

“Hit And Miss” Horse Buggy

By installing an old Deere hit and miss engine on back of an old 2-seater horse-drawn buggy, George Feltz was able to convert it into a self-propelled rig.

The engine, located just behind the seat, drives one of the buggy's rear wheels. The rig is complete with a foot-operated brake and clutch, and a hand-operated steering tiller that's connected to the buggy's front axle. It has a red and gold canopy on top, a couple of flags, a patriotic bow, air horn, and candle lantern lights on each side. A large sign on one side says “The Good Old Days”.

“It makes a colorful sight,” says Feltz, of Stevens Point, Wis. “I bought the buggy last year from a neighbor and put the hit and miss engine on it, knowing that I'd probably never buy a horse. It'll go 6 mph down the road. I occasionally take it to antique tractor shows and drive it in parades. The engine makes a unique sound, so it really looks and sounds different. People smile and start clapping when they see us coming.”

The horse buggy came with 2 seats and 42-in. high wood wheels on back. Feltz removed the back seat and bolted the 1 1/2 hp engine backward onto the floor in its place.

A 3-in. dia. rubber drive wheel is bolted onto the engine's flywheel and keeps tension on the buggy wheel to drive it. A foot-operated clutch is used to raise or lower the drive wheel about 4 in. The clutch is connected to a hinged metal rod with a “knee” in the middle that's attached to the front end of the engine. The hinge system makes use of a small metal wheel that serves as a pivot point for the clutch, allowing the hinge to move forward or backward as the engine is raised or lowered.

“Pressing down on the foot pedal causes the engine to lift up which disengages the



George Feltz converted an old 2-seater horse-drawn buggy into a self-propelled rig, by installing an old Deere hit and miss engine on back.



An old Ford Model A car starter wired to a car battery is used to start the engine.

drive wheel, and letting go of the foot pedal causes the engine to drop back down and engage the drive wheel,” says Feltz.

An old Ford Model A car starter wired to a car battery is used to start the engine. “Normally you start a hit and miss engine by hand cranking it, but since the engine was recently overhauled it wasn't broken in yet and the sleeve and pistons were still tight. I had a bad back so I made the electric starter,” says Feltz, who notes the photos were taken by his grandson Jarred.

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Clarence Hoffman built this 1/3-scale steam tractor. He custom-ordered the boiler but made everything else, with many parts coming from other tractors.

Big And Little Steamers Pull Threshing Machines

As the owner of the only old steam tractor with a certified boiler in a 100-mile radius, Clarence Hoffman's George White steamer attracts attention when he fires it up to do a little threshing. But even more impressive may be the smaller, one-third size steamer that Hoffman built, which is also capable of running a threshing machine.

The 81-year-old Ebenezer, Sask., farmer and his family save an acre or two of rye and oats to thresh each year. They make it a celebration with food and about 50 folks who come to watch.

“We do it just for fun on the farm,” Hoffman says, noting that he's threshed every year for the past three decades. The George White, with 1917 stamped on the boiler, was found about 75 miles away when he purchased it in 1977. The steam tractor was built in Brandon, Man.

The tractor was in running condition when he purchased it, and about the only parts that need changing occasionally are the tubes (47 of them) in the barrel of the boiler.

When it came to building his 1/3-scale

steamer, Hoffman custom-ordered the boiler but made everything else. Many parts came from other tractors: differential gears from a Deere A, clutch from a 1020 McCormick, steering system from a W6 International, flywheel from a pulley on an Oliver 80 and a steering wheel from a separator blower, for example.

Creating the engine frame was a challenge, Hoffman says. He worked on the steamer from 1997 to 2000. When it and the George White steamer aren't being used or taken to shows, he keeps them protected from the weather in sheds.

Hoffman is proud of keeping the steam engine and threshing tradition alive and sharing it with others. In 2008, when his farm received its Century Farm award, his family celebrated by threshing grain – just as it was done 100 years ago when the family purchased the farm.

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Modified Golf Carts, Garden Tractors Benefit Hard-Working “Wheelers”

By Dee Goerge, Contributing Editor

Here's a non-profit group every FARM SHOW reader can appreciate: The Innovation Institute pays workers in wheelchairs to modify golf carts and garden tractors so other people in wheelchairs can drive or ride on them at camps or in rural areas. It lets them get outside without having to ride in a truck or van and have a lot of fun.

Harold Andresen, who founded Innovation Institute in 2003, says his disabled work crew, who call themselves “wheelers”, love modifying the used vehicles. Like anyone, they just want the opportunity to work. Right now, there is only enough money for them to work one day a week. On Wednesdays, Andresen takes the day off from his auto repair business to work with them in his auto repair bays. He pays them an hourly wage and helps with their transportation costs.

Recently, the “wheelers” have been modifying golf carts to allow people in wheelchairs to roll right onto the carts, which were loaned out to children's camps in Texas last year. The kids grinned with delight as they were given rides while sitting next to someone who also happens to use a wheelchair.

Churches and others who work with people in wheelchairs have expressed interest in the modified rigs — for practical transportation and for just plain fun.

Andresen reworked 16 of the 20 bays in his auto repair shop to adapt to workers in wheelchairs. From workbenches to vises and tools, everything is designed for use by the “wheelers”.

Andresen also holds workshops teaching auto repair and welding with the goal to give the wheelers steady work. They started out repairing wheelchairs and other devices used by the disabled. After the Institute received 16

donated riding lawn mowers, the wheelers got really motivated as they realized they could have some fun with them.

Some rigs are modified to make it easy for a wheelchair-bound person to slide into the seat and work the controls. Others are fitted with sidecars so a person in a wheelchair can be rolled up onto it.

“We make golf carts wider and longer,” Andresen says. “And we add air suspension so it drops to the ground, allowing a person in a wheelchair to easily roll on board and get secured next to the driver.”

The response has been overwhelming. Parents and camp staff see the kids not only having loads of fun, but also connecting with the drivers.

“This is a realistic income-producing project,” Andresen says. Used golf carts are readily available. There are only three basic models, so it's easier to learn how to fix and modify them than the innumerable makes and models of riding mowers.

In order to build a fleet for use at camps and other events that include people with disabilities, the Innovation Institute needs regular monthly donations (tax deductible) to pay workers, or sponsorships that will cover the full cost of modifying a used golf cart. The Institute also welcomes donations of used golf carts and riding mowers, and of parts and materials for refurbishing and modifying them.

Check out Innovation Institute's Facebook page at www.facebook.com/InnovationInstitute.Duncanville.

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Harold Andresen trained wheelchair-bound work crews to modify golf carts so folks with disabilities can easily ride on them.



Garden tractors are fitted with sidecars to carry wheelchairs. Tractor controls are modified so disabled drivers can operate them.