

Tool carrier consists of a piece of 4-in. dia. pvc pipe with a handle riveted to it and end caps attached. One endcap screws off.

## PVC Tool Carrier

"I made this nifty tool carrier to hold a set of socket wrenches. It's great to take in the tractor cab, or just to hold them together in the toolbox," says Victor Rogalla, Minto, N.Dak.

The tool carrier consists simply of a piece of 4-in. dia. pvc pipe with a handle riveted to it and end caps attached. The one endcap screws off. "It's water and rust proof and

easy to carry. If you should ever get water inside it, just take out the tools, put in floor dry, and then dump it out. This carrier is perfect for a socket set because it keeps all the pieces together."

Contact: FARM SHOW Followup, Victor P. Rogalla, Box 313, Heron St., Minto, N. Dak. 58261 (ph 701 248-3642).

## Doubled-Up Pickup Springs

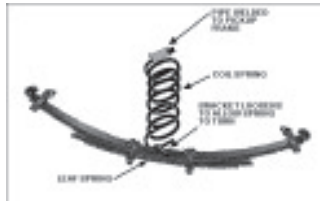
James Drullinger figured out a slick way to boost the suspension on his 1/2-ton pickup in a way that lets him adjust the extra lift as needed. He says the idea should work well on any truck with leaf suspension.

"I cut an automotive coil spring in two and mounted half over each set of leaf springs," says Drullinger. "The challenge was making brackets so that by rotating each spring, I get more or less suspension on one or both sides."

The brackets fit over each set of leaf springs. Hooks hold bottom of coils in place. A bolt at the bottom tightens up the hooks.

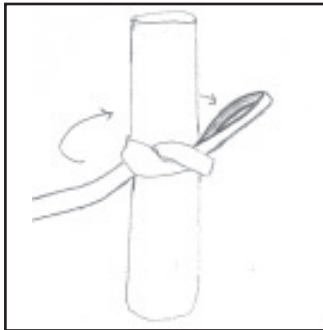
The top end of the coil fits through a short piece of pipe welded to the truck's frame.

By loosening the bolt on the bracket, he can rotate the spring so it spirals up or down



By loosening bolt on bracket, Drullinger can rotate coil spring so it moves up or down to increase or decrease suspension.

Contact: FARM SHOW Followup, James Drullinger, 810 Adams, Akron, Colo. 80720 (ph 970 554-9090).



The 1-in. wide nylon strap has a loop sewn into one end of it.

## Do-It-Yourself "Filter Changer"

"It's a handy trick for those times when you don't have the right-sized filter wrench or if you have to work in tight quarters," says Tom Conner of Gardnerville, Nevada, about the easy-to-use filter changing idea.

"I came up with the idea one day when I was trying to change all the filters on my Bobcat 980. They were sucked up pretty tight and I couldn't get them to budge. There were enough hoses, brackets, etc., around them that I couldn't get a good grip on them, nor could I get a good filter wrench on," says Conner.

To solve the problem he used a 1-in. wide nylon strap which had a loop sewn into one end of it. He slipped the strap around the fil-

ter and then tied a knot, like when you start to tie your shoe. (He kept the strap flat against the side of the filter.) He passed the tail end of the strap back around behind the filter and then put the tail end through the loop, leaving about 2 ft. of strap to pull on.

"From there, I just pulled on the tail end, cinching the strap down on itself. It spun the filter loose on the first pull," says Conner. "A couple of the filters were on so tight that I had to loosen the strap slightly and then pull again. But they all came off very easily."

Contact: FARM SHOW Followup, Tom Conner, 2275 Sandoval Road, Gardnerville, Nevada 89410.

## Heated Filter Housing Warms Up Veggie Oil

There's a lot of interest in using waste vegetable oil in vehicles equipped with diesel engines. The used vegetable oil is collected from local restaurants as a way to reduce fuel expense. Conversion kits are available.

You start the engine on diesel fuel and switch over to veggie oil. The problem is that you have to wait up to an hour for the veggie oil to heat up before you can switch over from diesel fuel to veggie oil, in order to prevent problems with fuel waxing or gelling in cold weather.

This new heated filter housing is designed to solve the problem by heating the veggie oil before it enters the engine. Fuel is heated by plumbing in a line from the engine coolant.

"It quickly gets the veggie oil up to the temperature where it has about the same viscosity as diesel fuel, which it should be for proper combustion," says inventor Noah Yoder.

The filter housing measures 6 in. in dia. and 12 in. high and bolts to the veggie oil tank. It consists of a Baldwin semi truck fuel filter inside a 5-in. dia. metal container that's inside a 6-in. dia. metal container, forming a water jacket. There are four ports, for fuel in and fuel out and water in and water out. You splice into the vehicle's fuel tank line and also into the heater hoses. A T-handle with bolt is used to open the lid for changing the filter.

"It works fast because the entire container gets heated. As soon as the temperature gauge reads normal operating temperature you're ready to switch over to veggie oil, without having to wait for the oil to warm up in order for it to flow. After driving five miles



Filter housing heats veggie oil before it enters engine by plumbing into the engine coolant lines.

or so you're ready to change from diesel fuel over to veggie oil. And it'll handle up to 10 gallons per hour so it has a lot of capacity."

Yoder says he's been building the units for more than 1 1/2 years, mostly for friends.

A word of caution - the container does get very hot so you have to be careful around it. "I highly recommend adding insulation around the housing," says Yoder.

He ships the units anywhere in the U.S. for \$150 postpaid. The best way to reach Yoder is by mail.

Contact: FARM SHOW Followup, Noah Yoder, 3589 S. 16<sup>th</sup> Road, Humansville, Mo. 65674.

## Slick Way To Measure Bolts

If you've ever found yourself searching for the right bolt to fit a certain hole, you know it usually takes a lot of trial and error to determine the right bolt diameter and length. This new Boltstix measuring device is designed to solve the problem by checking the size and depth of a bolt hole for you.

The "sticks" in the set are made from high density polyethylene and measure about 6 in. long. Each stick is marked in 1/4 to 3/4-in. sizes for length, with a hole at the top end of the stick that corresponds to the correct bolt diameter.

To find the bolt size you need, choose one of the sticks in the set that's closest to the size of the bolt hole and insert the stick in the hole. If it won't go in, choose the next smaller size. Push the stick all the way to the bottom of the bolt hole. Then place your thumb nail right at the top of the bolt hole and hold it there, while removing the stick. Read the length of the bolt on the length gauge, and the size of the bolt on back of the stick.

The kit comes with two sets of sticks - blue for standard and red for metric. The metric sticks have markings molded in 10 mm marks. The sticks snap onto a handle that can be hung on a pegboard for storage.

"It eliminates the need to grab a handful of bolts and run to the auto parts store to try and match them up," says inventor Rick Guinn, Peoria, Arizona. "Once you know the length and diameter of the bolt you need, you can go to your bolt bin and find a bolt that fits in the hole at the top of the stick. Then you can measure the bolt against the length markings on the stick."

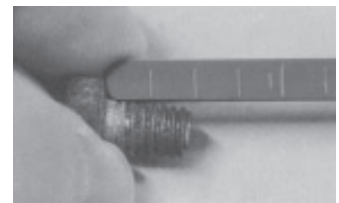
A set of one standard or one metric Boltstix sells for \$11 apiece including S&H. A set of one standard and one metric Boltstix sells for \$22 plus S&H.



Boltstix measuring device is designed to check the depth of a bolt hole.



Each stick is marked in 1/4 to 3/4-in. sizes for length, with a hole at the top end that corresponds to the correct bolt diameter.



You can read length of bolt on length gauge and size of bolt on back of stick.

Guinn says he plans to come out with a product later this summer that will measure for screws. He will also introduce a product that will list and measure the pitch of the thread on both bolts and screws.

Contact: FARM SHOW Followup, Boltstix LLC, 8159 W. Crocus Dr., Peoria, Arizona 85381 (ph 866 779-2658 or 623 215-3836; fax 623 334-1699; rrguinn@cox.net; www.boltstix.net).