

## FARM SHOW Tests New Gas Torch

By Mick Lane, Contributing Editor

My father has an old gasoline-powered blow torch that he used 50 years ago, so when we heard about a new gasoline-fueled cutting torch, I decided to contact the manufacturer and try one out.

The gas torch has actually been used for nearly a decade in China, where it was developed. The inventor is a Chinese university engineer and researcher. He's successfully patented it in much of the world, including the U.S. It's called "oPetrol." I emailed the company to see if there was a dealer in the U.S. yet. The answer was no, but they offered to send a unit for FARM SHOW to test, provided we paid the shipping. We decided to take them up on their offer and they shipped it out of Hong Kong on a Monday by airfreight. The delivery truck dropped it off at my home in Iowa the following Friday morning.

The system consists of a special tank for the gasoline, a gasoline pressure hose, and the torch and tips. You have to provide your own oxygen source, hose, and regulator.

You fill the oPetrol tank with about a gallon of gasoline and pressurize it once, using a tire pump or an air compressor. A built-in regulator on the tank allows you to easily set the proper pressure.

The gasoline tank is specially designed with an outer and inner layer filled in between with blast-proof material used by the military.

The torch itself is designed so fuel burns so completely there's hardly any pollution. According to company reports, no carbon monoxide is formed in the combustion process, so it can be used safely inside a building.

I enlisted the help of my brother, Dan, an experienced acetylene welder. We took the torch to the shop of John Jensen, Ankeny,

Iowa. Jensen built a 16-row corn head for his Deere combine a couple of years ago (Vol. 26, no. 1).

After reading the instructions thoroughly (which the company translated into English for me), we fired the torch up and went to work. It lights as easily as an acetylene torch, but we found that adjusting the gasoline and oxygen mix was different. When we set the oxygen pressure to achieve the bluest flame possible, it was slow to heat and cut.

We read the instructions again and noticed they said the proper cutting flame would have a yellow tail and would whistle. Lowering the oxygen pressure did the trick and the flame did indeed whistle.

It cut right through a 3-in. shaft salvaged from a hydraulic cylinder and also a piece of high carbon milled steel that we measured at about 3 1/2 in. thick. Jensen's new acetylene torch wouldn't cut either of them.

We also used it to punch holes through a disc blade, a chisel plow shank, and the hydraulic cylinder shaft. It worked great. With the right tip, the torch will cut or punch holes through steel more than 10 in. thick. Jensen figures that would come in handy for blowing broken bolts out of holes.

The torch is well-made, but the oxygen control is a knob instead of a lever. The company is working on a torch with a spring-loaded thumb lever and hopes that it will be available in a few months. They have prototypes of a specialized welding torch and a combination welding/cutting/brazing torch and those will both be ready for the market very soon.

The tips are sturdy and should last a long time. Jensen used one to chip slag off a cut and then went back to cutting with it. He says he goes through a tip or two with every bottle of acetylene gas he uses. We plugged one



John Jensen punched holes through a disc blade, a chisel plow shank, and a hydraulic cylinder shaft in the course of testing this new gasoline-powered torch.

acetylene tip while we were comparing it with the oPetrol torch.

Economics is the big reason to consider a gasoline torch because it's a lot cheaper than acetylene. Jensen says it costs him \$40 every time he fills the acetylene tank. If tips are \$10 each and he needs a new one with every tank, that's \$50. Compare that to gasoline and tips that last years.

The torch and tank setup is priced comparably with a good quality acetylene setup, but with shipping from Hong Kong, it's a little

pricey. Current price on the company's website for one torch and tank setup delivered to the U.S. is \$575. They figure the price will come down if they can ship in larger quantities.

Contact: FARM SHOW Followup, Beijing Ever Sunshine Science & Technical Development Co., Flora Miao, Manager, oPetrol, 1-153, DongXuHuaYuan, ChaoYang District, Beijing 10024, China (ph 011 86-13501 164668; email: info@opetrol.com; website: www.opetrol.com).

## Sod Sofa Turns Lawn Into Lounge

"How much oxygen did your furniture produce today?"

That's the question Greg Tate asks people after they've seen his "sod sofa." The California architect encourages people to "sprout a couch" by sculpting furniture out of a lawn itself.

In an article published in "ReadyMade Magazine," Tate says you can calculate the amount of dirt you'll need by simply multiplying the dimensions of the couch you plan to make. His sod couch was 8 by 8 by 4-ft., or 256 cubic feet.

"Clear the area of grass and weeds until you have a level swath of dirt. Then sketch the shape of the couch into the dirt with a stick," he explains. "Drive wood stakes into the ground along the perimeter every 18 in. or so, to a depth of about 12 in. These will secure the form."

Next, nail waferboard to the stakes to create "walls," and start shoveling dirt into the form.

Once the dirt is a foot high, water lightly and compress it by stomping around on top



This "sand bag chair" is another of Tate's unusual landscape ideas.

of it. Continue compaction every foot or so until you reach the top of the form.

"Once the basic shape is in place and secure, carefully remove the wood form and mold the couch to your liking, rounding off the corners. Next, sit on the couch and squirm around to form a comfortable seat. Completely smooth out the entire sofa like a large sculpture, making sure it is the exact shape and comfort you want. Then sprinkle the sofa with a healthy layer of fertilizer and gypsum and water lightly," he says. "For extra reinforcement, lay strips of poultry wire netting over the arms and back.

"Now you're ready to lay the sod. Stagger the rows so the seams don't fall in a line, and use chopsticks or planting stakes to hold the sod in place over the wire. During the next few weeks, water your sofa often, soaking it thoroughly. Once the sod has taken root, remove the planting stakes and trim as needed with an ordinary weed trimmer."

To add to the emphasis on truly "outdoor furniture," Tate suggests making a "sand bag chair" in conjunction with the sod sofa. Use 3 ft. long by 5/8-in. dia. rebar stakes driven about a foot or so into the ground behind the chair for support. Otherwise the bags will slip away.

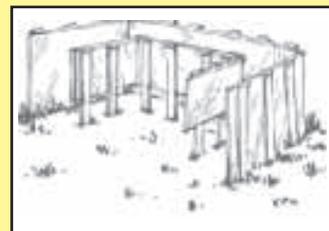
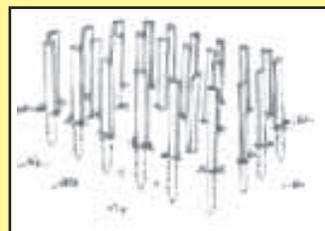
"I've always wanted to do an entire installation of sod furniture with sofas, chairs, ottomans and such, as an outdoor room - complete with river rock "throw rug," says Tate.

Contact: FARM SHOW Followup, Greg Tate (ph 949 722-2469, ext 132; email: info@gregtatedesign.com; website: www.gregtatedesign.com).



Photo courtesy Brian Slaughter

Live grass provides a plush cushion for lawn couch sculptured out of soil.



Drawings by Shannon Wheeler (www.tmc.com)



Stakes form outline of sofa (above left). Waferboard forms a mold that's filled with dirt (above). Sod laid over chicken wire is held in place with planting stakes (left).