

# DS Marine Surveys

991 Ridgemount Blvd. Oshawa Ont. L1K2K7  
905-449-2176

Website: [www.dsmarine.ca](http://www.dsmarine.ca)

Condition and Valuation Surveys – Repair Supervision – Consultations – Appraisals

C. David Sandford SAMS® / AMS® #1013



## Condition and Valuation Survey Report #

**THIS IS TO CERTIFY** that the undersigned Marine Surveyor inspected the referenced diesel auxiliary powered, fiberglass sailing vessel on \_\_\_\_\_, while this vessel was lying hauled out at \_\_\_\_\_. This survey was made at the request of \_\_\_\_\_ in order to ascertain this vessel's general condition and valuation on the date of the inspection noted below.



### Attending Survey

C. David Sandford AMS®, Marine Surveyor

## Scope of Survey

This Marine Survey is an objective report on the condition and value of the vessel listed above paying close attention to the structure, safety and installed systems. Appearance issues are addressed only when they affect the overall value of the vessel.

This report is unbiased and subject to the condition and accessibility of the vessel at the time of the survey. Test methods used are of a non-destructive nature and vessel disassembly is not within the scope of these inspections. A complete evaluation of the vessel would require disassembly and will not be undertaken in the formulation of this report.

Hulls, decks and superstructures are inspected visually for condition and appearance. Where possible moisture levels are measured by electronic detection methods with percussive sounding being used to verify laminate voids and possible structural weakening. It should be noted that electronic moisture readings are relative numbers, which may be affected by many factors other than moisture making evaluations subjective at best.

Electrical and electronic systems are tested by powering up when power is available and if not visual inspections only are performed.

Engines, Drives, Mechanical and Plumbing systems are inspected visually for leaks, flows or other defects and wear evaluations are based on visual inspections only and reported life of the components.

Interior joinery and fixtures are inspected visually for appearance, condition and for structural soundness.

All electronic moisture testing in this vessel was performed with an Electrophysics Digital Capacitance Moisture Meter calibrated to a dry test plate on the .5 scale. Relative moisture readings are interpreted as low (<15), slightly elevated (16 – 25), elevated (26 – 30), high (>31).

The surveyor will endeavor to apply Transport Canada TP1332 standards where applicable. If suitable standards do not exist then ABYC (American Boat and Yacht Council) standards will be used. Please note that at this time TP1332 standards are in the process of being harmonized with the current ABYC standards. Vessels manufactured prior to standard implementation are not required by law to comply but compliance is recommended where practical.

The surveyor has taken neither weight calculations nor made size measurements. All vessel data is taken from published information.

The Surveyor reserves the right to use this report (with all vessel and client specific information deleted) as a sample of his work unless otherwise informed in writing. Acceptance of this report constitutes agreement to all statements and limitations contained herein.

***This Survey is an opinion of the surveyor on the condition of the vessel as presented and within the parameters outlined above. The recommendations and comments made are based on the surveyors knowledge and experience. This report is in no way a guarantee of the vessel's condition or performance either now or in the future.***

## Survey Conditions

Vessel was inspected while hauled-out. The hull exterior wetted surface and underwater machinery and hardware were inspected. Due to paneling, liner, tanks, and installed equipment, only about 30 percent of the hull interior surface could be observed. The specific materials and lay-up schedule for the fiberglass moldings could not be determined with the non-destructive techniques available for inspection.

No underway trial was conducted. Machinery and equipment were not inspected while operating except where specifically noted below. Neither battery nor shore power were available for system or component testing. The salon floor boards were removed on the port side and the interior was in an unorganized state.

Locked compartments or otherwise inaccessible areas were not inspected. This vessel was surveyed without removals of any parts, including fittings, glued or tacked carpet or liner materials,

screwed boards or panels, anchors and chain, fixed partitions, instruments, clothing, spare parts and miscellaneous materials in the bilges and lockers, or other fixed or semi-fixed items.

No determination of stability characteristics or inherent structural integrity has been made and no opinion is expressed thereto. This survey report represents the condition of the vessel on the dates specified above, and is the unbiased opinion of the undersigned, but is not to be considered an inventory or a warranty, either specified or implied.

No other surveys or reports were conducted or available at the time of this inspection

This survey report is prepared for the purposes of pre purchase consideration and insurance underwriting.

### Particulars

**Client:**

**Address:**

**Client Phone:**

**Client Email:**

**Vessel Name:** n/a

**Hull No:**

**Documented Length:** 39'5"

**Draft:** 8'

**Builder:** C&C

**Hull Color:** white

**Model Year:** 1990

**Registration No:** n/a

**Breadth:** 12'6"

**Displacement:** 14,900 lbs.

**Model/Type:** 37R



*HIN and official numbers verified on hull. All specifications above are from reference data and not measured during survey.*

### Description of Vessel

The C&C 37R is a sloop rigged sailing vessel featuring FRP (fiberglass re-enforced plastic) construction of the hull, deck and cabin superstructure with a forward cabin, aft cockpit layout.

The cabin layout (from forward) features a v berth, main salon with seating and a table, galley, fully enclosed head area, chart table and an aft berth.

The cockpit has seating on both sides.

The vessel hull is finished in a white painted finish with blue accents. The deck and cabin superstructure are also finished in white gel coat with anti-skid finish in the appropriate areas.

### Hull Construction and Re-Reinforcement

**Construction and Re-reinforcement:** FRP construction and appears to be a one-piece shell with a lower structural grid and inner fixtures of tabbed in transverse plywood bulkheads and FRP

encapsulated inner stringers. FRP interior modules are utilized as well. All were inspected where accessible and found to be in sound order.

**Mast Support:** Aluminum shoe affixed to the hull inner structure with compression support by the hull inner grid. *Repairs were seen at the mast step compression support, the lower area of the main cabin bulkhead. All appear visually sound.*

**Chain Plate Load Points:** Stainless steel brackets through bolted at deck and additional brackets below. Internal re-enforcement by FRP hull knees. No issues seen.

**Below Waterline, Finish and Condition:** Freshly coated with an ablative bottom paint. The owner reports that an epoxy barrier coat has been applied as well.

**Moisture Levels:** Mostly low with slightly elevated to elevated levels registered at the following areas.

- 1-Both sides outboard of the keel root.
- 2-Both sides along the prop shaft skeg
- 3-Forward of the keel at the instrument transponders.

**Soundings:** Taken at random with no apparent structural concerns seen at this time. Areas of elevated moisture levels returned solid soundings as well.

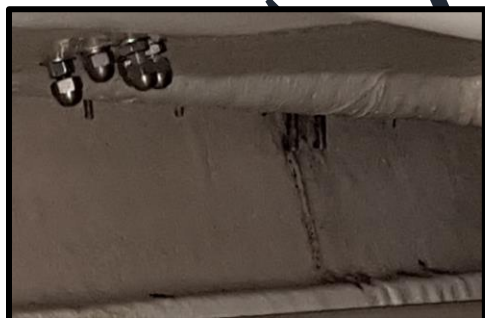
*Note: The owner reports that extensive hull repairs were performed on both hull sides below the waterline. This involved replacement of the laminate core material, buildup of the FRP laminate layers and an epoxy barrier coat being applied to all hull below waterline areas. This and the fact that the hull was originally of epoxy / kevlar construction may account for the higher than normal moisture readings.*

*Further investigation and evaluation of the hull structure would require taking of laminate core samples. This was not within the scope of this inspection.*

**Keel:** Lead fin keel is in serviceable visual condition. It is secured to the hull by stainless steel bolts and nuts which are in serviceable visual condition as well. The faired keel to hull joint shows no fairing fractures.

**Topsides, Finish and Condition:** Painted surface is in new condition. Random electronic moisture readings were in the low ranges. Percussive soundings showed no apparent issues.

**Hull to Deck Joint:** Overlapped joint is through bolted, caulked and capped with an aluminum toe rail. No working of the joint was seen. A small leak at 2 bolts on the starboard aft area was noted.



**See Item 1**

**Transom:** Same as topsides.



**Bilge:** Areas inspected where accessible are in sound order.

### Deck and Superstructure

**Finish and Condition:** Gel coat surface is in average – good condition relative to age with an antiskid surface in the horizontal areas.

**Moisture Levels:** Low with moderate levels registered at the mast partner flange, the starboard line clutches and the starboard grab rail.

**Soundings:** Taken at random with no apparent structural concerns seen at this time.

**See Item 2**

**Windows and Deck Hatches:** 1 opening port light and 4 dead lights are featured on the cabin sides. All are in serviceable condition with no leaks seen.

**Cabin Top Skylights / Hatches:** 3 in apparently serviceable condition with no evidence of leaks seen.



### Cockpit

**Description and Condition:** The cockpit is of FRP construction and molded integral with the deck and superstructure. It features seating with a single LPG storage locker below. Surface condition is the same as deck and superstructure.

**Moisture Levels:** Low

**Soundings:** Taken at random with no apparent structural concerns seen at this time.

**Scuppers:** 2 drains are located at the aft side decks which drain through flexible hoses into above waterline through hull fittings. All components are in functional visual condition and the hoses appear clear.



### Deck Equipment

**Rails, Stanchions, Lifelines:** Stainless steel bow pulpit and stern rail connected by PVC coated double lifelines and deck mounted stanchions. All are secure and in functional condition. All deck flanges were inspected and found to be secure to the deck and in good visual order.

**Mooring Cleats:** 2 forward and 2 aft mooring cleats are secure to the deck and in serviceable condition.

**Grab Rails:** Safety grab rails located on the cabin superstructure are in serviceable condition and secure.

**Genoa Tracks and Mainsheet Traveler:** Secure with cars and blocks. All apparently serviceable condition.

**Security:** The engine ignition is equipped with a locking mechanism.

---



---

### Spars and Rigging

*All spars were inspected on a storage rack.*

**Masts and Boom:** Keel stepped mast with triple spreaders. The aluminum extrusions of both the mast, boom and spreaders appear to be in serviceable condition. Fittings and fasteners appear secure.

**Standing Rigging:** Assumed 1X19 stainless steel rod and fittings. All appear to be in serviceable condition with no visible parted wire yarns. All fittings are compression, inspected where accessible and appear serviceable as well. A kink was noted in a mast supporting shroud.



**See Item 3**

**Headsail Pole:** Spinnaker pole is in serviceable condition

**Winches:** 2 Barient 24, 2 Barient 28 and 2 Barient 32 winches fitted to the cockpit coamings and the cabin top. All are in good condition and fully functional.

**Running Rigging:** Various sizes of polyester line. All are in usable condition.

**Clutches / Cleats / Blocks:** All in serviceable condition when inspected.

A Navtek hydraulic backstay and Boom vang adjustment system is fitted, not tested.

---



---

### Sails

<u>Type</u>	<u>Material</u>	<u>Condition</u>
Mainsail	Laminate	Fair
Genoa	Laminate	Fair
Jib #2	Laminate	Good
Jib #3	Polyester	Good
Spinnaker	.75 Nylon	Fair
Spinnaker	.5 Nylon	Fair

---



---

### Steering System

**Type and Description:** Pedestal wheel in cockpit with cable to rudder post quadrant. All appear to be in good condition, free moving and average free play was felt in steering.

**Rudder:** FRP spade rudder is in questionable condition showing elevated moisture levels in the lower areas. Soundings show no apparent issues.

**See Item 4**

**Rudder Shaft:** Average play.




---



---

### Sea Connections

Marelon through hull fittings are in functional visual condition and are fitted with sea cock style shut off valves. Neoprene and vinyl hoses are fitted and secured with double stainless steel gear clamps.

---



---

### Engine

Vessel auxiliary power is by a Universal M35 4 cylinder diesel fueled inboard engine.

**Serial #:** n/a

**Engine Hours:** 1685

**Exhaust System:** Water cooled, cast iron manifold with integral riser is in apparently functional condition showing no external corrosion. Type approved neoprene hose is in serviceable condition and double clamped at all connections. Water lift muffler is fitted. Back flow protection appears adequate. Exhaust exits at aft hull.



**Engine Mounts:** The engine and transmission are mounted to the FRP hull engine beds with metal brackets and rubber isolators. All are in apparently functional condition.

**Power Transmission Unit:** Conventional drive KBW 10 transmission with forward neutral and reverse gears. Appears to be in good visual condition. All external lines and hoses in good condition with no external leaks seen.

**Controls and Gauges:** Engine control panel at helm features gauge and warning light instrumentation. Throttle and gearshift are free moving and apparently functional.

**Cooling System:** Closed circuit, heat exchanger cooling with intake at hull is fitted with pump, heat exchanger, anti-siphon loop, and discharge to wet exhaust.

The engine was not run at the time of the inspection.

**Engine Oil:** Clean and level good

**Engine Coolant:** Clean and level good

**General:** Overall the engine installation was found to be in good order. All lines, cables and hoses are secure and no visible fluid leaks were seen.

### Running Gear

**Propeller:** 2 blade bronze folding propeller in operational visual condition. It is secured to the prop shaft by a nut and locking sleeve.

**Shafting:** 1" dia. stainless steel prop shaft was found to be in serviceable condition and true. Water lubricated shaft bearing in strut deadwood fitting. Shows little play and the strut is secure to the hull. Shaft seal (*appears new*) is connected to the stern tube with double clamped re-reinforced neoprene hose which is in serviceable visual condition.



### Fuel Tanks and Lines

**Type and Number:** One aluminum fuel tank is fitted and is secure. It is in good visual condition. Vent is fitted for overboard discharge with outlet screen in place. *Sender gasket appears new.*

**Bonding:** Wires in place and continuity is good.

**Fuel Tank Shut Off Valve / Anti-siphon Device:** Shut off valve is installed in the engine fuel supply line.

**Type and Condition of Fuel Lines / Filters / Fill Hoses:** Neoprene fuel lines are in serviceable condition but not USCG Type A1. Fuel filter / water separator is installed and appears to be in serviceable condition.

Type A2 neoprene fill hose is double single clamped and in functional visual condition.

**See Item 5**





## Electrical – Ships Power



**Batteries:** Two 12VDC wet cell batteries.

**Installation:** Are installed in approved housings, not secure. Positive posts are not insulated and are secured by wing nuts.

**See Item 6**

**Power Distribution:** Single panel with individual branch circuits and over current protection by circuit breakers.

**Master Switch:** Rotary

**Conductors:** Stranded copper, inspected where accessible only and found to be in functional visual condition.

**Battery Charging:** Engine mounted alternator and a 110 VAC Dytek 15 amp. hard wired marine spec battery charger. 115 VAC power supply not GFCI.

**See Item 7**

**General Condition of Wiring and Fixtures:** Good where viewed. Wire nuts were utilized at the bilge pump wiring.

**See Item 8**

## Electrical - Shore Power

**Type and Supply:** 115VAC / 30 amp and supplied by a marine approved shore power cable and receptacle.

**Power Distribution:** Single panel with a main circuit breaker, polarity indicator and individual branch circuits with over current protection by circuit breakers.

**Conductors:** Stranded copper.

**Ground Fault Protection:** GFCI plug is installed at the galley.

**AC / DC Grounding Bond:** Yes

**On Board Grounded AC/ Neutral:** No

**Dielectric Separation of AC and DC Panels:** Yes



**General Condition of Wiring and Fixtures:** Good where viewed

**Galvanic Protection:** None seen.

**See Item 9**

---

---

### Navigation Aids

**Compass:** Mechanical, functional.

**GPS and Chart Plotter:** Ray Nav 570 Loran C

**Depth Sounder:** Raytheon ST60

**Knot Meter:** Raytheon ST60

**Wind Instrument:** Raytheon ST60

**Repeater:** Raytheon ST60

**Radio(s):** Standard Horizon Explorer VHF

---

---

### Interior



**Bulkheads and Joinery:** Construction is teak and veneered teak plywood. Good condition.

*A repair was noted on the lower port side of the main cabin bulkhead. Appears sound.*

**Cabin Sole:** Teak and holly plywood.

**Upholstery:** Cloth over foam. *Some are mildewed on the back sides.*

**Interior Lighting:** 12VDC

**Entertainment Systems:** Alpine AM/FM/CD player

---

---

## Galley

**Potable Water:** Plastic tank. Piping is by PVC and vinyl hoses secured by stainless steel clamps. All were inspected where accessible and found to be in serviceable condition.

**Pressure System:** 12VDC pump, powered up. Faucets and sinks located in both galley and head.

**Stove:** 2 burner LPG fueled with oven, not tested.

**Refrigeration:** 12 VDC refrigeration unit is installed in the galley ice box. Not tested.




---



---

## Additional Fuels

**Tankage:** LPG storage tank in FRP compartment located in cockpit. Locker is vented out the bottom and a lid is fitted. No gasket or latching mechanism and vent hose is connected to scupper drain.

**See Item 10**

**Lines:** Type approved neoprene line with regulator located in locker appears to be in good condition but access for inspection was limited.

**Pressure Gauge:** At regulator

**Shutoff Solenoid:** 12VDC solenoid shut off at tank controlled by circuit breaker, not tested.

---



---

## Sanitation

The fully enclosed head area features standing head room with a marine toilet, sink, shower and facet. Systems not tested.

**Toilet:** Marine type toilet with a sea water hand pump flushing mechanism.

**Tankage and Hoses:** Plastic tank. Piping is by vinyl hoses secured by stainless steel clamps. All were inspected where accessible and found to be in serviceable condition.




---



---

## Safety Equipment

*Personal safety equipment that is not permanently installed on the vessel was neither inspected nor inventoried by the surveyor. A check of the check of the Transport Canada "Small Craft Regulations" should be performed and all necessary equipment fitted to the vessel before launch. This information can be found In the Transport Canada Safe Boating Guide.*

**Navigation Lights:** In place as required.

**Dewatering System:** Manual diaphragm type bilge pump located in cockpit, not tested. 12VDC pump with float switch installed in bilge, not tested.

**Re-boarding Ladder:** Stainless steel folding re-boarding ladder mounted to the vessel's transom apparently secure and functional.

**Ground Tackle:** None seen.

**Carbon Monoxide Detector:** None seen.

*See Item 11*

**Propane Fume Detector:** None seen.

*See Item 12*

### Additional Equipment

**Cradle:** Folding steel cradle of undetermined age. It appears to be in functional condition as are the pads.

### Noted Items

Items listed below are the opinions of the surveyor based on common sense, the surveyor's knowledge, experience and where noted applicable marine standards.

**Standards Used:** *The surveyor will endeavor to apply Transport Canada TP1332 standards where applicable. T1332 standards reference American Boat and Yacht Council (ABYC) standards in the following areas:*

- E-10 Storage Batteries
- E-11 AC and DC Electrical Systems on Boats
- H-2 Ventilation of Boats Using Gasoline
- H-24 Gasoline Fuel Systems
- H-26 Powering of Boats
- H-28 Inflatable Boats
- H-33 Diesel Fuel Systems
- H-35 Powering and Load Capacity of Pontoon Boats
- H-41 Reboarding Means, Ladders, Handholds, Rails, and Lifelines
- T-5 Safety Signs and Labels

*Vessels manufactured prior to standard implementation are not required by law to comply but compliance is recommended. All standards quoted are current editions with Transport Canada recommending that "existing pleasure craft comply with these standards insofar as it is reasonable and practicable to do so".*

#### Items Pertaining to Vessel Structure

None seen.

#### Items Pertaining to On-going Vessel Maintenance Repair and Upgrades

- 1-Re-bed leaking hull to deck joint bolts.
- 2-Suggest to re-bed deck fittings on areas noted on page 5
- 3-Inspect and repair as necessary, kink in mast shroud.



4-Recommend to drain rudder at each haul out. Monitor condition and if necessary repair as required.

9-Recommend that a sacrificial anode be installed on the vessel's prop shaft.

### **Additional Comments**

*Items listed below are offered as information or suggestions to enhance the vessel's safety and or performance. They are offered as information only and upgrade is at the owner's discretion.*

5- Transport Canada TP1332 recommends that all fuel supply line in the engine compartment be of USCG Type A1 or A15 neoprene.

6- **ABYC E10** recommends that batteries be installed and secured to prevent the movement of batteries by no more than 1" (25mm) in any direction. The cables should not be secured by wing nuts and the positive posts should be covered with a dielectric material.

7-**ABYC E11** recommends that the first A/C receptacle in each branch circuit are to be approved CGFI units.

8-**ABYC E11** recommends that wire nuts not be used in marine applications.

10-**ABYC A-1** recommends in part that LPG storage lockers used to contain LPG cylinders open only from the top with a gasketed cover that shall latch tightly, and shall be capable of being quickly and conveniently opened without tools. Lockers shall be vented at the bottom by a dedicated vent, with a minimum inside diameter of not less than 1/2 inch (12.5 mm).

11-**ABYC A24** recommends that a Carbon Monoxide Detector be installed.

12-**ABYC A14** recommends that a Propane Fume Detector be installed.

13- Recommend that a full power up test be performed at launch and proper operation of all components and systems be verified.

### **Summary of Inspection**

This report and its contents are made without prejudice and are the results of the examination of the vessel on the date stated above. DS Marine Surveys assumes no responsibility or liability for any action taken by the owner, purchaser or insurer as a result of this report.

This vessel was inspected in on the date indicated and found to be serviceable overall condition and suitable for its intended use of cruising and racing on open waters and inland lakes in Ontario and Quebec.

*I certify that to the best of my knowledge and belief: I have made a personal inspection of the on the date indicated and 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 above vessel and I have no personal interest or bias with respect to the parties involved. My compensation is not contingent upon the reporting of a pre – determined value or direction in value that favours the cause of the client, the amount of the value estimate, the attainment of a stipulate result or the occurrence of a subsequent event.*

### **Estimated Current Market Value**

*Current Market Value is defined as: "The price at which a willing but not anxious vendor would sell, and at which a willing but not anxious purchaser would buy". The surveyor has used current market listings of similar vessels, published pricing sources and current sold data to arrive at the estimated*

