

AR exhaust system replaces conventional exhaust manifold. Narrow "cones" inside each exhaust pipe prevent exhaust gases from slipping back into cylinders.

New Manifold Saves Fuel, Increases Hp.

"A turbo charger rams air into the engine. This new manifold for car, truck or tractor engines, and for stationary engines, essentially rams air out the exhaust," says Jim Mullins of Suretroll Switch, manufacturer of a new exhaust manifold that reportedly boosts horsepower 20 to 30% and cuts fuel consumption 10 to 25%.

The key to the manifold is a cone inside each manifold pipe that's narrower than the outer manifold pipe. Air is forced out the engine cylinder and through the narrow cone to the wider pipe where it expands. The narrow cone prevents gas from escaping back into the engine cylinder.

"When hot gas is forced through a smaller orifice, it expands and a turbulence is created so only about 5% of the gas slips back through the opening," explains Mullins. "With a normal manifold, much of the exhausted air escapes back into the cylinder. That means your engine is always trying to burn fuel that's already been burned."

"With the exhaust gas out of the cylinder, more oxygen gets in and burns. After we outfit engines with this system, they always burn rich because of the excess oxygen so we have to lean them down."

The exhaust system will work on

any gasoline, diesel, natural gas, or LP gas engine. Dynamometer checks by the system's inventor, Jim Fueling of California, reportedly showed a 20 to 30% increase in horsepower and 10 to 25% increase in fuel efficiency. The company says they've also found the manifold will increase valve life because of less wear and tear from burning exhausted fuels, particularly in dry fuel engines such as natural gas and LP. It'll also lower engine operating temperature, the company says.

Larry Landon, who farms near Deerefield, Kan., says he and his father Bob used three of the new exhaust manifolds on their irrigation engines last year and that they have already bought two more for use this year.

"We found they lowered engine temperatures tremendously," Larry told FARM SHOW. "Engines that were operating at 200 to 210° dropped down to 180°. The result was that we only had to do one head job a season on our IH 605's rather than two, which is a savings alone of \$700 to \$800. We didn't do horsepower tests but we do know that, over the length of the season, we saved a couple thousand dollars worth of fuel."

Electric Endgate First Of Its Kind

Art Brotzell first designed his electric-powered endgate as an accessory to his unique grain drain and drill fill (first featured in FARM SHOW VOL. 5, No. 5), but, once it was manufactured, it became evident that the endgate would be just the thing for grain trucks, wagons, hopper bottoms or anywhere else a controlled flow of material is desired.

The electric gate is controlled with an 8-in. screw-type "lineal actuator" powered by 12-V battery. Using a remote control button, you can raise the gate a little at a time, completely controlling the flow of grain rather than wrestling with a hand-opened gate.

Besides that, there is a safety factor in being able to open and close the gate standing away from the box.

The gate opener comes in kit form and will adapt to most any truck or hopper gate. Brotzell says it works particularly well with drill fills because you can completely run the material out of the auger rather than shutting it off when it's full, thus minimizing wear and the amount of power needed.

The gate opener sells for \$279.

For more information, contact: FARM SHOW Followup, Brotzell Enterprises, Brock, Sask. SOL OHO (ph 306 379-2031).

LETS YOU WORK LATE-SEASON CROPS WITHOUT CAUSING DAMAGE

New Kit Puts Your Tractor On Stilts

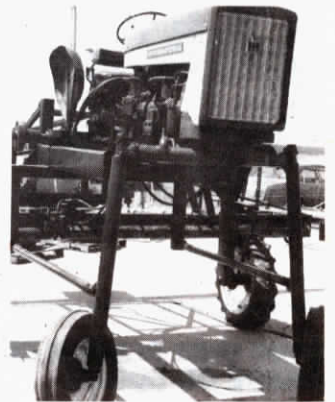
You'll be able to do some high-stepping through tall-growing row crops with a new Hi-Boy conversion kit from Winfrey Manufacturing, Plains, Kan.

The kit elevates tractors to about 5 ft. for late season work. For the \$3,500 price, Jerry Chandler, of Winfrey Manufacturing, says you get a machine similar to others on the market that sell for thousands more, yet you can always switch your converted tractor back to conventional size.

"To convert back, you simply unbolt the frame and reattach the rear wheels to the hubs and change the spindle on the front tires. It isn't a major project," Chandler notes.

Power is transferred by chain from a sprocket driven by the rear axle to the converted rear wheels. Chandler says there's some power loss but not enough to affect performance of most field chores.

The company has been converting tractors in the 45 hp. range. They say that in the future they plan to ship kits to do-it-yourselfers but, at this



Kit lets you "high step" through crops with a conventional tractor.

time all conversions are done in their Kansas shop.

For more information, contact: FARM SHOW Followup, Winfrey Manufacturing, Gordon Winfrey, Rt. 1, Box 25, Plains, Kan. 67869 (ph 316 563-9204).

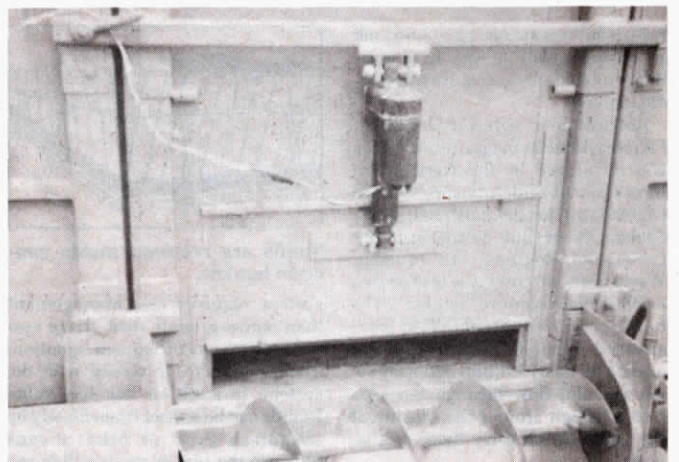
The Landons say they wanted the exhaust system for their International 605 engines because they're the biggest and run the hottest. Larry says they plan to do more extensive testing this summer before outfitting their 605 engines and other motors with exhaust systems. The Landons run some 40 irrigations on engines on their farm.

"Most interest in the system so far has been for stationary engines," says Mullins. The company has tooled up to provide manifolds for the International 605, 466 and 549 engines. New manifolds are also available for Datsun pickups, and Chevrolet or GMC pickups with 305 or 350 cu. in. en-

gines. As orders come in for other engines, the company plans to tool up to produce them. Mullins notes that the concept has been used to some extent on the racing circuit and that it will probably be standard equipment on the Corvette within a year.

At \$250, Mullins calls the manifold the "most inexpensive bolt-on device available for increasing engine horsepower."

For more information, contact: FARM SHOW Followup, Jim Mullins, Suretroll Switch, P.O. Box 1735, Garden City, Kan. 67846 (ph 316 275-4235).



Electric endgate controls flow of material into an auger, or into drill fills or other side-unload augers.