

CLASSIC FARM TRACTORS



**200 of the BEST, WORST, and
MOST FASCINATING TRACTORS
of ALL TIME**

Robert N. Pripps
With photography by **Ralph W. Sanders**



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Introduction

Rob Reiner's 2007 movie, *The Bucket List*, prompted many to examine their progress on their list of things they wanted to do at least once in their lives. I was one of those people. It's a special breed, however, whose list includes driving a lot of different kinds of tractors. But as my wife's uncle used to say, "Everyone's crazy different!" Therefore, off I went into a world of antique, classic, and modern tractors. Next, I decided to write about the tractors, listing them by year and describing them just enough so you can imagine driving them.

What, I asked myself, would a tractor nut want to know about these tractors? I concluded that each tractor profile would have two categories of readers: those who have actually driven the tractor and those who haven't. The experienced person wants to see if I got it right. The inexperienced person might want to know about power, shifting, starting, steering, and speed.

I have to admit that I've driven only about 25 percent of the tractors pictured (or similar models), but I've been around tractors most of my life and can make some generalizations. For example: invariably, tractors with transverse crankshafts will have hand-operated clutches; the older a tractor is, the more likely it will have either poor or no brakes; the very old tractors and the semidiesels can be very difficult to start; the old steamers are in a class by themselves, and I'm glad some hearty souls are willing to operate them!

Tractors are work tools. Their beauty lies in how well they do the work for which they were designed. This fact gave rise to the famous University of Nebraska Tractor Test Laboratory (NTTL). It began testing tractors in 1920 and still does so. Before a tractor can be sold in Nebraska, its manufacturer must submit an example for testing at the lab. NTTL tests have become the standard for the world. Where possible, I've included the Nebraska test number. The specifications listed are generally from the Nebraska report. (For more information, visit the lab's website at www.tractortestlab.unl.edu.)

So what happens to retired tractors today? Like the horses of old, they are often put out to pasture. Later, some are discovered by collectors and lovingly restored to an even

better glory than they had when new. Some collectors work these machines in their day-to-day routines, others enter them in tractor pulling contests, and still others take them to shows, fairs, and parades. Cross-country tractor rides are gaining popularity, too. I've been on several, and they are a delight! I know it doesn't make much sense to travel by tractor, but it's fun—like snowmobiling, motorcycling, boating, or any other thing you can do with a group of like-minded friends. Just be sure your ride is well-organized and safe, and then pray for good weather. Also, it's nice to not have the slowest tractor!

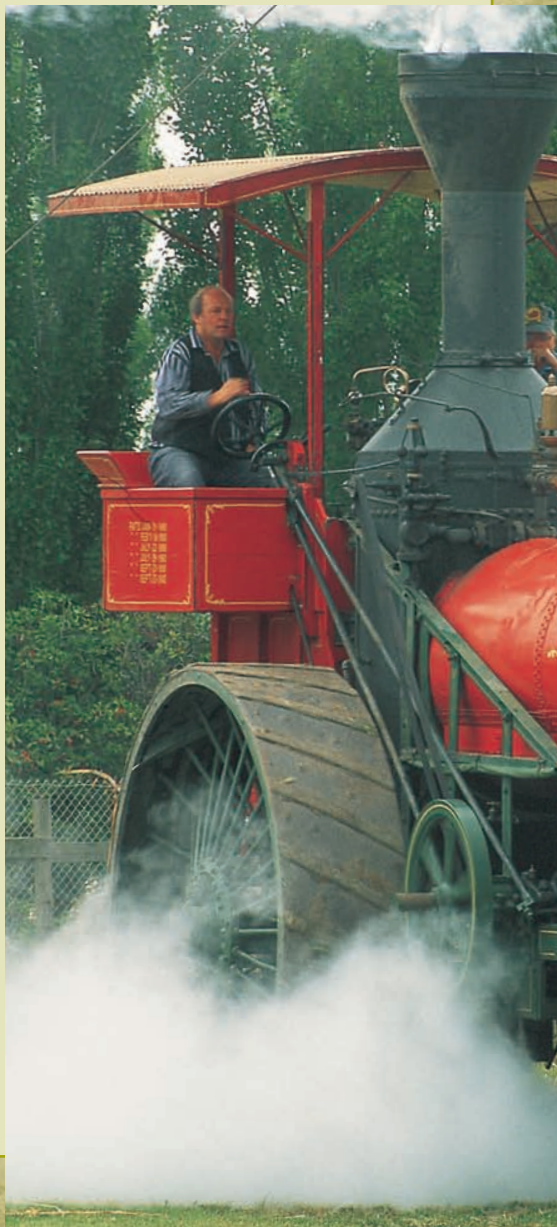


Author photo

Best 1908

Born in the East in 1838, Daniel Best worked his way west to Washington, then south through Oregon to California. He worked in lumbering and farming, eventually joining his brothers in the vast wheat lands of Northern California. Frustrated by the time and expense of taking their grain to a threshing mill, Best invented a portable machine powered by horses. This led to the traveling combined harvester or, more simply, combine. Horsepower requirements increased until the number of horses needed became unwieldy. About that time, an acquaintance of Best's from Oregon named Marquis de Lafayette Remington arrived at Best's operation in San Leandro, California, with a steam traction engine to which he held the patent. Best bought the manufacturing rights, modified the machine, made several variations, and found a ready market for pulling both combines and massive loads of logs.

ENGINE	2-cyl.
FUEL	No. 2 fuel oil
BORE X STROKE	9 x 9 in.
HORSEPOWER	110 belt
RPM	230
DRIVE-WHEEL DIAMETER	8 ft.
STEERING	Steam power
TOP SPEED	5 mph
WEIGHT	22,260 lbs.





Hans Halberstadt photos

1900–1919



Hans Halberstadt photo



Case 110

Circa 1910

One of the biggest and most powerful of the steam traction engines was the 110-horsepower Case steamer. The main steam barrel was 38 inches in diameter and was made of rolled .375-inch-thick steel plate. It held about 325 gallons of water with another 360 gallons in a feed tank. Operating steam pressure was 160 pounds per square inch. Because of the tremendous torque, the drive axles were 6 inches in diameter. Built-in bunkers held a ton of coal.

The big machine could be mated to a plow with up to 14 bottoms. Cabs were optional. Driving one of these monsters starts with obtaining a steam operator's license from the state.

ENGINE	1-cyl.
BORE X STROKE	12 x 12 in.
HORSEPOWER	110+ belt
RPM	230
DRIVE-WHEEL DIAMETER	7 ft.
STEERING	Chain and bolster
TOP SPEED	2 mph
WEIGHT	40,260 lbs.

1900–1919

Pioneer 30-60

1910

For its time (1910–1915), the Pioneer 30-60 was a truly impressive machine. With drive wheels 8 feet in diameter, front wheels 5 feet in diameter, and a length of more than 20 feet, it stands out in a crowd even today. It has a smooth-running,

horizontally opposed four-cylinder engine and a two-speed transmission. Rated for ten 14-inch plow bottoms, it was a real workhorse. The Pioneer was probably the first farm tractor to offer an enclosed cab as standard equipment. Optional lighting permitted nighttime work.

The Pioneer Tractor Manufacturing Company was incorporated in Winona, Minnesota. It also had a branch in Calgary, Alberta.

ENGINE	4-cyl., 1,232 ci
FUEL	Gasoline or kerosene
HORSEPOWER	60 engine; 30 drawbar
RPM	600
DRIVE	Rear wheels
TRANSMISSION	2-speed
STARTER	Crank
STEERING	Manual, chain and windlass (early); automotive (late)
TOP SPEED	6 mph
WEIGHT	23,600 lbs.





Heider A

1911

Run by a father and two sons, Heider Manufacturing Company of Carroll, Iowa, began making tractors in 1910, adding them to a line of other farm tools they made. Their first tractor, the A, used a four-cylinder Waukesha engine, a friction-disc transmission, and chain final drive. The tractor was of a typical size and weight for the times, and it sold quite well. In fact, Rock Island Plow Company took over manufacturing when Heider couldn't keep up with the demand.

The friction drive worked directly off the engine flywheel, giving infinitely variable speeds up to 4 miles per hour. Interestingly, the belt-pulley speed could be varied by the same means.

ENGINE	Waukesha 4-cyl., 354 ci	PTO	Belt pulley
FUEL	Kerosene	STARTER	Crank
HORSEPOWER	25 belt	STEERING	Chain and windlass
RPM	800	TOP SPEED	4 mph
DRIVE	Rear wheels	WEIGHT	4,500 lbs.
TRANSMISSION	Continuously variable		

1900–1919

International Harvester Titan Type D 1911

The Titan Type D (1911–1914) was built in several power ratings, the most common of which was the 20-horsepower size. It used a single-cylinder engine identical to the International Harvester Famous brand stationary engine and used an evaporative cooling system whereby water ran over a perforated surface using a piston-type water pump. Evaporation cooled the intake air, which was drawn through the surface. A large reservoir was required for makeup water.

ENGINE	1-cyl., 902 ci
FUEL	Kerosene
HORSEPOWER	20 belt
RPM	450
TRANSMISSION	1-speed
STARTER	Roll flywheel
STEERING	Pivot axle, chain and bolster
TOP SPEED	2 mph
WEIGHT	18,000 lbs.





1900–1919

Wallis Bear 30-50

1912

The huge Wallis Bear (1908–1912) was a very unusual tractor for its time. It featured a four-cylinder engine and a three-speed enclosed transmission. Other features that would not appear again in a tractor until much later were power steering, an engine-speed governor, and individual turning brakes. It was rated for ten 14-inch plow bottoms. Only about a dozen were made.

The Wallis Company was founded in 1902 by Henry M. Wallis, son-in-law of J. I. Case. The operation was originally located in Cleveland, Ohio, and made several types of tractors, all in small numbers. In 1912, the company moved to Racine, Wisconsin, and in 1919 it merged into the J. I. Case Plow Works.

ENGINE	4-cyl., 1,480 ci
FUEL	Gasoline
HORSEPOWER	50
RPM	250
TRANSMISSION	3-speed

STARTER	Crank
STEERING	Power
TOP SPEED	4 mph
WEIGHT	21,000 lbs.





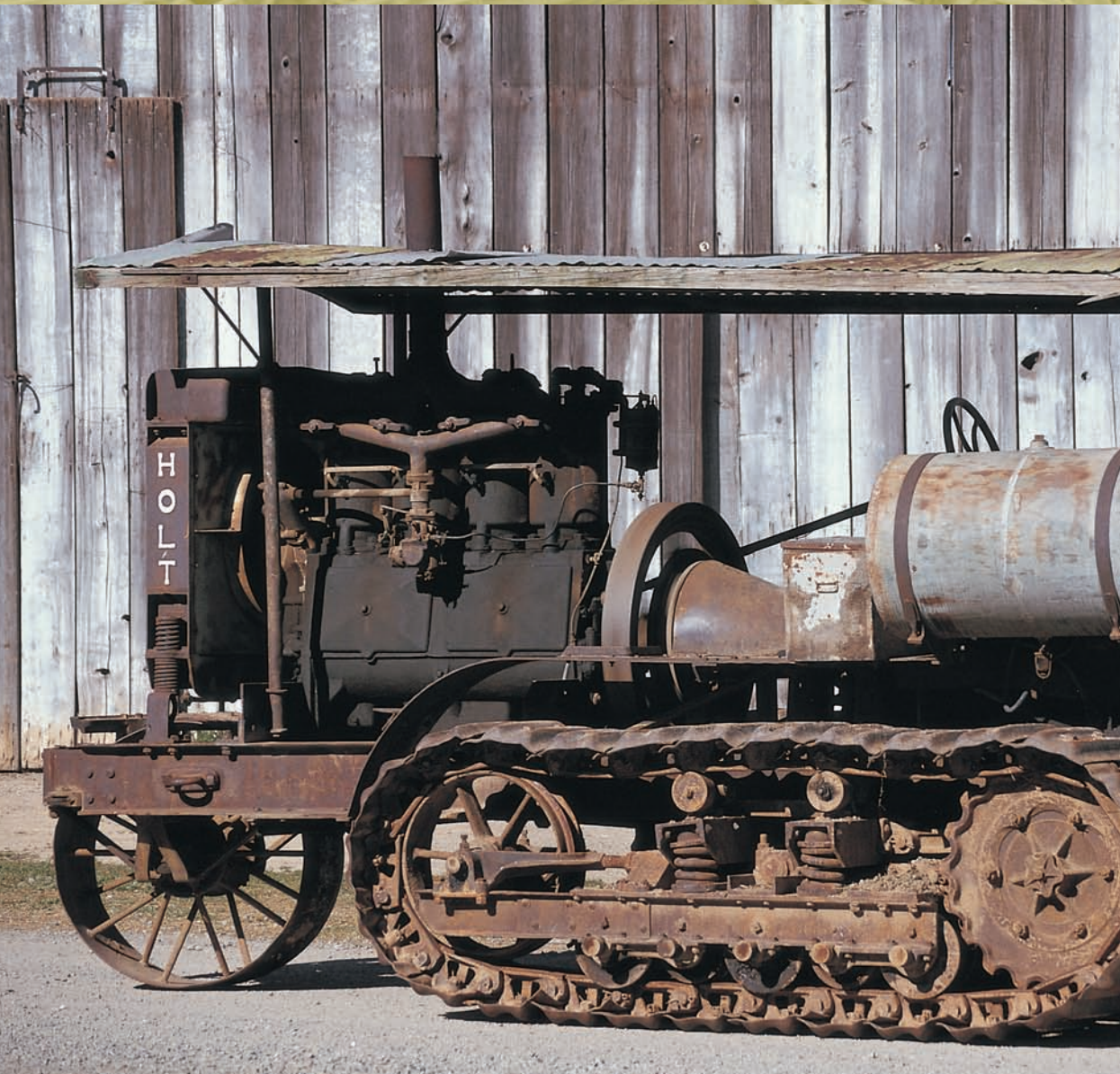
Advance-Rumely OilPull Type E 30-60 1913

The M. Rumely Company of La Porte, Indiana, purchased the Advance Thresher Company of Battle Creek, Michigan, in 1911, becoming Advance-Rumely Thresher Company. In the same year, it announced the OilPull Type E 30-60 (1911–1923). In typical Rumely fashion, it was conservatively rated to avoid disappointing customers and to allow for degradation over time. Remarkable for its time, the Type E mustered 50 drawbar horsepower in its Nebraska test, 20 horsepower more than its requested rating of 30. It also developed 76 horsepower on the belt, rather than the requested 60 rating.

ENGINE	2-cyl., 1,885 ci
FUEL	Kerosene
HORSEPOWER	76
RPM	375
DRIVE	Rear wheels
TRANSMISSION	1-speed

STARTER	Pneumatic
STEERING	Pivot axle; chain and bolster
TOP SPEED	2 mph
WEIGHT	26,000 lbs.

1900–1919



Hans Halberstadt photo



Holt 60

1913

The Holt 60 (1908–1917) sold new for \$4,200, a princely sum in 1913. Most of these monsters worked in plowing and harvesting the giant ranches of the West and in construction projects such as the Los Angeles Aqueduct. Steering was done by releasing one track clutch and pivoting the front tiller wheel. The Holt 60 had no steering brakes and could make only wide, sweeping turns. Starting the engine required filling priming cups for each cylinder, then inserting a crowbar into a hole in the flywheel and rolling the engine through a compression stroke. The flywheel hole was tapered so that when the engine fired, it kicked out the crowbar.

Holt Manufacturing Company and C. L. Best Gas Traction Company competed head-to-head until they merged in 1925 to form Caterpillar.

ENGINE	4-cyl., 1,230 ci
FUEL	Gasoline
HORSEPOWER	60 belt
RPM	500
TRANSMISSION	2-speed
STARTER	Crowbar
STEERING	Clutches for each track; tiller front wheel
TOP SPEED	4 mph
WEIGHT	22,000 lbs.

Allis-Chalmers 10-18

1914

Called simply “The Farm Tractor,” Allis-Chalmers’ first tractor, the 10-18, was built in its West Allis, Wisconsin, plant. Three-wheel design was popular at the time, and several manufacturers had similar designs. The 10-18, however, had the single front wheel in line with the right drive wheel. That way, both the front wheel and the right driver would run in the plow furrow. The 10-18 used a two-cylinder, horizontally opposed engine. Although it looked like a lightweight, it tipped the scales at almost 5,000 pounds. It had one forward speed and one reverse. Ads boasted of a strong frame with no rivets to work loose.

ENGINE	2-cyl., 303 ci
FUEL	Kerosene or gasoline
HORSEPOWER	18
RPM	720
DRIVE	Rear wheels
TRANSMISSION	Single-speed
PTO	Belt pulley
STARTER	Manual
STEERING	Manual worm and sector; single front wheel
TOP SPEED	2.75 mph
WEIGHT	3,480 lbs.





Common Sense

1914

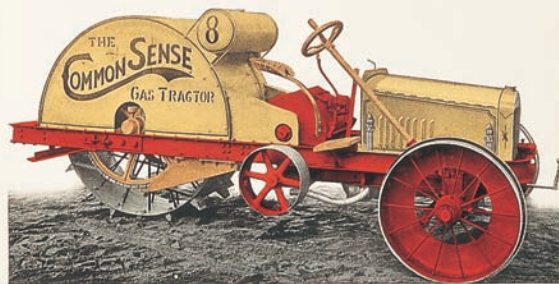
H. W. Adams designed this three-wheel machine and then set up a company to manufacture it. He also established operator schools to teach proper tractor care and maintenance and to provide driving instruction. Before the 1920s, farmers had little or no mechanical experience with gas engines. Adams had little trouble selling them his Common Sense tractor once they had a few weeks of instruction under their belts.

The unique feature of the Common Sense (1914–1920), besides the three-wheeled stance (single rear wheel driver), was the use of a big V-8 engine. Such engines were invented in France

around the turn of the twentieth century and were common in aircraft and racing engines, but they wouldn't become common in passenger cars until 1932, thanks to Ford's Flathead design.

“COMMON SENSE”

The Original 8-Cylinder Tractor



ENGINE	8-cyl., 332 ci
FUEL	Gasoline
HORSEPOWER	40
RPM	1,200
DRIVE	One rear wheel; chain-driven
TRANSMISSION	2-speed
PTO	Belt pulley
STARTER	Crank
STEERING	Automotive
TOP SPEED	4 mph
WEIGHT	6,000 lbs.

Aultman & Taylor 30-60

1915

Weighing in at over 24,000 pounds, this monster used a horizontal four-cylinder engine with the cylinders side by side. The engine was started by injecting air into the intake manifold with a high-pressure air tank. The tank was replenished by a hand pump.

This model was built from 1910 to 1922. Early versions had a square radiator with induced-draft cooling. After about 1914, a tubular radiator with dual fans was used. The 30-60 was very conservatively rated, actually capable of 80 horsepower on the belt and almost 60 horsepower on the drawbar (using gasoline fuel). It was considered one of the most reliable tractors of its time. Hit-and-miss governing was employed, along with automatic intake valves. A high-tension magneto was used, with dry-cell batteries for starting.

Steering was by swing axle with chain and windlass. One forward and one reverse speed were provided. In the forward gear, a little over 2 miles per hour was possible.

The Aultman & Taylor Machinery Company was located in Mansfield, Ohio. In 1924, it was taken over by Advance-Rumely.

ENGINE	4-cyl., 1,385 ci
FUEL	Kerosene or gasoline
HORSEPOWER	80
RPM	500
DRIVE	Rear wheels
TRANSMISSION	1-speed
STARTER	Pneumatic
STEERING	Pivot axle; chain and windlass
TOP SPEED	2 mph
WEIGHT	24,450 lbs.



The Ford Tractor Company B 1915

A Minneapolis entrepreneur named W. Baer Ewing saw an opportunity to capitalize on Henry Ford's growing reputation by enlisting one Paul B. Ford into his corporation in order to use the Ford name on a tractor. The rather unique result was designed by a man named Kinkaid, but Paul Ford was touted as the designer.

Kinkaid's tractor used a two-cylinder horizontally opposed engine driving the two front wheels with a steering wheel behind. Beyond that, not much is known about the tractor. Its real claim to fame is that a farmer and Nebraska state legislator named Wilmot Crozier bought one and found it so hopelessly unsatisfactory that he went on to establish the famous Nebraska Tractor Test Laboratory.

ENGINE	2-cyl.
FUEL	Gasoline
HORSEPOWER	16
DRIVE	Front wheels
TRANSMISSION	1-speed
STARTER	Crank
STEERING	Single rear wheel





1900–1919

Heider C

1915

In 1915, the Rock Island Plow Company took over production of Heider tractors and redesigned Heider's 10-20, calling it the Heider C and giving it a 12-20 rating. It used a four-cylinder Waukesha engine, a friction-disc transmission, and chain final drive. It also sold quite well.

The friction drive worked directly off the engine flywheel, giving infinitely variable speeds up to 4 miles per hour. The belt-pulley speed could be varied by the same means.

ENGINE	Waukesha 4-cyl., 429 ci	PTO	Belt pulley
FUEL	Kerosene	STARTER	Crank
HORSEPOWER	20 belt	STEERING	Sector gear
RPM	700	TOP SPEED	4 mph
DRIVE	Rear wheels	WEIGHT	6,000 lbs.
TRANSMISSION	Continuously variable		





Russell Giant 30-60

1915

Russell & Company of Massillon, Ohio, started out making wooden threshing machines before venturing into the steam traction engine business. Next it adapted a British-made tractor before finally making a tractor of its own design, engine and all.

Several other proprietary Russell tractors preceded and followed the Giant (1913–1927), but the Giant was the most successful of all. Known for its four-cylinder engine and enclosed gearing, it also had drive wheels measuring 7 feet in diameter!

Old price guides list the Giant retailing for \$4,800 in 1924—the equivalent of 10 McCormick 10-20s. It's a wonder that any were sold, although on big open prairies, 10 to 12 plow-bottoms rather than two might have been attractive. Today, there are seven Giants still in existence.

ENGINE	Russell 4-cyl., 2,011 ci	PTO	Belt pulley
FUEL	Kerosene	STARTER	Crank
HORSEPOWER	60 belt	STEERING	Chain and windlass
RPM	525	TOP SPEED	3.2 mph
DRIVE	Rear wheels	WEIGHT	24,000 lbs.
TRANSMISSION	2-speed	(Nebraska Test No. 78)	

1900–1919





Advance-Rumely Oil Pull Type C 15-30

1916

The OilPull C (1911–1917) used a single-cylinder engine that was one-half the engine of the 30-60. Like all in the OilPull line, it used oil for coolant because of its boiling temperature is higher than that of water. Higher operating temperatures allowed better vaporization of kerosene fuel. Also characteristic of the OilPull line was the use of the cooling-tower radiator with exhaust-induced air-flow. Rumely engines had the cylinders offset from the crankshaft to reduce side loads on the pistons.

Advance-Rumely was taken over by Allis-Chalmers in 1931.

ENGINE	1-cyl., 943 ci
FUEL	Kerosene
HORSEPOWER	30
RPM	375
DRIVE	Rear wheels
TRANSMISSION	1-speed
STARTER	Pneumatic
STEERING	Pivot axle; chain and windlass
TOP SPEED	2 mph
WEIGHT	16,000 lbs.

1900-1919

Emerson-Brantingham L 1916

Emerson-Brantingham (E-B) of Rockford, Illinois, was a famous old-line farm implement company originating in the days of the great reaper battles of the mid-nineteenth century. E-B got into the tractor business by buying out such makers as Big Four and Reeves, but then started making proprietary designs. The L was the first of them. It had a three-wheel design with a single drive wheel in the rear. It used a Big Four engine with a bore and stroke of 4.5x5 inches and had a 12-20 horsepower rating.

E-B once had the largest farm machinery factory in the world. Hard times in the late 1920s caused E-B to sell out to J. I. Case. After World War II, Case donated the giant plant to the city of Rockford.

ENGINE	Big Four 4-cyl., 318 ci	TRANSMISSION	2-speed
FUEL	Gasoline	STARTER	Crank
HORSEPOWER	22	STEERING	Sector gear
RPM	800	TOP SPEED	2.33 mph
DRIVE	Single rear wheel	WEIGHT	5,400 lbs.





Galloway Farmobile

Circa 1916

The William Galloway Company of Waterloo, Iowa, entered the engine and automobile business in the early 1900s. By 1916, the company was marketing its Galloway Farmobile tractor. Sales were fairly vigorous until World War I. After that, no more was heard of the Farmobile.

The Farmobile was conventional for the time. It used ridged-axle pivot steering, a two-speed transmission, and a cross-mounted four-cylinder engine of Galloway's own design.

ENGINE	4-cyl., 318 ci
FUEL	Kerosene
HORSEPOWER	20 belt
RPM	800
DRIVE	Rear wheels

TRANSMISSION	2-speed
STARTER	Crank
STEERING	Manual; chain and windlass
TOP SPEED	3 mph
WEIGHT	5,500 lbs.