George Liskey's home-built tire changer is designed for 8-in. and smaller wheels.

He used parts from a semi-mounted moldboard plow to build tire changer.

Tire Changer For Small Garden Tractor Tires

George Liskey, Buford, Georgia, built his own tire changer for 8-in. and smaller front tires on garden tractors.

"It lets me separate even the most stubborn tire from a rim quickly and almost effortlessly," says Liskey, who used parts from a semi-mounted moldboard plow to build the tire changer. "I built it because I needed to change several 4-ply garden tractor tires, which are difficult to handle. Most tire stores don't even want to change these small tires.

"It's designed only for smaller tires, 8 in. diameter or less. For larger tires I use a regular tire changer. I built it entirely from scrap metal. My only cost was for welding rod and a little spray paint."

The unit mounts on a 20-in. dia. plow coulter, which serves as a base, with a 3-ft. length of 6-in. dia. pipe welded to it. A threaded rod - off the plow's tail wheel adjustment system - runs down through the pipe and has a big nut welded to the bottom of it. The tire sets on a 10-in. dia. concave metal "dish" that's welded on top of the pipe. The nut on the bead breaker is tightened to keep the tire from moving.

Part of the tire changer was made from the plow's tail wheel adjust mechanism. It threads onto the rod coming up from the bottom nut. The operator simply pushes down on a handle to break the bead away from the rim. Once the bead is broken, the bead breaker assembly is removed and replaced by a tire removal unit. A 5-ft. long breaker bar is then used to remove or install the tire, similar to a normal tire changer. "The 5-ft. long bar was made from the axle off a garden tractor. I shaped and heat-treated the ends to match the 8-in. and smaller rims," says Liskey.

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Bucket Garden Provides Portable Food

Wayne Burleson set out to help dirt poor South Africans. After returning from a Farmer-to-Farmer exchange program in that country, he came up with an idea that he says would work for anyone. He calls it Bucket Gardening.

"We went over there to advise them on improving their soils and using moveable chicken coops, but the people were so poor and hungry that anything that got left out or planted was stolen," says Burleson. "When I came home, I started trying to grow things in a bucket. That way they could bring their plants inside with them at night."

Before long he was growing 8-lb. cabbages in 4 to 5 in. of soil in a bucket. The Montana gardener realized that being able to bring garden buckets inside at night lengthened his own growing season. It also let him take his garden on the road this winter when he and his wife traveled to California.

"I use 2 to 3-gal. buckets because they aren't that heavy with the soil in them," says Burleson. "At home, I put a bunch of them in a trailer and wheel them inside at night."

Burleson nests one bucket inside another. The bottom bucket serves as a reservoir and keeps the soil from being over watered. It has a hole about 2 in. from the bottom for overflow. The top bucket has many holes drilled in the bottom. A center hole is large enough to hold an 8-oz. Styrofoam cup or similar container, with slits cut in the side.

To prepare the pail for planting, he inserts the Styrofoam cup in the center hole. He then fills the nested bucket with a planting mixture containing equal measures of peat moss, compost and vermiculite. The planting mixture in the center cup acts as a wick to draw moisture up into the rooting area. He has also used pumice rock in the center to wick the moisture out of the reservoir.

"Just add water, plants or seed and watch it grow," says Burleson. "A single 3-gal. bucket can hold 50 carrot seedlings. As they grow, you thin them and eat them so the ones that are left keep getting bigger."

Burleson says he has planted lettuce, potatoes and even pumpkins in buckets. In the spring, his buckets warm up before the ground plots do. He suggests setting a stepladder against the side of a house and set a bucket on each step for a wall garden.

"Anything you can plant in the ground can be planted in a bucket," he says. "Just move it inside to protect against hail, frost or pests that damage gardens at night."

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Wayne Burleson grows plants in 2 to 3-gal. buckets to lengthen the growing season. He puts the buckets in a trailer and wheels them inside at night (above). He has planted peppers, lettuce, potatoes, and even pumpkins in buckets.

Exciting New Engine Saves Fuel, Boosts Power

Ford's new EcoBoost engine offers a new option to drivers who want better fuel economy without losing driving performance or breaking the bank to buy one. The new engine received Popular Science magazine's accolades for "Best of What's New 2008."

The 2009 Lincoln MKS sedan is the first car to have the EcoBoost engine option - a 3.5-liter, twin-turbocharged V-6 with the power and torque of a V-8. EcoBoost four- and six-cylinder engines will also be available in 2009 Ford Flex and Ford Taurus models.

The engines are ethanol compatible and include a couple of new technologies.

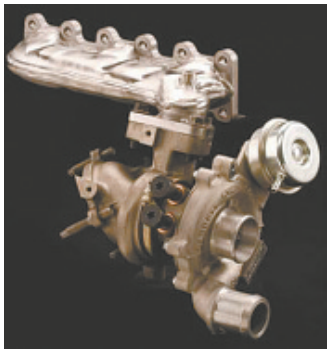
Direct injection injects small, precise amounts of fuel into each cylinder. That produces a cooler, denser charge, delivering higher performance and up to 20 percent better fuel economy.

Turbocharging uses waste energy from the exhaust gas to drive the turbine - and emit up to 15 percent fewer CO_2 emissions. Combined with direct injection, smaller EcoBoost engines can deliver the torque and power of larger engines.

For example, a 3.5-liter EcoBoost V-6 can deliver up to more than 340 lbs./ft. of torque and add 2 mpg, which remains consistent whether driving in the city or on the highway. Ford says the higher price of the technology can be recouped in 30 months, versus the 7 1/2-year payback estimates for diesel and 12 years to recoup costs on hybrids.

Ford says it plans to include EcoBoost engines as an option in more models over the next five years. By 2013, the company expects to have more than half a million EcoBoost-powered vehicles on the road annually in North America.

For more information, Ford has a 10 minute video at: www.youtube.com/watch? v=jgilKUwMl2A.



Ford's new EcoBoost engine will soon be available on a number of models.