

FARM SHOW Story From 15 Years Ago

R. Bruce McDannald's jet-powered Cub Cadet is a real attention-getter at parades. The 5-in. dia. exhaust system on front of tractor shakes tree limbs 16 ft. overhead.



Tractor's 60-hp jet turbine engine came off a military generator. Making it fit was tricky, says McDannald.

Jet-Powered Cadet Is No Ordinary Cub

From The Archives - Printed 15 Years Ago
The noise!

R. Bruce McDannald says that's the coolest thing about his "jet"-powered Cub Cadet. He originally bought the 125 Cub Cadet in 1966 to mow his lawn.

When Popular Science magazine heard about his Jet Cadet, they made it the Do-It-Yourself Project of the Month for September 2010.

It's definitely an attention-getter when McDannald takes it to parades and local events. The crowd hears - and sees - him coming. The 1,200-degree blast out of the 5-in. exhaust system shakes tree limbs 16 ft overhead.

Inside McDannald's 72-year-old body is the spirit of the 12-year-old who built a go-

cart out of combine parts on his Ohio farm. Later, he made his own minibike.

Three years ago, the urge to make something different stirred again when he heard a jet engine at the Antique Gas & Steam Engine Museum in Vista, Calif.

"Seeing the display gave me the idea that this same engine could possibly be transplanted into the Cub," McDannald recalls. "I had no idea of all the challenges it would take to make the transplant."

The Escondido, Calif., pump-system company owner has restored many tractors over the years, including a Wheel Horse D-200. But modifying a Cub with a jet engine is his most unusual project to date.

He bought a military generator for \$4,000 for its 60-hp jet turbine engine. Making it

fit was tricky. To make room, he added a 3-in. spacer to extend the frame and bought another hood to graft onto the original. The engine requires a 24-volt DC battery to run the starter, and the one that came with the generator was so large that McDannald had to lengthen the hitch and build a battery box.

The turbine engine turns at 52,000 rpm, so McDannald shortened parts and added a serpentine belt to reduce the speed to 3,600 rpm for the hydrostat shaft.

"Now I have 60 hp instead of 12," McDannald says.

Within a couple of years, he had most everything done, including a first-rate paint job, but McDannald couldn't run it.

"I didn't dare run the engine in public with the exhaust coming straight out at

1,200 degrees Fahrenheit," he explains. "It took a year to find someone with the parts and know-how to fabricate the 5-in. exhaust system. At last, I found Detroit Flex, which made the 90-degree elbow and mating flange with the V clamp."

That sent the heat straight up.

The engine uses jet fuel and burns 8 gal per hour. With just a 2-gal tank, that means McDannald's Cadet has to be towed to the parade line, so he has enough fuel for a 15-min ride.

It's worth it, he says.

"I get an adrenaline rush every time the engine spools up to 100%," he says.

Printed 2011, R. Bruce McDannald, Escondido, Calif.

Wood Stove Pushes Out Heat

Jerry Carra captures as much heat as he can from the wood he burns in the stove he built. The air box and heating tubes at the top of the stove, along with the stack robber above it, are anything but passive. Each has its own fan that pushes air through, heating it as it goes and releasing the hot air into his garage-bay woodshop.

"When I lived and worked in Alaska as a young man, a friend of mine built a stove using a 55-gal. drum," recalls Carra. "He had a water tank and copper tubes that ran inside the stove and up to a car radiator above it. A fan on the radiator pushed air through it to warm the room. I didn't want something that complicated, but I wanted the same effect."

Carra fabricated his stove body from 1/4-in., 1020 low-carbon, mild steel. The main fire box measures about 21 in. wide, 24 in. deep and 24 in. high. The 10-in. top of the fire box angles in by about 5 in. on each side, forming a heat-concentrating trapezoid.

"I welded 13 1-in. pipes through the top of the firebox," says Carra. "On the back side, I made an air box that's about 4 in. deep and open to the bottom. A squirrel-cage fan below the air box pulls cool air from the floor and pushes it through the tubes and into the woodshop."

As if that wasn't efficient enough, his grown children bought him a stack robber for Christmas. Like his stove, it has tubes and a fan to capture excess heat from the stovepipe.

"The stack robbers were popular in Alaska," recalls Carra. "They're easy to find on Amazon."

He built his wood grate from a 1-in. deep and 1-in. wide metal walkway grate. A small door for cleaning out ashes beneath the grate is located at the front bottom. A larger door for loading wood into the firebox is centered on the front. The large door was a lucky find.

"I ran across an old wood stove in the woods while deer hunting, and the door was



Aside from the recycled door and the gifted stack robber, the rest of the stove was fabricated in Carra's shop, including the name "Hotbox."

still in good shape, so I brought it home," says Carra. "I had no idea at the time that I would have a use for it."

Aside from the recycled door and the gifted stack robber, the rest of the stove was fabricated in Carra's shop, including the name "Hotbox."

"I cut the name out of steel plate with a cutting torch, cleaned it up with a grinder, and painted it," says Carra. "The name fits. Start a fire with a little wood in the morning, and the pipes are red hot in no time. It heats up my wood shop fast."

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"Our 1,000-lb feeder does an excellent job of eliminating feed loss to raccoons," says Rauschert.

Feeder Reduces Feed Loss

Coonless Feeders from Steinjäger, Inc., aim to make feeding wildlife a less expensive venture for hunters.

"My son-in-law, Austin Raisor, is an avid deer hunter," says Mark Rauschert, the company founder. "He developed our first 1,000-lb feeder to reduce the amount of feed he was losing to raccoons. He knew we were a manufacturing company and asked us to manufacture his design."

According to Rauschert, it takes 45 to 60 min to set up the feeder once you have a 6 by 6 post securely set in the ground.

"Our 1,000-lb feeder does an excellent job of eliminating feed loss to raccoons," he says. "It's entirely manufactured in the USA in our small family business in west-central rural Illinois."

"The 1,000-lb feeder is targeted toward the professional land managers who want

to minimize filling time and minimize feed loss to non-deer animals," he says. "The 555-lb feeder is for both the amateur and professional hunters. It has a great price point and is 100% made in the USA in our Illinois factory."

The 1,000-lb feeder sells for \$1,900; the 555-lb feeder for \$750; the mineral block holders for \$45; and the T Post adapter for \$35.

Coonless Feeders are sold almost entirely through local dealers, who can also support customers with products such as feed and cameras. Installation instructions are available on the company's website.

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