

Question: I have a Yamaha 225 four-stroke outboard. It's fuel injected. My mechanic fogged my engine through the intake manifold, claiming it was sufficient. Another mechanic said that all the plugs should have been removed and fogging fluid sprayed in each cylinder. Who was right? Also, the first mechanic ran antifreeze through the saltwater wash down connector to be sure there was no remaining water in the engine and that it's replaced with antifreeze. I thought all the water drained when it is left in the vertical position. D. DeLandri, Katonah, NY.

Answer: I went to the horse's mouth on this one, and spoke with Martin Peters, the manager of Yamaha Marine Group's Communications and Dealer Education department. Here's his reply.

The answer to the first question depends on which 225 you're talking about. If it has six individual throttle valves, it would have been sufficient to spray fogging fluid into each of the six throttle valves. If the outboard is a later-model F225 Sport — which has a single throttle valve — it would have been necessary to pull each of the plugs and fog the cylinders through the plug holes. The reason is, on outboards with a single throttle valve, you can't be sure the fogging oil is getting to each individual cylinder.

As for the drainage question, there is no real benefit to running antifreeze through the outboard. All Yamaha outboards are self-draining when tilted into the vertical position.

Question: I have a question about tides. All the tide tables give you high tide. How do you figure low tide from that table? I'd also like to know how

ASK CAPT. GARY

By Capt. Gary P. Joyce

you figure slack water after the tides, both high and low. Is there a formula to calculate this? Frank Scopazi, West Islip, NY.

Answer: Ah, living by the tidal clock, something important for all of us who spend time around saltwater. Okay, here goes. On the East Coast you "generally" get two high and two low tides every 25 hours. For starters, tides generally change every six hours, so for a rough approximation of a low tide based on a high tide time, simply add six hours. Since the time is "roughly" six hours, when you move to the next day and high tide was at noon on a Monday, add another hour to all the tide times for Tuesday. Given the noon Monday high, Tuesday's would occur around 1 p.m. (1300). Then add the six hours for the next tide, high or low.

If you need more precise tidal information, there are several ways to obtain it. Get a copy of *Reed's Nautical Almanac*. It's a yearly publication in three editions: East Coast, West Coast and Caribbean. This gives you a wealth of info regarding tides, currents, navigation, communication and much more. It can be found on the Internet at [\[salmanac.com\]\(http://salmanac.com\) or ordered by calling 800-995-4995. It's also available at your local chandlery, West Marine, etc. It retails around the \\$40 mark.](http://www.reed-</p></div>
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The Internet is an excellent source for tidal info. I use the following two different programs, both free - www.arachnoid.com/JTides and www.mrtides.com/Tides3/Home.html. The latter is Mac-specific, while the former works on virtually all platforms. Both are excellent.

As for slack water, it really has little to do with the high and low tide times, but depends on where you are on a body of water. For instance, on an incoming high tide at the mouth of a bay, the tide has not reached high at the back of the bay, and thus the current is still flowing. In some spots slack currents can be as much as six hours off the tidal info high or low.

For what it's worth, about 80 percent of the tidal stations historically report faster tides on the ebb (outgoing) tide rather than the flood (incoming) tide. You'll also get faster flows at full moon.

One of the best ways to get a grip (ha!) on slack current is to get a copy of the NOAA's National Ocean Service publication *Tidal Current Tables*. There are Atlantic and Pacific coast editions, and it is published yearly. Cost is around \$13.95 for the Atlantic Coast edition or you can get the info on line at tidesandcurrents.noaa.gov/tides10/; just click on the state for the info in which you're interested. It's available at the usual chandleries, Amazon, etc., or can be had by ordering it from Landfall Navigation (800-941-2219; www.landfallnavigation.com).

E-mail your questions to: Captain Gary at captgaryli@gmail.com

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