

Keeping on the Cutting Edge with Mower Starters

By Larry Hagemeister

Now that we're at the height of the mowing season, I thought I'd add a few more tips to go along with the article that Mike Schroeder wrote about small engine electrical services ("Using Mower Starter Woes to Your Advantage," May 2007).

Mike and I have discussed many times the problems that rebuilders run into. One very common problem is the hard cranking on re-start after it has been shut off hot, especially in Tecumseh engines. The wind down time is quite long, and even longer if the engine was not at idle when it was shut down. This draws fuel into the combustion chamber with no ignition source, leaving extra fuel to be compressed upon start up. This causes the starter to crank slower or harder.

One method I have found to work fairly well is to bring the engine to an idle, engage the mower deck, and then shut off the ignition switch. This reduces the wind down time at the engine, making it much easier to start when hot.

When selling a new or rebuilt small engine starter (as always the ground connection is very important) I recommend to the customer that a 10-gauge ground wire from one of the starter through bolts be added, attaching the other end to the ground cable from the battery. Many times this cable is attached to the painted body of the mower making it a source for high ground resistance. The engine is also bolted to a paint frame.

When rebuilding these starters, be extra careful when painting the components, because most of these starters ground the negative brushes with the starter bolts.

The coil wound Tecumseh starter uses the through bolts to ground the brushes like the permanent magnet ones, however, caution should be used here when tightening the bolts. The C.E. cap is held down with two 10/32 nuts, because of the starter's design, over-tightening the nuts on the C.E. cap can pull the through bolts away from the

ground brush leads, causing a poor ground. These nuts are 10/32 nylon lock type and should be snug to hold the C.E. cap to avoid loosening the ground on the brush lead if they over tighten.

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