

Tending to Two-Cycle Engines

Problem

Today's leaner burning two-cycle engines are built for lower emission levels. That said, the engines are not as forgiving as older units.

Solution

It's crucial to take care of this high-performance equipment to keep it running longer and efficiently. That means using the right oil and keeping the equipment clean, among other things.

Make sure to use the proper oil, among other things, for less-forgiving units

BY CURT HARLER

Today's leaner burning two-cycle engines are designed and built for dramatically lower emission levels and are simply not as forgiving as older units. Using the correct oil not only will extend engine life, it will also benefit the environment.

For that reason, the use of proper oil is vitally important to prolonging the life of high-performance equipment, says Jay Larsen, product marketing manager for Shindaiwa in Tualatin, Ore.

"Be sure to use the manufacturer's or a major brand of two-cycle oil," says Kent Hall, product manager of power tools for Stihl in Virginia Beach, Va.

Even in a pickup truck, if forced to choose between matching viscosity (say 10W-30) and matching brand, mechanics will recommend using a different weight (10W-40) but sticking with the same brand so the additives are the same.

It's important to mix fuel with a name-brand two-cycle engine oil at either 40:1 or 50:1, depending on the manufacturer's recommendation which can be found in the owner's manual. Avoid the generic, multipurpose oils and high-ratio oils. These mixing oils are really not suitable for today's leaner running, high-performance two-cycle engines.

Be sure to mix only enough fuel for your immediate needs. If fuel must be stored longer than 30 days, it should first be treated with a good quality fuel stabilizer.

Under certain conditions, alcohol-based fuels in a two-cycle engine can reduce the lubricating qualities of some mixing oils. Never use any fuel containing more than 10 percent alcohol by volume, Larsen says. An octane rating of 87 or higher is always preferred.

Check out lubricating practices, too, for two-cycle engines. Doug Cobb, instructional designer with Kawasaki in Irvine, Calif., warns against overgreasing machines. If grease breaks a seal, dirt is getting in.

Speaking of contamination, check fuel storage containers for contaminants and rust (especially if using

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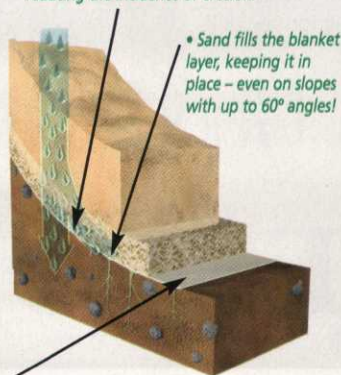
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Two-Cycle Engine Maintenance

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metal cans). Keep the power head fuel tank clean. Rinse and clean the fuel tank if signs of contaminants are present.

Always clean off any dirt or debris around the fuel tank before removing the fuel cap. Check to see that the fuel cap is sealing properly and not leaking.

The typical two-cycle engine is air-cooled and relies on its air passages to be clear of any restrictions. Dirt and debris collect in these areas, particularly if spilled fuel residue is present. This is also true for cooling surfaces like flywheel and cylinder fins. It's important that fins on the flywheel and cylinder are clean and free of any foreign material that can restrict airflow.

Inspect, clean or replace the fuel filter every 10 hours to 15 hours of use,

Most two-cycle engines are air-cooled and rely on air passages to be free of any restrictions.



Larsen says. Debris in the fuel tank will necessitate more frequent filter replacement. A fuel filter that's semiplugged with debris will affect engine performance. Speaking of filters, a partially clogged air filter can cause an engine to run too rich.

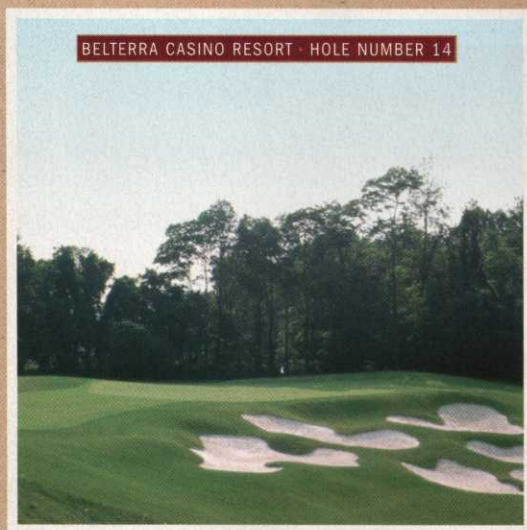
Maintain the muffler and the spark arrester. A plugged muffler or spark arrester screen will dramatically change the way an engine operates and per-

forms. Never let debris accumulate around the muffler. Debris may prevent proper engine cooling and become a fire hazard.

In most areas, mufflers must be equipped with a spark arrester. Larsen warns that a muffler without a properly installed (and clean) spark arrester is a potential fire hazard.

Always use the recommended spark plug with the correct heat range for a particular unit. Again, refer to the operator's manual for each model to verify the correct spark plug, Larsen advises. Spark plugs considered "hotter" may take a unit past its heat limits and cause major engine damage. ■

Harler is managing editor for Golfdom's TurfGrass Trends.



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