

PALCHER MARINE CONSULTANTS, INC.
MARINE SURVEYOR AND CONSULTANT

1999 Hacker Triple



INDEPENDENT MARINE SURVEY SERVICE

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Report of Marine Survey

Of The Vessel

1999 Hacker Triple

Conducted by
John Palcher

PREPARED EXCLUSIVELY FOR:

XXXXXXXXXX

May 26, 2020

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I. INTRODUCTION

SCOPE OF SURVEY

In an effort to be accurate in the description of services performed this survey is titled "In Water Systems Check". Traditionally the term "Sea Trial" is used to cover a broad range of tests under varying conditions. This leads to different interpretations and assumptions. This survey strives to define conditions observed under the conditions noted.

The vessel is reported to have undergone significant replacement of the wooden structural components. A separate survey of the vessel was performed the same day as this In Water Systems Check. Please refer to that report for overall evaluation of the boats safety and systems condition.

Acting at the request of Mr. XXXXXXXXX, the attending surveyor did attend onboard the *1999 Hacker Triple*, beginning on May XX, 2020 at about 2:30 pm where an in water systems check was performed (sometimes referred to as a sea trial). The Hull Identification # XXXXXXXX and engine serial # XXXXX are stamped on the manufacturer identification plate. A hull # XX stamp is additionally located on the forward port side hull. The engine manufacturer serial number label was not observed on the engine.

This in water systems check was conducted 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.

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.

I. INTRODUCTION

VESSEL DESCRIPTION

This vessel was built and designed to be used as a pleasure craft. The builder's design characteristics resulted in a boat that has minimal initial bow raise on acceleration. This is a desired feature that helps provide visibility and overall comfort. There are three seating areas, hence the "Triple Cockpit" designation.

The vessel is reported to have undergone significant replacement of the wooden structural components. A separate survey of the vessel was performed the same day as this sea trial. Please refer to that report for overall evaluation of the boats safety and systems condition.

II. GENERAL INFORMATION

GENERAL INFORMATION

SURVEY PREPARED FOR: XXXXXXXX

TYPE OF SURVEY: In Water Systems Check

BUILDER: Hacker Boat Company

YEAR BUILT: 1998

MODEL YEAR: 1999

MODEL OF VESSEL: Triple Cockpit Pleasure Boat

HULL IDENTIFICATION NUMBER (HIN): XXXXXXXX

HULL NUMBER: XXXX

PLACE OF SURVEY: XXXXX

DATE/TIME OF SURVEY: May 2020

III. SYSTEMS

HULL DECK AND SUPERSTRUCTURE

PROPULSION

MAIN ENGINES

TYPE:

One (1), Eight (8) cylinder four cycle V-8 gasoline naturally aspirated engine.

MANUFACTURER:

Marine Power

Reported to be the original engine.

HORSE POWER:

Manufacturer reports engine output 330 HP

NUMBER OF CYLINDERS:

Eight (8) in a V configuration.

INDICATED HOURS:

No hour meter sighted.

ECM reading including engine hours was requested.

THROTTLE CONTROLS:

Vernier style throttle cable.

FLAME ARRESTOR:

In place.

ENGINE MOUNTS AND BED:

Steel engine mounts, lag bolted to wood engine beds.

LUBRICATION:

Engine oil was changed the day of this sea trial. Upon completion of the sea trial engine oil was checked. The oil was clear with no visible sign of contamination, and the level was within the full range.

BILGE BLOWERS:

One bilge blower was mounted in the engine compartment. The blower functioned when switched on, however the hose is torn and brittle.

***A.1**

The bilge blower hose is torn and brittle.

EXHAUST SYSTEM:

Raw water cooled dual copper exhaust with no mufflers. Exhaust pipes are connected to risers with flexible exhaust hose. Connections are double clamped and in good condition.

III. SYSTEMS

PROPULSION

MAIN ENGINES(*continued*)

PROP SHAFTS:

A bronze 1.25" shaft is connected to the transmission with a drive saver style shock/torque absorber, and coupler. The coupler has safety wire connecting the two set screws. The safety wire can be more securely wrapped to reduce the potential of movement. The shaft has some surface corrosion, but is serviceable at present.

The stuffing box lock nut appears secure, the shaft log flexible hose appears secure and in good condition. Two clamps at each end of the flexible log is recommended, if there is sufficient room.

The strut appears to be aligned with the rudder, the cutlass bearing fit appeared serviceable.

The propeller is a properly attached 16 x 18 RH four blade. The propeller was recently reconditioned and installed this day.

***B.1**

Single clamps are used at the shaft log connection.

***B.2**

Shaft coupler safety wire will not adequately prevent screw movement.

COOLING SYSTEM

TYPE:

This engine is raw water cooled. This configuration directly circulates water drawn into the system from under the boat. This water circulates through the engine and is injected in to the exhaust risers, where it then discharges back into the water. There is no separate cooling fluid or reservoir.

RAW WATER STRAINERS:

No raw water strainers were observed.

***C.1**

No raw water strainers were observed.

HOSES AND CLAMPS:

Cooling hoses appeared secured and in good condition.

TRANSMISSIONS

MANUFACTURER:

Velvet Drive:
model # XXXXX
serial # XXXXX
ratio 1.52:1

FLUID LEVEL AND CONDITION:

Transmission fluid was observed in case. Level appeared appropriate.

III. SYSTEMS

PROPULSION

TRANSMISSIONS(*continued*)

CONTROLS:

A cable style control with a push pull lever at the helm. No recognizable detent was felt when in neutral.

***C.2**

No recognizable detent in the lever neutral position.

COOLER:

Engine oil cooler, hoses, and fittings appeared in good condition.

FUEL SYSTEM

MAIN ENGINE(S) FUEL SYSTEM

FUEL TYPE:

Gasoline.

MATERIAL:

There is one aluminum fuel tank mounted at the vessel stern.

TANKS CAPACITY:

Labeled as 51 gallons.

SECURED:

The tank is attached to the stringers using integral tab style brackets. The two forward tabs were observable and secured with lag bolts.

MANUFACTURING LABEL:

Label is affixed to the forward side of tank, and is easily observed and readable.

FILL PIPE LOCATIONS:

Fill pipe is located at the stern topside.

FILL PIPE GROUNDED:

Appears to be properly grounded.

HOSE CONNECTIONS, CLAMPS:

Double clamped.

SAFETY EQUIPMENT

BILGE PUMPS

LIST:

One bilge pump was mounted in the boat midship. The pump did not work.

***A.2**

The bilge pump did not work.

III. SYSTEMS

IN WATER SYSTEMS CHECK

INTRODUCTION

INTRODUCTION:

The systems checks were conducted from The XXXXXX. The weather was calm and clear, about 79 degrees F. On board were myself, Mr. XXXXXXXXX and XXXXXX Mr. XXXXX is the seller's representative and marina owner, he piloted the boat. The chere conducted from approximately 2:45 pm until 4:00 pm. The engine is reported to be last started about a year ago. During the sea trial helm control was taken over by myself to evaluate steering response. The width of the navigation channel limited steering and maneuverability testing to slow and moderate speeds. A straight line wide open throttle (WOT) test was able to be performed.

OBSERVATIONS

OBSERVATIONS:

- The engine started with minimal cranking, no smoke was observed.
- Idling oil pressure registered at the helm gauge 30 psi, and water discharged promptly at both exhaust tips.
- The helm volt meter registered 13.5 vdc, reading confirmed by a 13.4 vdc reading at the battery posts.
- Water temp gauge powered up at key on.
- The engine ran smooth at idle with no appreciable vibration or noises.
- Steering operated smoothly and responded promptly.
- Throttle operation is smooth and responsive.
- Shift lever control and transmission engagement, both forward and reverse, is smooth.
- Upon transmission engagement the stuffing box properly drips water in to the bilge.
- Excessive engine vibration occurs at about 2600 rpm.
- On initial start up it was identified that a water jacket winterization plug was not in place. This resulted in water entering into the boat. The engine was shut down and the plug was replaced. No further water leakage occurred.
- The bilge pump was not connected to the 12 vdc power system, it did not work.
- The port side fuel line is in close to the shift linkage. A potential exists for contact wear.

***A.3**

Excessive engine vibration occurs at about 2600 rpm.

***B.3**

The port side fuel line is in close to the shift linkage. A potential exists for contact wear.

III. SYSTEMS

ENGINE SURVEY SUMMARY

ENGINE SURVEY

OTHER:

Engine Observations Underway

Readings taken using a Garmin GPS unit and the helm gauges.

Idle

500 RPM

Batt: 13.5

Oil: 40 psi

Temp: < 100

Speed: 5.2 mph

1000 RPM

Batt: 14

Oil: 50 psi

Temp: < 100

Speed: 8.2 mph

1500 RPM

Batt: 14

Oil: 50 psi

Temp: < 100

Speed: 12.7 mph

2000 RPM

Batt: 14

Oil: 60 psi

Temp: 100

Speed: 19 mph

2500 RPM

Batt: 13.5

Oil: 60 psi

Temp: 100

Speed: 24 mph

3000 RPM

Batt: 14

Oil: 60 psi

Temp: 100

Speed: 30 mph

3500 RPM

Batt: 14

Oil: 60 psi

Temp: 100

III. SYSTEMS

ENGINE SURVEY SUMMARY

Speed: 34 mph

4000 RPM

Batt: 14 vdc

Oil: 60 psi

Temp: 100

Speed: 37 mph

WOT (wide open throttle)

4500 RPM

Batt: 14

Oil: 60 psi

Temp: 100

Speed: 39 mph

ENGINE SURVEY(*continued*)

NOTES:

Temperature Readings (F degrees) After WOT
Readings taken with an infrared digital thermometer.

Oil Filters	156
Stuffing Box	76
Transmission Case	105
Exhaust Riser (Port)	88
Exhaust Riser (stbd)	92
Thermostat housings	120
Alternator	120

All readings considered normal for this engine.

IV. FINDINGS AND RECOMMENDATIONS

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 it's 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:

A.1 (PAGE 4) BILGE BLOWERS:

FINDINGS	RECOMMENDATIONS
The bilge blower hose is torn and brittle.	<i>Replace blower hose.</i>

A.2 (PAGE 6) LIST:

FINDINGS	RECOMMENDATIONS
The bilge pump did not work.	<i>Repair bilge pump.</i>

A.3 (PAGE 7) OBSERVATIONS:

FINDINGS	RECOMMENDATIONS
Excessive engine vibration occurs at about 2600 rpm.	<i>Determine the source and cause of vibration and correct.</i>

B. OTHER DEFICIENCIES NEEDING ATTENTION:

B.1 (PAGE 5) PROP SHAFTS:

FINDINGS	RECOMMENDATIONS
Single clamps are used at the shaft log connection.	<i>Two clamps at each end of the flexible log is recommended, if there is sufficient room.</i>

B.2 (PAGE 5) PROP SHAFTS:

FINDINGS	RECOMMENDATIONS
Shaft coupler safety wire will not adequately prevent screw movement.	<i>Re-wrap safety wire to ensure screws can not back off.</i>

IV. FINDINGS AND RECOMMENDATIONS

B. OTHER DEFICIENCIES NEEDING ATTENTION:

B.3 (PAGE 7) OBSERVATIONS:

FINDINGS	RECOMMENDATIONS
The port side fuel line is in close to the shift linkage. A potential exists for contact wear.	Secure fuel line to avoid potential contact.

C. SURVEYOR'S NOTES AND OBSERVATIONS:

C.1 (PAGE 5) RAW WATER STRAINERS:

FINDINGS	RECOMMENDATIONS
No raw water strainers were observed.	It is highly recommended to have a primary easily serviceable raw water strainer.

C.2 (PAGE 6) CONTROLS:

FINDINGS	RECOMMENDATIONS
No recognizable detent in the lever neutral position.	Use caution not to unintentionally engage transmission while engine is running.

IV. FINDINGS AND RECOMMENDATIONS

In Water Systems Check

The significant vibration of the drive train needs to be identified and corrected. The cause of the vibration may be an easily corrected issue, such as a shaft or coupler alignment issue. Whatever the correction, the details of any and all work needed to fix the problem should be specifically documented, and verified.

The presence of water infiltration in the bilge is most likely attributed to the missing winterization plug. There was additionally minimal water intrusion observed at the chine, both stern and midship. The seller's representative did point out, there was still some sealing work to be completed at the chine cap area. This is likely a contributing factor to the intrusion. It should also be considered that the boat is reported to have been out of the water for more than a year. If a revaluation of the boat is undertaken the following recommendations should be considered:

- The boat should have ample time in the water, prior to evaluation, to allow for natural swelling and sealing of the hull.
- All finishes, paint varnish etcetera should be dry and cured.
- The bilge pump is to be operational.
- All available service and repair records should be provided.
- The engine computer (ECM) report should be available.

There are no indications of engine or transmission fluid leaks. The engine operating temperatures are within normal ranges. The vessel performance is consistent with other similarly equipped Hacker boats of this age.

This report reflects the condition and information available at the time, day and place the sea trial was conducted. Specific concerns observed are addressed within this report. This report serves as a baseline of the mechanical systems' operation and condition. The length of time mechanical systems may operate properly is not the function of this report.

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.

IV. FINDINGS AND RECOMMENDATIONS

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



John Palcher,
Marine Surveyor
ABYC, IAMI Certified

VI. PHOTOGRAPHS



Hull #



Engine



Warning Label

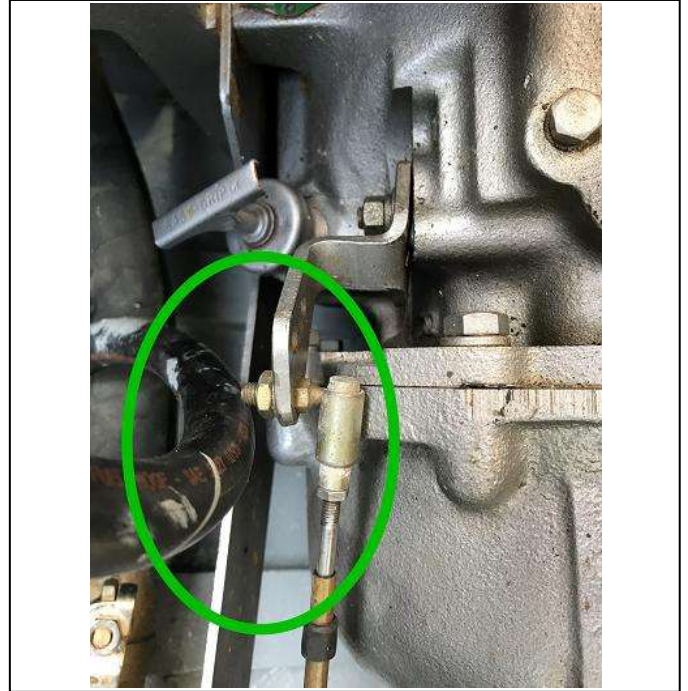


Drive Train

VI. PHOTOGRAPHS



Bilge Pump



Fuel Hose Near Transmission Linkage