

Deere G Sports A Powerful 307 V-8

A Deere G with a broken radiator and chunks busted out of the engine block was the ideal tractor for Howard Harder because he had a 307 Chevy V-8 looking for a home.

"Mounting the V-8 in the G was a lot of work, but it was worth it," says Harder. "It took me two years but now I've got a great tractor for chores and snowplowing."

Harder, a machinist by trade, started by breaking down the G and modifying the rear end. His goal was to use as many original Chevy components as he could, including the bell housing and clutch.

He also tore down the Chevy engine and rebuilt it, boring it out and giving it a valve job. Harder also made a number of modifications necessary for the engine to fit the G frame. One change needed was to modify the starter.

"I cut off about a third of the part that bolted to the bell housing and made a universal joint for it," he says. "This let me mount the starter to the side of the tractor frame. I used a Ford starter and haven't had a second of trouble with it."

More room was created for the engine by cutting the gas tank in half lengthwise. The bottom half was replaced with a piece of flat sheet metal. This also allowed Harder to use the original filler cap.

Harder also had to replace the carburetor on the V-8. He made an adapter that allowed him to mount a cast iron single barrel updraft carburetor from a 640 cu. in. crane engine behind the right valve cover and above the bell housing.

He also had to modify the manifolds, running a straight pipe off each. Needing a governor, Harder used one from a Wisconsin engine, making an adapter for the belt drive. He mounted it above the right hand valve cover.

Welding the oil filter to the base of the oil pan added a couple extra quarts of oil capacity to the pan. He also lengthened the oil filler tube.

"The extra oil helps if I am on a steep hillside," says Harder. "I don't starve the engine for oil."

Wanting to mount the engine forward, as it would sit in a car, Harder needed to shorten the drive shaft. To use the Chevy clutch, he cut down an input shaft from a Chevy transmission. A flange welded to the spline shaft of the clutch allowed him to connect it to the short drive shaft.

Connecting the modified drive shaft to the G transmission was his next challenge. Harder modified a Chevy rear end to work as a gearbox between the two. He set it on the main bearing saddles where the crankshaft connecting rods would have been. He cut the Chevy axle down to about a foot in length and mounted the original G clutch gears on it to drive the G transmission. He then connected the Chevy rear end to the short drive shaft with a slip joint and two U-joints.

With the gearbox in place, the engine fit was almost perfect. As it was, it would've been too tight to easily change fan belts if needed. Harder took the water pump apart and pushed the flange back and cut off the vibration damper to match the new position. This gave him the room he would need to change the fan belt without removing the radiator.

"The big challenge was the radiator," says Harder. "I didn't want to buy a new one, but the cast iron top and bottom were busted up, so they had to be ground out and welded back together."

The radiator core was the big problem, that and the 20+ bolts top and bottom needed to



"Mounting a 307 Chevy V-8 engine in my Deere G was a lot of work, but it was worth it," says Howard Harder.



Harder tore down the Chevy engine and rebuilt it. He had to make modifications to fit the engine to the G's frame.

hold everything together. Harder soldered the core up the best he could to hold water, bolted everything back together and pressurized it. Water shot out.

"I took it apart and resoldered and put it back together 11 times before I had it so it wouldn't leak," recalls Harder.

Because the Chevy fan only covered the bottom two thirds of the radiator, he added two electric blowers to cool the top third.

"I turn on the blowers on warm days when I am working the tractor hard," he says. "I also mounted a blower on the steering column post to cool the rear end where the connecting rods are. On a hot day, the rear end can get hot, but the blower takes care of it."

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LED Lights More Rugged Than Halogen

When the window for getting a job done is small, it may mean working into the night. The last thing you need are dim lights or lights that burn out. LED work lights are brighter, last longer and consume a lot less power than standard Halogen lights, according to Hamsar, manufacturer of lighting products.

The Canadian company offers lighting made in North America that's suitable for agriculture, trucking, construction and other applications.

"Halogen lights are conventional on most machines now," says James Scott, managing director at Hamsar, noting that many customers want to upgrade for better performance, lower power consumption and longer lasting bulbs.

A comparable LED light is as bright or brighter than Halogen lights. LED lights are guaranteed for five years, rated for more than 50,000 hrs., and have the lowest power consumption.

"You can shut the tractor off and leave the lights on," Scott says. "LED lights are the most resistant to vibration."

Housing for Hamsar lights have die cast aluminum backs and automotive polycarbonate fronts that are break resistant and rugged. Bracket mounts are also rugged and allow the light to be tilted down up to a 30-degree angle.

"It's easy to get light where you need it," Scott says. "Another advantage is that our LED lights work on anything from 9 to 36 volts so the same light can be used on an excavator or a pickup."

Replacing Halogens with LED's is as simple as snipping a wire and replacing them.



LED work lights are brighter, last longer and consume less power than standard halogen lights, according to Hamsar.



The company sells amber LED beacons and other safety lights as well. It also offers HID (Xenon) lights that are 3 times brighter than Halogen lights and last about 3,000 hrs. while consuming less electricity.

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Hydraulic-powered wire winder bolts to side of Gutschmidt's loader bucket.

Hydraulic Winder Wraps Up Wire Fast

Taking down an old fence doesn't have to be as much work as it was putting it up, says Roger Gutschmidt, who came up with some handy tools for the job.

The Gackle, N. Dak., farmer streamlined the process of removing old fence wire. He made a hydraulic-powered wire winder that bolts to the side of his tractor's loader bucket and plumbed hydraulic hoses to the couplers where the grapple fork would normally connect.

The wire on a fence he took down recently was in bad shape so he wrapped it up, 3 strands at a time. He drove in a gear that matched the speed of the hydraulic motor on the unit, always trying to keep some tension on the wires so they would wind tightly on the spool.

"I steered so that the wire would wind evenly across the spool from left to right, and once the spool was full, I simply removed the large nut that holds the outside disc blade on," he says. "It was simple to slide the full roll of barbed wire off the end of the shaft."

The wire winder consists of a main shaft,



Wire winder consists of a main shaft, bearings, disc blades, and a hydraulic motor.

bearings, disc blades, and a hydraulic motor he found at a salvage yard. The only new materials used were the plate steel frame, bearing holders, and hydraulic hoses.

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