



Marv Rubingh converted his 23-ft. tall, 62-ft. dia. Slurrystore into a shop complete with a Schweiss bifold door and barn steel roof.



Measuring 16 ft. high and 20 ft. wide, bifold door is complete with windows and a walk door.

## He Set Up Shop Inside Old Slurrystore

Marv Rubingh converted his 23-ft. tall, 62-ft. dia. Slurrystore into a shop. Built in 1979, it was still structurally sound. Rubingh started thinking about converting it even before he stopped using it for manure storage.

"Two years ago I bought an outside wood boiler for the house, but with enough capacity to heat the shop as well. So I decided to get to work," says Rubingh.

The conversion was relatively simple. He used a circle saw with a metal cutting blade to cut out a 16-ft. high, 20-ft. wide doorway. Rubingh reinforced the cut edge with steel columns and the top with a steel I beam. He mounted a Schweiss bifold door with windows and a walk door in the opening.

Rubingh had leftover steel trusses set aside. When he measured them, he discovered they would fit the shop perfectly. To prepare for

the trusses, he cut 2 by 8's and mounted them to the sidewalls where each of the 19 trusses would intersect the sidewalls.

"I read an article in FARM SHOW that gave me the idea," says Rubingh. "They serve as support columns under each truss. I also mounted 2 by 8's around the circumference of the shop."

Hanging the trusses was the trickiest part of the process. Rubingh cut them to the right angle and then cut a 3-ft. long, 9-in. dia. steel pipe to use as a center collar. He used a manlift and a telescoping forklift to set each truss in place. He welded them to the collar and secured them to the sidewall. Once they were all in place, he reinforced the center with a second steel ring welded to the underside of the trusses.

"We covered the trusses with barn roof

steel, running a peak ridge cap down every track where they joined," says Rubingh.

To insulate the shop, Rubingh sprayed the walls and ceiling with insulated foam. He had already covered the existing floor with Styrofoam for a heat barrier. On top of that, he laid 4 in. of concrete with water lines for in-floor heat.

"We connected it to the boiler, but we haven't needed heat yet," says Rubingh. "We've only done a few jobs in there this spring, but it will be a nice place to work this winter."

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He cut the trusses to the right angle and then cut a 3-ft. long, 9-in. dia. steel pipe to serve as a center collar (above). A telescoping forklift was used to set each truss in place.



## Blow-By Reservoir Keeps Engines Clean

George Muth keeps a clean engine, thanks in part to his Blow-by Reservoir. Without it, blow-by oil collects under engines, drips onto roadways and collects at intersections.

"I used to see the oil under my engine and look for a leak," says Muth, a professional trucker. "I would change out gaskets and seals, and the mess would come right back."

Realizing that it was the blow-by oil from the breather tube, Muth worked on a solution. What he came up with was two aluminum canisters with a hose from the breather tube outlet at the valve cover to the first and largest canister.

"We can retrofit them to any large engine from farm tractors and construction equipment to semi-tractors or anything else," says Muth. "People that have them really like them."

The pressurized oil and air enters the first canister and passes through a series of baffles with alternating size holes. As it cools, the oil condenses, and 85 to 90 percent of the oil falls to the bottom. The air still containing minute traces of oil passes into the second chamber and through a washable filter that traps most of the remaining oil.

"By the time the air exits the second chamber, the system has captured between 98 and 99 percent of the blow-by oil," says Muth.

Oil captured in the second and smaller chamber drains back to the first. A dash-mounted warning light notifies the driver when the larger canister needs to be emptied.

"I empty mine at every oil change," says



George Muth keeps engines clean by using two aluminum canisters and a hose that runs from the breather tube outlet at the valve cover.

Muth, who runs a 400 Cummins diesel over the road. "Normally you'll collect less than 16 oz. of oil per oil change."

Muth designed the 6-in. diameter canisters for easy maintenance. A manual drain is installed at the bottom of the 32-oz. capacity, 16-in. long reservoir canister. The second canister containing the washable filter is 9 in. long. A smaller system with 4-in. dia. canisters is available for pickups. That reservoir is 9 in. long, and the filter canister is 6 in. long.

Muth says the systems are very durable. He has one that has been on an older truck since 1998. He has only replaced the float in it once, and that was due to the wire on it corroding from exposure to road salt and weather.

## Powerful Vac Mounts On Shop Wall

"It's ridiculously powerful," says David Stern, at Metropolitan Vacuum Cleaner Company, Inc., about the Vac 'N' Blo PRO system. "Nobody has this much power in such a lightweight vacuum. And it's made in the U.S."

The 4-hp unit is similar in power to carwash vacuums, but the PRO unit at \$250 is portable and handy for everyone from car detailers and collectors to operators who want to keep trucks, tractors and equipment clean. One accessory kit (AGB-3) includes attachments to groom horses and other animals.

The rugged, all-steel canister vacuum uses bags and can be mounted on a shop wall, rolled in place on wheels or carried with a shoulder strap. With a 12-ft. cord and 24 ft. of hose and extension wands, it has a long reach. Several attachments make it versatile enough to reach in all kinds of nooks and crannies on a variety of surfaces. Use the inflator adapter on the blower end to blow up inner tubes, blow debris out of a shed or blow-dry parts.

Metropolitan is a family business that's been selling vacuums since 1939, Stern



"No one else offers this much power in such a lightweight vacuum," says David Stern about his company's Vac 'N' Blo PRO system.

says. The family takes pride in its tagline: Deliberately Made Better In The USA®.

Check out the website for information on the Vac 'N' Blo PRO and other products and to locate a dealer in your area.

Contact: FARM SHOW Followup, Metropolitan Vacuum Cleaner Company, Inc., 5 Raritan Rd., Oakland, N.J. 07436 (ph 201 405-2225 or 800 822-1602; www.metrovacworld.com; www.carvacexcellence.com).

"They are easy to install," he says. "Everything is included in the kit except a hose from the valve cover to the inlet on the canister and wire from the float to the warning light on the dash."

Muth custom fabricates systems to order. The price for the larger units runs from \$400 to \$500, depending on the cost of aluminum. A pressure gauge for crankcase pressure is available as an option.

The Blow-by Reservoir can also save money and time, acting as an early warning system. He cites several test trucks where the reservoir filled too quickly and problems from a blown piston to a cracked block were found.

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