



Tapered tip fits onto end of Jim Rankin's grease gun so he doesn't have to take the dust cap off the wheel hub to lubricate it.

Grease Wheels Without Removing Hub

A simple tapered tip for the end of his grease gun saves Jim Rankin hours of labor greasing the wheels of 30 wagons used to raise tobacco.

Because he doesn't have to take the dust cap off the wheel hub, it takes a fraction of the time to apply grease. He drills a 1/4-in. hole in the center of the hub. It's the right size for the 1 1/4-in. long cold round steel piece on his grease gun.

"I had several tips made up for my grease guns," Rankin says. "The tip screws on the end of the grease gun and has a small hole about 1/8-in. dia. The hole in the hub doesn't have to be exact; that's why I tapered the tip. Put the point in the hole, put pressure on it and squeeze the grease gun. Grease until it comes out of the backside."

When finished, he plugs the hole with a small rubber stopper.

Rankin notes he has had more luck with his attachment than with grease fittings on



He drills a 1/4-in. dia. hole in the center of the hub to make room for the tip.

the side of hubs that he thinks don't do as good a job.

The simple tip has been a huge time saver, Rankin says, and made it easy to grease his wheels through the years.

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Deutz Diesel Engine Mated To F-150 Pickup

"I got the idea for doing this after reading an article about Shade Tree Conversions in FARM SHOW a couple years ago," Truman Miller says. "The story said they had plans that could help a truck get up to 40 mpg, so I decided to buy their manual and give it a try."

After reading the Shade Tree manual (www.shadetreeconversions.com), Miller found a used 1997 Ford F-150 with 340,000 miles on the odometer. He bought it for \$18,000 because the body and frame were in good shape and the cab was large enough to hold his family of four kids.

Miller decided to repower the Ford with a Deutz Diesel because "they have a history of running well with very good fuel efficiency." He found a 1997 5-cyl. Deutz on Craigslist, paying \$1,500 for the engine, clutch and bell housing. Miller also found a NV4500 transmission from a 1999 Dodge truck for \$900.

"My Ford engine compartment didn't have as much room as the Chevy, so I had to cut out part of the grill, remove the radiator and block up the cab about 1 5/8 in. so the Deutz housing would slide into place," Miller says. "I also modified the engine mounts and I had to cut out part of a cross member on the frame and replace it with a different one so the oil pan would clear."

A machine shop built a 3/4-in. adapter plate to mate the bell housing on the Deutz to the Dodge tranny. Since the Deutz is air rather than liquid-cooled, he had to cover half the air intake so the engine would run warmer.

Miller adapted the exhaust with a 3-in. flexible pipe and used existing lines for the tachometer, the heater and AC connections. He rigged a new mount for the power steering pump and the alternator and bought a new V belt to run it because the Ford had



Truman Miller repowered a 1997 Ford F-150 with a 5-cyl. Deutz diesel engine that he bought on Craigslist for \$1,500.

a serpentine belt. The Deutz already had a vacuum pump that worked fine.

Miller's repowered F-150 has a 5-speed transmission with a 3:08 rear end. That gives it enough power to easily pull a 5,000-lb. trailer. Top speed is in the 80 mph range.

"I've got about \$3,700 into the engine and parts, and the rest is all labor," Miller says. "That's quite a bit less than trading for a different truck, and I think this engine will probably run for a couple hundred thousand miles."

Although he hasn't exactly documented mileage yet on the new setup, Miller says it's about double the 16 mpg that the truck got originally. Miller says the manual from Shade Tree was very helpful and he recommends their book to others who aren't afraid to tackle a project like this. Miller has several photos of the project on his Facebook page.

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Kits For DIY Engine Swaps

Anyone who's into do-it-yourself engine swaps will be interested in these Cummins installation kits available from Auto World, Great Falls, Mont.

Motor Mounts

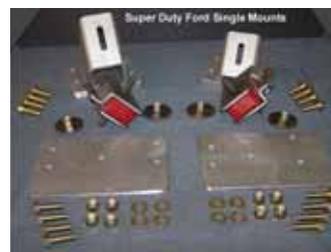
The company says it's been doing Cummins engine repowers for more than 20 years and offers motor mounts for many swap applications, including Cummins 6BT and 4BT engines. Motor mount kits include crossmember and mount sets, OEM alternator/air conditioning bracket sets, and tach adapter kits. The company also sells transmission adapters, flexplates, oil relocation kits, PCS transmission controllers and other performance items for diesel trucks.

"All our products are TIG welded/waterjet cut and made to order for your particular application. Instructions are provided with all our products, including wiring and tech help on all your other questions," says Dawna Kraus. "We make our own accessory brackets for Ford and Chevrolet pickups. Over the years we've done repowers for a lot of farmers and ranchers."

Crossmembers

Their crossmembers are designed to fit older vehicles from 1967 to 1987 and up through 1991 in Chevrolets with the old body style.

The company also sells the cross members needed for old body-style GM and Ford trucks, allowing you to easily equip them with a diesel engine. "We're partners with Destroked's products and sell their adapter plates for transmissions and alternator



Cummins Auto World has been doing Cummins engine repowers for more than 20 years and offers motor mounts for many swap applications.



The company sells crossmembers designed to fit older Chevrolets as well as older GM and Ford trucks.

brackets," says Kraus.

Contact: FARM SHOW Followup, Auto World, 9th St. and 6th Ave. N., Great Falls, Mont. 59401 (ph 406 727-8915; autoworld@bresnan.net; www.autoworldmt.com).



Simple Shift Transmission Controller lets an electronic overdrive shift smoothly whether it's under load or not, at lower rpm's and with better fuel efficiency.

Controller Cures Overdrive Blues

"We sell to a lot of people putting overdrives in older trucks that didn't have them," says Jay Rohrbach of Powertrain Control Systems (PCS) about his company's Simple Shift Transmission Controller. "They are also popular when repowering an older truck with a Cummins diesel. You can get much better mileage with an overdrive and our controller."

The Simple Shift Transmission Controller lets an electronic overdrive shift smoothly whether under load or not, at lower rpm's and with better fuel efficiency.

"Our controller will let you do 70 on the highway at 1,800 to 2,100 rpm's like a normal truck, not turning the engine at 3,500," says Rohrbach. "The same holds for getting the most out of an overdrive when doing heavy towing or normal driving of anything from half-ton to one-ton trucks. It does more at a lower rpm's, and that cuts fuel use."

High-performance operators often turn to programmable electronic controllers. However, most of these involve the use of a laptop in the truck and require extensive

programming. With the Simple Shift the only thing added to the cab is a small control unit.

The Simple Shift controller lets the operator adjust shift points, shift firmness and torque converter lockup. Easy to use dials adjust settings up or down. Simple Shift also offers complete diagnostics if problems occur with the transmission.

"It's fully adjustable, so you can go in and adjust as needed," says Rohrbach.

The kit from PCS retails for \$599 and is available for most domestic 4 and 5-speed transmissions. The kit is designed for do-it-yourself installation. It includes the complete wiring harness tailored to the specific transmission. Each connector is clearly labeled. Initial setup is carried out with the self-calibrating throttle on the Simple Shift control unit.

Contact: FARM SHOW Followup, Powertrain Control Solutions, 11228 Hopson Rd., Ashland, Va. 23005 (ph 804 752-6025; sales@powertraincontrolsolutions.com; www.powertraincontrolsolutions.com/dealers.php).