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By Jo Schloeder

TAKE YOUR ENGINE'S PULSE: Check Compression

Though there may be snow on the dock, now is the time to perform regular maintenance to be sure that your boat is in ship shape when springtime comes. Just like the doctor checks your pulse at your yearly physical, the best place to start to check your engine's health is with a compression check.

According to 25-year veteran two-stroke technician and service manager John Schloeder, regular compression checks tell how your outboard engine is wearing and give you indication of whether a major failure is coming, even if you don't notice anything amiss in the performance of the machine. Much of the same advice applies to larger, four-stroke motors.

"There is nothing more common than hearing a guy talking about how great his boat was running right before it blew up," said Schloeder.

Schloeder explained that when the cylinder to wall clearances get too loose, RPM's increase, so the engine seems to run better than ever. However, that extra room in the top end allows the piston to move back and forth while it's going up and down, causing piston skirts to fracture and break. Once the skirts break, they eventually send pieces of metal through the motor and either the piston forces the metal debris through the side of the motor or locks the piston up completely. Worst case scenario sees the broken piston traveling to the bottom of the motor, getting forced out through the bottom of the case.

Whether the engine simply locks up or physically blows apart, you're looking at a very expensive engine repair that could have been averted by a simple compression check. A compression check would have revealed a loss of compression in one or more cylinders, which is your first clue that engine wear is reaching a critical level.

"The old saying, 'Don't fix it if it's not broken' does not apply to two-stroke engines," Schloeder said.

So how do you check compression?

First of all, Schloeder advises that three or four regular compression checks a year are a good idea, as they give you base line compression numbers for your engine and allow you to check how spark plugs are burning. He recommends writing the date, cylinder number and compression numbers down in your manufacturer's service manual so you can refer to them at service time.

Compression is easily checked with a compression gauge that is inserted into the spark plug hole after removing the spark plug. For accurate readings, make sure the adapter tip of the gauge is the same length as the threaded part of your spark plugs.

Follow the manufacturer's service manual instructions on how to check compression, as procedures differ with different motors.

Engine manufacturer specifications normally allow for compression difference between cylinders to be plus or minus 10%. If the range is more than 10% from one cylinder to another, it is possible that a failure has started to occur from cylinder wear. And, if you have taken compression readings throughout the year, you'll know exactly where the numbers are supposed to be for a healthy engine.

Performing this regular maintenance now may not only save you a big headache and big repair ticket in the future, but will give you time to repair any potential problems before the ice melts off the dock.

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*Jo Schloeder
Creative Approach, inc
5005 W Hurley Pond Road
Wall, NJ 07719
Phone 732-751-1004
Fax 732-919-02344*