

Spring Tether Prevents Horse Tangles

Give a tethered horse too much slack and you're asking for trouble. Make it too short and the horse won't be able to reach feed or water. After years of seeing horses tangled up in tether ropes, Laura Saylor got the idea for a spring tether.

Saylor and her husband Eurrat operate a riding stable, show horses and rent out horses for trail rides and other special occasions. They have had lots of opportunity to test the tether out at shows, rodeos and while camping. She says they keep 6 spring tethers attached to the side of their horse trailer with no problems.

The tether is a 6-ft., plastic coated, coiled steel cable with a bolt snap at one end and a quick release at the other. With the coil stretched out, an animal can reach hay or water or even lay down.

If the tension should start to come out of the coils and they begin to relax, Saylor says it can be restored by turning the coil inside out. She quickly adds that she has used several for more than four years without needing to turn them.

"The spring tether works great on trailers, crossies, hitching rails or when hooked to a knot eliminator on a picket line," says Saylor. "I use it every day when I feed."

She cautions that the tether should not be



Tether consists of a 6-ft. plastic-coated, coiled steel cable with a bolt snap at one end and a quick release at the other.

used as a training tool. If an animal falls back or pulls hard on the tether, the snaps may break as they would on any lead rope.

Saylor sells the spring tether for \$20 plus \$5 shipping. It is available in red, blue or clear plastic.

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"It has a lot of torque and great traction," says Mike Van Horn about the heavy-duty Toro riding mower he repowered with a big 30-hp Wisconsin engine.

Heavy-Duty Riding Mower Cost Less Than \$1,500

"It has tremendous power and traction and does the job of an expensive grounds-keeping mower," says Mike Van Horn, Wendell, Minn., about the heavy duty Toro riding mower he repowered with a big 30 hp engine. It's equipped with hydrostatic drive and a 6-ft. deck.

He bought the 1974 Toro Groundsmaster 72-in. riding mower at an auction for \$1,200. The 20 hp Continental engine was worn out. He replaced the engine with an industrial Wisconsin VH4D air-cooled, 4-cyl. engine from a Versatile swather, which he bought for \$100. The Wisconsin engine was too wide to fit between the frame rails so he mounted it on top of the frame. A3-belt pulley on back of the engine goes down to a 1-in. dia. drive shaft that he installed parallel to the mower's original drive shaft. The Toro is hydrostatic drive, so the hydrostatic oil required cooling. So he added a 2 by 36-in. galvanized pipe with hydraulic fittings on each end to cool the oil. The U-shaped pipe mounts under the engine and wraps around the driveshaft.

"I spent less than \$1,500 to build it. Yet it does the job of a new heavy duty golf course mower that sells for \$20,000 or more," says Van Horn. "I call it my 'lawn swather' because it has so much capacity. The Wisconsin

engine still has its original muffler on top, which is how it was equipped on the swather, so it gets a lot of looks."

The Wisconsin engine not only has more power than the Continental, says Van Horn, it also has a longer stroke and therefore a lot more torque. "Even with the engine idling I can mow right through 10-in. high grass. One time I ran over part of a hay bale laying in a ditch just to see if the mower would cut through the bale, and it did. In fact, the Wisconsin engine has as much power when it's idling as the original one had when it was running wide open."

He says the extra weight helps with traction as well as steering. And, the mower is fuel efficient. "I was surprised to find that it takes only about 2 1/2 gal. of fuel to mow my two acres of lawn, which I think is really good."

According to Van Horn, Toro mowers like the one he bought are relatively easy to find. "The Continental engine on these mowers isn't worth much and they burn a lot of oil. However, the mower itself has a big, heavy frame which can easily support a bigger engine."

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Aaron Marshall built this backhoe attachment for his Ditch Witch. The arm has a stretch of 8 ft. and can dig to a depth of 6 ft.

"Made It Myself" Ditch Witch Backhoe

When Aaron Marshall picked up a Ditch Witch at a junkyard for \$750, he knew he got a good deal. Included in the price was a vibratory plow and a horizontal boring attachment. He decided to take advantage of the low-cost machine by building a backhoe attachment for it.

His first step was to fix the engine. "The existing Onan engine on the Ditch Witch was burning oil, and would have cost about \$2,500 to replace it," says Marshall. "I have a couple of uncles who work at a factory where Kohler engines are tested, after which they can't be sold. They gave me a 25 hp model, which I installed in the Ditch Witch. All I had to do was put a 2-in. slab of oak under it and bolt it in place."

Marshall's dad Neil sketched a full-size backhoe out, and the two scaled it down to fit the small power unit. Marshall then proceeded to cut and weld steel to match fit the hitch on the Ditch Witch.

"I used everything from 3/16-in. to 1/2-in.

steel," he recalls. "I bought 4 by 8-ft. sheets and cut them up. By the time I was finished, I had used up two 6-ft. tanks and gone through 20 to 25 lbs. of welding rods."

The entire project cost him about \$4,500 in steel and hydraulics.

The arm has a stretch of 8 ft. and can dig to a depth of 6 ft. He built 8, 12 and 16-in. buckets for the unit using 3/16-in. steel. Cutting edges for the buckets are hardened steel cut from plow landsides.

"The hardest part was building the stabilizer legs," recalls Marshall, who is a landscape contractor. "I had seen backhoes, but never looked at the outriggers and how they worked. I broke the legs three times before I got them strong enough. We figured out that there is about 60,000 lbs. of pressure on the main pin when the bucket is digging."

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Front and rear cylinders on this 3-blade lane grader allow operator to adjust how aggressive the front blade digs and the rear blade spreads.

3-Blade Lane Grader Adjusts On-The-Go

You can change blade depth on-the-go with this 3-blade lane grader from HFL Fabricating. Front and rear cylinders on the lane grader allow the operator to adjust how aggressive the front blade digs and the rear blade spreads.

"A hand crank on the rear lets you change pitch on all three blades by raising or lowering one rear wheel in relationship to the other," says Rick Hendriks, co-owner with his father, Archie, of HFL. "An uncle asked us to build a road drag. He suggested the design, we tried it, and he loved it. We've been making them ever since."

The lane grader measures 16 ft. front to rear with a standard width of 8 ft. to match most common road lanes. Since building the first one, the units have found homes throughout Ontario and as far away as northwestern Canada.

The 2,000-lb., \$5,150 (Canadian) units can be completely unbolted for shipping. For regional deliveries, the lane grader can be towed down the road at 60 mph without a problem. The only requirement is that a trac-

tor has dual hydraulic outlets.

"They can turn as tight as a tractor and are simple to operate and maneuver," says Rick. "Guys who try them usually buy them."

For the past five years, HFL has done custom metal fabricating for area farmers and other companies. If an item like the lane grader has potential, they build them for sale. When not in the shop, Rick and Archie manage a 500-sow farrow-to-finish hog operation and farm 1,000 acres. One of their latest projects is a no-till drill, which they built for their farming operation and are now building for sale.

"Fabricating complements the farming operation," says Rick. "We manufacture all our own equipment. My dad has a knack for engineering, and I have a knack for finding a simple way to get it done."

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