### Money-Saving Repairs & Maintenance Shortcuts



Mower is suspended between trailer and ramp, allowing Niesel to easily change blades on the deck.

#### "Poor Man's" Mower Rack

John Niesel, Palominas, Ariz., recently sent FARM SHOW photos of the "poor man's" rack he came up with for his riding mower.

"I don't have a fancy lift to change the blades on my riding mower. Instead, I keep the mower on my trailer, which comes with a detachable tailgate that doubles as a ramp and hinges on a 5-ft. long metal pin," says Niesel. "I lower the ramp until it's level with the trailer bed. Then I place 4 jack stands at the corners of the ramp.

"I back up the mower until it's midway between the ramp and trailer, lock the mower's rear wheels with some wood blocks, and remove the hinge pin by rolling a hydraulic jack under the hinge point. Then I slowly pull the trailer forward until the mower is suspended between the trailer and ramp, with the front wheels on the trailer and the rear wheels on the ramp."

When he's done with the work, Niesel reverses the process until he can swing the gate back up and lock it in place. "The hydraulic jack keeps the ramp perfectly level so the pin is easy to line up with the hinge," he says.

He says the same idea would probably work with other kinds of equipment such as golf carts and utility vehicles.

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One looped hammer has a crows foot prybar at the bottom; the other is a steel claw hammer with comfort grip.

# "Looped Hammers" Do Lots Of Different Jobs

"I thought your readers might be interested in my 2 patented 'looped hammers' that can be used for many different jobs such as pulling up large nails and screws, cotter pins, oil seals, dowel pins, and much more," says Jerry Simmons, Montgomery, Texas.

The "Hammer with Leverage Loop" is a steel claw hammer with comfort grip. A rainbow-shaped loop on the hammer head works great for pulling out nails and screws. The loop is flattened to prevent damage to wood when pulling out the nails. You can easily clip the hammer to a belt loop with a carabineer hook.

"It pulls nails like nothing you've ever seen and is the perfect hammer for your everyday needs around the house," says Simmons.

The "Hammer with Leverage Loop" comes with a carabineer and sells for \$10 plus S&H.

The "Multi-Purpose Handheld Tool" looks like a steel claw hammer but has a crows foot pry bar at the bottom in addition to the loop. "It works great for straightening or removing bent nails and screws, removing staples, twisting fence wire, and fastening or loosening binder straps, etc.," says Simmons. "It can be used to pull pins and to straighten

or remove cattle gate bolts. Or you can use it as a cheater bar for loosening lug nuts on tires etc."

A removable fencing ring (supplied) can be used with the tool. The ring has a gap, which goes on under the head of the tool, and twists around and down to the bell-shaped part of the tool to grasp fence wire, barbed wire, cable and cords, etc. "With the ring in place, you put the wire through the gap, twist and pull the wire tight," says Simmons. "The loop can be used with a come-along to pull the wire, and can also be fitted over T-posts so you can straighten them out or pull them in."

The Multi-Purpose Hand Held Tool comes with the removable fencing ring and a carabineer. It sells for \$20 plus S&H. Package deals are available: Two Multi-Purpose Hand Held Tools sell for \$30 plus S&H. A package with a Multi-Purpose Hand Held Tool and a Hammer with Leverage Loop sells for \$25 plus S&H.

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#### **Small Engine Stand Makes Repairs Easy**

Jerry Maddock didn't want to bend over his Briggs & Stratton engines as he worked on them. So he built a stand that lets him work from a chair and rotate the engine as needed. It also serves as a handy mount for his innovative flywheel holder.

"I wanted to be able to roll up in a chair and be able to move the engine around the shop as I worked on it," says Maddock. "It lets me take apart an engine, work on it and reassemble it without ever taking it off the stand."

He started with a commercial H-frame engine stand with an engine support arm. He modified the base and the mounting plate. He cut off all 4 wheels and replaced them with the locking castors. They ensure the stand remains in place, even if it tips so 2 wheels come off the floor.

The original stand allowed the mounting arm and engine to be rotated into one of several fixed positions. Maddock wanted infinite positions, but commercial stands with that option cost several hundred dollars.

The original system involved a round steel shaft that extended through a housing on the stand's upright and attached to the engine support arm mounting plate. A bar at the rear was turned to rotate the engine into positions at 45° intervals. Maddock replaced the bar with a salvaged worm gear drive from a winch.

"I removed the cable from the winch and attached it to a round ring that I milled to fit over the mounting plate shaft," says Maddock. "The worm drive lets me easily rotate the mounting plate and engine. I use two set screws and a pin to lock the shaft in place. On these light engines, I can pull the set screws and pin, slide the winch off and free wheel the engine."

Since the bulk of the engines he works on are small Briggs & Stratton's, Maddock made a bracket specific for these engines and bolted it in place of the support arm. It bolts to the



Home-built stand lets Jerry Maddock work from a chair and rotate the engine as needed.

engines where their starter/generator would normally attach. Other brackets work with larger engines.

If he needs to work on a flywheel, he makes special brackets with a curve for the flywheel. He uses a pipe bender on a piece of steel strap to match the curve of the flywheel. A tab on the end of the curve fits over a fin on the flywheel. Once the bracket is in place, Maddock adds more tabs to "sandwich" multiple fins.

"When you're trying to torque a flywheel off or on, it wants to lift constantly, and you need someone to hold the engine down," says Maddock. "With this, I can torque the flywheel myself."

Maddock has also fabricated a front engine support for his Simplicity garden tractor. It bolts to the mounting plate.

"It lets me rotate the front end for welding new bearings in place and other work," says Maddock. "Whether front end or engine, the worm gear lets me adjust them as little or as much as I want."

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## Stabilize Fuel For Up To 3 Years

You can protect engines from bad gas for up to 3 years with Advanced Formula Fuel Treatment and Stabilizer from Briggs & Stratton, according to the company.

"Ours is the only 5-in-1 formula on the market that includes a triple antioxidant formula, corrosion inhibitors, metal deactivators and a detergent," says Carissa Gingras, Briggs & Stratton Corp. "It works with any octane level and can be used in any gasoline-powered engine. Because our Advanced Formula Fuel Treatment and Stabilizer also stabilizes fuel for storage, we recommend using it even with ethanol-free fuel."

Briggs & Stratton uses their Advanced Formula product in their own branded premixed fuel. They also recommend it be added every time a consumer fills a can with gas for use with 2 or 4-cycle engines.

"Because gas begins to degrade after only 30 days, it's critical that a treatment like ours be used to help maintain good engine health," says Gingras.

The new fuel treatment with its dual corrosion inhibitors stops chemical reactions caused by dissolved metals in fuel. Water protection inhibitors protect against the harmful effects of water in fuel due to ethanol. Detergent ingredients prevent gum and varnish build-up on engine parts.

"The detergent will help clean out gums and deposits already there," says Gingras. "However, there is no product on the market that can make bad gas good."



Advanced Formula Fuel Treatment and Stabilizer can protect engines from bad gas for up to 3 years.

Once opened, 5-in-1 Advanced Formula Fuel Treatment and Stabilizer has a recommended shelf life of 3 years. The 4-fl. oz. container treats 20 gal. of gas. It's priced at \$6.55. The 16-fl. oz. container treats 80 gal. of gasoline and is priced at \$12.60.

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