Money-Saving Repairs & Maintenance Shortcuts

He "Trued Up" Cheap Tires

Brian Lazenby turned a bad tire buy into a good investment by making a tire truing machine. The made-in-China, Gladiator brand tires he had ordered online were out of true. Rather than send them back, he fixed them.

"I saved \$700 on a set of 5 tires for the 19 1/2-in. wheels I was putting on my truck, but I could feel they were out of round, even driving at low speeds," says Lazenby. "When I checked, they were as much as a 1/4 in. outof-round."

Out-of-round was once a common problem with tires, so much so that tire trimming or truing machines were common. Lazenby's father recalled having tires trued before using them and suggested he find someone with a tire truing machine.

When none could be found within several hundred miles, Lazenby decided to build his own.

"I had an old radial arm saw and an engine hoist and decided to use them," says Lazenby. "I built brackets to temporarily attach the radial arm saw head to the vertical leg of the hoist."

Lazenby had recently replaced hubs on his truck. One fit nearly perfect to a 1-ft. length of 4-in. schedule 40 pipe. He bracketed it to the leg of the hoist with a single pin. The pin allowed minimal movement of the pipe.

"I attached a turnbuckle between the hoist base and the pipe so I could level the tire," explains Lazenby.

Once the wheel and tire were mounted, he lowered the saw blade to just barely trim the high area on the tire. He moved it across the tire's width and rotated the tire as he worked. "I brought it down a bit more and trimmed

again," says Lazenby.

When he was satisfied that the tire was true, he repeated the process on the other tires. He



Brian Lazenby couldn't find a tire truing machine so he built his own out of an old radial arm saw and an engine hoist.

then remounted them on his truck and took it out on the road.

"I ran it up to 85, and it rode as smooth as glass," he recalls.

Lazenby needed the larger wheels and tires to safely and legally haul RV trailers for an Indiana manufacturer. Since truing the tires, he has made multiple trips cross-country with no problems. Whether he buys the same brand in the future and goes through the truing process again depends on how they last. His advice for others is to spend more up front.

Check out the tire truing machine in action at www.farmshow.com.

Contact: FARM SHOW Followup, Brian Lazenby, 9750 70th St. W., Mojave, Calif. 93501 (ph 805 829-6263; brianplazenby@ hotmail.com).



David Lehman used the metal cages on chemical shuttles to build this 24-ft. long storage rack. It consists of 3 sets of double-stacked shuttle cages spaced 4 ft. apart.

Chemical Shuttle Cages Hold Steel

"I farm and operate a fabrication and repair shop. I also sell steel. I wanted to store the material neatly without spending a lot of money, so I started using the metal cages on chemical shuttles," says David Lehman, Tribune, Kansas.

His storage rack measures 24 ft. long and consists of 3 sets of double-stacked shuttle cages spaced 4 ft. apart. The upper and lower cages are held together by big metal bands and hose clamps.

The cages are made of lightweight 16-ga., 3/4-in. O.D. galvanized tubing and have openings that measure either 8 in. sq. or 6 by 8 in. "I made sure to pick cages with matching holes so the steel pieces will go all the way through them," says Lehman. "The longest pieces I use are 24 ft. long.

"It really works good. I have 6 kids at home and when I saw the economic downturn in agriculture coming, I knew I would need extra income. So I decided to start my welding business."

According to Lehman, shuttle cages are made of lightweight material but they'll hold a lot of weight as long as the cage stays



Cages have matching holes so long steel pieces will go all the way through them.

level. "If you set the cages on a floor that isn't completely flat they'll collapse under the weight of whatever is in them," notes Lehman.

Contact: FARM SHOW Followup, David Lehman, 114 Glick, Tribune, Kansas 67879 (ph 620 376-8562; plowboycustom@gmail. com).

Anti-Shimmy Device For Narrow Front Tractors

"I drive my Deere narrow front-end tractor on paved roads, and the shimmy was really a problem until I figured out how to fix it," says retired Maine farmer Lauris Bailey. "Before I built my anti-shimmy device, I tried letting air out of one of the front tires, out of both of the front tires, and I even removed one of the wheels. Nothing worked. It just made the tractor harder to steer at road speed."

Bailey also talked to a tractor mechanic and looked at different aftermarket products to fix the shimmy problem, but couldn't find a solution. Eventually he designed and built a bracket that mounts between the front wheels and holds a shimmy-shock stabilizer. Bailey says the device keeps a small amount of pressure on both of the wheels and holds them stable, especially when he drives at road speed on paved roads. Bailey's device doesn't

hinder steering the tractor or cut down on the radius he can turn.

"People have looked at this setup and told me I should've patented it a long time ago," Bailey says. "It's really not that difficult to make if a person can cut a piece of flat metal to a template, drill a few holes, and mount it to the front spindle of the tractor." Bailey says the concept should work on any Deere tractor with a standard narrow front end. He also thinks it would work on Farmall, Oliver, Case and other tractors with narrow fronts.

"I grew up on a farm and have been around tractors and machinery all my life," says Bailey. "Fixing the shimmy problem on that 1959 Deere made it a lot easier driving my tractor on paved or gravel roads."

Contact: FARM SHOW Followup, Lauris Bailey, 173 Bailey Hill Road, New Sharon, Maine 04955 (ph 207 778-4005).

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Fuel Pump Repair Business Going Strong Since 1978

"The main skills needed for this business are good eyesight, nimble fingers and being able to do the same thing over and over again without getting bored," says Feltz Terrill Jr., whose niche company in DeLeon, Texas rebuilds fuel pumps and vacuum advances.

They work mostly on mechanical pumps for cars, tractors and commercial equipment made prior to the 1960's. Most of his customers own vintage vehicles where they want the original equipment repaired, not OEM replacements. Terrill says his main pump expert Brian has probably rebuilt more than 20.000 pumps in the past 10 years.

"We can rebuild any kind of pump, as long as its mechanical and held together with screws," Terrill says. "From the late 1960's on up they're crimped together, and I can't do those. All the materials we use inside are modern, so they handle ethanol up to 10 percent. We do pumps for tractors and farm equipment, but our main business is vintage cars and trucks."

Pumps that come to Terrill's shop range from thoroughly rusted to partially working. "We usually have to put in a diaphram, a seal and 2 little check valves. Sometimes there's linkage or a spring that needs replacing, maybe a gasket or 2. We thoroughly clean them and will resurface the casting if its warped. The arm has to be good to make a sound repair. We put in a new mounting gasket with a 1-year warranty and put the pump back together with all new screws. Work is usually done in 2 to 3 weeks."

Terrill says repairing and rebuilding pumps isn't something just anyone wants to do or has the skills to do. "My daddy and I got into this because we had access to a big supply of used auto parts. We liked tinkering with old stuff to make it new again. At first we started fixing fuel pumps and water pumps, then people found out about us and it's just sort of taken care of itself since 1978." The business still sells other parts for vintage cars and trucks.

Terrill says he's busy enough that he buys more than 100,000 helmet head screws annually for pump repairs. He charges \$85 to \$95 to repair and rebuild single action fuel pumps and \$105 to \$115 for double action pumps. Vacuum advances are repaired for \$75. Customers pay shipping both ways, and whenever they call, a real voice answers the phone.

"We've got a lot of experience, are happy to talk about the work we do, and we charge a fair price," says Terrill. "Those are probably the reasons why we've been successful."

Contact: FARM SHOW Followup, Terrill Machine, Inc., 1000 Co. Rd. 454, De Leon, Texas 76444 (ph 254 893-2610; terrillmachine@yahoo.com).