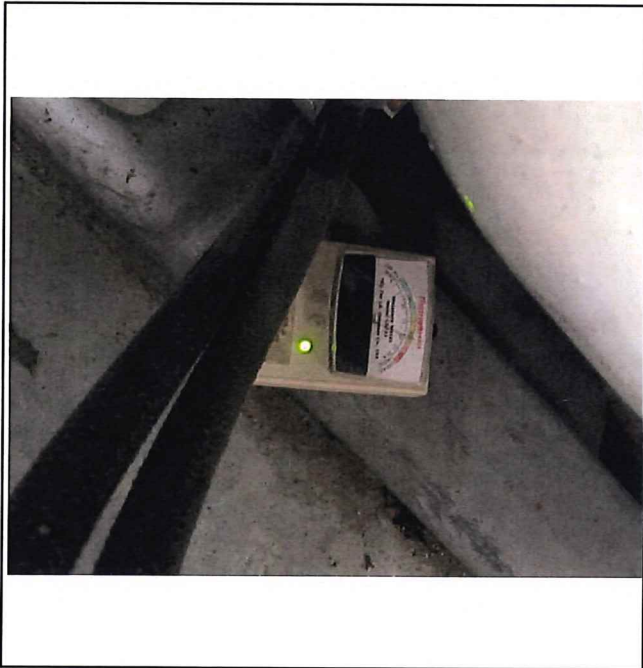
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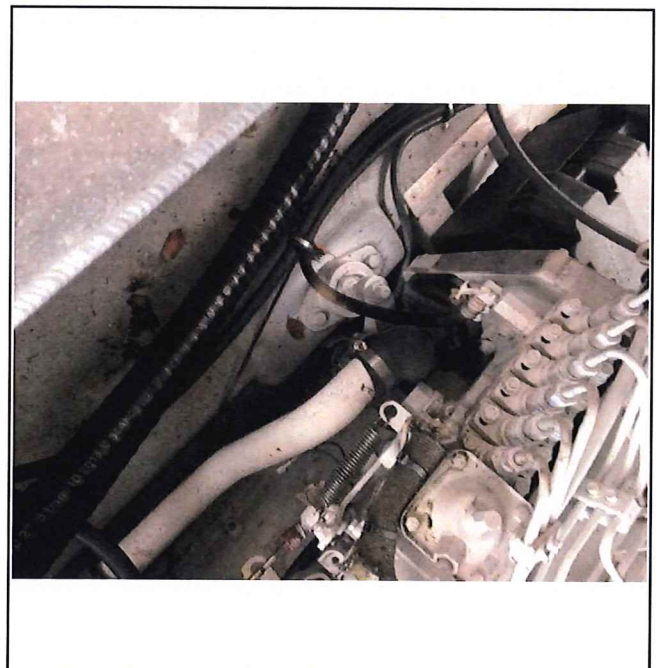
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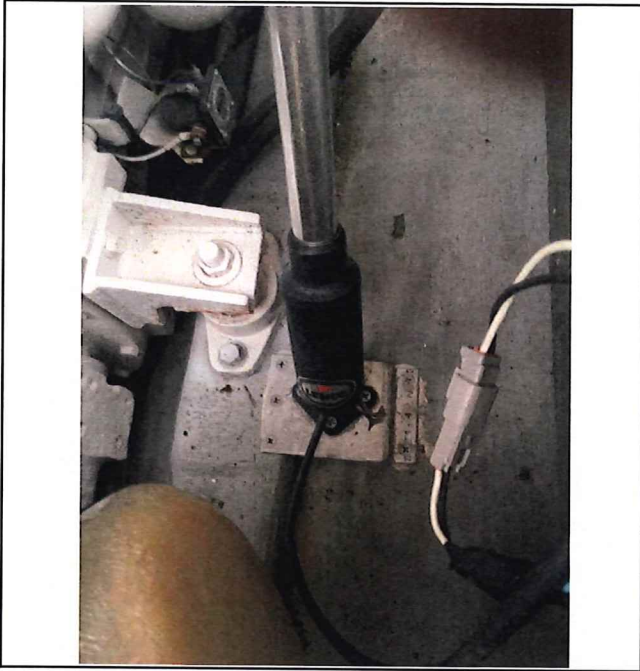


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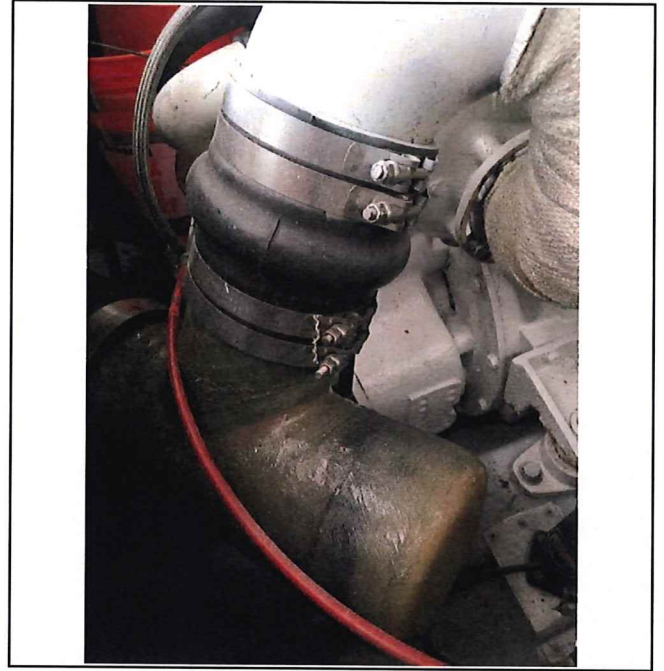


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## VI. PHOTOGRAPHS



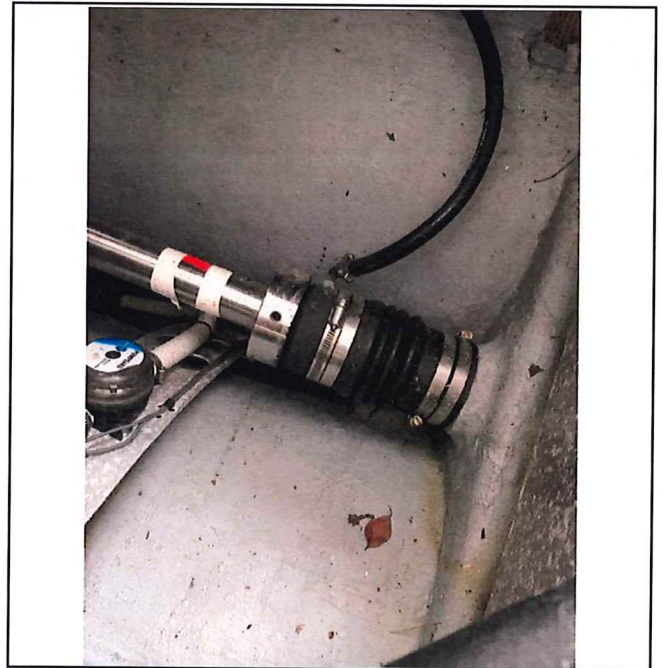
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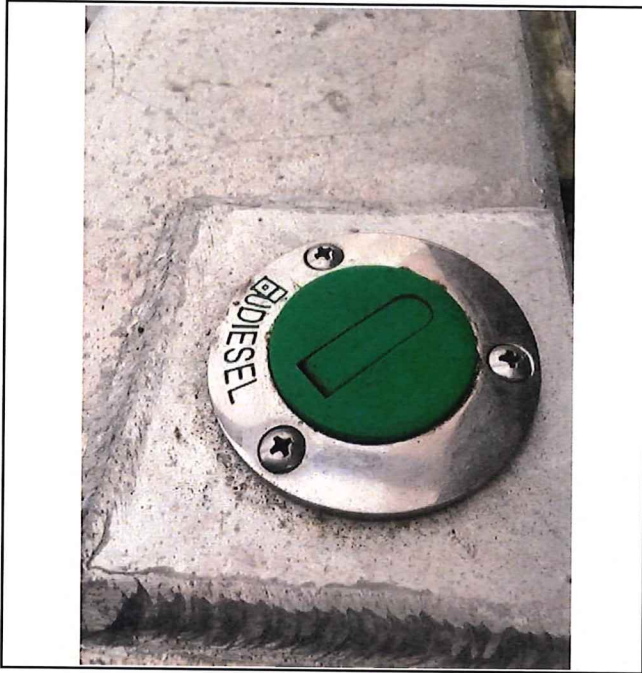
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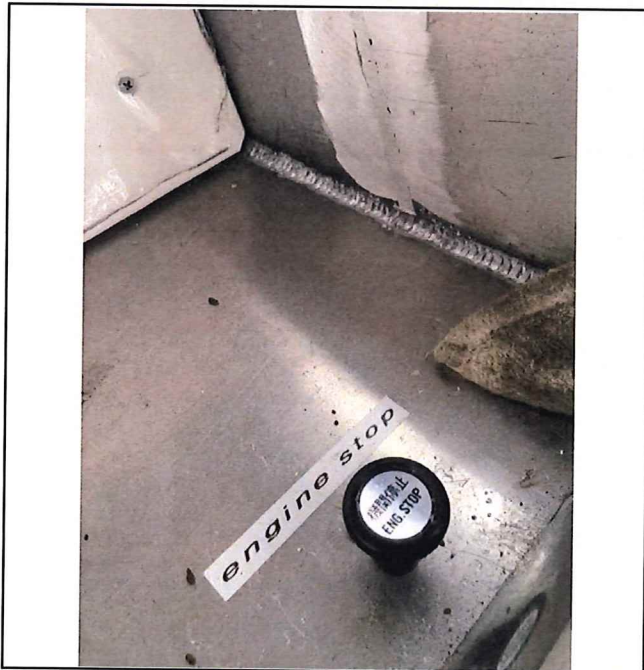
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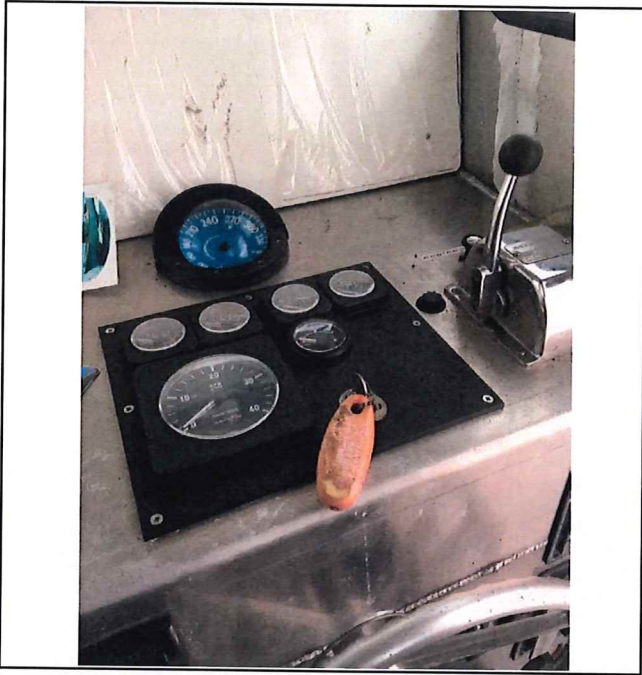


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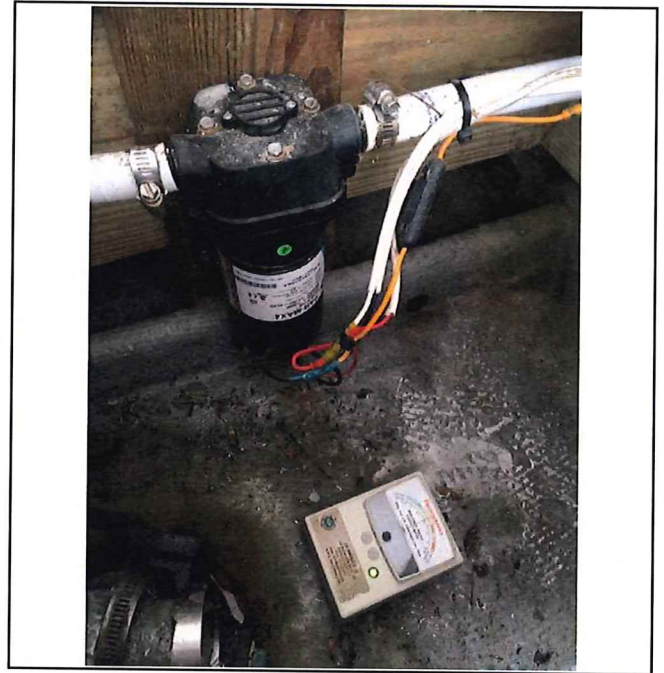


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## VI. PHOTOGRAPHS



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