



"Auger mount" transports augers and holds it while you dig. It can be used on both ATV's (left) and pickups.



## Auger Holder Fits Receiver Hitch

Anyone who spends a lot of time digging holes will be interested in this new "auger mount" that transports augers and also holds it while you dig.

The Auger Easer is designed to mount in any 2-in. receiver hitch and can be used on both pickups and ATV's.

"It eliminates all the strain of operating an auger and allows you to drill holes without having to hang onto anything or do any lifting at all. You just crank the auger up or down and operate the throttle," says inventor Monte Sande, St. John, N. Dak. "It works great for making fence post holes, tree holes, or even ice fishing holes."

The auger attaches to a metal bracket that rides up and down on a chain. Turning a crank makes the auger go up or down. It has a ratchet, like a boat winch, that holds it steady in position. The auger is fastened by two hand-tightened clamps. It's easy to mount and dismount. Two side-mounted channels help

keep the auger rigid, and a safety latch at top of unit keeps the auger from accidentally falling down. An optional 4-way tilt feature is available for drilling on uneven ground.

"It's built heavy and will last a long time," says Sande. "It took a long time to design it. I drove about 1,500 miles in my pickup going across fields, testing it to make sure there were no weak spots. There's even a built-in tightener that keeps the carrier tight inside the receiver hitch so it won't wobble."

"Another advantage of the carrier is that it makes the auger easy to start and to work on because it's always held firmly in place."

Sande says the auger will come on the market sometime this spring. He expects it to sell for about \$1,400 without the auger.

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## Lister Diesels Catching On Fast

High fuel costs have increased interest in Lister-style diesel engines since FARM SHOW first ran an article about them in 2006 (Vol. 30, No. 3). For a while, ambiguous EPA regulations left buyers wondering if it was legal to import them, says George Breckenridge, a Lister enthusiast who maintains an informative website (utterpower.com) about the engines.

Breckenridge says that most Lister users build a generator set (generators are purchased separately) to charge batteries that provide all the power needed for a home or farm operation. Some ranchers use the engines to pump water or for irrigation systems. Some live a long way from power lines - others just want to be self-sufficient.

The 6 hp Lister BJCS6/1 engine (about \$1,400) runs at low rpm's and has plenty of power provided by its high mass flywheel, says Breckenridge.

"They last a long time - 10,000 hours or more - and are inexpensive to rebuild," he says. They're also quiet.

The Lister was significant when it was built in the 1930's in Britain because it was the first engine that could be cold-started, without first heating it with a blowtorch.

Companies in India sell Lister-style (or Listeroids) replicas that vary greatly in quality, Breckenridge warns. Some buyers think they can save money by buying directly from an Indian company, but end up with an inferior product. While he doesn't sell Lister-style engines, he offers advice and referrals and sells a CD of information on his website.

There has been recent interest in the engines, because they can run on straight vegetable oil and filtered waste vegetable oil, says John Ferguson, who sells Lister-style engines in Canada.

"My engines run on 100 percent waste vegetable oil (WVO)," says Ferguson, who produces all his own electric power. "I collect it

The 6 hp Lister engine runs at low rpm's and has plenty of power thanks to its high mass flywheel.



from local restaurants, then de-water and filter it before transferring it to my bulk tanks. The WVO sits in the bulk tanks until I need it, then it is transferred over to my day tanks. Filtering can be as simple or as complicated as you like. I use a common kitchen strainer when pouring the freshly collected WVO into my receiving tank, which is simply an old bulk milk tank. After that I heat the oil to about 160 to 180 F that makes the solids and water drop out of suspension. I drain the water off from the bottom of the bulk tank; the solids remain at the bottom. I then draw the oil off the top, filtering it through a double fleece blanket before it goes to the bulk tanks. In the bulk tanks it settles a bit more, so again I draw off the top of the tank when transferring to the day tanks. My final filter is a common automotive 15 micron, situated in the fuel line just before the fuel injector."

Ferguson changes the sump oil every 300 hours and since the engines don't have filters he uses a non-detergent oil so the solids in the oil drop out of suspension and collect in the sump of the engine, away from working parts.

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"It's easy to set up and take down, and has a flexible frame that can be adapted to whatever I want to use it for," says Dale Brown about the low-cost greenhouse he put together.

## Low-Cost Greenhouse Is Easy To Set Up

Dale Brown of Clinton, Ark., recently sent FARM SHOW photos of a low-cost greenhouse he put together using materials available at most building supply centers.

"It's easy to set up and take down, and has a flexible frame that can be adapted to whatever I want to use it for. It works great for starting plants in the spring but can also be used for other purposes. Best of all, it didn't cost much to build," says Brown.

His greenhouse measures 15 ft. wide by 20 ft. long and has a low profile - 5 ft. 8 in. high at the center - that allows it to better withstand wind. The main components are 4 mil plastic sheeting that's sold in 20-ft. wide rolls, and 1-in. dia., schedule 40 pvc pipe sold in 20-ft. lengths.

He sets up the pvc frame by using a steel tamping iron to poke two rows of holes in the ground spaced 15 ft. apart, with the holes in each row spaced 2 ft. apart. He sets 2-ft. high pipe stubs into the holes at an inward angle, then sets the 20-ft. lengths of pipe into the pipe stubs so they naturally bend into an arched form. He adds lateral strut pipes from front to back along the top and one side, using plastic ties to lash them to the frame. Then he covers the entire structure with plastic, using earth or buckets of rocks to weight the sides down.

"I've used these greenhouses for several winters and really like them," says Brown. "I don't have any shelves inside and basically just use them as covered gardens. Here in northern Arkansas, I'm able to grow hardy



Frame is made from 1-in. dia., schedule 40 pvc pipe in 20-ft. lengths.

greens such as turnips and lettuce right through the winter without any additional heat whatsoever. In the spring I take the structure down and grow vegetables outdoors in the same place. It takes only a few minutes to take the structure apart. It's so light that I can pick it up by myself."

The greenhouses don't cost much to build, he says. "A 20 by 100-ft. long roll of plastic sells for \$70, and the 1-in. dia. 20-ft. long pipes sell for \$7.50 apiece. I used eleven 20-ft. pipes on my building. My total cost including pipe stubs and lateral struts was only about \$200. A comparably sized commercial greenhouse would sell for at least ten times that much."

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Metal feeder is designed to hold two round bales and has a 10 by 12-ft. roof. "It supplies enough feed for my goats for several weeks at a time," says inventor Wade Hearn.

## "Roofed" Round Bale Feeder

Wade Hearn didn't like the daily chore of feeding his goats. "My off-farm job keeps me working into the night several days a week," says the Blountsville, Alabama, man. So he built a portable round bale feeder that's covered by a corrugated sheet metal roof.

The metal feeder is designed to hold two round bales. It measures 6 ft. wide by 10 ft. long and has a 10 by 12-ft. roof.

"It supplies enough feed for several weeks at a time," says Hearn. "Also, it keeps the hay dry as well as the goats, and it reduces hay loss to a minimum. "Goats tend to do a lot better if their hay is kept dry. They'll go

hungry before they'll go out in the rain."

The frame is made from 3-in. angle iron and supports a bale rack made from 1/2-in. dia. galvanized pipe. The rack is welded to both sides of the frame as well as to a subframe at the bottom. A pair of metal runners with wooden 4 by 6's under them make it easy to push or pull the feeder around.

"I bent the rack by rolling the galvanized pipe around a tractor tire," notes Hearn.

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