

The First McCormick Deering Series

(1921-1939)

The McCormick Deering 15-30 Standard. The first McCormick Deering.

(1921-1934)

The McCormick Deering 10-20 Standard. A smaller McCormick Deering.

(1923-1939)

The McCormick Deering 22-36 Standard. The 15-30 Replacement.

(1929-1934)



ABOVE: A 15-30 McCormick Deering on the left. A 22-36 on the right.

The 22-36 is an improved version of the 15-30. Both tractors were produced in the 1920s.



ABOVE: The 22-36 is on the left. Its little brother, the 10-20 is on the right. Both tractors were sold with steel wheels. The 10-20's wheels were changed to rubber tires long, long ago.

Both of these beautiful old tractors run splendidly.

The First McCormick Deering Series

IH produced tractors in two basic forms. The Standard form and the Row Crop form.

Standard tractors are often called Western, Wheatland, or Utility tractors.

The first Standards were branded “McCormick Deering”. Later the name Deering was dropped. Then the brand was simply “McCormick”. Still later the McCormick name was replaced with the “International” brand.

That may seem like an insignificant point but I recall as a boy, looking at a group of these red tractors and wondering, “What is the reason for all these overlapping names?”

The Row Crop tractors were all branded Farmall. But, “McCormick” and “International Harvester” or just “International” were often included in smaller letters.

The first Standard series had three members: the initial 15-30, the smaller 10-20 and a later version of the 15-30 that was labeled 22-36.

These tractors were reasonably comfortable, ergonomically.

They had a much-improved power to weight ratio.

They had a low and safer center of gravity, built on a huge, heavy, one-piece, “bathtub” cast iron frame.

The engines were reliable. The gears were enclosed and long lasting.

They had a good seat, a mostly enclosed platform and good access to the steering wheel and other controls.

The clutch pedal was on the right. That placement seems odd now but pedal and lever functions, and placement had not yet been optimized.

Today, all tractor clutch pedals are on the left with dual brake pedals on the right.

RIGHT: The PTO in this rear view of the 15-30 is covered by a metal cap fastened by four bolts in the center of the photo. It was difficult to use this PTO to power a machine while in motion.

(1921-1939)

The first McCormicks came with a single brake lever. No brake pedals.

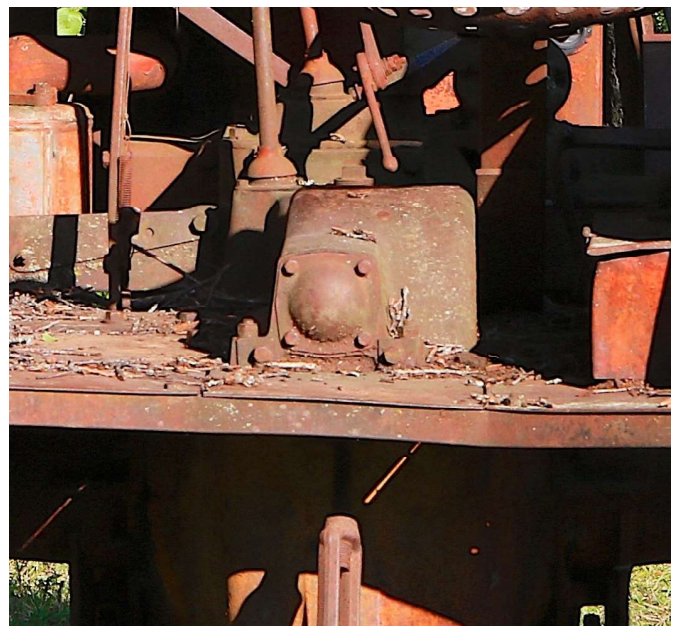
That brake lever was constructed and used more like the emergency brake control in an automobile.

It was designed to lock when pulled and took two hands or a hand and a foot to disengage.

These steel lugged machines had high rolling resistance. They did not need a brake to stop or hold them under normal conditions.

The greatest use of the brake was to lock the tractor in position when it was set up on a belt. In that situation, it would be necessary to prevent the forces on the moving belt from gradually pulling the tractor closer to the load. A typical load might be a stationary threshing machine. If the tractor were to move forward under those conditions, the tension on the moving belt would be reduced and the belt would slip.

The new Power Take Off (PTO) was available on these and all future IH tractors. Originally the PTO shaft was mounted too high and was little used. In 1921, almost all non-traction power was taken from the belt pulley. Over the next 40 years that situation reversed completely. By 1960, the belt pulley was seldom used and the PTO was mandatory on most tractors.



The 15-30 Standard. (1921-1929)

The first McCormick Deering tractor.

The 15-30 in the photo below is easily recognized as a farm tractor. The large, rear wheels with steel lugs are the drive wheels. The smaller front wheels provide steering. The belt pulley is mounted on the side of the tractor body.

The engineers put the clutch pedal on the right side. Eventually, that became the wrong side.

There are no brake pedals, only a brake lever which functions more like a parking brake.

Notice the side curtains on the engine. Many early tractor manufacturers used those. No doubt modeling them after automobiles of the time. Farmers never took to engine curtains.

Curtains limited access to engine adjustments which were often necessary. Over time the

engineers learned to leave them out of the design. Until then, many farmers just threw the side curtains away.

The tall pipe is the air intake for the engine. It is high to minimize dust intake. Dust wears engines.

Early engines did not have mufflers. The engine exhaust is on the opposite side and relatively low. There is no exhaust pipe just a short port off the exhaust manifold.

That was a fire hazard in fields of dry wheat or corn. Upward exhaust pipes and then mufflers became common in a few years.

Although the 15-30 seemed agile for its time, it is a slow-moving beast that requires at least 30 feet to make an 180-degree turn.



ABOVE: This 15-30 has the original steel wheels and steel lugs. This is also a good view of the right-side-mounted belt pulley. The pulley was used to power threshing machines through a long flat drive belt.

The 15-30 was also offered in rice and orchard versions.

This is Snake River Farm's 15-30 in natural patina.

I initially intended to repaint this tractor in the original gray color.

Gail and others encouraged me to leave this tractor, the oldest of our tractors, in its beautifully weathered patina.

So, I did.

This is what a fine old tractor looks like after a century of hard use, weather, and neglect.

Magnificent!

If only these machines could tell their stories.

I cannot work on these tractors without thinking of the strong and true men who depended on them.

As of fall 2018, this 15-30 is not running and its fuel tank is rusted through. It is all there however, and the engine is loose (not frozen with rust).

I expect to get it running again.

Russ claims that if we start it after dark, the ghosts of old farmers will emerge from the land.

Russ tends to be overly dramatic.



ABOVE: The 15-30, like many other early tractors, had engine curtains. The tall pipe is the air intake. Early tractor engines wore quickly from inadequate air filtering. The exhaust port was just a short metal outlet on the side of the engine. No muffler.



ABOVE: The early IH tractors had a high quality brass carburetor. The carburetor is in the center of this photo. The exhaust port, in the lower right, is stuffed with rags. The old man who owned it before me, did that to keep rodents from packing acorns into the exhaust manifold.

RIGHT: This is an over-the-seat view of the 15-30.

The upward pipe on the left is the air intake.

The sturdy rod in the center is the shift lever. These early IH tractors used IH truck transmissions.

The small cylindrical tank in the right-center is the gasoline tank.

The large oval tank is the kerosene tank.

These early tractors were designed to start on gasoline and then switch over to kerosene after the tractor heated.

It was easy to start engines on gasoline, but gasoline was expensive and rare.

It was impossible to start the engines on kerosene unless the engine was hot. Kerosene was available and cheap.



The 15-30 was the first tractor produced under the McCormick Deering brand name.

In the years between the creation of the International Harvester Corporation in 1902, and 1921 when the 15-30 was introduced, the company had sold two identical tractor lines through separate dealer networks.

The US government pushed IH to combine their dealer networks to eliminate this apparent anti-competitive monopoly.

IH combined the two dealer networks into one. And designed a new tractor for the newly unified sales force.

The McCormick Deering 15-30.

The 15-30 proved to be a reliable tractor. It had excellent belt power for running threshing machines plus good traction and maneuverability for open field work.

In the naming tradition of the time, the 15-30 was claimed to provide 15 horsepower when used as a traction machine, (pulling) and 30 horsepower on the belt pulley (most commonly, threshing).

When tested, the tractor actually cranked out 27 and 35 horsepower.

All the tractors of the 1920s moved slow. I mean really slow. Four gears (speeds) were most common. One of those was reverse.

15-30 Specifications

35 Horsepower Belt
27 Horsepower Drawbar
In Production from 1921 to 1929
Total Manufactured 160,000
382 CID engine
Engine RPM, 1,050
Fuel tank capacity, 19 gallons
Standard rear wheels, steel, 12 X 50
Standard weight, 6,000 pounds
Speeds, 2.0, 3.0, 4.0, Rev. 2.5 MPH
Price \$1,250

The other three, moved the tractor forward at roughly 2 miles per hour, 3 miles per hour or 4 miles per hour.

Those speeds were selected to replicate the pace of working horses. After all, horses were the competition.

Early Standard tractors were built with a “bathtub” frame. The bathtub frame was a one-piece cast-iron body to which all the other parts were bolted and attached. The bathtub frame was used for Standard models into the 1950s.

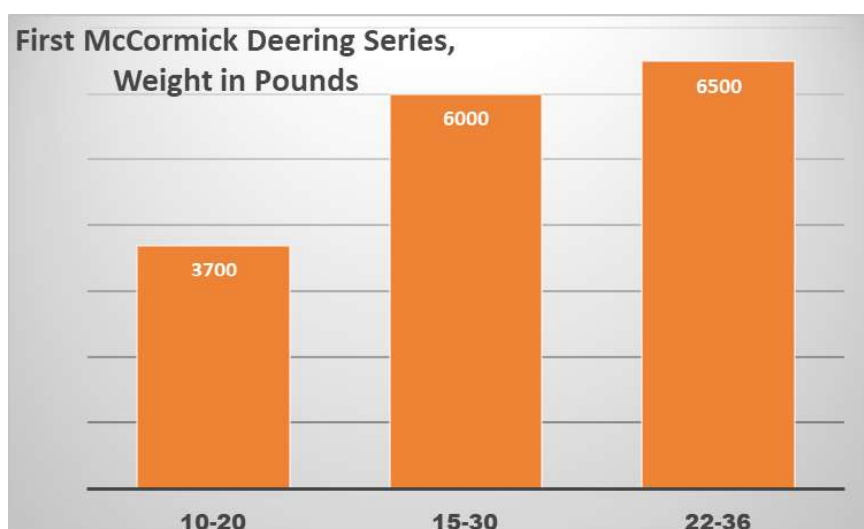
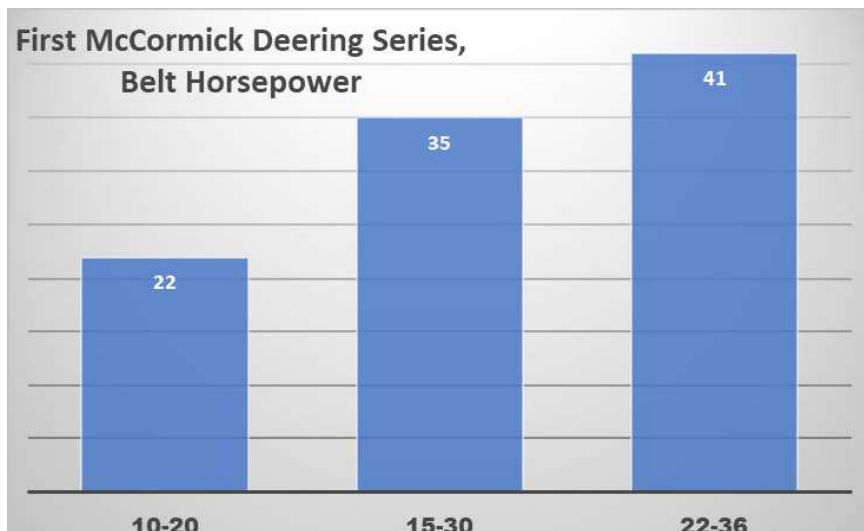
All 15-30s were painted gray. Almost all tractors of that time were gray.

The story is that the US Government owned tons of surplus “Battleship Gray” paint at the end of World War I.

That surplus gray paint was cheap and everyone used it. Maybe.

In any case, IH tractors were gray until late 1936. Then the company’s marketing department switched to red. They did so to make their tractors stand out in fields and on country roads.





Horsepower (HP) Defined:

Engine HP, often called “brake” HP is the maximum power output of an engine. The word brake in this context has nothing to do with the normal meaning of brakes.

Belt HP is the HP available at the belt pulley. That number is less than, but normally very close to the engine HP.

The **PTO HP** is normally very similar to, but slightly less than, the maximum available from the belt.

The losses in each case are simply an indication of the power consumed by operating the drive mechanisms.

Drawbar HP is the amount of power available to actually pull a load hitched to the tractor drawbar.

Drawbar HP is always substantially less than engine HP, brake HP or Belt HP.

That is because of the significant losses inherent in delivering power from the engine to the drive wheels and the ground.

Steel wheeled tractors lost 25 to 35% of their power between the engine and the ground. Pneumatic, rubber wheeled tractors only lose 10 to 15%.

The first tractor I drove was an 8N Ford.

In 1950 we had a pull-type, one-row corn picker. Pa needed to hand-pick a couple of outside and center rows to start the fields. Otherwise, the first pass with the drawn picker would run down a row or two of corn. He had me drive the tractor and wagon, while he picked.

The little tractor was easy to steer. Pa set it to move along as slowly as possible. When the wagon got too far ahead, it was my job to stand on the clutch pedal to stop the tractor. I was four and heavy enough to disengage the clutch if I stood on it with both feet. It felt good to be helping Pa farm.

I can still feel the warm fall sun, smell the corn and hear the cobs hit the bang-board.



ABOVE: Our neighbors, Heather and Diane Herman, on their beautiful, little, 8N Ford.

Why are tractors called tractors? And why do we call semi-trucks, tractors too?

It is not a long story but it is best to start at the beginning.

The steam engine was invented around 1700.

Inventors quickly mastered the use of large stationary engines to power factories.

By the early 1800s, locomotives and railroads were developed to move goods and people. That meant engines on tracks.

By 1850 inventors were working on ways to make steam engines transportable under their own power, off-track. An engine that could move itself on normal roads and through open spaces.

It was tough. Steam engines tended to be massive and messy.

Fortunately, around 1875 the internal combustion engine was invented, in both spark ignition and diesel versions.

Internal combustion engines, still used in cars, trucks and tractors today, are relatively small and fuel-mass efficient. Coal burning steam engines use a large volume of fuel and typically hauled a coal (fuel) car behind them.

Engines for farm use needed to be portable across changing terrain. Farm engines were first used to power semi-stationary threshing machines. Machines that were moved from farm to farm. Simultaneously, farmers needed engines that could pull ganged breaking plows to open and till the prairies.

By 1900, huge, costly, but effective, self-powered engines, called “traction engines” were sold to provide drive power for threshing machines and motive power for large-area tillage.

That was good, but all lesser agricultural tasks required human or equine labor.

No common farmer could afford one of these huge traction engines.

In the early 1900s, hundreds of agriculture equipment companies were working to develop a smaller, economical, versatile, traction motor.

It is often told that about 1906, a sales manager at a company named Hart-Parr, coined the word “tractor” by combining parts of traction and motor. It is true that Hart-Parr first commercialized the word tractor, but this “tractor” story was promoted by the Oliver company.

The word “tractor” was actually used in an 1880 US patent application and in other pre-1906 documents.

Hart-Part by the way, eventually became the Oliver Company. Oliver was acquired by White in 1960.

In any case, the new word, tractor, was quickly applied to any machine that used an internal combustion engine to pull loads on roads or fields. That could be either a wagon or a plow.

Many of the same companies that were developing farm machines were also developing road machines, the machines we now call trucks.

In fact, many early farm tractors had truck transmissions and truck engines, and vise versa.

Traction engines that hauled wagons on roads were a tractor-trailer combination. To this day we call the locomoting part of a “semi” rig a tractor.

Semi is a shortened form of the word semi-trailer. A semi-trailer is a trailer without front wheels. Exactly what is connected to a road tractor, a truck.



ABOVE: Trailer and highway TRACTOR combination. A “tractor-trailer”, also called a “semi”, or a “truck”.

This rig is loading at Joel’s cold storage warehouse in Florida.



ABOVE: Farm tractor. A McCormick-Deering W-30 farm TRACTOR driven by my son, Joel.

The 10-20 Standard. A smaller McCormick Deering. (1923-1939)

The model 10-20 was introduced soon after its big brother the 15-30.

The 10-20 was smaller by a third in size, weight and horsepower. Of course, it was less costly. It had the same high reliability as the 15-30.

The common, unitized, bathtub frame is easy to see in this photo.

This tractor was made with steel wheels, not rubber as in the photo.

Rubber tires were not originally available for tractors. They did not become common until the mid 1930s. Pneumatic, rubber tires were offered as a special-order item for the 10-20 in 1933.

Rubber tires gave great advantages of reduced weight, improved traction and easier handling. They also made it possible to drive tractors on paved roads.

The tractor in the photo, like the great majority of steel wheeled tractors was converted to rubber.

Local blacksmiths and dealers had a good business doing the conversions. On the tractor

below, both front and rear hubs were cut down, the steel rims were removed and tire rims were welded in place. Steel slats as in the photo or rod spokes are a giveaway that the tractor was originally made with steel wheels and later converted to rubber.

The model 10-20 was one of the most popular tractors of all. It was sold from 1923 until 1939. A total of 215,000 were made.

That total includes an industrial version known as the "Model 20".

My Pa bought a well-used 10-20 in the early 1950's for belt work. It powered the hay and silage blowers. But not for long. The worn-out old tractor tended to overheat.

I bought this tractor from a non-farmer, restorer, in eastern Wisconsin. He put a lot of time and money into restoring it. It runs quite well.

The 10-20 was available in orchard and industrial versions.

BELOW: Note the short, horizontal, rusty, exhaust port, left-center in photo.





LEFT: 10-20 , over-the-seat view.

The original, one gallon, gasoline tank is the cylinder immediately ahead of the steering column.

These tractors required a strong operator to drive them. Notice the wooden spinner that is long enough for the driver to get both hands on in order to “spin” the wheel.

The seats were simple steel pans.

The pan is mounted to a wide steel strap that acts as support and spring.

They were comfortable enough.

The brake lever is to the left. The shift lever is the heavy rod beyond the steering wheel.

10-20 Specifications

22 Horsepower on the Belt

11 Drawbar Horsepower

In Production from 1923 to 1939

Total Manufactured, 215,000

This tractor was manufactured in 1929

284 CID Engine

Engine RPMs 1,000

Fuel Tank Capacity, 14.5 Gallons

Rear Wheel Dimensions, Steel, 12 X 42

Speeds, 2.0, 3.0, 4.0, Reverse 2.8 MPH

Standard Weight 3,700 Pounds

Price in 1928, \$875



ABOVE: 10-20 rear view. Note the PTO shaft directly below the seat, bracketed by a shield..

The fenders and working platforms are quite nice on these standard tractors.



LEFT: 10-20 front view. Notice the cast, non-adjustable, front axle.

The starting crank was always left in position at the front of the tractor. In fact, the tractors came with a crank hanger. Sometimes metal, sometimes leather.

The 22-36 Standard. The 15-30 Replacement.

(1929-1934)

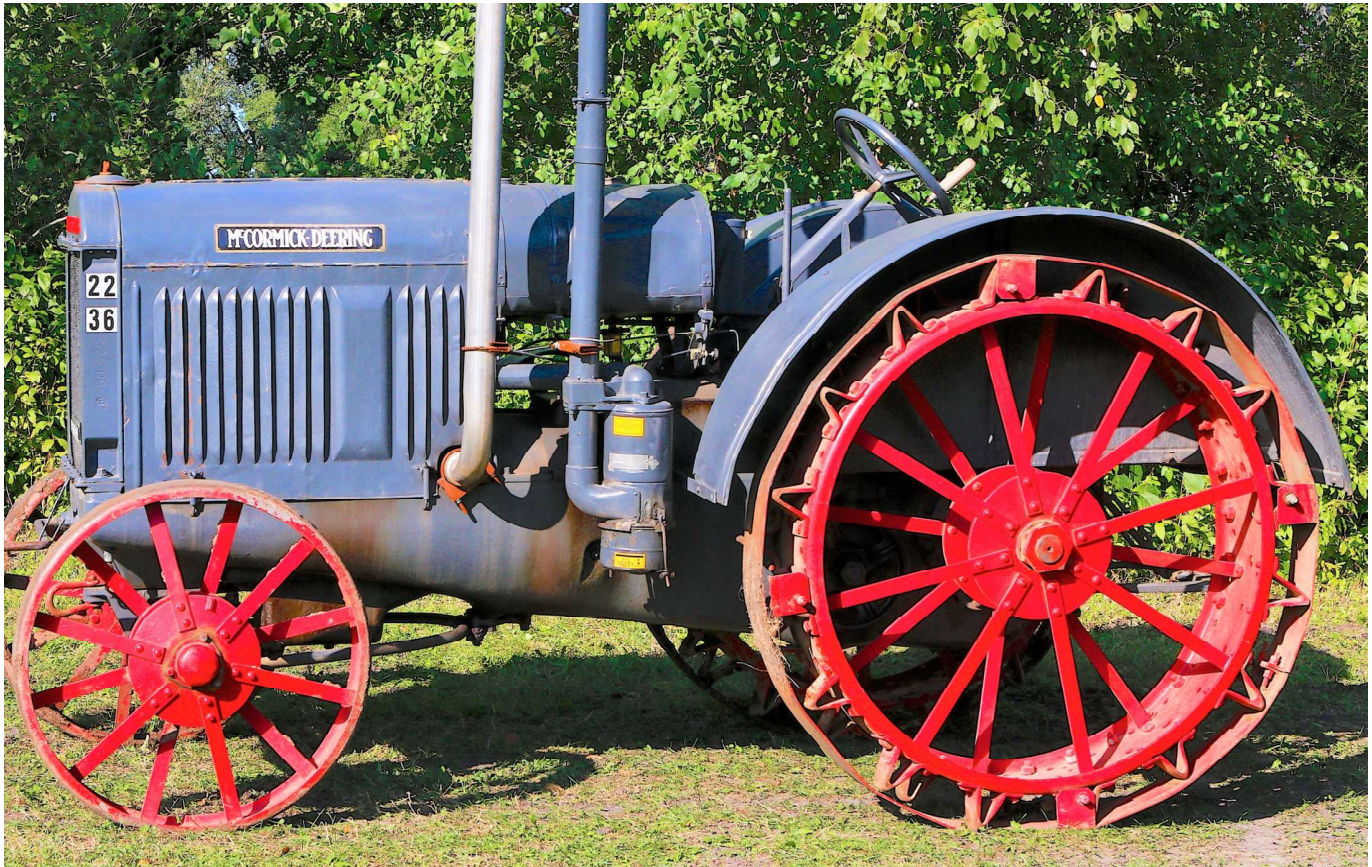
Around 1928, several engine improvements were made to the 15-30. The piston bore was increased, parts were strengthened, a water pump was added and RPMs were increased by 50 to 1,050 RPM.

Although there was not a clear end to the 15-30 and a clear start date for the 22-36, the 22-36 did replace the 15-30. Because of that ambiguity on IH's part some folks still refer to tractors of both versions as 15-30s. We got this well cared for 22-

36 from Mike and Gloria Rosenstiel. It starts easily and runs with a delightful rich tone.

Originally the front wheels had a vertical steel band to aid in turning. Mike removed that and added steel bands over the rear wheel's lugs so that the tractor could be driven out of the field.

The rear cleats, if left exposed, are terrifically destructive to sod, driveways and roads.



22-36 Specifications

41 Horsepower on the Belt
30 Drawbar Horsepower
In Production from 1928 to 1934
Total Manufactured, 58,000
This 22-36 was Manufactured in 1929
423 CID Engine
Engine RPM, 1,050
Fuel Tank Capacity, 19 Gallons
Standard Rear Wheels, steel, 12 X 30
Speeds, 2.5, 3.3, 3.8, Rev. 2.3 MPH
Standard Weight, 6,500 pounds
Price in 1929, \$1,350

ABOVE: A steel band has been added to prevent the aggressive steel lugs from touching the road surface. The band renders the 22-36 useless for actual traction work but adapts the tractor for parade or show use.

Without the protective steel bands, the lugs would dig so deeply into soil that brakes were seldom needed. The friction of movement is very high in lugged tractors. They do not roll easily.

That high rolling friction was a waste of energy in normal use.

Rubber tires are a great benefit in many ways.



LEFT: A previous owner added the tall vertical exhaust pipe. The unpainted pipe is also easily seen on the photo, facing page. Originally these early tractors had only a very short exhaust port that vented horizontally. That port was a fire hazard in dry wheat or corn fields.

RIGHT: This rear view of the 22-36 shows the spacious work platform. The operator's seat and controls are shifted to the right to provide a good view forward. The small plate in the center of the photo, covers the PTO shaft. The drawbar is beneath the deck of the operator's platform.



LEFT: A 22-36 right side view showing the steel belt pulley. This is the normal location for the pulley. Just ahead of the rear wheel, on the right side. The pulley was used to power stationary machines such as threshers and silo fillers. Early pulleys were steel, like this one. By the 1940s, most pulleys were tightly laminated wood, paper, or leather. The laminated pulleys were "stickier". That kept the belts on better and reduced slippage.