

Online School Teaches Small Engine Maintenance

Got a chainsaw that just won't run right? Or a push mower that needs a tune up?

If you're not an expert at that kind of small engine work, you might want to check out a new "service school" online that walks members step-by-step through preventative maintenance and small engine diagnostics.

"We film professional mechanics who work on chainsaws and other small engine tools every day," says Roger Simons, founder, ATTN (Advanced Technical Training Network). "They will walk through a repair scenario on all the things likely to be repaired through the life cycle of a product." The maintenance section of the website – which costs members \$9.95 a month – covers trimmers, edgers, commercial mowers, trailers and chainsaws. Chainsaw maintenance is broken into 13 segments, including Chainsaw Bar, Fuel Line, Oiler, Air Filter, Sprocket and Recoil. Overviews included "Clean, Inspect and Torque," covering basic tips such as not using excessive air pressure, especially on seals and gaskets.

Individual segments are easy to understand. Illustrations clearly define worn sprockets and other problems, using well-worn and damaged components. Even for an experienced chainsaw owner, the sessions offer a worthwhile refresher.

The diagnostics section covers identifying problems with both two-stroke and four-stroke engines. It uses "first glance" evaluations to identify generally what a problem might be. Related documents offer specific diagnostic steps for problems such as no spark, compression or fuel delivery.

"Our goal is to show people who want to do their own maintenance or diagnostics how to do it," says Simons. "If repairs are needed, they may well decide to take it to the repair shop. However, now they'll understand the problem or its complexity and feel better about paying for the repair."

Knowing what the problem is will help when talking with a mechanic. It can also help when considering a new product for purchase, he adds.



Online "service school" walks you step-by-step through preventative maintenance and small engine diagnostics.

Simons understands how important the simple things are when it comes to maintenance. His background includes starting a technical training program for Stihl chainsaws in the U.S. He then did the same for Husqvarna and also supervised their call center.

Simons says the site is continuing to grow. He encourages members to suggest other new training segments.

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Valve Flow Control Saves Steps

"Anyone with an air seeder or an air drill can use this simple invention to save a lot of steps," says Murry McMillan, a retired Saskatchewan grain farmer. McMillan rigged up a simple lever and cable device that lets him adjust the hydraulic flow control valve on his tractor without leaving the driver's seat.

"I came up with this device because I was always having to get out of the tractor to adjust the flow control valve to get the fan speed correct on the air seeder," McMillan says. "In the morning I'd set the flow so the fan speed was about 3,000 rpm's, and as the oil got warmer, the oil would flow easier and the fan speed would go up. With seeds like Canola the air flow level is critical so the seed isn't damaged or blown out of the seed row. Every few minutes I'd have to stop the tractor,

get out and adjust the flow valve slower. It was a never ending process."

McMillan solved the problem by making a simple 4-in. metal extension that he bolted to the flow control valve. He attached a truck pto cable to the extension and ran it through a hole into the back of the cab. The cable is held in place by a metal arm bolted to the valve housing.

"Now I can move the valve from the tractor seat and watch the rpm gauge at the same time. I can adjust the flow to the exact level that I need," McMillan says.

McMillan says his simple valve extension works best on 4-WD tractors, but it can also be adapted to MFWD and 2-WD tractors.

"I made it a couple years ago and sold one to a farmer quite a ways from my place. He



Simple lever and cable device lets Murry McMillan adjust the hydraulic flow control valve on his tractor without leaving the driver's seat.

had twisted his ankle getting in and out of the cab adjusting the valve, so he was happy to see this device that would save him steps," McMillan says. "Since then I've sold about 60 of them, so it has become fairly popular."

McMillan sells his flow control lever extension kit for \$79.95 Can. and charges

a small amount for shipping. "It's easy for anyone to install because we include good instructions," McMillan says.

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A 48-in. dia. rotating tool table provides David Chambers with easy access to a cut-off saw, drill press, band saw, planer and combination belt/disc sander.

Tool Table Rotates For Easy Access

David Chambers designed a 48-in. dia. rotating tool table that gives him easy access to a cut-off saw, drill press, band saw, planer and combination belt/disc sander.

"I needed a way to get at different tools when working with long materials," explains Chambers, who does custom carpentry projects.

Chambers' solution was to build a cabinet that, while attached to his existing workbench, stuck out from it. The cabinet consists of a 2 by 4-ft. wood storage unit open to either side.

"I cut a 1 in. thick, 4 by 8-ft. sheet of pressed board in half and mounted half of it to the top of the cabinets," says Chambers. "I drilled a hole in the center of it and cut out half a circle on the part that extended over the

drawer unit. Then I drilled a hole in the center of the second half and cut out a full circle."

Chambers used a router on a piece of flat stock set on a 24-in. radius to cut out the half and full circle pieces. He set the full round over the half circle and slipped a 2-in. long dowel through both holes.

"I mounted the tools to the top disk and just pull it around as needed," says Chambers. "There's nothing between the two disks, and they don't move unless you are pulling on them. Yet it's easy for a 170-lb., 84-year old man to do and has worked well for 16 years."

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"Lock Bra" Keeps Lock From Freezing

Ron Geppert has a simple method to keep padlocks from freezing during the winter.

"I have an outside shed secured with a padlock that's exposed to the elements," says Geppert. "In subfreezing temperatures, the padlock freezes up so hard I need my wife's hair dryer to thaw it out."

To prevent moisture from entering the lock, he came up with what he calls a "Lock Bra". It's made from a small piece of heavy-duty inner tube off a tractor tire.

"I cut the piece of inner tube larger than the lock to create a somewhat flat umbrella and then use a leather punch to punch two holes in it, spaced to match the lock's shackle," says Geppert. "The holes need to be much smaller than the shackle in order to provide



Rubber "umbrella" prevents moisture from entering lock. It has 2 holes in it, spaced to match lock's shackle.

a water-tight seal. It completely solved the problem."

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Jump Start Battery

"When my old portable jump start battery recently went bad, I got the idea to make my own. I kept the cables and bolted them to a side post car battery that I bought used for \$10. Now I have a jump start battery with twice as much power as my old one, and it'll last a lot longer, too," says Larry Wood, Waldo, Ohio.

He used a short length of pvc pipe and some nylon rope to make a handle to carry the battery around.

"It's a simple idea but it's really practical," says Wood. "Good used car batteries sell for \$10 to \$20. When I'm not using the battery, I double the cables back and clamp the leads onto them so they're out of the way."



When his portable jump start battery went bad, Larry Wood bolted the battery cables to a side post car battery.

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