## Money-Saving Repairs & Maintenance Shortcuts



Each Keystone Turbo kit is designed to fit a specific tractor, avoiding the need to modify the hood or move the carburetor or exhaust.

## **They Add Power To Old Tractors**

Keystone Turbo offers turbocharger kits for a growing number of popular old tractors. Each turbo kit is designed to fit the tractor, avoiding the need to modify the hood or move the carburetor or exhaust.

"All you should have to do with our kits is unbolt the stock manifold, bolt the turbo in, and you're on your way," says Mark Duddy, Keystone Turbo, LLC. "In a couple hours, you will have doubled your horsepower with a 15-lb. boost and only added 8 percent stress to your engine.

Duddy got started with turbos when his dad Franklin gave him an old M Farmall to restore on his 16th birthday. Duddy wanted to add a turbo like his dad had put on a car at age 16. They decided to build one, and when others wanted one too, the business was up and running

With 6 years under their belts, the father/ son team has shipped turbo kits from Alaska to Texas and Washington to Maine. They now offer turbos for the Farmall M through the 450, the 6-cylinder 460 through the

International 806, the Oliver 77 through the 1650 and the Allis Chalmers WC, WF, WD and WD45.

Prices start at \$1,350 for stock engine kits for tractors being used around the farm. High performance kits for 6-cylinder engines being used for tractor pulling can range to \$2,150. They include a bigger manifold, bigger turbo, 500 cfm/two-barrel carburetor and, if needed, water/alcohol injection kits.

"A 6-cylinder 265 to 301 cu. in. engine will produce 120 to 140 hp," says Duddy. "With the two-barrel high performance kit, you are looking at 300 hp plus."

The Duddy's are working on high compression and low compression piston kits to add to their product line. Their goal is to have affordable products for both puller and farm markets.

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Forest Cunningham says he can customize your fuel pump to get whatever torque range or power you want from your diesel engine.

## **Customized Fuel Pumps Boost Torque/Horsepower**

Tell Forest Cunningham what torque range or power you want from your diesel engine. If it can be done, he will customize your fuel pump to give it to you. Cunningham started working on Cummins diesels 30 years ago and now works with all brands. With rebuild customers across 6 states, there aren't too many engines he hasn't worked on.

"All the parts are out there," he says. "Ninety percent of parts used, even by tractor and truck pullers, aren't custom machined. You just have to know what fits what and how to calibrate it."

That's not to say that Cunningham doesn't machine parts when needed. Currently he's working with a farmer who wants to boost his 300 hp Steiger tractor to more than 1,100 hp. hp and machine them to fit his fuel pump."



Cunningham started working on Cummins diesels 30 years ago and now works with

"He sends me the parts and tells me what he wants," says Cunningham. "I had to use parts from an engine that develops close to 2,500



Rotating storage rack is built on the same principle as a continuous loop jewelry display case, maximizing storage space along one wall of Dressman's 75-ft. shop.

## **Rotating Storage Rack Holds 25 Tons Of Steel**

"One of my customers and I were looking for a piece of steel in my storage racks a few years ago and couldn't find what we needed," says Carl Dressman, who owns a welding shop in Frankfort, Kan. "The fellow kind of jokingly mentioned 'you ought to build a rack that brings the steel to you,' so that's what I did and it's the best thing I've ever made," Carl says.

Dressman's massive rotating rack is 24 ft. wide, 15 ft. tall and about 20 in. deep. It has 43 individual boxes that are welded about 8 in. apart on four lengths of 100 gauge chain. Each of the boxes, which are made from 2 in. pieces of 5 by 7-in. steel tubing, hold four different types of rod, bars, tubing or angle iron. It's built on the same principle as a continuous loop jewelry display case so it maximizes storage space along one wall of Dressman's 75-ft. shop and minimizes the time he needs to find any piece of steel.

Dressman numbered all the boxes and keeps four products in each box.

"When someone comes in the shop and wants a specific size or piece of metal I look in my book to see where it's located. Then I rotate the rack to find exactly what they need. The rack probably saves me 30 min. or more every day because I'm not sorting through piles looking for something," Dressman says. "Keeping track of what's in the boxes also simplifies inventory control and lets me know when to order more products.'

Dressman built the rack with heavy-duty components because he knew it would hold 25 tons when full. The vertical supports on each side and the cross member on top are 10in. H beams. Two 1 5/8-in. dia. steel shafts



Storage rack is fitted with 43 individual boxes welded about 8 in. apart on 4 lengths of 100-ga. chain.

have 16-in. diameter sprockets to guide the 100-gauge chain.

"I have a 3 hp electric 3-phase motor that rotates the storage rack," says Dressman. "It can rotate a full circle in less than 5 min., which is plenty fast." The motor drives the rack through a worm gearbox that turns slowly and acts as a brake when it stops. "I can raise or lower the box I need to the table with the cutoff saw, pull out and cut the piece I need, and that's all there is to it," Dressman

The rack is easy to load, too. There's another table on the opposite end from the cutoff saw to hold material before it slides into its designated box. "I built this in my spare time and it sure beats digging through stationary racks to store materials.

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Cunningham likes the older mechanical systems for their versatility and ease of customization. Older engines also aren't required to meet today's emissions standards.

You can change the injection timing and/or the torque curve to produce a stronger, more fuel efficient system," says Cunningham. "For off-road uses, with new electronic control EGR engines, we have to delete the EGR system to help improve fuel efficiency.'

Cunningham is hard to argue with when it comes to what is good for engines. He's the regular mechanic for a lot of over-the-road truckers who put hundreds of thousands of miles on each year. He describes engines with 400,000 miles on them as "babies", especially compared to Howard Clayton's

2000 Dodge Ram 3500 that was featured last vear in FARM SHOW (Vol. 35, No. 2).

Cunningham services the pickup every 10,000 miles. It had 1.7 million miles on it at the time of the article. Soon after, major work had to be done. Cunningham rebuilt the engine, replacing pistons, cranks and bearings.

'Clayton's truck now has 1,850,000 miles on it and is running fine," says Cunningham. "I think he'll get tired of driving it before it gets tired of running.'

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