

Findings

Hathaway Marine Services, Inc.
Marine Surveyors

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Special Interest Articles:

•Mast Storage.

• Maintenance Notes. Part 4

Dribs & Drabs.....2

The Boat Killer.....2

ROR Quiz3

From the Bilge.....3

.....Back Page....

Tech Tip #4

About HMS

Mast Storage

There seems to be a trend today for leaving the mast stepped with its wind instrument sending units whirling away. It probably costs a few dollars less, but in our opinion, it's asking for trouble that far exceeds any financial benefits.

Freezing rain and snow gets into everything including the mast interior where it slithers down into the boat (if keel stepped) or onto the deck (if deck stepped with drain holes). It's almost impossible to create a seal where the mast goes through the winter cover and therefore more water is allowed through to the deck.

Water penetration into even the best swaged terminals and can cause progressive damage due to repeated freezing and thawing. And those expensive sending units don't have a chance if

winter gales hit.

We are also concerned with rigging loads. Since the hull, when ashore resting on its keel, takes a somewhat different shape than it had when afloat, the rigging will also be differently loaded. Cold winter temperatures can unequally reduce rigging tension and, in combination with multi-directional winds, may fatigue materials and degrade hardware and their attachments.

It's best to get the mast off the boat and get it covered and ready for what's coming. You can also inspect everything, remove running rigging and sending devices, and lubricate moving parts.

Many boatyards either store masts inside or on a covered yard rack. If your boat is stored at home, you can do an equally good job.

One skipper that we know

removes all his rigging (both standing and running), individually labels each, and hangs them up in his cellar. This method allows him to individually inspect each piece and to repair or replace items before the sailing season begins.

The mast is then stored outside on sawhorses and covered with polyfilm with enough air circulation to stop condensation. (If you're thinking of using your mast as a winter cover ridgepole, forget it. Masts make terrible ridgepoles that destroy winter covers.)

In the spring, you assemble everything, clean bulb contacts, and "buzz" out the electricals. You're ready to go.

Masts are expensive items. With good care, they'll last a lifetime.

Maintenance Notes – Part 4 – Cockpit Drains

Lately, we've seen many frozen seacocks on cockpit drains. Although all other seacocks should be closed when the boat is not being used, cockpit drain seacocks are always left open and are essentially no more effective than their hose connections. If a hose begins to leak and you just happen to be aboard at the time and, if the seacock is not frozen solid, you may be able to close it off and make repairs. If the boat is unattended, there is the possibility of sinking.

In many cases we've found hoses that were showing their age where the hose has lost much of its flexibility and cracking is seen in areas of sharp bends and where the hose clamps are located. This is a disas-

ter just waiting to happen and a prime area for maintenance that is best done while the boat is ashore.

If the hoses show even slight evidence of age, replace them with the best marine rated material that you can buy. Automotive radiator hose should not even be considered.

Replace all hose clamps even if they look serviceable. And use marine grade clamps only. Those at the hardware store cost half as much but are of a lighter construction and often contain a steel "worm" gear acting on the stainless steel band. Steel rusts quickly in the bilge.

Remember that the integrity of the connection below the waterline is right where

the hose connects to the seacock. Saving a few dollars here is not wise.

When replacing hoses, it's a proper time to service the seacocks. It isn't difficult to disassemble them, clean all the moving parts, and reassemble using plenty of waterproof grease.

During the boating season, it's a good idea to periodically inspect every hose connection that is below the waterline and to operate every seacock to keep it free and working properly.

We can personally attest to the fact that maintaining seacocks and hoses is not an activity that requires a technical degree or an IQ greater than that of a cherrystone clam.

Dribs and Drabs

Jackstand maintenance:

You don't set'em and forget'em. All the weight of the boat is on the blocks under the keel and large fluctuations in temperature may cause movement in the ground that everything is resting upon. If the blocks sink a bit, the stands start taking the load. We've seen hulls "dimpled" by this. Generally, if not left too long, the dimples pop out but sometimes they don't. If the ground under the keel blocks heaves upwards, the jack stands can't do their job and the boat sways side to side when the wind blows. Check

them regularly but mostly when there has been a major change in temperature like after the first deep frost and after those few warm days that trick you into thinking that spring is just around the corner (when, in reality, it's way down the pike). Most good boatyards do this automatically but, if you're storing at home, the job is yours.

Downflooding – We've been recently called in on several sinkings. In two cases, the cause was most likely exacerbated by downflooding that apparently happened after the

bilge pump had discharged the batteries. The use of a check valve may not have saved either boat from sinking, but would have significantly delayed the event to daylight hours when the vessel's condition may have been noticed. We constantly recommend that a check valve, or other non-return device, be installed on all sideshell piercing fluid lines that may be subject to siphoning due to heavy loading or extreme angles of heel.

Here's a \$20 fix that can save you a fortune.

New Member of the Hathaway Team

S. Merrill Hall has spent the last forty years as a design, manufacturing, and forensic consulting engineer. During slack times he was a yacht broker, restored several cruising sailboats, ran Mobile Boatyard Services, delivered sailing vessels along the east coast, and has been involved with marine surveying for the last nine years.

He and his wife, Laraine sail their recently restored Contessa 26, *Lucy Ann*, from Cousins Island, Maine. At fourteen, Zulu their cat, still objects to becoming marinized.

Deck Core Wetness & Delamination – The Boat Killer

We're seeing this more and more – a perfectly good looking, well found yacht with massive deck core damage that could have been prevented. New or old, the cause is the same. Water has entered the deck core through poorly sealed deck fittings. Some relatively new boats have sealing that was badly done by the manufacturer while, in older boats, the problem is generally the result of poor or non-existent maintenance.

When fiberglass boats first came on the market in the mid to late fifties, the "no maintenance" flag was flown from every dealer's showroom. For all the people who spent their free time caulking, scraping, and painting, the FRP boat was a godsend that offered more time afloat and less in the yard. It was a good selling point but, as with all adverts, it wasn't totally true.

Some early boats had no cored decks at all and relied on heavy glasswork or underdeck ribbing. But that was expensive so, in order to build strength, lightness, and low cost into the deck, the builders made a sandwich where the bread was fiberglass and the filling was the "core".

Early cores were made of plywood or sometimes Masonite. These materials seemed good initially but had a nasty habit of allowing water to migrate long distances.

If you had a mooring cleat that was leaking moisture into the foredeck, after a while the moisture would travel aft along the weather decks. Trapped moisture would also freeze and thaw (weather permitting) breaking the fiberglass bond and allowing more moisture to further infiltrate the core.

Along with the moisture came the little microbes that

looked on most core materials as a free lunch. With summer heat, they could turn wood core materials into mush and then sack out for the winter well fed.

After plywood came end-grain balsa and certain types of foam coring – these are all light and strong materials when prepared and installed correctly, but to do so requires skilled FRP technicians and the time to do it properly. Not all manufacturers have done this consistently.

Let's assume that your boat has no indications of delamination or moisture entrapment. What do you do to protect your boat for the future? You should periodically remove and re-bed every piece of gear that is screwed or bolted to the deck eg. cleats, winches, fairleads, handrails, lifeline stanchion bases, everything.

If your boat is like many

others and there are indications of damp areas that are not too prominent, you can do the same thing and then monitor the situation on a regular basis to determine the effect of re-bedding.

But, if the indicators show large affected areas of delamination with high moisture content, you may need professional help and the sooner the better.

This is not a repair routine that most boat owners can handle. The tools, materials, knowledge and skills that are required are clearly those of professional FRP technicians with the specific experience required to do a permanent repair. This will be costly but, with many boats, well worth the investment.

The dream of the no-maintenance boat is no closer to reality than it ever was.

Rules of the Road - Quiz

- At night you see a red light over a green light well above a stern light. What kind of vessel is ahead?
 - A sailboat.
 - A trawler with gear stowed.
 - A vessel over 50 meters restricted in maneuverability.
- In restricted visibility, your "lookout" should best be stationed where?
 - Close to the helmsman
 - As high as possible.
 - Forward and as low as possible.
- At night, off shore, you see a flashing yellow light above red and green sidelights. What's heading towards you?
 - A tug pushing a barge
 - A submarine
 - A seaplane maneuvering
- Your powerboat is engaged in fishing by trolling astern and a close-quarters situation is developing with a sailboat. What do you do?
 - Hold your course and speed.
 - Sound the "danger" signal.
 - Give way to the sailboat.
- You're proceeding in dense fog and hear a horn signal of two prolonged blasts followed shortly by four short blasts. What does this mean?
 - A vessel requires assistance.
 - A pilot vessel is identifying itself.
 - A trawler has fouled gear.

Answers: (Don't peek!) 1-A; 2-C; 3-B; 4-C; 5-B

File & Forget

Good Luck Things...

- Stepping aboard with the right foot.
- Throwing back the first-caught fish.
- Sighting a mermaid.
- Sighting a semi-clad lady just before boarding.
- Having a broom aboard that had been used in a church.

Bad Luck Things...

- Sailing with a priest, pig, or rabbit aboard.
- Leaving a bucket overturned.
- Making lewd remarks to a mermaid.
- Making similar remarks to semi-clad ladies just before boarding.
- Attempting to take flight using a broom that had been used in a church

Up from the Bilge

Spinx's Acre – was the early nickname for the huge triangular sail that the cutter *Spinx* first used in the 1866 Cowes regatta. The term evolved into *spinnaker*.

Boston Harbor Light - First lit in 1717, it's cost and upkeep was paid by a fee levied on every commercial vessel entering or leaving the port.

Davy Jones – The evil spirit of the sea believed to have been conjured up in the 1700s by West Indian sailors and a corruption of Duffy Jonah. Duffy is the West Indian name for devil.

BB-24 – In 1952, the Beetle Boat Co. of New

Bedford, MA announced it's new 24' fiberglass express cruiser that was available fully finished or as a "kit".

The Tri-Pan – Made of heavy cast aluminum, this little dandy lets you cook a three-course meal on one burner. At \$6.95, it was a hot item in 1952.

Schooner – Although some British and Dutch rigs of this type were used in the 1600s, the schooner was fully developed in the American colonies in the early 1700s. The name probably comes from the word, "scoon" – a local term for skipping a stone, due to the rig's quick performance.

The Blue Pigeon – The slang term (c. 1800) for the lead line used for soundings in waters of less than 20 fathoms.

SPARS – The women's branch of the USCG was established in 1942. The acronym stands for "Semper Paratus – Always Ready" the coast Guard motto.

USS Alcedo – The converted yacht that was sunk by a German U-Boat 11/5/1917 and became the first U.S. loss to enemy naval action in WW1.

Bricklayer's Clerk – An 1800s term for a sailor who acts as if he is above it all.

Gas Guzzler – WWII PT boats carried three Packard V-12s of 1800 hp each. At cruising speed (30 kts), the 100-octane fuel would disappear at the rate of 110 gallons per hour per engine.

The Mighty Unimite Four – Universal's new engine for 1952 gets 65hp out of 141 cu in. Weighing only 450 lbs. and 32" long, she's a bargain at \$799.

Supercargo – Short for cargo superintendent. The merchant vessel owner's on-board representative who oversees the cargo and the financial transactions of the voyage. (may be a dull one, but I needed a filler)

Hathaway Marine
Services, Inc.

25 Carriage Rd, C-F
Portland, ME
04110-1301

PHONE:
207-781-4467

FAX:
207-781-2857

E-MAIL:
hathaway@maine.rr.com



Technical Tip # 4 - Winter Lay-Up – Minor Points

Clean and Wax - By doing this in the fall, you'll clean off any crud that the boat picked up in the summer and the wax will protect the gelcoat from freeze/thaw damage.

Those areas of crazing will be sealed so that moisture from the weather or condensation can do no harm.

Grease Turnbuckles – By what we've seen lately, this is seldom on anyone's list. Again it's moisture that causes problems. The screw thread clearances are quite

close and, when water infiltrates and freezes, the strength of the threads can be compromised. Working in waterproof grease will seal the threads.

Running Rigging – Leaving this stuff on the mast isn't good for its longevity even when the mast is properly stored. Some people bring them home and run them through the washer with fabric softener. It does wonders.

Fire Extinguishers – Take

them home and store them in a warm place. They'll probably last longer when they don't have to survive summer to winter temperature fluctuations.

Electronics – Best to provide warm storage for these also. Some systems have internal batteries to maintain memory when powered down. Batteries don't like wide temperature fluctuations. Remove all batteries from flashlights and other gizmos that you don't want ruined.

About Hathaway Marine Services...

Background

Brian M. Hathaway, President, is a graduate of Maine Maritime Academy and has been involved in the marine industry for more than forty years as a ship's officer, instructor of technical nautical subjects and marine surveyor. He was one of the founders of Associated Marine Surveyors, Inc. (1977) and was affiliated with the company through April 2002.

Professional Qualifications & Memberships

- U.S.C.G. Unlimited Master Mariner
- National Association of Marine Surveyors, Certified Marine Surveyor (NAMS-CMS)
- Council of American Master Mariners
- Portland Marine Society
- National Fire Protection Association (N.F.P.A.)
- American Boat & Yacht Council (A.B.Y.C.)

Survey Services Include:

- Condition & Value – For Insurance Underwriting
- Condition & Value – For Lending Institutions
- Condition & Value – For the Prospective Buyer
- Appraisals – Damage Surveys
- On Hire/Off Hire – Trip in Tow surveys
- Draft surveys; Container inspections
- Fishing Vessel Inspections

[Let our Knowledge and Experience work for You](#)

HATHAWAY MARINE SERVICES, INC.
25 Carriage Rd, C-F
Portland, ME 04110-1301

