

Cab Heater For Deere Garden Tractor

Ron Nikolai, Marshfield, Wis., made a heater for his 1990 Deere 420 garden tractor so he can work in comfort when clearing snow.

The unit takes heat from the front of the tractor and shoots it around the side and back into the cab.

"It works so well I wish I'd have thought of it 20 years ago," says Nikolai. "I use the tractor to operate a front-mounted snowblower around my driveway and yard. I knew there was a lot of heat blowing out the front because I could see where some of the snow was melting on the snowblower, even though it's about 1 1/2 ft. from the tractor. I decided to harness that heat and get it into the cab."

The front part of the heater was made by screwing together pieces of heat duct tin. The ductwork is about 2 ft. wide and extends about 4 in. out one side of the tractor, where Nikolai cut a 3-in. dia. hole into it and attached a flange. A 3-in. dia. aluminum dryer vent pipe fits into the flange and runs alongside the left side of the tractor back to a hole that he cut into the tractor cab.

Inside the cab, a 2-in. dia. flexible metal pipe attaches to the dryer vent pipe and extends upward to serve as a windshield defroster.

Nikolai also glued 1/4-in. thick foam insulation over the front and side pieces, and used plastic ties spaced about 8 in. apart to hold it in place.

"It worked perfect the first time I used it and didn't cost anything to build because I already had all the parts," says Nikolai. "It doesn't take long to heat up the cab and the harder the tractor works, the hotter the muffler gets and the more heat comes into the cab. In fact, it gets so warm that I often take my hat and gloves off and even open the window. I flattened the top of the defroster pipe in order to blow warm air over a wider area of the windshield."

"At first my left foot stayed warm next to the defroster pipe but my right foot was still cold, so I ran a 1 1/2-in. dia. plastic drain pipe along the floor over to the right side of the cab."

"Some people have asked me if there's a danger of exhaust getting into the cab. I tell them no, because the exhaust on my tractor comes out the right side and the heater is mounted on the left side."

The heater is attached to the front end of the tractor by 6 screws. In summer Nikolai removes the screws and takes the ductwork off, then removes the dryer vent pipe from



Ron Nikolai made a cab heater for his Deere 420 garden tractor, which is equipped with a front-mounted snowblower. It captures heat from the front of the tractor and shoots it around the side and back into the cab.



Front part of heater was made by screwing together pieces of heat duct tin. A 3-in. dia. aluminum dryer vent pipe runs alongside tractor back to a hole cut into the cab.

it. In summer he also takes the cab off the tractor.

"The dryer vent pipe is located about 2 in. below the top of the tractor's engine access cover and sticks out about 5 in. from the side

so I can still open the hood," notes Nikolai.

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"Bolt-Tightened" Tire Chains

Kerry Kligora came up with an easy way to install tire chains on skid loader wheels using bolt-tightened chains.

"I use an air ratchet or cordless drill and a deep socket to snug the chains up. Each tire gets 4 chains, which is more than enough for the tire to get good traction without causing a bumpy ride," says Kligora.

He bought some 800-lb. test chain and cut it into sections that almost circle the tire perpendicular to the rim. Then he inserted and welded a full thread carriage bolt through one end of each chain section. He wrapped the chain around the tire and put the bolt through an existing hole in the wheel rim, then placed the other end of the chain over the bolt and added a washer and a nylon lock nut.

"It's an easy way to install tire chains, without the hassle of moving the tires out by adding wheel spacers," says Kligora. "My small New Holland L250 skid loader has very tight clearances, but these chains are small enough to fit without the need for wheel spacers. And, they stay on tight with no slop. My dad also installed bolt-tightened chains on his New Holland LS160 skid loader which

is a much bigger machine, with no problems.

"I came up with the idea because I've never been real good at putting tire chains on tight, and after losing a couple fingers in accidents it became an even harder job. After finger tightening one chain I move the skid loader forward and install the rest of the chains. It goes real fast. I can install 16 chain sections in about 10 min., whereas it would take me an hour or more to install a full set of ordinary tire chains. At first I double nutted the bolts in order to reduce vibration, but now I just use nylon lock nuts."

He uses the skid loader during the winter to move snow and manure. "After one season of use the chains show hardly any wear, although I use this skid loader only on gravel and not on concrete."

Test chains are smaller and lighter than ordinary tire chains, which he says offers an advantage in handling.

"We live on hilly terrain, and if it gets icy ordinary tire chains make the machine ride jerky when turning, whereas my tire chains ride smoothly through turns. They provide just enough traction to keep the skid



Kerry Kligora says his "bolt-tightened" tire chains are easier to install than conventional tire chains.

loader moving, but not enough to rip out the machine's final drives."

The chains are also cheap, so if one breaks it isn't a big deal. "Test chain sells for about 80 cents per foot, and including the bolts, each chain section costs only about a dollar

to make," notes Kligora.

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Swather Makes Great Pto Power Source

"I was putting too many hours on my farm tractor to run a firewood processor, so I came up with a way to use an old swather as a pto power source," says Allan Ritchie, Silver Valley, Alta.

Ritchie first removed the header from a 30-year-old Versatile self-propelled swather that he wasn't using anymore to cut hay or grain. "It had a 15-ft. header, and that's way too small for what we need in this country," says Ritchie. He kept the frame, wheels, operator's platform and engine intact. The 60 hp Ford 4-cylinder industrial engine was in good working condition.

Ritchie says the driveshaft that powered the header turned at about 1,100 rpm's, so he had to buy a speed-reducing angle drive to bring the rpm's down to 540. "I bolted a piece of channel iron to the frame to mount the angle drive," Ritchie says. "Then I welded a male pto spline to a length of shaft that I attached to the output end of the angle drive. I secured

that shaft with a pillow block bearing, then attached a telescoping pto shaft from there to the firewood processor."

Ritchie knew the swather engine had plenty of power to run the firewood processor, but he had no idea it would be so economical on gas compared to his tractor. "The processor needs a 30 to 40 hp tractor to run it, so the 60 hp swather engine wasn't laboring at all," Ritchie says. "We did a gravel truck full of wood and only used about 3 to 4 gal. of gas in almost 2 hrs. of processing," says Ritchie. "The tractor I had on the processor before would've used twice that much, plus the hours on the tachometer, so I'm really saving two ways."

Ritchie says a neighbor helped him with the project, so by the time he paid him for labor, bought the angle drive and other materials, the total cost for his power unit was about \$1,200. His success with this rig has him planning a similar rebuild on another old



Allan Ritchie converted an old Versatile self-propelled swather to use as a pto power source for his firewood processor.

swather. "I plan to put a 3-pt. hitch on that one along with the pto shaft. I'd like to use it for a rough cut mower and to run and move grain augers."

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