

Dale McLaen, Rutland, N.D.: “I started to develop a ragged cough and asthma-like symptoms. I realized they flared up after I used my fairly large sandblaster cabinet.

“It has a factory vacuum system, but I found a fine layer of dust around the outlet on the vacuum motor. I cleaned up everything, made sure the large factory bag-type filter was ok, then rechecked after about an hour of use later.

“Sure enough, an ultra-fine layer of dust had formed again, meaning the most dangerous particles that can cause lung damage were getting blown into the air and all over the shop.

“If you think about the particles that accumulate inside the blaster, such as lead from old paint, rust, metal dust, silica, and ten other kinds of dangerous things, you quickly realize they’re nothing to mess with. If you can find dust with your fingers, it’s also in your lungs.

“A HEPA-type filter might work, but I can’t find anything like it for my blaster. My short-term fix is to wear a full-face mask with replaceable cartridges whenever I use the blaster. I also open the shop doors to ventilate the entire shop when I finish.

“My longer-term fix is to vent the exhaust from the vacuum outdoors. It’s a similar problem to one outlined in a recent Best Buy report about woodworking dust collection systems. Filters in vacuum systems rarely do more than catch the big chunks. Lead made that old paint shine and last, but it’s extremely dangerous when turned into dust.”



We found this idea on the internet and thought it was worth passing on.

Those who haul dirt in pickups are no strangers to dealing with big messes. Dirt often gets mashed between the gap between the bed and the tailgate. A Twitter user has an innovative solution. A small-diameter pool noodle is used to fill the gap, which prevents dirt from working its way into the cracks.

Thomas Smith, Moodus, Conn. “A handy way to reinstall heavy wheels is to find a bolt that is 5 or 6 in. longer than the studs with the same thread. Cut the head off the bolt and file the edges clean, screw the threaded part of the long bolt into the hub, then use that long bolt to guide the wheel onto the hub. Insert two or three bolts into the wheel and then remove the guide bolt.

“I had a Wood-Mizer sawmill, and the original engine was an Onan with a lot of hours. It was hard getting parts, so I replaced it with a Honda which had the same 23 hp. All I had to do for the swap was add a small lift plate made of 2-in. channel iron, and it ran just fine.”

Don Wooley, Lawton, Okla.: “Instead of buying an expensive lift for my shop, I bolted one end of a 2 by 4 to the trusses in the shop so it hangs down vertically. I mounted a boat winch to the lower end. I can now lift heavy equipment quickly and

easily, using a step stool to crank the winch. I use it to lift mowers, generators, pumps, and much more up onto a rolling worktable that I move under the item once it’s lifted.”

Jonathan Thompson, Blairsville, Penn.: “Some older IH tractors have a problem with transmission oil leaking into the shuttle shift or TA cavity and overflowing it. The official fix is to split the tractor and drill a hole at a specific height to allow the oil level to equalize. What worked for me on an IH 340 was to drain the oil from both and replace the two drain plugs with compression fittings with a hose between, connecting the two compartments. They now share oil at the same level, and I didn’t have to split the tractor.”



Allen Pederson, Nashua, Iowa: “I was always losing the wrench for my grinder. I simply drilled a bigger hole at the end of the wrench and screwed it onto the handle.

“Last spring, I needed to put a new front tire on my riding mower. I had to use a Sawzall to get it off, but I couldn’t get the new tire over the rim. I had grilled burgers a little earlier, and the grill was still hot, so I put the tire in there for 15 min. at about 200 degrees, and then it popped on easy.”



Craig Dalton, Chilliwack, B.C.: “I put a 3/4-hp. reduction motor from a flex auger on my drill press. It used to struggle to drill a 1/2-in. hole, but now it’ll easily drill a 1-in. hole spinning at about 130 rpm’s.”



John Rochester, Deerfield, N.C.: “I use a large C-clamp to hold planks in place while I nail or bolt them into place. Makes the job a whole lot easier.”



Frame uses adjustable crossbars with upright arms with motor mounts for the engine to be tested. At the front of the stand, two upright arms with a crossbar provide support for a control panel.

Made-It-Myself Engine Testing Stand

Testing an engine before he installed it seemed like a good idea to Brian Laine, so he built an engine run-in stand. He can bolt a motor in place, fire it up, and run it for break-in, tuning and general troubleshooting, all before final installation.

“You can buy engine run-in stands, but they aren’t cheap, and as they are large, they involve the added expense of shipping,” says Laine.

Laine posted photos and complete details of the building process on his website. As he has multiple times in the past (most recently Vol. 47, No. 2), he’s sharing an overview of the project with FARM SHOW readers.

“I made the frame with 2-in. square tubing with a base of 30 by 60 in.,” says Laine. “The caster wheels lifted it 7 1/2 in. off the ground, providing room for the engine hoist to roll beneath it.”

The frame uses adjustable crossbars with upright arms with motor mounts for the engine to be tested. At the front of the stand, two upright arms with a crossbar provide support for a control panel. Laine mounted a radiator with a fan and a radiator overflow tank to the uprights. Space beneath the radiator provides room for a battery with a disconnect switch, an electric fuel pump with regulator and pressure gauge, and a fuel filter. For safety’s sake, he also mounted a fire extinguisher to an upright, as well as a ground.

“I used some 3/4-in. square tubing for the control panel frame, which I covered with an aluminum sheet,” says Laine. “I mounted a tachometer from a boat and a TachMatch to accommodate engines with a different number of cylinders, a voltmeter, an oil pressure gauge, and a water temperature gauge. I put in an extra hole for future use and temporarily filled it with a mechanical oil pressure gauge.”

He also installed a starter button and several switches with on-indicator lamps and a fuse per switch. He wired it with an on/off switch for the ignition that also powers the other gauges, a starter switch, a fuel pump switch, and a fan switch. As with the gauges, he added a couple of extra switches for future use.

“I used relays in the wiring to switch the fan and another to switch ignition current,” says Laine. “I used a salvaged starter relay, so the cable connecting the battery to the

starter is only active when the starter button is pushed. This is necessary for cars without starter relays but is also compatible with cars that use a solenoid on the starter.”

Before having the stand powder coated to protect it from oil and gas exposure, Laine fabricated three common motor adapters, one for a flathead Ford V8, one for small-block Ford, and the last for a Datsun A-series engine transmission. They were simply cradles with inexpensive rubber transmission mounts. The cradles clamp to the main 2 by 2-in. frame, allowing them to be adjusted to match the motor.

“At the transmission end, I made a plate that bolts where the transmission typically mounts,” says Laine. “I drilled patterns in the plate for three common Chevy and Ford patterns. The plate connects to the frame via the same rubber mounts used for the engine cradles.”

As Laine used the stand, he made changes as needed. The second motor tested was a Ford 302 stroker motor. It required he add an MSD ignition and coil, as he was using a magnetically triggered distributor that couldn’t directly run a coil.

“The stand saved a lot of work on the 302,” says Laine. “I made an assembly error on the motor. I was able to find the problem before installing it and having to pull it again. The motor had an oil pressure issue, and it was nice to have both electrical and mechanical gauges to confirm proper operation of the gauge and the sender.”

While working on the 302, Laine quickly discovered the need for a few more changes. One was rewiring the gauges for power separate from the ignition. He also saw the need for a muffler and a way to run exhaust out of the shop.

While working on his third engine, a Datsun A-series, he added a Massey Ferguson tractor muffler. Given the small engine size, Laine mounted it and the transmission to the stand.

Laine placed a link to drawings of the stand on the project page on his website. “There isn’t complete detail, since some of the parts were fabricated on the fly without drawings,” he says.

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