

This Tractor Pulls Like a Horse

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It "digs in" and pulls harder when the going's tough without changing gear. For the Farmall M-TA and W6-TA are equipped with a new development in power farming — the Torque Amplifier — which at a flick of the lever steps up the pull to get through the hard spots without declutching and changing gear. It may mark a new era in tractor history, by introducing new flexibility in the mechanical application of power. They've restored the whip to horsepower.

In the Super M-TA (Super M Farmall with Torque Amplifier) International Harvester engineers have come up with an idea and a mechanism that can compare in originality and impact with the Original Farmall. In doing it they have biased their own trail and followed no one else's slash marks.

They have a mechanical whip that puts horse power into horsepower. The torque amplifier when the lever's pulled, makes the TA adjust down on its haunches, as it were, and pull out as no other farm tractor has done before.

One's conclusion when first hearing of the TA is that it must be just another hydraulic torque converter, such as are used in military vehicles, industrial track-type tractors, and in Buicks. True, the Harvester Torque Amplifier steps up pull just as does the hydraulic torque converter, but the big difference, and it is a crucial one in farm tractor service, is that travel speed with the hydraulic mechanism is infinitely variable (within certain limits) depending upon loading, while Harvester's torque amplifier steps up pull by pulling down speed from one gear-fixed rate to another a third lower. This is without changing gears in the transmission or throwing out the clutch and re-engaging.

You older fellows will recall how the Model T would struggle through mud and loose sand when no other car could. Equipped with high wheels and narrow 2 1/2 inch tires, a Model T when it hit loose sand might start to bog down and stall the engine. But all you had to do was push down on that planetary gear pedal and immediately the forward speed was pulled down through the planetary gears and the wheel galls stepped up with the load on the engine eased below the stall point.

The Model T, bless its tiny body, would get you through mud and anything but quicksand when no other vehicle but a backboard could. Harvester has exalted this get through and get-thar idea in their Super M-TA tractor. It may prove to be a pattern of the things to come in the power farming world.

Most outstanding mechanical developments in their original conception are the ideas of individuals, like Bert Benjamin's original idea of what later became the Farmall, which revolutionized agriculture. The working out of such ideas in the natural course of events becomes a group project, so that many engineers and inventors contribute.

The new Harvester torque amplifier, we are informed, was not a single individual's flash inspiration. The man most responsible is Clarence Hubert, chief of engineering for the tractor division of International Harvester Co., but the development and working out of the idea was a group project on which they set up certain basic objectives for a better working tractor in the field, then brought forth various suggestions as to how these might be achieved. One of these which turned up was a mechanical torque amplifier utilizing planetary gears. This was not in itself new, but it was absolutely novel in its application to agriculture in farm tractor service.

So hats off to Clarence Hubert and His Gang. They may have pulled another Farmall idea for that

place ahead of the gear-shift transmission, the belt pulley will also operate at a reduced speed. In direct drive, pulley speed is 800 rpm, which with the 117 1/2 pulley, delivers a belt speed of 2500 feet per min. In TA drive, the speed is 600 rpm, or a belt speed of 1762 ft. per min.

The new independent PTO can be stopped or started, independent of the tractor motion and the tractor can be stopped, started or shifted without affecting the PTO.

A hollow shaft, driven from the engine flywheel through the clutch pressure plate, surrounds the shaft that transmits power to the TA unit. This hollow shaft drives the independent PTO drive gears whenever the engine is running. From the PTO drive gears, power is transmitted inside the hollow transmission counter shaft. A control lever near the right side of the driver's seat starts or stops the PTO. A seasonal disconnect is located on the underside of the clutch housing allowing the PTO to be removed during those times of year it is not needed.

A new front bolster and new wide front axle have been designed for the Super M-TA. A new hydraulic seat with foam rubber upholstery and tilt-back hinge is an added feature for the Super W6-TA. (end Jim's account.)

As Bob Messenger, executive vice president and super-boss of engineering, remarked: "Farmers, like you and me, are ambitious. They want to put a tractor in the fastest gear they think they can get by with. If they're digging and hit a heavy spot, ordinarily it means stopping, declutching, shifting to a lower gear, starting up and going through. Then, if their ambition overwhelms their inertia, they stop and shift back into the higher gear. This new torque amplifier eliminates that situation," and Bob might have added, mental indecision and frustration.

One can aim with the splatter barrel and still have the choke to fall back on when it only will get the bird, speaking in duck dialect. One of the greatest advantages of TA, says the panting ad men, at least those who, having a farm background, have had the urge and opportunity to work with the TA, is in hauling heavy loads of corn from the picker, grain from the combine or manure from the feedlot. You can put the tractor in the high road gear, roughly 18 mph, with a load so heavy you'd have trouble starting up, but by pulling the TA lever, you pull down your travel speed to 10 1/2 for starting the load.

That's also a real safety feature, pointed out Ted Hale, vice president general sales, when pulling out of the farmyard with a load to cross the highway. It is necessary for safety to stop before crossing, and with motor car drivers cruising at 70, as they do those days, the pull-down speed of the TA and the quicker start it gives with a heavy load, is a much better assurance of getting across the road alive.

Then with four-row cultivating tools mounted, most farm boys feel they can't achieve and demonstrate their mastery of power cultivating unless they operate at least in third gear — and that's 44 mph at governed engine speed. When it comes to turning at the end of the row and raising the sweeps, such a speed often is too fast. It's far better to pull into slower TA and effect the turn in repose instead of jitters.

If there ever have been times when Harvester dealers in competitive demonstrations have had to eat crow, the chances are that in any contest they enter from now on with the Super M-TA, they will land near the head of the table, eating quail, plover and partridge.

When the control lever is pulled back the disc clutch is disengaged. The carrier tends to revolve opposite to engine rotation due to the input gear driving the planet pinion. This counter-rotation clutch is the cam-roller over-running clutch to lock or stop the carrier. With the carrier locked the TA unit operates like a conventional counter-shafted transmission. The input sun gear and in turn the planet pinions drive the output sun gear. In the actual unit there are three planet pinion sets. The rpm of the transmission drive gear is reduced, 1.482 to 1, which results in an actual speed reduction of 32.5 per cent.

Since the speed reduction takes

every Orangeman helping his church and organizations. Plans were laid for a membership drive by the brethren, aided by county and district officers.

Wag Bro. Leonard, who is also the W.M. of Oakville L.O.L. 3334, stated that plans are well under way



L. D. MAXWELL
L. D. Maxwell, named this week as Halton County chairman of the \$2,150,000 Canadian National Institute for the Blind Building Fund. Mr. Maxwell is assistant to the vice president, Ford Motor Co. of Canada Ltd., Oakville.

FARM NEWS

Ontario Prexy Speaks At Junior Farmer Dinner

Tratfalgar Memorial Hall was the scene of the fourth annual Halton Junior Farmer banquet on Friday evening. The auditorium and banquet hall were both tastefully decorated in true St. Patrick day style, and dinner was served by the ladies of Knox Presbyterian Church, Acton. This year's programme presided over by toastmaster Harold Tyrrell was if possible even on a higher level than that of a year ago.

A new but very lovely innovation instead of "Grace," was the singing of "The Lord's Prayer," by Bill Somerville, accompanied by Mitchell Neale, both of Acton.

The group singing was led by David Pelletier, with Marjorie Swerthout at the piano. The toast list included: Introduction of Head Table, Jean Peterson; Thanks to the Ladies, Earl Snow; The Junior Institute, proposed by John W. Pickett and responded to by Kathleen Stanley. The Junior Farmer, proposed by Jean Patterson and responded to by Earl Wilson.

The guest speaker, Don Middleton, president of the Junior Farmers' Association of Ontario who was introduced by Don Matthews recently elected president of Halton Juniors, took as his subject "It Isn't Magic." In an amusing and original style he delivered a thought provoking address on how to build a strong junior organization. Howson Ruddle expressed the appreciation of the gathering to president

Farm Paper Takes Pride In Family Relationship

Extraordinary demands are often made on a publication which makes real friends of its readers, according to the Family Herald & Weekly Star, which has prided itself on maintaining such a relationship to an unusual degree. Many things are asked of it, the Family Herald says, which readers would ordinarily never think of asking. One example is a request from a reader in England to have someone make a personal investigation and report on the health of her uncle in Nanaimo, B.C. She had not heard from him in two years.

While such requests cannot always be satisfied because they would require facilities which are not available, the Family Herald points out, all efforts are made within reason to help the enquirer. Readers are regarded as members of the Family Herald family, and their problems are therefore deserving of sympathetic attention. Consultation and similar reader services have been provided by the Family Herald for many years, covering subjects which range from animal diseases to the obtaining of words and music to long forgotten songs. Letters to these departments were written by approximately a quarter of a million Family Herald readers during 1953.

In this way, the Family Herald points out, its readers are given more than the usual entertainment and information provided by magazines, and tend to feel like members of a genuine "family." Like members of a family, they are quick to express likes and dislikes, they seek and encourage ask for advice, and give it as well and continually impress on the publishers their feeling that the magazine really belongs to its subscribers.

A lot of work? The Family Herald admits that it is but they feel that the unusual warmth of response they receive from their readership makes it well worthwhile.

The English lady's uncle in Nanaimo? He was fine. She had been using a wrong address:

Middleton.

Under presentations, Mr. George E. Elliott, of Milton, on behalf of Halton Juniors, presented Mary Pope Halton Public Speaking Champion with a medal and Harold Tyrrell with his past president's pin.

The final item on the evening's banquet programme was the presentation of Halton Junior Farmers, and George S. Atkins, representing the Halton Federation of Agriculture, of gifts to Mac Sprowl, one of two Lord Nuffield scholarship winners from Canada, who left early this week for his six months' educational tour overseas.

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Hornby Orangeman Gives Talk at Bronte Lodge
On Thursday, March 11th, Bronte Lodge was the host to a presentation from four

county master, WBro. Jack Fox, and Milton brethren were headed by the District Master, WBro. Ernie Wilson. Small delegations from Hornby and Georgetown were also present.

WBro. James McLennan, Wor-

every Orangeman helping his church and organizations. Plans were laid for a membership drive by the brethren, aided by county and district officers.

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