

He Built His Own Electric Shop Lift

After building a new shop three years ago, Larry Zimbelmann needed an easier way to get up to his parts storage area which is 10 ft. above floor level. So the Milford, Neb., farmer decided to build an elevator.

The elevator cage measures 40 by 45 in. and runs up and down on two 20-ft. lengths of channel iron mounted about 1 ft. out from the wall. Adjustable rollers guide the cage along three sides of each channel iron. Power is provided by a 1/2 hp electric gear motor connected by chain and sprockets to a drum with cable that lifts the cage. There's a safety switch at the top, and a 200-lb. counterweight that gives the elevator a 700-lb. lift capacity.

"It takes up less space than stairs and works fast," says Zimbelmann. "The cage is big enough that I can load tools and other parts and equipment on it."

A big 25-tooth sprocket and a smaller 15-tooth dia. sprocket serve as the gear reduction drive for a cross shaft at the top of the frame. A spool with 3/8-in. winch cable raises and lowers the lift. The elevator is equipped with a spring-loaded brake that applies or releases pressure on the cross shaft via a solenoid wired into the electric motor.

The elevator is operated from a waist-high, push-button control arm.

"I looked at a lot of commercial elevator hoists and winches before I built it and discovered that most of them go too slow for my needs. With most commercial elevators, it takes 30 seconds to go up 10 ft., but with mine it takes only 11 seconds," says Zimbelmann.

"I use the loft area to store small parts for my tractors and other machinery that would otherwise get in the way on the shop floor."

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Photos by Vantage Event Imaging
"It takes up less space than stairs and works fast," says Larry Zimbelmann about the elevator he built for his shop.



Elevator goes up to shop's loft area, which is used to store small parts.

Understanding Tire Talk

If you're confused by all those numbers and letters printed on tires, you're not alone.

Typically on a tire's sidewall, you'll find the model or name of the tire and opposite that, the manufacturer. On the space between the model and manufacturer, you'll find something like "LT 245/75R16 90H" on one side and something like "TRACTION A TREADWEAR 220 TEMPERATURE B" on the other. In smaller type near the bead, you'll find information on maximum cold inflation and load limits, tire ply composition and materials used, and even the U.S. Department of Transportation safety standard codes relating to that particular tire.

Okay. But what does it all mean? This diagram from Cooper Tire Company should help.

If we break down the coding on a pickup tire, this is what it says:

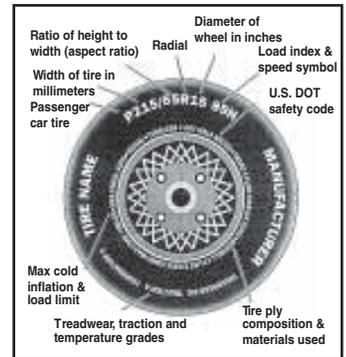
LT - This is the type of tire. LT means light truck. You'll find these on pickups and some SUVs. P means passenger car.

275 - Width of the tire, in millimeters.
 75 - Designates the aspect ratio, or ratio of height to width so 75 means the tire is 75 percent as tall as it is wide.

R - Designates radial construction. For a bias tire, you might find D, for diagonal, or B for belted bias.

17 - Indicates the nominal wheel dimension to fit the tire, in inches. The wheel diameter on the vehicle and this number on the tire must always match.

95H - These are load and speed ratings for the tire. Such information is not required on the tire, so don't panic if it's not there. But if you're concerned about your tires' performance under load or at certain speeds, you should probably look for this information or ask your dealer before you buy the tires. The number relates to load. The higher the num-



ber, the greater the load carrying capacity of the tire. The letter is the speed rating, based on indoor wheel tests and doesn't represent a safe or acceptable driving speed.

Other information that might be important is treadwear, traction and temperature, which appear opposite the size and load ratings.

The treadwear number compares the tire against a government-mandated standard that is equal to 100. A treadwear rating of 220 means the tread should last 2.2 times as long as the federally imposed standard.

The traction scale is from C to AA, meaning that a tire with a C rating has the lowest level of road grip and an AA traction tire has the most.

The temperature rating indicates the tire's ability to disperse heat. This may not be important on tires that run at low speed on soft surfaces, but it is something to look for on tires that will see high speeds on hard surfaces under load. The rating scale is C to A, with an A rated tire being best able to resist heat buildup.

Oil Changer Works Quick, Clean

Russell Flock, Maywood, Nebraska, is an innovator when it comes to changing oil in tractors, combines, trucks, and pumps.

Several springs ago, he was frustrated because he couldn't get to the oil dipstick on his Case 2170 during planting. "With saddle tanks for the sprayer on the front of the tractor it was impossible to open the doors that gave us access to the engine," he says. He couldn't have added oil if the tractor had needed it without removing one of the tanks.

"That got me thinking about other ways to change and add oil," he says.

After eight years of experimenting with 15 or 20 different designs, Flock put together what he calls the Able Oil Changer. It consists of a pump, a container for fresh oil and one for used oil, and a small hose and will pump out used oil and refill the engine in just a few minutes.

"You can use any reversible power drill to power the pump," he says.

Flock installed Pioneer hydraulic couplers and 1/2-in. hoses on his vehicles, so all he has to do to change oil is hook a couple of hoses together, pump out the used oil, and then, after reversing the drill through the same hose.

"I also relocated the oil filters using a couple hoses and the same kind of couplers so I don't have to get under the vehicles at all," he says.

Flock's Able Oil Changer comes with a 5-gal. bucket for fresh oil and a 2 1/2-gal. container for waste oil. He says the pump can be mounted on any size container, including 30 and 55-gal. barrels.

"I'd be happy to advise anyone on how to



Able Oil Changer is designed to pump out used oil and refill the engine in just a few minutes. You can use any reversible power drill to power the pump.

add hoses and couplers to their own vehicles, tractors, combines, or irrigation pump engines," he says.

"For some engines, you can pump out used oil through a small hose inserted through the dipstick tube," he says. "It takes a little longer, but is not nearly as messy as draining oil from the plug in the pan."

"In addition to using it for engine oil, you can also use it to change transmission fluid or even empty the oil from gear boxes or differentials," he says. "It can be set up to filter oil as it pumps it out, so it can be reused if you want."

The Able Oil Changer sells for \$299, plus shipping.

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Dolly Stands Make Repair Work Easier

Avon, Ohio brothers Eric and Steve Wise spend their winters repairing, overhauling and restoring farm tractors. "We do our own maintenance plus some restoration work, and we're always looking for ways to make things easier and faster," Eric says.

For years they've made tractor-splitting stands for their own use to work on engines, clutches, and rear ends. Recently, the brothers say they've been asked to make splitting stands for others. That prompted them to launch a sideline business, manufacturing stands and dollies for sale.

Their product line now includes stands to support engine and clutch assemblies, dollies to handle the front end of tricycle-type tractors, dollies to handle the entire rear end of 1939-1956 Farmall rear ends, and more.

They use heavy carbon steel to construct their stands and mount them on Faultless heavy-duty casters.

"Most of our customers so far have been individuals or small independent farm machinery repair shops," Eric says. "Our goal is to provide a solution for someone who wants to make a tractor repair job easier. We can design stands and dollies from the ground up for any tractor or other machine."

"Our main focus is on the IH Farmall line, but we can make stands for other makes, too. We recently adapted a set of stands and dollies for a man who restores Deere tractors."

A complete set of stands and dollies would cost \$500 to \$1,000, depending on how much the stands have to be modified from the Farmall specifications.

They have some stock on hand and can ship



Ohio brothers Eric and Steve Wise recently began manufacturing stands to support engine and clutch assemblies, and dollies to handle the front end of tricycle-type tractors.



They use heavy carbon steel to construct their stands and mount them on heavy-duty casters.

immediately. Shipping weight is less than 300 lbs.

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