# Mitch Witt Marine Surveying

# C 281-650-0145

Survey of the Motor Yacht **"Motor Yacht XYZ"** 1986 42' CHB Seamaster'



#### Survey of "Motor Vessel XYZ"

### Evaluation Criteria, Terminology and Considerations.

A. This report has been prepared after a visual examination of hull, rigging, machinery, equipment and other items as mentioned in the report. Areas requiring tools for access have not been inspected, nor has any testing or inspecting, other than visual, been performed unless specifically stated. Comments on Rigging and Engines does not constitute a Rigging or Engine Survey. No inspection has been made and no opinion is expressed as to internal condition of any part of the engines and transmissions. Fees paid for this inspection and report include one physical visit to the vessel. The report is issued specifically for the current owner of the vessel. it is not transferable.

B. Standards and codes considered in these evaluations and comments are established by the US Coast Guard (USCG), the Code of Federal Regulations (CFR) Title 33 and 46, the American Boat and Yacht Council (ABYC), NFPA and other organizations involved in vessel construction and technical standards, however, it should not be assumed that the inspection and this report address all aspects of any applicable standard or code. Information supplied by others, referred to "as reported" which may be used in this evaluation and report has in most cases not been verified.

C. As much information as is considered practical has been included in this report, but no attempt to compile a complete inventory was made unless specifically stated, nor are necessarily all what may be considered to be damage or flaws mentioned. All features of electrical and electronic equipment and controls were not tested for full range of functions unless specifically mentioned.

D. The Client has acknowledged and agreed that the vessel inspection and report does not constitute an engine or rigging survey since the inspection and report is a general review of the vessel and her equipment on the day in question. Reporting on unseen flaws, degradation, inaccessible features and conditions, subsequent changes or modifications are beyond the scope of this inspection. This report does not include any evaluation of or guarantee of seaworthiness or stability.

E. Photographs inserted into this report and retained on file may have been reduced in size, cropped, have contrast or brightness adjusted and may have annotation inserted to illustrate points (referred to as editing) but they have not otherwise been altered. Photoshop software by any author has not been used.

	Miscellane	eous Terms, Acronyms and Abbrevia	tions
CFR:	Code of Federal Regulations (used by the USCG for inspection of pleasure craft)		
FBG or FRP:	Refers to the family of resin reinforced fiberglass laminates with any resin.		
STBD	Starboard	Ctr = Center or Center Line	NPT National Pipe Thread
CO:	Carbon Monoxide	OEM: Original Equipment Manufacture	er
End-of-Life	Item which is completely worn out or otherwise degraded and needs replacing or rebuilding.		
Prior to Navigation	A repair or task to be completed prior to any use of the boat away from the dock.		
VDC	Volts, Direct Current	AC = Alternating Current	A/C = Air Conditioning
"A-R"	"As Reported / Saio	To Be" refers to unconfirmed inform	mation provided by others.

Capable or Qualified Persons: Having physical strength and knowledge necessary to the task.

**Fair Market Value** An estimated figure at which an item would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell and both having reasonable knowledge of relevant facts. The surveyor develops this estimate from internet based resources and/or compiling an average of available comparable sales of vessels of the same or similar manufacturer, model, model year and equipment. Adjustments may be included for current conditions of exchange rate, region and market as deemed appropriate by the surveyor. FMV figure listed in this report is exclusive of Trailers, Jet Ski's, etc.

**Replacement Value** An estimated figure to replace subject vessel with another vessel having the same or similar equipment and construction.

Sea Trial The *functional operation* of the vessel in any body of water under local conditions to observe operation of major equipment and systems. The buyer may request sea trial be performed in open waters having made this request of the seller and the surveyor well in advance to permit planning to accommodate weather and other issues. Sea trial may be cut short at any time due to malfunctions or other conditions thought to be unsafe or ill advised in continuing the effort.

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### General Information May 8, 2013

Pre-purchase Survey for:		<b>ohn A Boat Owner</b> oyal Lane, Great State	Ph
Vessel Name:	Moto	r Vessel XYZ	Home Port:
Location	Berthe	ed at	Haul Out:
Builder:	Seama	aster Yachts	Given as date of manufacture: 1986
Hull ID			Engines: Caterpillar 3208 (Turbocharged)
Documentation	00000	00	Registration: None
LOA <b>48'</b>	BE	EAM 15.5' DRAFT 3.5'	,
Gross Weight: 39,000			
General Descript	tion	Flybridge cruiser with single	e station, White Bimini.
Present at inspec	tion:		
Intended Use:		Local Inland, and Coastwis	e Navigation.
Owner Prior Exp	erience	Owner reports he has owne	ed small power boats and a sail boat.
Circumstances of Inspection:	f	Buyer engaged undersig	ned surveyor prior to final purchase negotiations.
Vessel Issues		The following items / equip	ment / systems were stated as in operative prior to
		inspection:	
		Washer & Dryer: Inoperati	ve, not demonstrated or tested.
		Trim Tabs: thought to be n	nalfunctioning. At haul out both were observed to
		operate but were leaking o	il when "trim down" command was initiated.
		Stabilizers: stated as inope	rative, mechanism locked in place by a pin.
		Autopilot : Operation of aut	topilot system is unknown.

# PHOTO HIN

# A. Hull Exterior

- Hull: Fiberglass reinforced polyester (FBG), appears to be original gel coat. Generally hull is in average condition with occasional chips and scuff marks.
- Rub rails Stainless rub rail at hull to deck joint is intact all around, average condition.

Hull Below Hull bottom slopes directly to keel – no planning chines.

Waterline Gel coat blisters ranging from 1/2" to 3" in diameter were observed over most the hull bottom. No evidence of grounding. This vessel is equipped with roll stabilizers which were reported to be non-functional with a locking "pin" inserted in the linkage. Through-hull fittings were severely overgrown, several which included an exterior mesh or screen were wasted and in need of replacement.

Antifouling paint has reached end of life, extensive barnacles and algae growth on hull bottom and gear. Hull was scrapped and pressure washed at haul out and the buyer is aware that new antifouling paint and other maintenance is needed. Zincs were replaced during haul out.

Keel Type A FBG keel slopes down from bow to a point approx. 20". Observed no obvious evidence of grounding. Keel shows same blister condition as hull.

Swim PlatformBolt on FBG swim platform with welded stainless steel angle supports, appeared solidly<br/>attached to transom but in need of cleaning.A small fold down stainless steel swim ladder mounted on platform.<br/>An aluminum "gangway" is also part of ships equipment. Stored in brackets along<br/>port side catwalk it clips to brackets on either side of the hull.

Through-hull fittings:	Port Side of keel.	Starboard Side of keel.
At Water Line	5	2
Below Water Line (incl transducers)	7+ Main Exhaust and ground plate.	7+ Main Exhaust

Note: Engine exhausts exit the hull above and below water line in transom. (See Engine Section). Generator exhaust exits transom above water line, starboard side beneath swim platform.

In the bilge found most through hull valves cycled with minor difficult. Some are inaccessible (beneath generator) and were not cycled. None observed to be leaking. All handles in place.

Note: It is important to cycle all through hulls on a regular basis to keep them from seizing.

# **B. Decks and Cabin Top**

<u>Hull x Deck Bond</u> Inaccessible for inspection from inside.

No soft spots identified in decks however there are significant gel coat cracks at both Port and Stbd boarding locations. Additionally there are gel coat cracks port side where cabin top meets the foredeck. These areas should be repaired to prevent water intrusion into core.

Hard top over stern deck appears recently painted (underside), is clean and free of cracks or other signs of degradation. Hard top supported by several 1.25" and 2" stainless steel posts welded into aft deck railing. Welds sighted were clean and free of visible flaws. The vessel's tender (discussed pg 18) resides in a cradle bolted to hard top. There are <u>no safety railings or hand rails</u> on aft deck hardtop for use when launching or retrieving the tender. Ref: ABYC H41.

Stern (Transom) Port A rectangular aluminum frame hinged and opening port is installed on center in the *and Emergency Exit.* transom, above and behind the berth in the owner's stateroom.

- Aft Deck A standard 120 VAC plug-in home quality window style air conditioning unit is installed outboard of stern gate. Not demonstrated.
- Deck+Non-Skid FBG w/ molded non-skid on foredeck and catwalks which is nearing or at end of life. Gel coat and non skid is cracked and deteriorating at both boarding locations. Observed no "soft spots" or other indication of delamination when walking on decks and catwalks

<sup>&</sup>lt;u>Hatches & Ports</u> 8 Good quality stainless steel frame opening ports (each side). Lenses are intact. Recommend, given the age of the vessel that gaskets be replaced at the earliest opportunity and prior to repairing / refinishing interior woodwork.

## **B. Decks and Cabin Top** continued

Handholds &<br/>RailingsForedeck, catwalk and aft deck are enclosed with 1.25" stainless steel railing. All portions<br/>sighted appeared to be undamaged, free of rust and in average to good condition.

Railings are supported by 18 stainless steel tubular stanchions – bases screwed to deck, fasteners intact.

Boarding access port and starboard via "sliding" sections in rail which lock in place. A fold up boarding ladder hinges up and secures in place. Ladder fabricated of 1" SS Note Condition of ladder shown >>> Repair essential - *prior to navigation*.

Note: Standoffs have worn depressions in hull sides beneath port & Stbd board ladders

Additional hand rails located Port & Stbd along catwalks.



Stern railing includes a hinged gate which opens out and is secured closed by two latches which are slightly bent and difficult to operate. Caution: All gates must be securely latched in place when not in use. Severe injury may result when leaning on an unlatched gate.

- Canvas Large Bimini top over fly bridge secured to radar arch and supported by three stainless steel tubular "bows". Bimini includes full set of zip in clear curtains. Bimini and curtains would benefit from cleaning and lubrication of zippers and are in average condition.
- Mast & Aerials Single FBG antenna serve VHF radio. Hardware permits aerials to be lowered to clear bridges.
- Cleats Four stainless steel 10" cleats installed from bow to stern each side.. Several cleats were slightly loose, recommend rebedding all cleats.
- Deck Fills Diesel located port side forward, one starboard side near boarding ladder. Waste fitting located port side forward. Fuel fill fittings are not grounded or bonded. Ref: ABYC E11.16 and H33.15.1
- Aft Deck Stepping up from salon or down from flybridge large covered and enclosed aft deck includes several pieces of furniture a bar and ice machine (inoperable). Hard top includes 12 volt lighting and one stereo speaker was observed but not demonstrated. Furniture in average condition. One glass top coffee table is included. Aft deck enclosure include hard "privacy panels" from deck to hand rail which appeared to be undamaged and in good condition. Panels are attached by riveting, rivets are failing and in need of replacing.
- Transom Aft railing gate opens to ladder down to fixed swim platform. Right hand side of ladder is crushed in from impact and in need of repair. Egress from the aft cabin is rectangular hatch

# **<u>B. Decks and Cabin Top</u>** continued

Bow Pulpit A molded FBG pulpit and anchor roller is fitted at the bow and supports anchor rollers Pulpit is solidly anchored and in average condition. The bow rail encloses the pulpit and foredeck and appears undamaged.

Windlass &Simpson Lawrence "Horizon 1500" 12VDC Electric windlass with chain gypsy operated byGround Tackle"In and Out" foot switches. Not Demonstrated.

Primary Rhode: Approx. 75 lb Stainless CQR with 3/8" chain. A Fortress aluminum anchor is lashed to railing.

FlybridgeAccess via interior steps up from aft deck. Hand rail provided. Swivel pedestal chairinstalledfor pilot with bench seating and cushions around perimeter. A small table is included.

# C. Helm & Steering

No bow thruster



- Visibility: From the helm there is reasonably good visibility forward and side to side however <u>visibility aft</u> <u>is hindered</u> by aft deck hard top, tender and other items. Having two people aboard during operations is recommended and can be considered essential when operating astern propulsion. Wrap around forward swept tinted windscreen is cracked on the port corner.
- Rudders Fabricated stainless steel rudders on stainless shafts. Little or no side x side play in both rudders and shafts. Rudder shaft seals are bronze flax packed stuffing boxes accessed from beneath owners berth. Shafts supported in two points by internal structural frame which appears adequate to the task and recently re-bedded. Rudders tied together by heavy stainless steel tie-rod and controlled by single hydraulic ram. No hydraulic leaks sighted. Normal amount of oxidation on all. Control wiring is not labeled, connections made at an exposed terminal strip.
- Auto-pilot CETEC Benmar control installed at helm. Owner reported operation of autopilot unknown. Unit powers up from adjacent breaker panel, several LED's lighted. Unit engaged operation from "Start" switch however in two attempts the vessel veered hard to starboard. Further attempts at testing autopilot were aborted.
- Trim Tabs Appear to be standard Bennet tabs with single hydraulic ram each. Rams observed to leak hydraulic fluid during haul out.

### Functional Test (Sea Trial)

During functional testing a cold front was passing the area, winds were over 20 knots. Operations were conducted on calm inland waters.

At the time of this inspection (except as noted) engine gauges from dual panels at flybridge and in engine room and flybridge controls and the steering system functioned effectively through port and starboard turns underway and when backing. WOT was achieved as the vessel gained speed over a period of 3-4 minutes and with the application of trim tabs. When loaded the engines produced a normal amount of white smoke.

Information as recorded:	RPM	Speed (Kts)
Idle – In Gear	1,100	3-5 kts
Cruising	2,000	8
WOT	2,500	16 kts

## **D.** Interior

The Salon and cabins have mahogany veneer paneling and solid trim. Salon and cabins are carpeted, carpet appears in better than average condition. Heads paneled in white laminate.

Several areas of paneling are in need of refinishing or replacing, most notably in the galley dining area.

Lighting includes AC and DC fixtures, observed to function during this inspection.



Windows Four large windows panels either side of salon, one section slides open. Windows are intact and undamaged. Sliding window tracks are in average condition and would benefit from cleaning. Side windows fitted with mesh sun covers in average condition.

Entertainment: None observed on board.

### D Interior continued







**Galley** includes a three burner 115 VAC stove with oven. Burners observed to heat to warm when energized. Microwave mounted in adjacent cabinets and full size Frigidare side by side freezer and fridge. There is reasonable storage space, cabinets and counter tops are clean and in good condition. Full size upright refrigerator/freezer and a smaller under counter unit both operating. An adjacent pick nick style table provides seating for 6. Fresh water pump operated delivering hot & cold water to galley and heads.

### Heads

Three heads onboard. One forward, two aft. Owner's head includes separate shower stall. All were clean with equipment in working order. Toilets are power flush which appeared to work properly.

# **E. Plumbing**

Water Tanks: Total Capacity of two tanks reported as 200 gallons total. Tanks located beneath berth in aft stateroom. Deck fills installed aft corners of aft deck. No evidence of leaks sighted. Tanks appear to be well secured.

Waste Tank: Total capacity reported as 30 gallons. No evidence of leaks. A macerator pump reported to be included in this system – not demonstrated. No onboard waste treatment system.

Fresh Water Pump: 12 volt diaphragm pump serves sinks and showers.

- Water Heater:115 VAC unit, observed to heat water from Shore and On Board Power.Wiring and plumbing at the heater requires some reorganization, support and protection.
- 12 VDC Bilge Forward pump observed to operate from float switch.
- Pumps Aft pump located beneath aft stateroom berth observed to power up from float switch. Primary pump location unidentified, this pump was not operational during functional testing. Rating of these pumps could not be determined. Make the midships pump fully operational, recommend a minimum of 2500 GPH rating for this pump.
- "Emergency" Mounted on forward engine room bulkhead forward of port engine. Pump housing is cracked,
   rubber diaphragm appears to be dry rotted and is cracked.
   Replace this pump, insure all hoses, connections and clamps are intact and free of
   leaks, test operation periodically.

# Bilges: Observed **excessive oil**. This mixture must not be pumped overboard, remove into containers and dispose of in accordance with State and Federal

- requirements.
- Air Conditioning Three marine grade water cooled units installed onboard. Portions of equipment sighted appear in average condition. Units powered up from breakers on main panel and functioned to cool from Thermostat controls in respective areas.
- Salt Water Pumps: 115 VAC centrifugal pumps provide raw cooling water for air conditioning systems. Raw water pumps in engine room mounted aft of starboard engine were, although operating rusty and one bracket was broken with that pump free to shift against the starboard prop shaft which is inches away.

## F. Electrical Systems

Ships 12 VDC Power

BatteryMarine grade selector switches located in engine room. No fuses in large conductorsSwitchper ABYC E11.

Original "00" size (+) conductors to port engine start motor and start solenoid are disintegrating, insulation completely broken down in one location near starter motor. > > > >

## 🗱 Caution: Electrical Hazard 🕷

Essential: Replace original wiring for engine starting power (both engines) at the earliest opportunity. <u>Battery switches for engine</u> starting should be kept in "OFF" position until repairs are made.

Following ABYC E-11 guidelines for "Fusing" of power wiring.



Batteries All liquid electrolyte batteries arranged in what appears to be 3 banks. One 8D each for engine starting and two banks of 6D size for house loads and Generator starting. All in boxes located within engine room. Wooden lids on some boxes deteriorating, other boxes with plastic lids were not secured. 6D size batteries located in personnel walk way between engines are not secured against shifting. All terminals in need of cleaning. Recommend addition of chafe protection and replacing any original battery cable with marine grade wire of appropriate size installed in accordance with ABYC E11, NFPA and other applicable codes.

Charging status monitored by Heart Interface Link 2000 in Salon. Observed this unit to display various parameters as buttons were selected. Full functions not demonstrated. The 4 pole shunt which is part of 2000R system is oxidized and in need of comprehensive cleaning.

- Charging Reported as Cruising Equip. Co. 2500 Watt Inverter/Charger installed Fwd bulkhead in engine room. Full output and all features were not demonstrated.
- Bonding & Throughout the vessel some bonding wires are corroded and broken at connections. Grounds Observed other wires (grounds or bonds) also disconnected and free floating. Clean, re-terminate and reestablish bonding system throughout. Eliminate disconnected free floating wire ends.

### AC Electrical System and Equipment

ShoreVessel fitted with dual sets of Shore Power receptaclesPowerlocated Port & Stbd including: (1 ea) 50A, 125/250, Phone<br/>& Cable, and dock water.<br/>Note: The 50 Amp receptacles are not wired to vessel.

125/250 marine grade cord (in-use) cord ends (plugs) in average condition.

Panel DC and AC loads controlled from primary panel (original equipment) in main salon, port side. Panel includes analog current & voltage meters. Double pole main breaker and single pole breakers for branch

circuits with selector switches for Shore Power vs Generator. All circuits were not individually tested during this inspection.



### F. Electrical Systems Continued

Outlets Counted fourteen grounded 112 Volt AC convenience outlets throughout the vessel. Polarity shows correct however none are GFI equipped – there is no GFI protection sighted on board.

GFI protection is recommended by ABYC and required by NFPA for all circuits feeding outlets in heads, galleys, machinery spaces ,weather decks or areas subject to spray.

- Generator Westerbeke 12 KW unit mounted forward of Stbd engine on wood platform. Hours
- reported as 114. Unit appears recently installed. No sound shield or enclosure. Unit observed to start and run from control panel adjacent to main electrical panel in salon. Produced power to operated air conditioners during functional test (sea-trial). Safety shut-down interlocks for low oil pressure, high coolant temperature and over-voltage, if any were not demonstrated. During "sea-trial" a small leak developed in the raw water cooling system. Raw water hose to sea strainer shows cracking. Fuel supply is a combination of copper tubing, and SAE J1527 fuel hose with hose clamps to and from a Fuel-Water separator / filter which is in need of cleaning. No other leaks sighted during this inspection.

### **G. NAVIGATION ELECTRONICS & EQUIPMENT**

Compasses Danforth "Constellation" (original equip.) – dome is cracked- unit has reached end-of-life.

- Navigation Lights Port, Starboard, Stern and Anchor light fixtures are intact but did not function. Port light wiring deteriorated and broken. Lenses are UV damaged – in need of replacing. Replace wiring starboard side and make all Navigation lights work reliably.
- Depth Datamarine unit installed. Function not demonstrated.
- Knot Meter: Monitoring vessel speed is a function of GPS and was not demonstrated.
- GPS: Garmin GPS 230, LCD screen is faded, as such this unit was not demonstrated.
- Radio(s): VHF Marine Radios installed . Not demonstrated.
- Radar: Raymarine SL72. LCD Screen is faded, as such this units which were demonstrated.
- Security A programmable electronic security system is installed. Not demonstrated.

Misc. Beneath the flybridge helm console wiring was not installed and secured in a orderly fashion with some oxidation on various items typical of a vessel this age. Observed disconnected wires with bare ends.

## H. Engines

Engine Room Height approximately 50", ceiling overhead is sound insulated and has both AC & DC lighting, (only one DC fixture functional, several AC UV type fixtures apparently unused). Crew walkway between engines encumbered by batteries and other items.

Access to the engine room is through lift of steps both forward and aft (two entrances).

General Information Engine serial numbers inaccessible or other wise obliterated. Eight cylinder, **Caterpillar Diesels, Model 3208**, Turbo charged, fresh water cooled.

Engine hours reported as 2,650.

Engine exteriors show rust, paint peeling and are generally less than average c o n d i t i o n . Good access to engines inboard, access to outboard sides is restricted.

Controls Original analog panel meters for oil pressure, water temp & pressure and tachometer appeared to function normally at both fly bridge and engine room panels. Engines were not started or stopped during this inspection from engine room

panels.

- Belts & Hoses Visible portions in average condition. Belt guard on port engine only.
- Cooling System Two inch size strainers are mounted with good access.

Raw water pump leaking during testing (hose popped off due to loose clamp).

Some hoses run beneath flooring and were not inspected. Observed some splices, fittings and size changes beneath flooring or in remote locations.



Outboard Port Engine (Rust and peeling paint)



General Condition: Paint Peeling



**Rusted Fuel Lines** 

## H. Engines continued

- Ventilation of Engine Room
   Two, 3" 12 VDC exhaust fans installed aft and forward bulkheads of engine room. Neither fans observed to operate. Fresh air supply via large vents in hull sides.
   Recommend exhaust fans be made operational. Consideration should be given to replacing port side exhaust hose and clamps at the next scheduled maintenance interval.
- Exhaust
  Stbd side exhaust hose and clamps appear new. Insulated riser "lagging" is original material (both engines).
  Port side hose shows signs of cracking and is approaching end-of-life".
  No obvious signs of exhaust leaks either hose at time of this inspection. Portions of exhaust systems beneath lagging not inspected.



# H. Propulsion

Transmissions ratio reported as 1.98  $\sim$  1

Four blade bronze propellers, 26" diameter (pitch unidentified) installed on 2"stainless steel shafts. Little or no transverse movement in prop and shaft. Propellers in average condition. Each shaft supported by bronze "V" struts. In the bilge each shaft is supported by a Bearing with grease fitting. Shafts and Bearings show some rust. Shaft seals are difficult access.



### I. Fuel System Fuel: Diesel

Two, 250 gallon tanks with a third day tank.

### Fuel Deck fills not grounded. ABYC E11

System Distribution plumbing is a mix of copper tubing and SAE rated fuel hose with hose clamps. Evidence of minor leaks apparent.

Raycor fuel-water separators installed on aft bulkhead with fabricated stainless steel distribution manifold which has no labeling.

Primary fuel tanks outboard of engines with fittings, valves, strapping and method of securing are all original equipment and appears secure. Each tank is fitted with a "Sight Tube" for physical indication of fuel level in each tank. **Tubing is clear vinyl and is not fuel rated or in compliance with USCG, ABYC or NFPA requirements.** 

Each shows minor evidence of leaks. There are no guards installed around sight tubes.

Vinyl plastic tubing for fuel level > >

A third fuel "day tank" is fitted between stringers on center aft end of engine room. Tank is fabricated aluminum and appears securely installed.





# J. Additional Equipment, Accessories, Spare Parts

"AB" 11' Rigid Bottom Inflatable, with helm steering. Model 360VS, ID XAZ10015B898, Rated at 30 HP.

40 hp Mercury Outboard, 1997, ID: 0G565367, With 3 blade aluminum propeller (all blades damaged).

Tender stored within cradle secured to aft deck hard top. The tender has no sun cover, fabric "tubes" are in average condition and somewhat deflated. It is unknown if the tubes are capable of holding inflation.

A Davit with spreader bar and 4 part stainless steel wire sling is fitted for launch and retrieval. Stainless wire slings showing some rust. Tender, Motor, Controls and Davit were not demonstrated. There are no hand rails, supports or any form of safety restraint for crew to hold onto when launching and retrieving the tender.

## K. Safety Gear

Emergency Manual Bilge Pump: Manual pump is inoperable (See Page 12)

Fire Fighting Equip.	<u>Fixed Auto Release System</u> : Two, Fireboy Halon 1301 units installed port & Stbd in engine room. Last inspection 1995.
	Note 46 CFR, ABYC A4 and NFPA 302 Annex E address maintenance of <b>fixed</b> fire fighting systems. "Fixed systems must be inspected and re-certified annually."
Manual Extinguishers	A number of, 4lb Dry Chemical extinguishers – mounted in Galley, Salon, and cabins observed on board. All show good pressure. No inspection tags.
Horn and/or Whistle:	Fixed horn – not demonstrated.
Life Preservers (PFD)	None sighted.
Throw-able	None sighted onboard
Life Raft/EPIRB	None onboard.
Emergency Lighting	No fixed emergency lighting.
First Aid Kit:	None sighted on board.
Flares :	None sighted.
Smoke/CO Detector	None.
Note: equipment	The addition of at least one 10lb or 15lb CO2 hand held extinguisher to ships
	is suggested (to be inspected and re-certified annually).
Emergency Egress	Transom Hatch or port is installed in the transom and provide emergency exit from owners cabin.
Charts & Publications	None sighted onboard.

**L. Summary** In addition to notes and comments in the body of the report the following items require attention.

Overall this vessel is in average condition for her age, the following items are in need of attention.

- 1 Essential: Replace original wiring for engine starting power (both engines) at the earliest opportunity. Battery switches for engine starting should be kept in "OFF" position until repairs are made.
- 2 Repair cracked boarding ladder, port side. See page 7.
- 3 Insure all electrically powered bilge pumps work reliably and are adequately sized for this vessel.
- 4 Replace manual emergency bilge pump in engine room. See Plumbing
- 5 Re-certify engine room fixed extinguishers, confirm that all aspects of auto release system are functional.
- 6 Recommend the installation of marine grade Carbon Monoxide detectors in all cabins and main salon.
- 7 Replace lenses and make all running lights reliably operational.
- 8 Recommend: Safety hand rails on aft deck hard top. See Page 7.
- 9. Make the "Roll Stabilizer" system operational.
- 10. Repair cracks in gel coat and non-skid surfaces at boarding areas and port side forward where cabin top meets foredeck and both port and starboard transom corners.

11. Provide life saving, safety and signaling equipment in accordance with USCG regulations prior to navigation.

12. Provide GFI protection for AC convenience outlets (Pg 13).

# In consideration of addressing comments and issues outlined in the report and summary,

MOTOR VESSEL is a reasonable risk for the intended use.

Based on available comparable values, current market conditions <u>and in consideration of addressing</u> <u>issues mentioned above</u>, the Fair Market Value is estimated at \$ 90,000 USD.

### Replacement Value Estimated at \$ 800,000 (

I certify that to the best of my knowledge and belief the statements contained within this report are true and accurate and are limited only by the indicated assumptions and conditions under which the inspections were performed. Except as noted (as reported) the information contained in this report is based on my personal observations. I have no past, current or future interest in this vessel or bias with respect to the parties involved. My compensation is not contingent upon reporting predetermined conditions or value or future action or event.

This report is submitted without prejudice and for the benefit of whom it may concern. This report does not constitute a warranty, either express or implied.

