

Snow Machine Made From Crown Victoria Station Wagon

When it comes to plowing deep snow in the coldest winter weather, Matt Stafford has all the bases covered. He built a self-propelled track-mounted snow mover with a dozer blade and a blower that will grind through 5-ft. drifts. He rides in comfort in a cab the size of a small kitchen that has thermostatically-controlled heat, a 40-amp stereo sound system, a backup camera and a gorgeous Cherry dashboard.

"I guess I'm a little eccentric when it comes to building things," Stafford says. "I started with a few simple ideas for this rig and just didn't know where to stop." His three daughters all pitched in to weld and build various parts with him. "Now they all know how to weld and have a stake in this machine," he says.

Stafford decided to build his own rig because his Ford pickup and blade was difficult to maneuver in deep snow and often got stuck. The chassis and drive train for his one-of-a-kind creation are from a 1987 Crown Victoria station wagon. He installed a 351 Windsor engine and built the cab and bogey wheel suspension out of scrap steel. Six wheels and tracks on each side support the machine.

Stafford and his daughters wrapped the wheels with custom made tracks that are 18 in. wide and about 14 ft. long. Stafford says, "the guy who sold them to me wondered out loud what I was going to do with 1,000 lbs. of belting. I think he thought I was crazy."

The tracks are driven by cog wheels made from old steel tractor rims. Stafford made rubber cogs for the rims that extend through holes in the track between the cleats. Small wheels at the rear of each track are fitted

with air shocks on a sliding wedge. As air is pumped into the shocks tension is applied to the tracks.

Stafford and his daughters cut and formed all of the steel cleats for the tracks out of 1/8 by 2-in. flat steel. Cleats are bolted onto the tracks about a foot apart, creating a rugged track that negotiates the toughest snow conditions. The tracks are held in place by a 1/2-in. cable that's strung through four lengths of chain connected to each cleat.

"It's a home grown system, that's for sure," Stafford says, "but it sure has great traction and plenty of flotation."

The rig has a custom-built cab that has all the amenities of a modern pickup. There's a comfortable bucket seat, insulated walls and ceiling, thermostatically-controlled heat and insulated windows salvaged from an old Ford van. His daughters insisted on a "state-of-the-art" sound system, so his stereo even has a sub-woofer.

The 351 Windsor delivers plenty of power to push and blow large amounts of snow. The engine is mounted at the rear of the machine and the transmission at the front. The engine weight helps offset the 6-ft. Loftness blower mounted on loader arms on the front. Stafford converted the machine's 540 pto drive to hydraulic power.

The blower and blade mount on lift arms that Stafford bought from the Surplus Center (www.surpluscenter.com). They're similar to those on a tractor loader. The arms are raised and lowered with 4-ft. lift cylinders and also have a 2-ft. tilt cylinder. The arms pivot on brackets welded to the top of the reinforced cab.

Hydraulics are powered by a motor that's



Track-mounted snow mover is equipped with a dozer blade and a blower that'll grind through 5-ft. drifts.

mounted in place of the car's AC compressor. The reservoir has a 50-gal. tank. Oil flow scavenged from the rig's power steering turns the snow blower discharge chute. Hydraulics are controlled by valves mounted inside the cab.

"The drive train works like the old Bombardiers," Stafford says. "I have two floor pedals that I push to steer left or right. The transmission has three forward speeds and one reverse. I control engine speed by a throttle cable mounted to the dash."

The machine has two sets of high intensity

lights on the cab and a yellow emergency beacon. Stafford says, "building this was like therapy for my girls and I. The old car where they learned how to drive is now a really unique snow mover."

Contact: FARM SHOW Followup, Matthew Stafford, 5358 Darrow Ave. N.E., Buffalo, Minn. 55313 (ph 763 682-0118; staffmj@dwig.net).

Allis Chalmers "B" Gets A Low Profile

Jim Willette lowered the profile on his Allis Chalmers "B". It gets more attention at shows, and it's easier to get on and off.

"It was a tall tractor but now it looks more like an industrial model," says Willette, who lowered the tractor about 9 in.

While lowering it was a matter of reworking the front and back axle, Willette also made changes to the seat, steering column, drawbar, fenders, footrests, and the clutch and brake pedals. Even the shift lever had to be shortened.

"The clutch pedal just needed a different pivot point, so I drilled a hole lower on the shaft," says Willette. "It came off an old Allis D15, and the footrests came off a D17. I had to cut them down and drill new holes in the castings to mount them."

The brake pedals had to be completely modified. Willette cut and reworked the steel on brake pedals from a WD. He welded extra steel on them for a longer reach and to make the brake lock work.

"I had to fabricate a completely new front axle," says Willette. "The only parts I reused were the spindles."

The original axle was an arch, so Willette went with a straight steel tube made from two, 1/2-in. by 3-in. angle irons. The challenge was to get the axle mounted properly. The kingpins were on an angle, and he had to get them back to that same angle.

The original reach had two straight bars for support. Willette curved the new ones to the outside for more stability, but mounted them in the same locations.

Lowering the rear axle was relatively easy. Only four bolts held it in place. "I unbolted it and gave it a quarter turn forward and then put the bolts back in," says Willette.

To fit the new look, he modified a drawbar from a "C", narrowing it up by about 8 in. He



Jim Willette lowered the profile on his Allis Chalmers "B", making the tractor easier to get on and off.

cut the flanges off, cut out about 3 in. from each side of the drawbar, and welded the flanges back into place.

"The fenders were too long and stuck out too far, so I cut about 4 in. off each," says Willette. "I made a flange on each one, so they look like they were factory installed. They were a hazard with the sharp corners sticking out."

Willette replaced the old flat seat with a spring-loaded seat from a D17 after fabricating a new mounting bracket. He also shortened the steering column by about 13 in. and the shift lever by 6 in.

One of the last modifications was to the radiator grill screen. He fabricated a new one using expanded metal with a border, OEM style, and mounted it with wing nuts.

"Newer Allis Chalmers, like the D17's, had wing nuts on the screen," recalls Willette. "It makes it easy to clean."

Contact: FARM SHOW Followup, Jim Willette, 20428 470th Ave., Easton, Minn. 56025 (ph 507 787-2295; cjwillette@bevcomm.net).



Mervin Jones repowered his Cub Lo-Boy with a Cobra 302 engine out of a Ford Mustang. The 200 hp, V-8 engine fit almost perfectly.



Cobra 302 Gives Cub Amazing Power

Mervin Jones has a Cub Lo-Boy that will run faster than he cares to go. Repowered with a Cobra 302 from a Ford Mustang, he thinks the 200 hp engine could push the tractor past 50 mph, but he doesn't plan to find out.

"When I hit the throttle in road gear, it jumps as it takes off," he says.

The advantage of the 302 was that the V-8 fit almost perfectly. The old motor on the Cub was shot. Jones made new motor mounts and a driveshaft connection between the V-8 and the Cub drivetrain.

"The clutch and transmission on the Cub are at the rear, so I just hooked a coupler with a 2-in. drive from the Cobra back to the driveshaft," he says. "The width was fine, but I had to extend the frame by about 4 in. at the front to make room for the radiator. The front grill covers the extensions. You wouldn't notice unless it was next to a stock Cub Lo-Boy."

What isn't stock are the wheels. Jones dressed the V-8 Lo-Boy with rear wheels and tires off a racetrack sprint car. The 14-in.

wide wheels required adapter plates. He used 1/2-in. aluminum plates and drilled them to fit the Lo-Boy lug pattern with a second set of holes to match the holes on the sprint car wheels. Front wheels are from a 1974 ATV that fit the Cub hub pattern.

"I had to grind some on the engine to get it to fit and fabricate new side covers to fit over the engine. I notched them for the exhaust pipes to either side. I also had a radiator made to fit, complete with a water pump."

Jones made an adapter plate to hook the 2-speed hydrostatic transmission to the engine. He drilled holes to match the flywheel in a round plate with a 1-in. shaft that extended back toward the hydrostat.

When Jones hooked the hydrostat up and put the tractor in forward gear, it went in reverse. He realized the Ford V-4 had an opposite rotation to the Kohler. Luckily, the hydrostat had left and right hand rotations.

Contact: FARM SHOW Followup, Mervin Jones, 2234 E. 2350 North Rd., Fithian, Ill. 61844 (ph 217 776-2486).