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Compact Tractor Firefighting Rig

George Edwardz built a piece of equipment he hopes he never needs to use for its intended purpose - firefighting. What makes his firefighting apparatus unique is that he mounted it on a small tractor.

Edwardz and his wife, Julie, bought a compact 24 hp tractor to use in their terraced orchards on two acres on the outskirts of La Habra Heights, California. They decided the tractor could also be used for firefighting.

As a news cameraman and volunteer firefighter, Edwardz understands the real threat of wildfire in the area. He also understands the restrictions of fire departments.

"A wildfire can be stopped if you get on it quick and fast," Edwardz says. "I don't believe we need to fall victim to it."

He found a high pressure, high volume diaphragm pump that would work on his tractor's 540 rpm pto. He had a modified 3-pt. sprayer custom built and attached a pump and a 110-gal. water tank. He purchased a \$250 nozzle and 300 ft. of fire hose. He used stainless steel piping and fire hose fittings.

The New Holland tractor's 3-pt. hitch can easily handle the apparatus, which weighs 1,100 lbs. when filled with water.

A 1 1/2-in. line fills the tank and the 1-in. fire hose can shoot a 100-ft. stream of water at 30 gpm at 290 psi, equivalent to the minimum rating for fire engines (Type 7).

During practice drills Edwardz drives the tractor and engages the pump. Julie rolls out the hose and starts spraying water, while

Edwardz hooks into the nearest water source. The couple has a seasonal swimming pool, a private hydrant attached to city water, and two 550-gallon tanks of potable water.

"This is the most interesting piece of firefighting equipment I've used," Edwardz says. Because of the tractor's small size, it can go places fire engines can't fit.

Since building the apparatus in 2005, the Edwardzes haven't needed to use it for firefighting, but it's been handy for spraying down their driveway and irrigating their orchards. They wash mites off their avocado trees spraying water at 100 psi.

When their area is in high fire danger they have the apparatus filled with water and mounted on the tractor. Costing less than \$4,000 to build, the Edwardzes believe it's a smart investment and that people who live in extreme fire hazard areas should empower themselves by making their own firefighting rigs.

Firefighting equipment is available through municipal surplus sales and internet sites.

"I highly recommend people get some training," Edwardz says. "Safety is important. You have to know your limits."

Edwardz is willing to advise people interested in making their own firefighting rigs.

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Easy-To-Use Foam Fire Fighting System

The technology of fighting fire with foam isn't new, but one company has developed an easy-to-use system that'll stay ready to go in standby mode for years.

Fire Solutions has sold foam fire protection systems for five years to fire departments and other agencies, according to Wes Hunter, co-owner of the Eugene, Oregon, based company.

Recently the company started marketing and selling smaller units for farm and ranch use. The units can be stored in the corner of a building or mounted on the back of an ATV, tractor or other vehicle.

"Our delivery system is unique from others," he notes. While competitors mix ingredients in the tank to make foam, Fire Solutions uses a water-powered injection system to create the foam outside of the tank.

"It's more efficient and you don't have to clean out the tank and hose," Hunter says.

With 30 years of experience in fighting fires, Hunter developed and patented the compressed air system to be simple enough for anyone to operate. He also built it so that it would run without electricity or water (other than what's in the tank).

Foam sprays out 50 ft. or more. Each gallon of water produces 20 gallons of foam. There's enough foam in the unit for three tanks of water. After using up the foam, it's easily refillable.

"Foam puts out fires very fast," Hunter says. Unlike water, which skips over some surfaces, such as smoldering hay, the detergent-based foam penetrates. Since it lasts a couple hours, foam can also be used as a preventative measure to coat a building before a

fire reaches it.

Foam suppresses all types of fires including gasoline and electrical, Hunter says, and it doesn't damage computer circuitry. Unlike water, foam leaves little damage after the fire is out. It's non-toxic and biodegradable, just dissolving away.

"It's very practical in the sense, that it can sit in the corner of a barn for years," Hunter says about the Fire Solution units. "When you need it, it's going to work."

For people in the country or on the outskirts of urban areas, the ability to start fighting a fire immediately can make a huge difference.

"As a rule of thumb, a fire doubles its size every three minutes," Hunter says. With a Fire Solution unit, a homeowner can put down or at least control a fire before the fire department arrives.

Hunter adds that Fire Solutions units can also deploy microbes with the foam to clean up fuel and oil spills. Producers use microbe foam to spray down animal and poultry barns to eliminate odor.

The smallest units hold 10 gal. of water (makes 200 gal. of foam) and sell for \$4,290. The 30-gal. unit sells for \$6,790 and is often mounted on an ATV or other vehicle.

Larger units are also available through Fire Solution's website and through several dealers.

Contact: FARM SHOW Followup, Fire Solutions LLC, P.O. Box 25040, Eugene, Oregon 97402 (ph 888 805-8155; firesolutions@att.net; www.firesolutions online.com).



Fire Solutions LLC sells foam fire protection systems for farm and ranch use. The units can be stored in the corner of a building or mounted on back of an ATV.



Foam sprays out 50 ft. or more. Each gallon of water produces 20 gal. of foam.