Gas Tank Welding: Readers Tell How They Do It

We got lots of response to a story in our last issue about the dangers of welding fuel tanks. Thousands of big fuel tanks all over North America can be had for the taking as gas stations and other fuel suppliers have been forced to update to meet new environmental standards. Many farmers have found ways to use the big tanks for everything from calf barns to chemical storage sheds. The problem is working on them safely. Here are a few suggestions from readers on how to avoid the catastrophes detailed in in our previous story:

After reading the article about unsafe welding practices in your last issue, I thought I should write you about some of my own experiences in regard to safe brazing and welding of fuel tanks.

Over the past 40 years I have brazed quite a number of car, pickup and tractor tanks and on one occasion brazed brackets on a D-17 Allis gas tank to adapt it to fit on a WD Allis. These tanks were all prepared for safe welding by running a car exhaust into them for a full 2 hours (not 1 1/2 hrs.!). This completely dries out the tank, and it will not be hot to the touch.

I first saw this done saw at a Hutterite colony once. I watched some men weld a loose fitting on top of a 4020 Deere diesel fuel tank right on the tractor with some fuel in the tank. The men simply drove a gas tractor up beside the tractor and ran a flexible exhaust hose from the exhaust on the gas tractor to the filler hole on the tank to be welded. Then they started up the gas tractor and ran until the motor almost choked, filling the tank with exhaust. They went ahead and welded the 4020 tank. The carbon monoxide from the gas tractor displaces the oxygen and won't allow either a fire or explosion inside the tank. ***(Robert T. Valetine, Rt. 2, Box 2, Wolsey, S.Dak. 57483)***

I read the article on welding fuel tanks in the last issue of FARM SHOW and wanted to tell you how I deal with the dangers of working on fuel tanks. I'm not a professional welder. Just a farmer who has a gas tank to repair now and then.

The method I use is foolproof and safe. I remove the gas tank, remove all plugs and any gauges that are in the tank, which leaves several openings for air. Then I take a 6-ft. piece of rope or baler twine and soak it in gasoline. I put one end in an opening in the tank and stretch the remainder of the rope out away from the tank. I light the end farthest from the tank. The flame goes up the rope to the tank and will flash the vapors, rendering the tank harmless. You can then weld up any holes or replace sections without any fear of explosions. If the tank ruptures when it flashes, it probably wasn't worth fixing in the first place. This would probably not be a good idea on big fuel storage tanks which have a lot more fumes in them but works well on small tanks. ***(Donald Stewart, 10120 Jersey Mill Rd., Pataskala, Ohio 43062)***

Here's my comment on welding or working on fuel tanks. Gas tanks are dangerous no matter whether they're wet or dry and no matter how long they've been empty. To eliminate the danger of explosion, your best bet is to fill the inside with exhaust. If a tank is wet inside, I first fill it with water and then drain the water out. Then I run gas engine exhaust from a 5 hp. motor into the tank. If it's a small tank off a vehicle, I let it run for a few minutes. On a bigger tank - 100 gal. or more - I let the motor run while I weld the tank. I've never had a problem. ***(Perry Jay Yoder, Yoder & Sons Repair Shop, 6035 W. 800 South, Topeka, Ind. 46571 ph 219 593-9992)***

The only safe way to weld, patch or braze fuel tanks is to use the exhaust from an engine (car or tractor). I've been doing this for over twenty years. Just recently I repaired a school bus with a 60-gal. tank. First, remove all the fittings to open holes into the tank, then insert a flexible hose into the tank with the other end on the exhaust pipe of another vehicle. Start the engine and let it run while you are welding (from a fast idle to slightly faster, depending on tank size). The exhaust rids the tank of oxygen so you can safely weld. Filling it with water would not be a good idea. You wouldn't be able to weld effectively and it would create potential problems when you empty it out. ***(Duane Reid, 23 S. Bard Rd., Gladwin, Mich. 48624 ph 517 426-4693)***

Here's what we recently did with a big fuel tank. My Dad, Marvin Carpenter, doubled his beef cow herd and needed extra feed. He decided that a small silo would be the easiest way to get the extra feed to cattle. He couldn't justify the cost of a new silo so he made his own. He used an old oil tank 10 ft. in dia. and 25 ft. high. I cut the top off and cut out doors in the side, just like a silo. Dad used 2 by 4's and old tin to make the chute over the doors. The tank cost $450 plus $300 to have it hauled and placed up on end. The silo, which we store corn silage in, sits on a gravel base. There's a 40 by 2-ft. concrete apron around it, and we simply use a pitchfork to pitch silage out of the silo onto the feed area. ***(Steve Carpenter, 3791 Cooperider Rd., Somerset, Ohio 43783; ph 740-743-2902)***

Backpack attaches to ATV's rear rack. Here it's shown in load position.

Backpack in upright transport position.

"Fifth Wheel Backpack" For ATV's

An ATV can do the job of a pickup with this new dolly cart that attaches to the rear rack.

The "5th Wheel Backpack" can carry loads of up to 320 lbs. The gooseneck-type mounting brackets adjust from 12 to 23 in. wide to fit virtually any ATV.

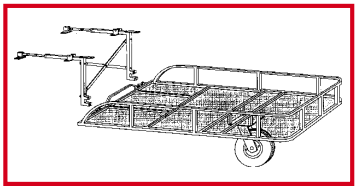
The 40-lb. trailer is made from square tubing covered with expanded metal. It's 37 1/2 in. wide by 40 1/2 in. long with a 5-in. high rail around the outside. It's fitted with a single caster wheel with a 4.10 by 4-in. pneumatic tire underneath.

The unit quickly detaches by removing two pins. It can also be flipped to an upright position when not in use.

Sells for $324 plus S&H.

Contact: FARM SHOW Followup, Schoolman Enterprises, 419 East - 1800 North Rd., Onarga, Ill. 60955 (ph 815 265-7747).

Works great for hauling bales of hay.



Add-On Rollbar, Cab, Or Canopy For Deere Gator

Deere's popular Gator ATV can now be equipped with a protective rollbar, shade canopy, or even a fully enclosed cab thanks to a new line of accessories from Femco, Inc., McPherson, Kan.

The ROPS is both OSHA and SAE certified and includes seat belts for both occupants as well as an expanded metal back screen for protection from shifting cargo. Sells for less than $700.

Femco's canopy is made from ABS plastic and has reflectors on each corner for increased road safety. Sells for less than $250. A hard-sided cab can be installed with or without the ROPS. It's made of steel and ABS plastic and includes a tempered glass windshield. Sells for about $1,700. A soft-sided cab is also available for use with the ROPS and canopy. It also includes a tempered glass windshield. Sells for less than $800.

Additional options for the Gator include a snap-on clear windshield, golf range enclosure, electric wipers, liquid heater, work lights, flashing beacon and blade adapter.

Contact: FARM SHOW Followup, Femco, Inc., 500 North 81 By-Pass, McPherson, Kan. 67460 (ph 800 677-0898 or 316 241-3513; fax 3532).

Rollbar includes seat belts for both occupants as well as an expanded metal back screen for protection from shifting cargo.

Canopy is made from ABS plastic and has reflectors on each corner for increased road safety. A hard-sided cab can be installed with or without the ROPS.