Home-Built Machine Built To Move Brush

Vereschagin's brush-handling machine started out as a 1980 32-ft. diesel-powered motor home that he picked up at a wrecking yard.

"We've been building our own brush-hauling machines for 30 years so we've got the design perfected. They work better than anything on the market," says Mike Vereschagin, a fruit grower from California.

"Most orchardists use a brush rake attachment on front-end loaders to remove prunings from the orchard. The problem is that with a 2-wheel drive tractor, as the load increases on the front end, traction is decreased on back, especially in winter when orchards are wet and muddy. And maneuverability is bad because the loaders stick out so far in front on a conventional tractor.

"Our latest brush-handling machine started out as a 1980 32-ft. diesel-powered motor home that we picked up at a wrecking yard. It had only 58,000 miles on it and was powered by a Cummins 504 cu.in. V-8 diesel with a 4-speed Allison transmission. We paid just $1,700 for the complete chassis and running gear and the wrecking yard even ripped off the body for us.

"The first thing we did was to remove the front axle and move it behind the rear axle, mounted under the engine with a leaf spring removed to soften the ride since we didn't need its 6,000-lb. capacity anymore. The steering is a Charlynn hydraulic power steering system. I shortened the frame and used the extra parts of the frame which I cut off to double up the frame from the motor to the front end.

"I then moved the rear end forward, mounting it to the frame solid without springs and lengthening the drive line about 3 ft. The rear end has a 12,5000-lb. rating and a 4.88 ratio.

"We made brush forks 8 ft. long and 9 ft. wide from 2 1/2-in. square tubing The two lift cylinders are 3 by 24 in. and the tilt cylinders 2 by 30 in. They're powered by a belt-driven pump off the crankshaft. With the forks level, it will lift 7 ft. high for stacking brush on top of another pile or setting on the burn pile. Lift capacity is only limited by the weight of the machine on the steering axle. I could add additional counter weight for larger loads but it's not necessary since it can already handle larger loads than most tractors.

"As the load increases, traction increases. The rear wheel steering gets around row ends better since the forks pivot around when turning. In fact, I can flip a U-turn from one row to the next in the middle of the orchard without backing up. Braking is better under all conditions since it has power brakes on all four wheels. The automatic transmission eliminates clutch use when going back and forth. And it's fast. We can go 10 to 12 mph handling brush and travel 30 mph on the road, which is only limited by steering control because of the rear steering."

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Hydraulic-Powered Saw Mounts On Side Of Tractor

Cedar trees seemed to be taking over Melvin Gengler's pastures and those of a lot of other cow-calf producers around his Beloit, Kansas farm.

"I mentioned it to a neighbor and he said he was going to take care of his with a chainsaw," Gengler says. "There are a lot of trees out there to be cut, but I just couldn't see myself carrying a chainsaw all over the pasture."

Gengler had seen tree cutters for skid steers and others that mounted on a 3-point hitch. "I didn't like the idea of having to back into every tree to cut it, and I wasn't going to try getting through some of the ditches in my pastures with a skid steer," he says.

After giving the matter a little thought, Gengler figured the best place to mount a tree cutter on a tractor was on the side in front of the rear wheel, set far enough away from the tractor that he could drive by without backing up.

He decided to use a circular saw blade, powered by hydraulics.

He located an orbit motor to turn the saw blade and mounted it in a hinged pipe frame that's raised or lowered by a hydraulic cylinder. "I used a cylinder with an 11-in. stroke, but a standard 8-in. cylinder would probably work fine on it," he says.

He figured there might be some stress on the saw as he moved it into trees (and maybe dirt and rocks), so he made a support for his pipe frame from heavy 2 by 5-in. steel tubing that attaches to the post where a front end loader would mount. "I figured pushing it off the post would be better than trying to mount it somewhere else on the tractor frame," he says.

Once he had the frame built, he went looking for a saw blade but found nothing he felt would work.

Finally, he decided he'd just make one himself. "I started with a 20-in. circle I cut out of a sheet of 1/4-in. plate steel. That didn't work as well as I wanted it to. So then I cut teeth into a 20-in. rolling coulter from a plow," he says. "I made several blades from coulters, with different sized teeth and different pitches on them. In testing them, I found a flat one with the finest teeth did the best job of cutting smaller trees."

He also tested several different speeds for his hydraulic motor and found that 80 rpms was as fast as the blade needed to turn.

"I just cut about 700 cedars on a 250-acre pasture with a little four wheel drive Deere utility tractor. None of the trees were more than 2 ft. high and it worked great, even though I was cutting them off at or below ground level," he says.

Gengler's design is sufficiently different from anything else on the market that he's applied for a patent on it.

"I've been looking for someone interested in building them, but I'm planning to make a few for sale in the meantime," he says. "I think it should sell for under $2,000."

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Hydraulic-driven circular saw blade mounts on side of tractor in front of rear wheel. Gengler made the saw blade himself from a 20-in. coulter.

Skid-Steer Chain Saw Trims Trees

When Merritt Symons, Gaines, Michigan, needs to cut brush and small trees or prune branches from larger trees, he hops on his skidsteer loader.

Symons says he was getting a little too old to handle a chainsaw while standing on a ladder.

So he put together a chainsaw attachment for his skidsteer. The first step was to find a hydraulic motor with the right speed and torque to power it. He made a quick-tach bracket and mounted a short length of 2-in. dia. sq. tubing to that. Then he mounted the hydraulic motor on a length of 2-in. solid steel bar.

He mounted a chainsaw drive sprocket on the shaft of the hydraulic motor and then mounted a 34-in. commercial saw bar on it. On the bar, he uses a heavy 3/4 pitch chain. He wanted the bar and cutting chain to be able to stand up to any pressure the lift arms might put on them. He also added an automatic chain oiler, which he made by tapping one end of a small tube into the hydraulic line and mounting the other end to the bar post.

Chainsaw attachment allows Symons to cut as high as his skid steer will reach.

"I drilled holes through the square tubing and through the 2 in. square bar so I can mount the chainsaw with a pin, like a receiver hitch. There are both vertical and horizontal holes in the tubing, so I can mount the chainsaw bar in either a vertical or horizontal position," he tells.

To run the saw, he merely hooks the hoses from the motor into the remote outlets on his skidsteer. He can cut as high as the skid steer will reach. He can swing the saw from side to side and can cut anything he can drive up to with the skid steer. And with roll cage protection on the loader, he doesn't have to worry about limbs or small trees falling the wrong direction.

The saw is reversable if pinched. And because you can swing it from side to side, it can be used as a brush cutter, too.

Unit's 34-in. saw bar is driven by a hydraulic motor that mounts on a short length of steel tubing. Chainsaw bar can be mounted in either a vertical or horizontal position.

Symons says making the chainsaw attachment for his loader was easy enough once he'd figured out how he wanted to do it. He found a new hydraulic motor that met his needs from hydraulic supply store. He bought the chainsaw sprocket, bar and chain from an outdoor power tool supplier.

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