

STEP BY STEP MANUAL TELLS HOW

Do-It-Yourself Pickup Engine Conversion

If you've been thinking about repowering your pickup with a diesel engine, you'll be interested in a just-published manual that gives you step by step instructions for doing the job yourself in your own farm shop.

"This manual is the result of more than eight years of full time involvement with pickup engine conversions," says author Doug Fraser, of Diesel Engineering Service, Oregon City, Ore. "Our first diesel conversion, a 1969 Ford ¾ ton pickup, was sold recently with a total mileage of over 612,000. Its engine runs as good today as it did the day it was installed eight years and 612,000 miles ago."

"One reason for publishing this 'how to' manual is the problems many owners have had with newer GMC diesel engines. We've been involved with the replacement of many of these engines. Many owners are stuck with a late model pickup with very few miles and a bad engine. Our manual tells how to solve the problem with a do-it-yourself engine conversion," Fraser told FARM SHOW.

Directions in the manual are based on using a ¾ ton Ford pickup as the vehicle. "You can use your judgement to easily adapt the instructions to other makes," Fraser points out.

"Some makes may not have adequate factory front ends to accept the conversion without extensive and expensive modifications. We recommend 1969 to 1978 Fords — all of which have almost the same frame — as the best units to start with if you don't already own a pickup."

Fraser's manual details use of a special type of bell housing which, he says, is the key to a trouble-free conversion. The system he strongly recommends bolts an engine to a transmission using the same make parts for the clutch and clutch control. "Almost every other method needs parts from many sources to complete a conversion," he notes.

The manual lists all the parts you'll need — and their numbers to make it easy to obtain them locally. It also gives you a listing of all the required tools.

Sells for \$10. "Purchase of the manual entitles you to call for consultation on any problems you may encounter while repowering your pickup," says Fraser.

For more information, contact: FARM SHOW Followup, Diesel Engineering Service, 18221 Clear Acres Drive, Oregon City, Ore. 97045 (ph 503 631-3919).

Making Ends Meet

In today's economy, where it's becoming increasingly difficult to know which way to turn, maybe what we all need is a double car.

This unusual way to "make ends meet" is for real — a driveable double car, made by splitting two 1977 Datsun F10 Hatchbacks, removing the tail ends and welding the front halves together back to back. The car has two dashboards, two steering wheels, two front seats, two hoods, two gear shifts and two fully functional engines. Since both cars were front wheel drive, the resulting "double car" can be driven from either end.

Locking devices were put on the

steering systems so one end locks while the other is steering. The exhaust system also was altered, and the wheelbase strengthened to accommodate the extra length.

The double car was put together by Fram/Autolite, a major auto parts manufacturer headquartered at Providence, R.I., to prove that preventive maintenance pays off. One of the front ends is from a well-maintained car and the other from a neglected auto.

Fram/Autolite is taking the double car on the road, displaying it at major fairs and auto shows across the country.

MAKES COMBINING, SWATHING EASIER

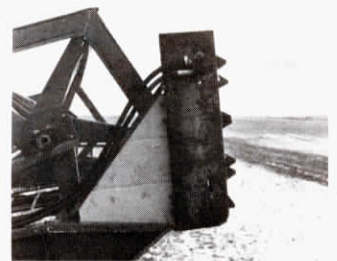
Power Swath Divider Slices Through Crops

"The Keer Shear saves time and money by lifting up and slicing through down and tangled beans, rape, wheat, barley, and other crops," says Arne Johansen, manager of Danio Products Ltd., Okotoks, Alberta, manufacturer of a new powered crop divider.

The Keer Shear mounts in place of the regular crop divider on combine or swather heads. Blades, similar to sickle sections, revolve on a roller chain, lifting and cutting the down crop. The unit is powered by the combine or swather hydraulics.

"In addition to combines and swathers, some farmers mount the unit on haying equipment. It may work on down corn, too, but we've never done tests," says Johansen.

The Keer Shear adjusts to three different positions and fits any combine or swather. Johansen says that in standing crops you can leave the unit



Cutter blade is made up of sickle-like sections which revolve on a roller chain.

in place with the hydraulic hoses disconnected.

Sells for \$785. Johansen is looking for distributors.

For more information, contact: FARM SHOW Followup, Danio Products Ltd., 101 Fisher St., Okotoks, Alberta, TOL 1TO (ph 403 938-7087).

45.4 MILES PER GAL.

He's Turning Animal Fat Into Low-Cost Fuel

How about animal fat for an alternate car fuel? An Illinois man has proved that it works.

Robert Kuecher, operator of the Automotive Machine Shop in Palos Hills, did a lot of redesigning of the engine of his AMC Gremlin so it could run on an animal fat mixture. He then ran it in competition where it got 45.4 mpg.

The redesigned engine is a Waukesha pre-combustion diesel with modifications of the injector, fuel pump, and other parts. "So far, we have only made this work with a pre-combustion diesel engine," says Kuecher. "It won't work with a direct injection type of diesel engine."

"The fuel we use is called 'white grease' in the rendering trade. It's a mixture of beef tallow, lard and

chicken fat — waste products of the meat packing business. We get the refined product for about \$1 a gallon from Kaluzny Bros. rendering company in Joliet, Ill."

Since animal fat is solid at low temperatures, the engine has to first be started on regular diesel fuel. By the time the engine is warmed to 140°, the animal fat is liquid and the engine switches over to use the fat for fuel.

"The engine's performance on animal fat is excellent," says Kuecher. "It runs quieter and smoother, though the heat value of fat is somewhat lower than diesel. And it has a nice smell of meat cooking."

Kuecher is confident the principle would apply to any truck or tractor as long as it is a pre-combustion diesel. He's currently working on using cheaper animal fat as fuel.

"We're experimenting with 'yellow grease' which is the fat recovered from restaurants and institutions. It's a mixture of animal and vegetable fats which now sells for 70¢ a gal. and is getting even cheaper," he says.

Kuecher is excited about the potential for animal fat as an alternate fuel, and so is the American Rendering Association which is doing a lot of research.

"It's a waste product that is increasing in supply every day," says Kuecher. "Using it for fuel would make use of a surplus by-product and also reduce our dependence on fossil fuels."

We'll keep you posted in future issues of FARM SHOW on any new developments.



The double car has two engines and steering wheels, and can be driven from either end.