

Repower Your Pickup With A Diesel Engine?

Many owners of factory-built diesel pickups report fuel mileage double what they were getting from comparable gasoline-powered pickups they traded in. But, what can you do with a pretty good gas-powered pickup that gets horrible mileage, and you're not yet ready to trade for a diesel?

One possibility is to replace the gas engine with a new diesel.

Dealers making these conversions say you can generally get about twice as many miles per gallon of diesel fuel for the same truck model. Several farmers who had real "gas hog" pickups repowered told us they're getting four times better mileage since switching to diesel.

But, new diesel engines don't come cheap. The going price for a complete conversion is about \$8,000-8,500. In addition to pickups, a number of one and two-ton trucks are also being converted to diesel to cut costs.

Hicklin GM Isuzu in Des Moines, Iowa, has installed several new QD145 Isuzu diesels in pickups. This 6-cyl. 145 hp engine is liquid cooled, has a displacement of 353 cu. in., and weighs 992 lbs.

Russell Riley, of Corning, Iowa, put a QD 145 in his 1973, ¾-ton, 4-wheel drive Chevy pickup in March 1981. He says he's getting 16-20 mpg, compared to 4-5 mpg from the "gas guzzling" 454 V-8 he took out. He installed the engine himself and had driven the truck about 12,000 with the new engine when FARM SHOW talked to him. Riley frequently pulls a trailer to haul hay and livestock and says the new diesel has worked fine. The conversion cost him about \$5,000 plus his time, and he figures that with an average of 15,000 miles per year, he'll pay for the new engine in 35,000 miles or less. Others figure up to 75,000 miles to break even, depending on new and old fuel economy and miles driven annually.

Hicklin reps say part of the conversion cost they quote involves raising the truck cab and body to accommodate the larger Isuzu diesel, compared to factory-installed gas engines. They also install a new radiator, and the conversion requires 100-400 hours of labor, depending on the truck and modifications required. Very slow differentials may have to be changed to compensate for the slower speed of the diesel engine, compared to the speed of gas engines.

Kits are available to convert some late-model Chevy trucks to Isuzu diesels, but special brackets must still be fabricated for air conditioning units, etc.

Marshall Warren, Leon, Iowa, has installed diesel engines in several trucks in recent years and is sold on their performance. His most recent conversion is a 1978 Ford 150 pickup which he drives about 25,000 miles annually. On a recent trip from Iowa to Arizona and New Mexico, Warren says he averaged 15.4 mpg while

pulling a 32 ft. 5th-wheel trailer.

Warren used a 5-cyl., air-cooled Deutz diesel with 278 cu. in. displacement. He says this engine is rated at 100 hp, but that he's watched unmodified units develop 140 hp on a dynamometer. A few years ago, he put a similar Deutz engine in a dump truck and, while hauling 16-20 ton loads, he averaged 8 mpg while other haulers with comparable trucks and loads averaged 4-5 mpg with gasoline engines. Warren says he's had no cooling problems with Deutz engines, even in the dump truck during hot weather and very dirty work.

Deutz has obtained EPA approval for installation of their 5-cyl. diesel in trucks with gross vehicle weight (gvw) of 8,500 lbs. or more. This means at least a heavy ¾ ton or larger truck with adequate suspension. This engine also weighs more than 900 lbs., compared to 400-500 lbs. for gasoline and even some truck diesel engines.

Sapp Bros. Ford Center, Omaha, Neb., regularly sells and installs Deutz engines in new Ford trucks, or they'll convert used trucks from gas to diesel. But, according to their sales people, the truck — new or used — must have adequate suspension, and tires with enough load capacity, to support the extra weight.

A new pickup can't be ordered from the factory without an engine. So, when Sapp Bros. gets an order for a new truck with a diesel engine, they specify heavier suspension, shock absorbers, etc. Then, when the truck arrives, the gasoline engine and transmission are removed, and the new Deutz engine and a different transmission installed. Conversion takes one to two weeks.

According to Sapp Bros., Ford uses a Borg-Warner T19D, 4-speed transmission, and Deutz provides a Borg-Warner T19A transmission which is comparable, but modified to suit the diesel engine and already mounted. This eliminates the need for dealer fabrication of a transmission mounting plate, and reduces conversion time.

Sapp Bros. agrees with Warren that air-cooling of Deutz engines is no problem. Air-cooled engines have been used successfully in Deutz tractors for years, and they have also established a solid reputation for outstanding fuel economy in Nebraska Tractor Tests. Deutz engines have a thermostatically-controlled cooling fan which many users say seldom operates when trucks are driven at highway speeds. In fact, Sapp Bros. frequently builds extra engine shrouds and windbreakers for the grill to prevent overcooling the engine, which reduces efficiency. But, because there is no radiator, conventional hot water heaters cannot be used on Deutz engines. So, in most cases, engine oil is used instead of water to warm the cab. Deutz also



Marshall Warren's 1978 Deutz-powered pickup averages 15.4 mpg, pulling a 32 ft. 5th wheel trailer.

sells separate diesel burning heaters that can be used to warm the cab whether the engine is running or not.

According to Sapp Bros., a complete factory-assembled gas engine cannot be ordered from Ford. So, the gasoline engines they remove from trucks converted to diesel are actually a bargain for customers needing a replacement gas engine because there's no labor charge to assemble an engine from new and/or reconditioned parts.

The slightly lower price of diesel fuel, and from 20 to 40% lower maintenance cost of diesel engines compared to gas models, are also used to sell engine conversions. But, conversion is not practical for everyone. Annual mileage should be at least 15,000 and some dealers recommend even more use to break even.

For more information, contact: FARM SHOW Followup, Hicklin GM

Isuzu, Interstates 80 & 35, 2nd Ave. Exit, Box 4026-H.P., Des Moines, Ia. 50333 (ph 515 286-4826);

FARM SHOW Followup, Isuzu Diesel of North America, 23920 Freeway Park Drive, Farmington Hills, Mich. 48024 (ph 313 474-8000);

FARM SHOW Followup, Detroit Diesel Allison Div., General Motors, 13400 W. Outer Drive, Detroit, Mich. 48228 (ph 313 592-5000);

FARM SHOW Followup, Deutz Corp., 7585 Ponce de Leon Circle, Atlanta, Ga. 30340 (ph 404 449-6140);

FARM SHOW Followup, Sapp Bros. Ford Center, Inc., Interstate 80 & Hiway 50, Box 37569, Omaha, Neb. 68137 (ph 402 895-4333);

FARM SHOW Followup, Russell Riley, Corning, Iowa 50841 (ph 515 333-4630);

FARM SHOW Followup, Marshall Warren, R. 2, Leon, Ia. 50144 (ph 515 446-6317).

First-Of-Its-Kind Electronic Dipstick

You'll never have to take a chance with your oil level again, or waste time checking it when it's full, thanks to a new electronic dipstick developed by the 3M Company, St. Paul, Minn.

According to Joe Minarovic, manager of sales for the first-of-its-kind dipstick, it replaces the conventional dipstick and has an electronic sensor that monitors fluid levels. It will work in cars, pickups, vans.

"This is a much more fool-proof way to keep track of oil. The present use of oil pressure gauges may not warn you until damage has already been done. And in cars, with the growth of self-service gasoline stations, many car owners are not checking their oil as often. Many of the new cars have only three quarts of oil and, if you're a quart down, you

can be cutting your engine's protection by one third," explains Minarovic.

Every time you start your car or truck and the dipstick finds the oil a quart low, a tiny memory chip activates a red "Add Oil" light mounted on the dash board, which blinks on and off. If the oil level is adequate, a steady green "Oil OK" indicator lights for 30 sec.

Initially, the new dipstick will be sold only for automobiles. New car dealers will sell them, and they'll also be available by mail direct from 3M Company. Suggested retail price is \$39.95.

For more information, contact: FARM SHOW Followup, Oil Sentry, 3M Company, Dept. AA, P.O. Box 33133, St. Paul, MN 55133 (ph 612 733-3124).