

SURVEY REPORT

SUBJECT: "Grey Hawk"
Peterson 34' Sloop
Built by Composite Technology, 1980
Hull No. CTE340821080
USCG Documentation No. 630980 Net 8
LOA: 33'11"; Beam: 11'2"; Draft: 6'3"

PERFORMED FOR: Timothy Allen
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The above named vessel was inspected on 7 July 2005 while blocked on land and afloat at the Oxford Boatyard, Oxford, Maryland, and a sea trial under auxiliary power was conducted. No attempt was made to gain access behind interior liners, fixed cabinetry or into cored areas of the deck laminates. No attempts were made to inspect the internal condition of the vessel's machinery or tankage. Mast and rigging were inspected from deck level and aloft. Unless specified, this survey was limited to the acoustical sounding of the fiberglass laminates and visual observations throughout. The findings, recommendations and conclusions are as follows.

FINDINGS**HULL CONSTRUCTION & CONDITION**

The hull was constructed of fiberglass reinforced plastic in a female mold. The overall appearance is of a fair and symmetrical hull with a fin keel and spade rudder.

SOUNDING: Revealed no areas of delamination or voids.

INSPECTION FOR MOISTURE INTRUSION PROBLEMS WITH THE UNDERWATER BODY: (Caused by a reaction between the outer laminates and the surrounding water whereby moisture is able to pass through the gelcoat and reacts with the polyesters, forming an acidic solution which because of a density differential either expands into the laminate or, more usually, forces the gelcoat and/or the surface laminates to blister) There is evidence of a grey coating under the

antifouling paint that is presumably an epoxy which is to serve as a barrier against moisture intrusion and possible concurrent blistering. The epoxy appears to have good adhesion and no blistering or signs of other moisture intrusion problems were observed. A Sovereign Moisture Master meter was used at randomly selected areas on the bottom to test the surface laminates for possible moisture contamination with negligible results.

HULL STRINGERS & ENGINE BEDS: All accessible members appear adequately accomplished and in serviceable condition in spite of a crack in one starboard side stringer outboard of the engine compartment.

BALLAST: External lead keel, appears well fit to and adequately secured to the hull, but with some cracks in the hull to keel joint on the starboard side that are oozing rust stains (see recommendation no. 1).

ANTIFOULING PAINT: Appears to have good adhesion. The condition of the antifouling properties is unknown.

HULL REPAIRS & SUSPECTED LEAK PROBLEM: The hull has been repaired on the stem, but the repair appears to have been adequately accomplished. Because of the delayed launching of the vessel the day of the survey, the afloat inspection was somewhat abbreviated. The vessel was revisited on 7 July and was found with a fair amount of water in the bilge, some of which could be attributed to rain water running down the mast, both internally and through the worn out mast partner boot, but some seawater entry is suspected, and is thought to be other than the cockpit drain thru-hull leaks and the engine strut leak problems that were detected on 6 July (see recommendation no. 1).

FINISH OF TOPSIDES: The forward sections of the freeboard have been refinished with a paint, presumably necessitated because of the stem repairs, reported previously. The rest of the freeboard appears to be the original molded gelcoat. All appears in overall only fair condition.

DECK CONSTRUCTION & CONDITION

The deck was constructed of fiberglass reinforced plastic in a female mold. A core material bonded between laminates was utilized to achieve needed panel stiffness in the larger flat areas.

HULL TO DECK JOINT: The deck is secured to the inverted hull flange with the fasteners securing the aluminum toe rail and is secured on the interior with fiberglass laminates. All appears to be secure.

SOUNDING: Revealed scattered areas where the laminates and the encased core material have separated or were never properly bonded together along with areas of moisture intrusion to the deck core material across the aft deck, along the aft ends of the side decks, adjacent to the waste deck plate on the port side deck, and across the forward end of the cabin top (see recommendation no. 2).

SURFACE FINISHES: Refinished with an enamel paint. Appears in overall poor condition (see recommendation no. 2).

HATCHES & PORTS: Appear adequately secured and in serviceable condition, but with leak problems at some of the ports and at the forward hatch. Also, the aft dogs have been broken off the forward hatch, its support arm is loose and its dog works stiffly, and there is some play at the hatch hinges (see recommendation no. 2).

TRIM & WOODEN PARTS: All teak. Appear in acceptable condition, but without the benefit of any finish (oil or varnish).

RIGGING & HARDWARE

The Peterson 34 is a mast head sloop and appears to have an adequate deck layout.

DECK HARDWARE: All appears to be adequately secured and in serviceable condition, but stains indicate multiple leak problems and active leaking was observed at the aft spinnaker pole chock (see recommendation no. 2).

WINCH INVENTORY: All appear adequately secured and in serviceable condition.

CHAINPLATES: All appear adequately secured and in serviceable condition. There is no evidence of any stress failure to any of the bearing members.

RUNNING RIGGING: Showing its age in places.

STANDING RIGGING: All stainless steel rod rigging. All appears to be of adequate size and in serviceable condition. It was noted that the starboard side running backstay is off the mast.

FORESTAY FOIL: Plastic extrusion. Appears in serviceable condition.

BACKSTAY ADJUSTER & BOOM VANG: Navtec hydraulic units. Appear adequately installed and are operational, but with some rust on one hydraulic line fitting at the boom vang and the lens on the PSI gauge is checking and is only partially legible.

MAST & BOOM: Painted aluminum extrusions, appear in serviceable condition, but with some bubbling paint in places because of some surface corrosion and the mast partner boot is worn out.

SPINNAKER POLE: Anodized aluminum extrusion, appears in serviceable condition except that its jaw casting is loose in the extrusion.

REACHING STRUT: Anodized aluminum extrusion, appears in serviceable condition.

PULPITS & LIFELINES: Stainless steel bow and stern pulpits with vinyl covered stainless steel wire lifelines led through well spaced stanchions. All appears adequately secured and in serviceable condition except that the stern pulpit cast aluminum forward bases are cracked and the bow pulpit bases are loose (see recommendation no. 2).

INTERIOR

Accomplished with molded fiberglass liners appointed with teak and teak plywood joiner work.

CONDITION OF LINERS: Appear in acceptable condition.

JOINER WORK: Appears in overall only fair condition.

FILLET BONDS TO BULKHEADS & FURNITURE PARTS: Accomplished with fiberglass laminates. All accessible bonds appear adequately accomplished and secure.

OVERHEAD: Upholstered. Ripped and falling down in places and is in need of replacement.

VENTILATION: Considered adequate.

UPHOLSTERY: Only the pipe berth cushions onboard, which appear worn, but can be considered serviceable.

BILGE AREAS: Found with a fair amount of water and in need of cleaning.

PLUMBING & GALLEY FIXTURES

SEA CONNECTIONS: All bronze thru-hull fittings protected by a combination of bronze gate valves, plastic seacocks, and one bronze seacock (engine intake). All thru-hull fittings appear to be in serviceable condition but both cockpit drain thru-hull fittings are weeping. The plastic seacocks all appear in serviceable condition. The bronze gate valves on the cockpit drain thru-hulls and on the head overboard discharge thru-hull are frozen. The engine intake seacock's barrel nut is in need of adjustment as the handle has to be tied open with a string and this seacock is fit with a fragile plastic hose barb. The galley sink seawater hand pump and the head sink drain are plumbed with just clear vinyl hose material (see recommendation no. 3).

HEAD TYPE & INSTALLATION: Manual marine toilet, installed with a "Y" valve option to discharge either to a collapsible waste holding tank or directly overboard. The head pumps in seawater very weakly, the discharge "Y" valve is frozen, and all the discharge hoses are aging and are not marine sanitation hose material. Also, the overboard discharge is not looped and vented to prevent possible back siphoning (see recommendation no. 4).

FRESH WATER SYSTEM: Galley sink hand pump and head sink foot pump are supplied by a plastic tank. The galley sink hand pump is not working. The head sink foot pump is working.

GALLEY SINK SEAWATER HAND PUMP: Not working.

GALLEY STOVE: Force 10 CNG range. The CNG tank is not secured in place, the CNG regulator is not vented to the exterior of the vessel, the fuel supply line is not secured in place, and the left burner control is frozen (see recommendation no. 5).

BILGE PUMPS: Two manual pumps. Both appear to be operational, but the below decks pump discharge hose is not plumbed overboard.

ELECTRICAL

SHIP'S SYSTEM: Based on two 12-volt batteries with engine driven alternator. The four position, vapor tight full disconnect switch is operational. There is individual circuit protection through fuses and circuit breakers. The batteries were found dead and with dry cells in the port side battery. The battery boxes are poorly secured in place. The starboard battery positive cable is not color coded. All the positive battery cables are poorly secured in place, especially the one running to the engine starting motor. There are multiple loose wiring runs. The stern light and the head cabin light are not working (see recommendation no. 6).

INSTRUMENTATION:

Autohelm Navdata - Activates, not programmed.
Autohelm VMG - Activates, not working.
Autohelm Tridata - Knot works, depth does not.
Autohelm Multi - Activates, bleeding display.
Autohelm Wind - Activates, not working.
Autohelm Speed Trim - Activates, not working.
Apelco Loran c - Appears to be functioning properly, but is antenna whip has been broken off.
Garmin GPS - Appears to be functioning properly.
Horizon VHF Radio - Appears to be functioning properly.
Twin Ritchie Compasses - Appear in serviceable condition.

LIGHTNING PROTECTION: The shroud chainplates are grounded to keel bolts.

MACHINERY, FUEL SYSTEM & PROPULSION HARDWARE

ENGINE TYPE & MAKE: Yanmar two cylinder diesel engine, model 2QM15G. A serial number was not observed posted. Appears to be properly mounted. Tested and was found to be operational, but with heavy rust in places especially on the exhaust manifold. Also, the alternator belt and the raw water pump belt are too slack (see recommendation no. 7).

TRANSMISSION: Kanzaki Marine Gear, model KBW10, serial no. AR5624, ratio 2.83. Appears to be properly mounted. Tested and was found to be operational.

COOLING SYSTEM: Raw water cooled. The raw water intake hoses and the raw water hose running to the thermostat are checking with age. Also, the raw water line is not looped above the waterline and fit with a vented elbow to prevent possible back siphoning (see recommendation no. 7).

EXHAUST: Water fed with a riser, fiberglass muffler, and flexible hose to the outlet on the fantail. The exhaust hoses are badly kinked at the muffler and in the aft lazarette, there are two restrictive 90 degree elbows in the exhaust run, and there are rusting clamps securing exhaust hose connections (see recommendation no. 7).

FUEL SYSTEM: Fed from an aluminum tank. The fuel fill hose has been spliced and the older section left running to the fuel fill is stiff with age, there is no fuel shut-off valve, and there is no primary fuel filter (see recommendation no. 7).

VENTILATION OF THE ENGINE COMPARTMENT: The passive ventilation appear adequate.

PROPULSION HARDWARE: The 1" diameter stainless steel shaft, two blade folding bronze propeller (16 X 12 RH), and bronze strut appear in serviceable condition, but there is a leak into the vessel along the starboard side of the strut, the strut sleeve bearing is worn, the stuffing box is leaking excessively, the stuffing box hose clamps are rusting, and the shaft coupling is rusting. Also, there is what is considered excessive vibration underway (see recommendation no. 8).

INSTRUMENTATION: All appear to be operating properly.

CONTROLS: All appear to be functioning properly except that the cockpit starter button is not working. Also, the accelerator and gear controls are hooked up reverse (accelerator is gear and gear is accelerator) (see recommendation no. 9).

CORROSION PROTECTION

Supplied by zinc anodes mounted on the engine shaft.

STEERING SYSTEM

Spade rudder to inboard tiller.

RUDDER: Fiberglass construction, appears in serviceable condition in spite of some water oozing out of the bottom of the blade.

RUDDER PORT: Appears in serviceable condition.

TILLER & TILLER HEAD: Appear in serviceable condition.

AUTOPILOT: Autohelm ST4000, tested and was found to be operational, but its 12-volt plug in the cockpit is loose.

SAILS

There is a nick along the luff bolt rope on the mainsail, but it appears in otherwise good condition. The three genoas inspected appear in serviceable condition.

SAFETY & USCG MANDATED EQUIPMENT (see recommendation no. 10)

PERSONAL FLOTATION DEVICES: 1 Type IV throwable cushion, 2 Type IV throwable horseshoes.

FIRE EXTINGUISHERS: 3 Type BC, Size 1 (2-3/4lb), all mounted, two showing discharge.

DISTRESS FLARES: None observed onboard.

SOUND SIGNALING DEVICE: Horn onboard.

POLLUTION WARNINGS: Oil and trash posted.

GROUND TACKLE: Two fluked anchors.

EPIRB: Onboard, but its battery date is illegible.

RECOMMENDATIONS

1. Hull - Pump the bilges dry and inspect further for possible seawater leak problems other than at the cockpit drain thru-hull fittings and the leak at the engine shaft strut, and repair as found necessary (refer page 2).
2. Decks - Accomplish reconditioning repairs to include hardware, hatches, and port rebedding and/or replacement (refer page 3).
3. Sea connections - Rebed both cockpit drain thru-hull fittings. Replace the cockpit drain and head discharge gate valves. Service or replace the engine intake seacock and replace its fragile plastic hose barb with a bronze fitting. Replace the galley sink seawater hand pump and head sink drain vinyl hoses with marine grade wire reinforced hose material (refer page 5).
4. Head & waste holding tank - Rebuild the head pump, replace the head and waste holding tank discharge hoses, and if overboard discharge is intended, the discharge line should be looped above the waterline and fit with a vented elbow to prevent possible back siphoning. An alternative precautionary measure would be to insure to close the head valves when not in use (see recommendation no. 5).
5. Galley CNG stove - Secure the CNG tank in place. Vent the CNG regulator to the exterior of the vessel. Secure the fuel supply line in place. Repair to free up the left burner control (refer page 5).
6. 12-volt service - Service the port battery cell water levels and recharge the batteries. Retest under load and replace as found necessary. Devise better means of securing the battery boxes in place. Color code the starboard battery positive cable and secure all positive battery cables in place and away from all chafe potentials. Secure all wiring runs in place every 16". Repair to get the stern light operational (refer page 6).
7. Engine - Arrest the rust and monitor the condition of the exhaust manifold and replace as found necessary. Tighten up the alternator and raw water pump belts. Replace the raw water intake hoses and the raw water hose running to the thermostat. Loop the raw water line above the waterline and fit it with a vented elbow prior to the dump into the exhaust to prevent possible back siphoning. Replace the exhaust hoses to eliminate the restrictive kinks and the 90 degree elbows. Replace the fuel fill hose, fit the fuel supply port on the fuel tank with a shut-off valve, and install a primary fuel filter (refer pages 6 & 7).

8. Propulsion hardware - Repair the seawater leak along the starboard side of the engine shaft strut. Replace the strut sleeve bearing. Adjust the shaft stuffing box and replace the rusting clamps securing its hose. Arrest the rust on the shaft coupling. Check engine alignment (refer page 7).

9. Engine controls - Repair to get the cockpit engine start button operational and reverse the accelerator and gear control cables at the cockpit controls (refer page 7).

10. Safety & USCG Mandated Equipment - Procure a suitable inventory of PFD's, recharge or replace the two fire extinguishers showing discharge, and procure distress flares. Also, if the EPIRB is to remain part of the vessel's safety equipment, its batteries should be replaced (refer page 8).

CONCLUSIONS

This vessel is generally well built using good materials and acceptable methods, but is currently in need of some corrections and repairs as reported.

An appraisal of current market value is \$20,000. An estimate of new replacement cost is \$145,000.

This report is submitted without prejudice. Its content is the opinion of the undersigned only, unless otherwise stated. It is to be understood that the undersigned is not responsible for any defects or conditions of this vessel. This report also does not guarantee or warrant the condition of the vessel. Use of this report implies acceptance of the above conditions.

Respectfully submitted,



David C. Manning
Marine Surveyor
9 July 2005

