# He Plows Snow With His Zero-Turn Riding Mower

"I made a snowplow blade to fit onto my Hustler zero-turn riding mower. It turns on a dime and really gets the job done," says Hal Minnigan, Zionsville, Ind.

Minnigan says he came up with the idea because his driveway is wide and fairly long, and he needed something to remove the wet and sometimes very heavy snow in central Indiana. "We also have chickens in our backyard, and I needed a way to remove the snow from the yard where they range," he says.

"It works fantastic. I get great traction because the mower's wheels are direct drive, and there is no differential and therefore no slippage. It also takes advantage of the speed and maneuverability of the mower."

He cut a discarded well pump tank in half lengthwise, trimmed the pieces to length, and welded them together to make a 4-ft. wide blade. "I copied the articulating tilt design from a truck snowplow using mostly scrap iron," says Minnigan. "The blade mounts on a 3/16-in. thick steel plate that bolts on in front of the mower. The blade is hinged at the bottom so it can flex forward if it strikes a hard object. The spring from an overhead garage door provides tension on the blade."

Minnigan's driveway surface is uneven and he wanted to clear snow from his back yard without gouging the ground, so he mounted a rubber edge on the lower edge of the blade. "I used a rubber truck bed liner to make the edge, but a rubber stall mat would also work well. The flexible edge protects the blade from gouging and follows the contour of the driveway really well."

A portable 12-volt winch mounted on front of the mower is used to raise or lower the blade, using pulleys also salvaged from the overhead garage door. A heavy-duty 12-volt linear actuator can be used to tilt the blade up to 20 degrees in either direction.

"I wired DPDT switches for the winch and linear actuator up to the mower's 2 ZTR drive levers. It allows me to drive the mower and raise, lower and tilt the blade using only my hands," says Minnigan.

He needed extra weight for traction, so he constructed an angle iron frame on back of the mower and then mounted steel barbell weights on it that sit right over the rear wheels. "Lights on top of the frame let me work at night. I use chains on the rear wheels for extra traction," notes Minnigan.

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**"It turns on a dime and really gets the job done," says Hal Minnigan, who made a snowplow blade to fit his Hustler zero-turn riding mower.**

# Built-From-Scratch Tracked Snowblower

"After spending several winters getting stuck in my driveway, I decided to build a machine that could cut through deep snow and blow it away," says Greg Braun, Rosholt, S. Dak.

His "Sno Cub" rides on a pair of 7 1/2-in. wide, 121-in. long tracks made by cutting an old Polaris snowmobile track lengthwise in half. A pair of trailer wheels support each track and are just wide enough to fit the track's lugs. A 40-in. wide snowblower mounts on front of the machine and is driven by the gearbox off an old pull-type fertilizer spreader.

"I didn't want a lot of belts that could fail," explains Braun.

The machine is powered by a Briggs & Stratton 21 hp engine connected to a pair of belt-driven transmissions off a zero-turn riding mower. The transmissions control the rear drive wheels for each track.

The battery is located under the machine's hood, and there's a 3-gal. fuel tank under the seat.

"It works a lot like the old Caterpillar dozers made years ago and was fun to build. I've used it for 2 years with no problems," says Braun. "I built the entire frame from scratch and my nephew designed the graphics for the body. It steers a lot better than I thought it would. I push both levers to go forward and pull them back to go backward. To turn I pull one lever backward and other one forward.

"I welded 2 bars onto each rear wheel rim so they grab the track's lugs like a snowmobile does without slipping. However, I don't use this machine to move dirt so there's not a lot of pull on the wheels and the tightness of the wheels on the track is enough to keep them from slipping.

**"Sno Cub" rides on a pair of 7 1/2-in. wide tracks made by cutting an old Polaris snowmobile track lengthwise in half.**

"I painted it Cub Cadet colors because I've always been a Cub Cadet fan. I had tried using a Cub Cadet equipped with a snowblower on front and chains on the wheels, but I still couldn't seem to clear my two driveways without getting stuck. When I built the Sno Cub I made new brackets to adapt the snowblower to it."

"The rig's steering system is off the zero-turn riding mower and uses 2 levers fitted connected by metal rods to the transmissions. Each lever is equipped with an electronic switch - one to lift the snowblower and the other to turn the spout. The levers are fitted with hand warmers. I bought the seat at Northern Tool and the wheels and exhaust at Fleet Farm. The rest was for the wheels, steel, and electric lift mechanism."

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**"I push it using my legs and not my back," says Patrick Walsh about his wheeled snow shovel. "Works great on light snow because I can cover a big area quickly."**

# Wheeled Snow Shovel

Combine a 40-in. wide shovel, a bicycle wheel, and a pair of long 8-ft. 4-in. wooden handles and you've got a back-saving "wheeled snow shovel".

Patrick Walsh came up with the idea as a way to make the job of shoveling snow less strenuous. "You just push it using your legs and not your back," he says. "You use your body weight to push down on the handle, instead of your back and arms."

He used 1 1/16-in. thick sheet metal to fabricate the shovel, which is 5 in. high at the back and has a replaceable cutting edge. The oak handles bolt onto aluminum angle iron brackets on back of the shovel. A pair of angle irons extend from the handlebars to down below the wheel. Both angle irons are bolted to the bicycle wheel's axle using the original axle bolt. An angle iron brace at the top of the handlebars provides reinforcement.

"It works like you're pushing a wheelbarrow, except that it's easier," says Walsh. "I use it on my 300-ft. driveway and sidewalk, and on a 40-ft. sq. apron in front of my garage. It really works great on light snow because I can cover a big area quickly.

"I made the handles by glueing two 3/4-in. oak boards together and then sawing them down to 1 1/4 in. sq. Then I tapered the top part of the handles until they were round."

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# Snow Blade Made From Propane Tank

Mark Yax of Solon, Ohio wanted a snow blade on back of his Ford 8N tractor that would let him pull snow away from his garage doors and his driveway turnaround.

"I had already made a front plow setup for the tractor and wanted to use my Dearborn rear blade to pull snow away from my garage doors and the turnaround. However, the Dearborn blade stuck out a long ways and made the tractor's turning radius too long," says Yax.

"I had an old 2-pt. mounted hay rake that mounted just on the lift arms, so I made a blade with metal brackets that mount the same way using just the tractor's lift arms. The blade is 6 ft. wide and only sticks out about a foot past braces that come off the lift arms."

He cut an old 100-gal. propane tank lengthwise into three equal pieces 6 ft. long. They were a little wider than he wanted, so he overlapped them in the middle by 6 in. for extra strength and then welded them together. He cut up a length of 3-in. wide by 3/16-in. thick sq. tubing and welded it onto the top of the blade, then used the same material to make the lift arm brackets.

He welded on a 1-in. dia., schedule 40 pipe to make an edge at the bottom of the blade.

**Mark Yax's home-built snow blade mounts on the lift arms on back of his Ford 8N tractor, allowing him to pull snow away from buildings.**

"The pipe lets the blade glide right over gravel instead of picking it up. The blade is still kind of lightweight so I only use it for pulling snow or leveling loose gravel," notes Yax.

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