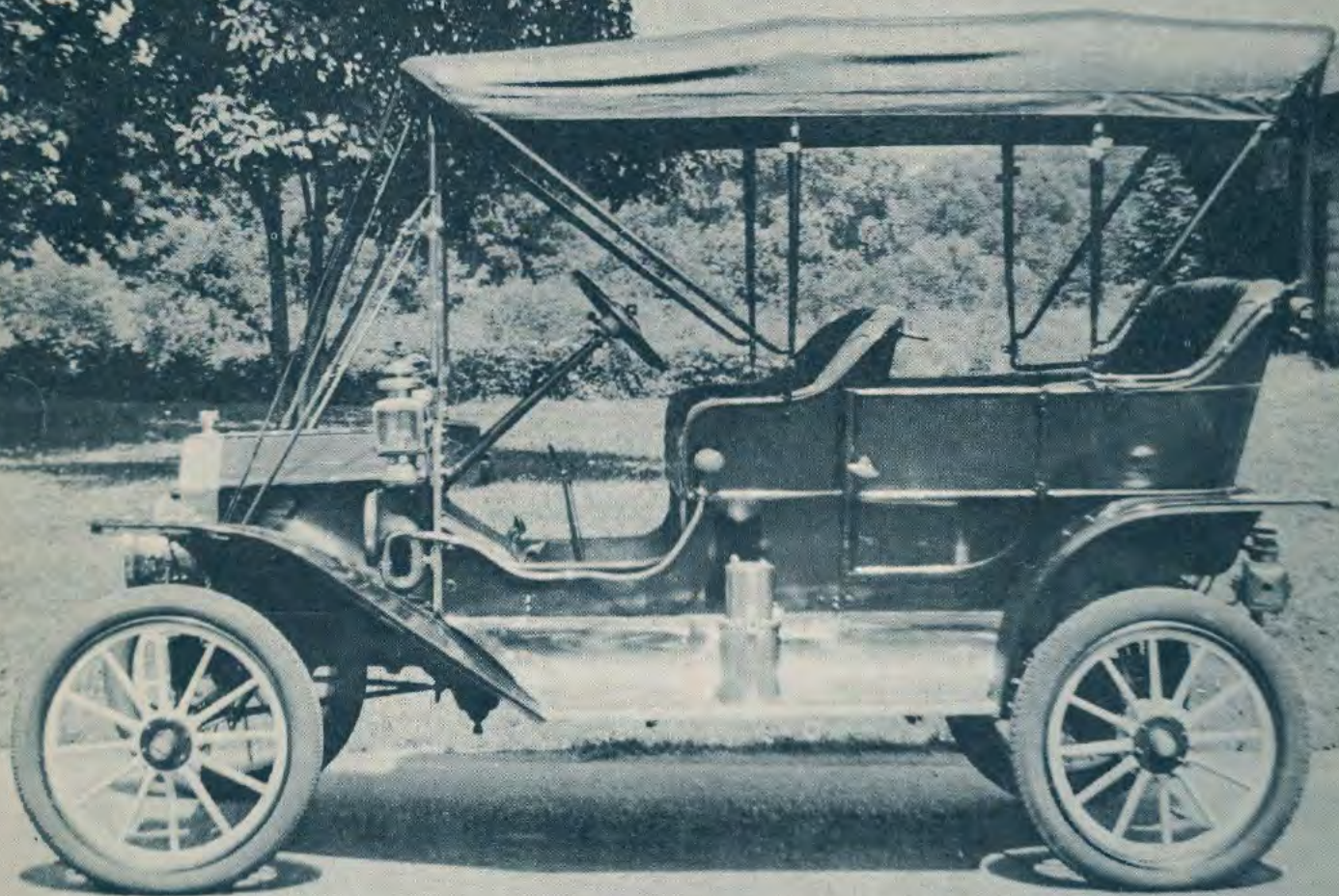


"FIFTEEN MILLION TIN LIZZIES"

Facts and Data



FIFTY CENTS

Articles by:

CHARLES W. BISHOP

LESLIE R. HENRY

SPECIFICATIONS OF MODEL T

Motor	4 Cylinder Vertical
Horse Power	20
Bore and Stroke	3-3/4 x 4
Cooling	Thermo Syphon
Ignition.	Magneto
Lubrication	Splash and Gravity System
Clutch.	Multiple Disc
Transmission.	Planetary
Final Drive	Shaft
Brakes.	Transmission and Hub
Control	2 Speeds forward 1 Speed Rev. Left Side
Wheels.	30 inches
Tires	3-inch Front 3-1/2-inch Rear
Springs	Front and Rear Semi Elliptical-Transverse
Style of Body	Touring Car, Open Run- about, Town Car, Torpedo Runabout Roadster, Coupe
Passengers.	2 to 6
Wheel Base.	100 inches
Tread	56 inches
Gas Capacity.	16-1/2 gals. Runabout 10 gals. Touring
Equipment	Full Equipment
Price	\$780, \$680, \$960, \$725, \$680, \$840
Weight.	1200
Speed	45 Miles per hour
Color	Brewster Green

FORD — FROM A TO T

By Charles W. Bishop

The Ford Motor Company is celebrating its fiftieth anniversary. Most of the popular automobile and scientific magazines have long since burst into print with resumes of the long career of this company, which might lead one to inquire, why one more.

One of the major purposes of the VMCCA is to preserve information on early cars. Such information as is on file in the library in our headquarters is readily available to only a small part of our total membership. It should be readily available to all, and the Bulb Horn is the vehicle which makes this possible.

Every one of the many articles we have seen has given a selection of examples of early FORDs. Some have even given one example of each model. On the following pages we have assembled illustrations from the company sales catalogs showing every body type mounted on each chassis model as shown in company catalogs from the beginning to the first of the stamped radiator model T cars (i.e., through the brass radiated T's).

Those who study the data abstracted from the catalogs will find many points of variance from previously compiled histories in national magazines. We accordingly specifically state that the catalogs are dated, and their evidence is preferable.

There are perhaps some omissions, and members will confer a favor upon the entire membership in bringing these omissions to our attention so they may be passed on to the rest.

The legendary air-cooled FORD is an exception because we have no picture of it at hand, but as evidence that it is not as elusive as some earlier writers in the motoring press would have us believe we abstract the contemporary mention reproduced on page 12. Another account is found in *Automobile Topics* February 27, 1904, page 1348.

This was perhaps known as model D or E, designations which never appeared in the general run of models. Other letters in the alphabet are passed over before the T. Perhaps someone will come forward with stories on these missing links. Missing also is the "6-cylinder model T" an example of which is found in the Dearborn Museum. Perhaps we misrecall the label as stating it was specially constructed for Edsel Ford. If it was, there were one or two that got away, because the Horns, out in Ft. Dodge, Iowa, had one not long ago. We look forward to authentic stories on these and other rarities among FORDs.

Many of the features which led to the success of the T are discernible in embryonic form in the earlier cars. The T stayed with us so long that many people have been permanently blinded to the virtues which it brought to the motoring public when it was first introduced. They can be dug out of the catalog excerpts by those who wish to pursue the subject.

It is curious that Ford, who was reported in the *Horseless Age* of 1898 as having built a number of successful gasoline cars, and whose early ads mentioned dates as early as 1891 and 1892, should turn his back on this in later years and ignore the antecedents of The Ford Motor Company. While the cars of the Detroit Automobile Company may have been called DETROIT or D.A.C., (it is not clear), the pre-1899 cars were FORDs certainly, and what of the product of The Henry Ford Company (1901)? In 1902 Henry Ford was still so obscure in auto circles that the first publicity on "999" sought to bolster its news value by calling it the FORD-COOPER racing car, as Cooper was well known to the speed-minded public. Yet Ford had won a brush with Winton, using a little two-cylinder horizontal opposed motor (as in the model A) in a very light vehicle. It was Cooper's suggestion that brought Barney Oldfield into automobile racing, when "999" proved too rich for either Ford or Cooper. It is not amiss to note that Henry was able to cope with Barney (something many manufacturers were not able to do in the ensuing years) as we find Henry again at the wheel, or helm, of FORD racers in post B-O days. One of the little racers was owned and raced by a millionaire sportsman in Detroit in 1902. So there was trade in FORD cars before the 1903 date which is the subject of commemoration, a commendable display of modesty.

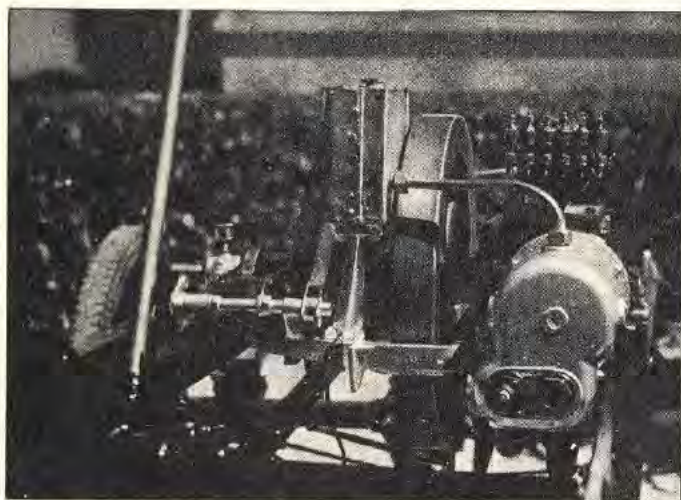
FORD has, since 1903, been the name of the product of The Ford Motor Company, formed in 1903 and continuing without change in name, and the company has been managed by Fords since 1903. This unique combination of circumstances, any one of which calls for congratulations, clearly calls for triple congratulations to car,

company,

and clan

on their quinquenary.

Catalog reproductions on the following pages arranged through the courtesy of Connecticut State Library, James Brewster, Librarian.



Engine of the 1904 Model C Ford No. 772 in George C. Cannon's yard during restoration. George C. Cannon built several successful steam race cars circa 1900, and later (1907) was chief engineer for the Grout steam car made in Orange, Mass.



The model C was created by adding a short section of angle iron to the front of the "A" frame and mounting hood and gas tank on this extension. The Cannon Car #772 is now owned by Charter Member, W.H. Leathers. Photographed in the V.M.C.C.A. Antique Auto Museum.



HE first one of the first lot of 650 Ford automobiles was placed on the road early in June, 1903, and this latest representative of the American type of two-cylinder driven vehicles, has won an international reputation as the most practical type of the self-propelled carriage.

The two opposed cylinder motor has advantages in the way of balance and frequency of impulse delivered to the motor shaft, which produce distinctively smooth running and strong hill climbing, and there is no doubt as to the pronounced success of this form of motor for driving low-cost and high-duty vehicles of the runabout and detachable tonneau class.

Mr. Ford built the first automobile in Detroit and the third in the United States, and the Ford Motor Car for 1904 represents the most advanced type of the double opposed cylinder machine.

The same genius and skill which made possible the world famous "999" is shown in the reliability and perfect construction of the Ford Motor Car.

Detailed Description

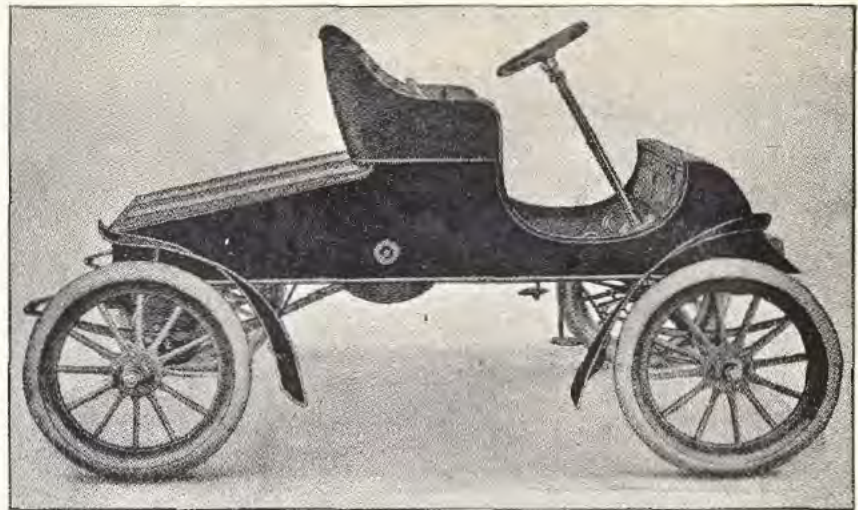
THE MOTOR is a pair of opposed cylinders, 4x4 inches, jump spark, epicyclic change gear, two speeds forward and reverse, transmission by Whitney roller chain, heavy pattern, 1-inch pitch, 28-inch artillery wheels, 3-inch heavy double-tube tires, wheel base 72 inches, gauge 55½ inches, weight 1000 pounds for two passengers, 1100 pounds tonneau; price, \$800, runabout without top; \$850 with leather top; \$830 with rubber top, and \$900 with tonneau body.

Everything is brought close together, and simplicity and directness are the dominant characteristics of the motor and speed change. The gearing is all spur, no internal gear being used. The water tank and gasoline tank are made part of the motor, and the 4-lead oiler is placed on top of the crank chamber, so that short metallic tubing may be used instead of rubber hose, and the oil-leads are all very short and direct. This close assemblage of small parts enables the whole motor to be placed on an independent cross frame, which carries everything except the radiator, and thus gives the motor the great manufacturing advantages of assembling and testing separately from the chassis frame, and of being transferred from the assembling stands to the testing stands, and from the testing stands to the chassis frame, without any disassembling whatever.

The radiator is very large, and does not boil the water, and the exhaust muffler is very small, but has 5-16 inch diameter holes in its four sheet iron concentric shells, and creates no back pressure at all, although it perfectly silences the exhaust.

The large cooling area of the radiator makes very little cooling water tank capacity necessary. If the radiator is sufficiently large to avoid evaporation the only function of the water tank is to make leakage good. The Ford tank holds about 1½ gallons only, but as the water never boils, this limited bulk and weight of cylinder-cooling medium is ample. In fact, given good construction and tight water piping there seems to be no real need for any water tank whatever.

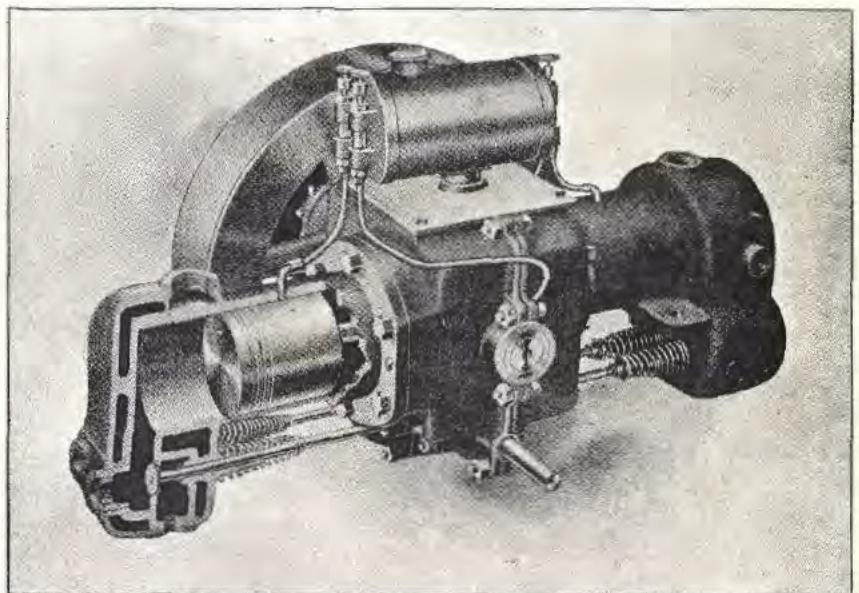
If the water does not boil and is not wasted by leakage then there is no water loss, and water enough to fill the cooling system is all that is required. The Ford radiator is built up by soft-soldering straight-winged tubes, copper or brass, into cast brass heads, ported in series, so as to ensure the circulation of the heated water in successive vertical banks of radiator tubing, so that the water starts from the front vertical bank of tubes, which are most exposed to the air, and hence coolest, on its return to the cylinder jackets. The circulating pump is of the centrifugal type, and is amply powerful for merely aiding the movement of water through a free pipe system, where the fluid is normally influenced by thermal conditions to make the desired circuit. Rapid water circulation is essential to light weight of the cooling system, and thorough cooling is the most urgent



THE FORD AS A RUNABOUT \$800.00.



THE FORD (WITH TONNEAU) \$900.00.

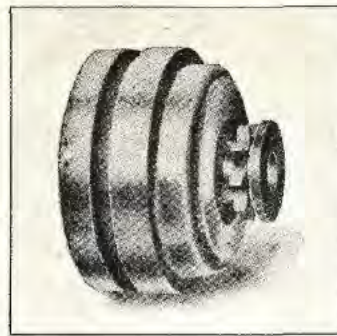


The Ford Motor Model A of 1904

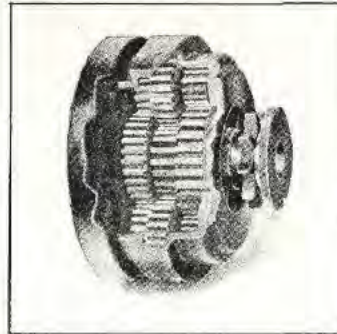
Text and Illustrations from 1904, Ford Catalog "The Blue Ribbon Car"



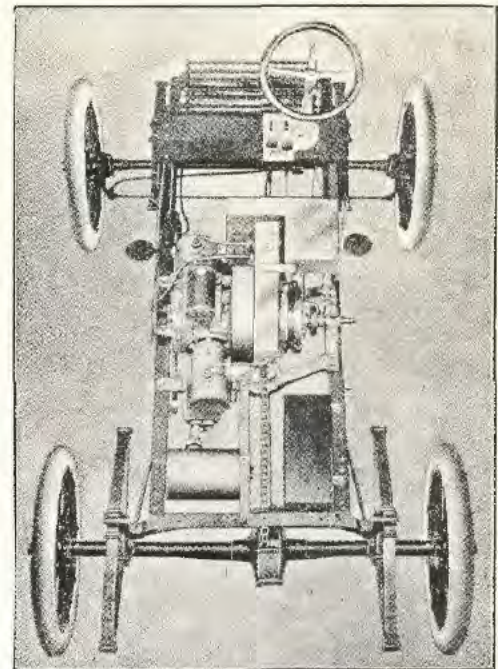
THE FORD
WITH SIDE CURTAINS AND STORM APRON.



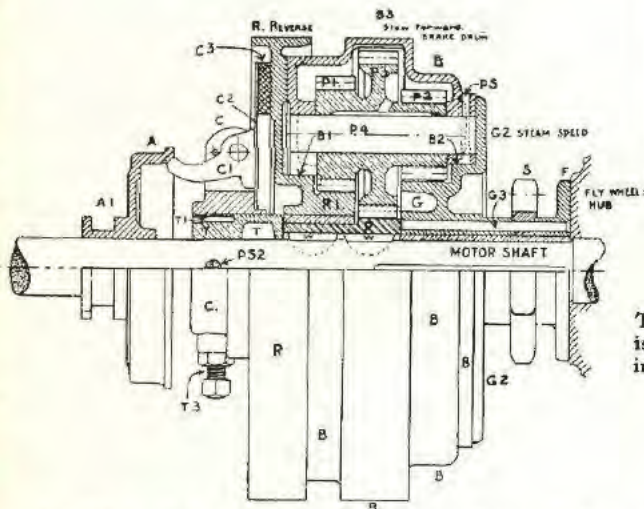
TRANSMISSION GEAR CASE.



SECTION OF TRANSMISSION GEAR CASE.



CHASSIS OF THE FORD.
BODY REMOVABLE BY LOOSENING SIX BOLTS.



The meaning of "G-2 Steam Speed" is not explained in text. Readers are invited to clear up the mystery.

requisite of the short-stroke, high-speed cylinder-fired motor; hence a low-cost car such as we have produced must have an effective and durable circulating pump.

The Ford motor consists of two cylinders and two crank box halves all of gray iron, no aluminum bronze being employed.

The crank box is covered by a plate, which supports a four-lead oiler, operated by crank chamber pressure; this oiler is shown in working drawing detail. There is always a small pressure in the crank chamber, and this is made to force the lubricating fluid through needle valves, which regulate a sight drop through individual glass tubes for each oil lead. The sight feed is used for making the original needle valve adjustment only for each lead. After the adjustment is once satisfactory the system takes care of itself. There are no wicks used, and the flow of oil begins as soon as the starting crank is turned, and stops as soon as the motor stops, with no attention from the driver, who must, however, see that the large oil tank on top of the crank box contains a sufficiency of oil.

The cylinders are closed at one end, and the water jacket covers only the combustion chamber and valve seats.

The second motion shaft is driven in the usual manner from the crank shaft, both the admission and the exhaust valves being mechanically operated, two cams only being used. The ignition is jump spark, from two sets of batteries, one in reserve, carried in a box fixed to the chassis frame, which seems better than to fix the battery box to any part of the wagon body. In the runabout form removal of the rear body "deck" gives

free access to the machinery, and when the tonneau is in place removal of the front seat cushion and board discloses the motor almost entirely. Four bolts suffice to hold the body in place, thus making it possible to remove the body very quickly and easily when full access is to be had to the machinery.

The motor sits on a cross frame of its own, which carries the engine, piping, tanks and speed-change cam shaft all as an independent entirety, to be secured to the chassis frame by only four bolts, after the motor passes the testing floor.

The Ford motor piping is one straight mixture passage from the carburetor to both cylinders, and one straight exhaust pipe from both cylinders to the extremely small, light and efficient muffler, which creates no back pressure whatever.

The battery box carries two sets of six cells each, 12 cells in all; price, 20 cents per cell to the user. Battery life is yet wholly uncertain, and varies enormously with the same make of cell under what appears to be the same treatment. The only safe way is to use two sets of cells, one in reserve, and renew the worked-out set as soon as possible after connection is made with the reserve.



Text and Illustrations from 1904, Ford Catalog "The Blue Ribbon Car"

February 24, 1904

THE HORSELESS AGE.

225

Ford Four Cylinder Air Cooled Car.

The Ford Motor Company exhibited at the Detroit Show their new 14 horse power air cooled car, of which a plan and an elevation are shown herewith. The engine has four upright cylinders cast with radiating flanges, and is located at the front of the car under a close fitting narrow hood. The inlet and exhaust valves are located in the head of the engine and both are mechanically operated through push rods and short walking beams. The cam shaft and cam shaft gears are enclosed within the aluminum crank casing. The crank shaft has five bearings in the casing. A rectangular flange is cast on the upper end of the cylinders, and to the sides of this flange and to the crank casing are bolted sheet metal side plates, to form a housing over the flanged cylinders. The casing is open at the forward end and provided with an extension at the rear end fitting closely to the side of the rim of the flywheel. The

1904

spokes of the flywheel have the shape of fan blades, and the flywheel acts as a fan, drawing air through the housing surrounding the cylinders. The crank case of the engine is provided with removable end plates and with an inspection door at its bottom. The engine has practically a three point support, being secured to the forward cross member of the frame by two adjacent brackets extending forward from the casing, and to the main frame bars by lateral brackets at the rear end of the casing. The upper portion of the hood is hinged, and can be thrown back, and the forward end of the hood is provided with a wire screen to allow free circulation of the air. The engine is designed to develop its rated power at 950 revolutions per minute. The

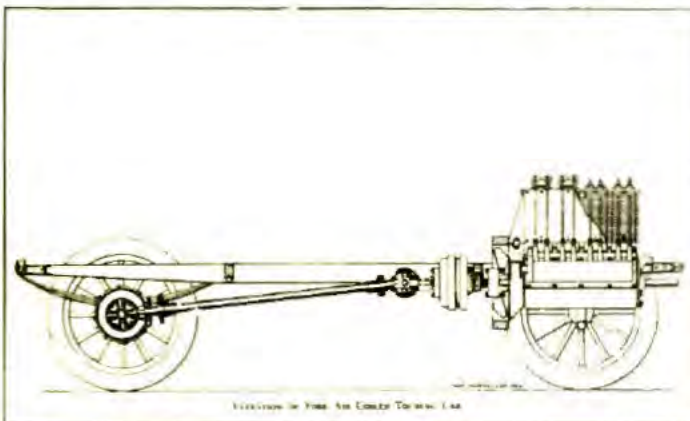
cylinders are $3\frac{3}{4} \times 4\frac{1}{2}$ inches.

Ignition is by jump spark, with two spark coils arranged in a case on the dashboard, and a double commutator located on the forward end of the cam shaft, outside of the hood. The current for ignition is furnished by a spark generator. The spark plugs of the two outer cylinders are connected in series, and the plugs of the two inner cylinders are also connected in series, so that a spark is produced in both cylinders of a pair at each revolution of the crank shaft. By this arrangement it is possible to spark four cylinders with only two coils, without the use of a high tension commutator. The low tension commutator used is a double commutator, each half controlling the current in one of the ignition circuits. The engine is supplied with gas by means of a Kingston carburetor arranged at the side of the crank case, and provided with a throttle valve which is controlled by a foot lever. The lubrication of the engine bearings is effected by means of a pressure feed lubricator operated by gas pressure, as in the Ford runabout. This lubricator is arranged between the engine and the dashboard.

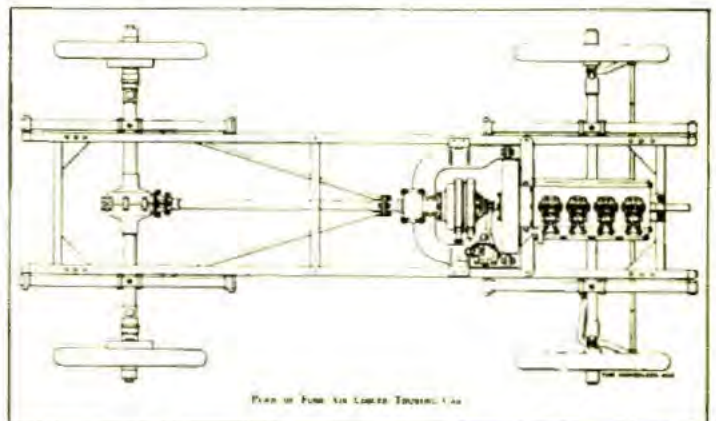
The change speed gear is the regular Ford planetary gear, giving two forward speeds and one reverse, with direct drive for the high speed. The forward end of the change speed shaft is bolted to the engine flywheel, and the rear end is supported in a bearing on a casting fastened to the side members universal joint at the of the frame and the forward end. The rear engine brackets, shaft is encased in a as plainly shown in tube which takes care the plan of the car of the reaction of the herewith. The drive to the rear axle is by ratio of reduction of shaft and bevel gear, the rear axle driving with only a single gear is 3 to 1.

The frame is constructed of pressed steel, and is supported by long semi-elliptic springs at both ends. The rear springs are shackled both at the forward and rear end, and the front springs only at their rear end. As shown in the plan, both sets of springs are swung out from the frame to reduce the strain on the axles. The rear axle is the usual encased live axle, and is mounted on four roller bearings. The wheels are of the wood artillery type, 30 inches in diameter, and shod with $3\frac{1}{2}$ inch detachable tires. The hubs are provided with brake drums for the emergency brake. The front axle is a 1 13-16 inch heavy walled steel tube, to which the forked axle ends are pinned and brazed. The connecting rod of the steering gear is located forward of the front axle, and has forked connections, while the connections of the rod between the right hand steering knuckle arm and the lever arm of the worm and sector gear are of the ball and socket type. A small lever for controlling the spark is arranged on the steering column underneath the steering wheel. The speed changing gear is operated by a side lever and a pedal, the side lever giving the low speed when in its rearward position, and the high speed when in the forward position, and the pedal controls the reverse. A second pedal, provided with a ratchet locking device, is used to apply the hub brakes.

The car weighs complete 1,400 pounds, making 100 pounds for every horse power of the engine. The gasoline tank of 20 gallons capacity is located under the front seat. The body is a side entrance tonneau seating five passengers, and the front seat is divided.



ELEVATION OF FORD AIR COOLED TOURING CAR

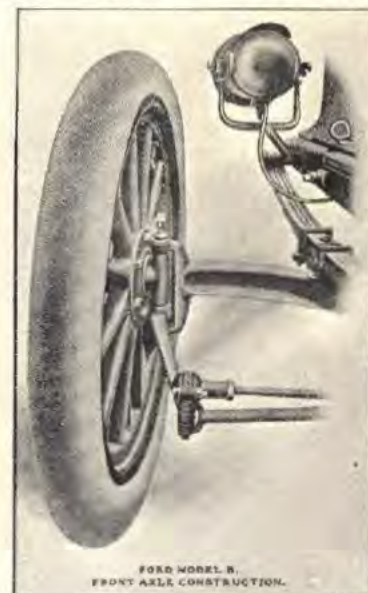


PLAN OF FORD AIR COOLED TOURING CAR

Text and Illustrations from "The Horseless Age" Courtesy Detroit Pub. Library

THE FAMOUS FORD

THE FAMOUS FORD

FORD MODEL B.
FRONT AXLE CONSTRUCTION.

THE MODEL B FORD

THE MODEL B Ford for 1905 is a touring car of light weight and great power. From our experience in automobile building we are enabled to produce a motor of great power and to build a car of light weight, and at the same time of great strength. The handsome appearance of this car is only one of the notable features you will find herein described. To produce such a car at such a price would a few years ago have been impossible. Today our modern equipment enables us to place before the public in Model B a car which we believe cannot be duplicated.

THE MOTOR

THE MOTOR is the Ford four-cylinder vertical. Every approved feature known to the art of motor construction has been utilized, and many features unique in this motor, and now of proven value, have been introduced. The cylinders and pistons are of the best quality of cast grey iron, simply made and accurately ground. The crank shaft is a steel drop forging of ample dimensions, with bearing surfaces ground to gauge. The connecting rods are drop steel forgings, provided with bearing surfaces of large area, thoroughly babbitted and provided with the best of oiling facilities. All other shafts and rotating rods are furnished with the best of bronze bearings. The water jackets are of sheet copper so arranged that they may be easily removed and yet remain perfectly water tight; an arrangement which cannot be surpassed.

Among the notable and unique features of the Ford four-cylinder motor the following are prominent. The crank case, entirely of aluminum, carries in its upper half all the shaft and rod bearings, thus allowing the lower half to be removed with ease, even when the motor is running. The upper half bears the motor supports, which rest directly upon the side frames of the car.

The valve cam shaft runs parallel to the line of the crank shaft, being thoroughly protected and constantly lubricated by the oil splash. The valve cams are most accurately made and thoroughly hardened.

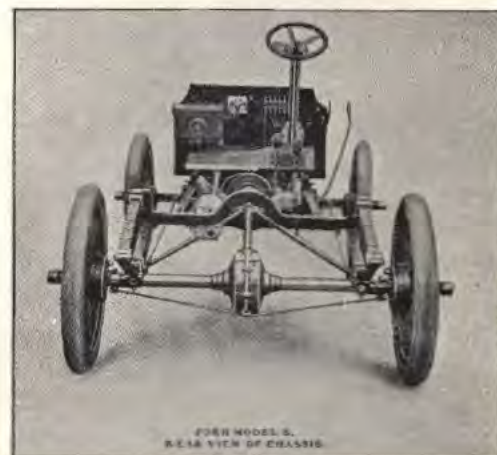
The simplicity and convenience of the commutator or make and break system deserves especial mention. Running vertically at right angles to the cam shaft at its rear end and geared to it by spiral gears is the commutator shaft. At the upper end of the commutator shaft, near the top of the dash, is placed a commutator of marked simplicity. The gearing for this shaft is thus perfectly protected and the commutator placed in a position within easy reach and sight of the driver. The convenience of this arrangement cannot be over stated.



FORD MODEL B, CHASSIS.



FORD MODEL B, CHASSIS.

FORD MODEL B.
REAR VIEW OF CHASSIS.

Text and Illustrations from 1905, Ford Catalog "The Ford"

THE FAMOUS FORD



FORD MODEL C, WITH TONNEAU.

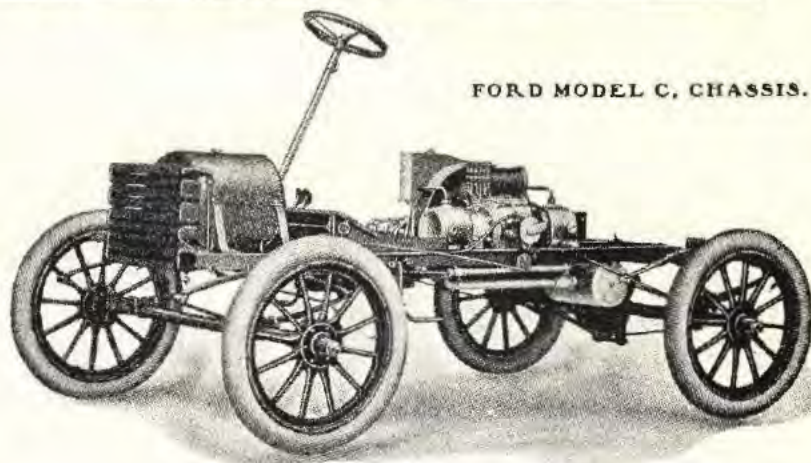
FORD MODEL C,
AS A RUNABOUT.

FORD DELIVERY CAR.

FORD MODEL C,
FOR THE DOCTOR.

SPECIFICATIONS OF MODEL B

PRICE—\$2,000 F. O. B. Detroit.
 WEIGHT—1,700 pounds.
 POWER—Ford four cylinder, 20 horse power gasoline motor.
 WHEEL BASE—92 inches.
 TREAD—55½ inches.
 WHEELS—32 inch wood artillery.
 TIRES—3½ inch clincher double tube.
 MILEAGE CAPACITY ONE FILLING (GASOLINE)—At least 200 miles.
 MILEAGE CAPACITY ONE FILLING (OIL)—At least 100 miles.
 CAPACITY—Gasoline tank 15 gallons.
 MAXIMUM SPEED—at least 40 miles per hour.
 COLOR—Rich dark green, yellow running gear.
 UPHOLSTERING—Black, of best leather, handsomely tufted.
 EQUIPMENT—2 side oil lamps, tube horn and necessary tools.

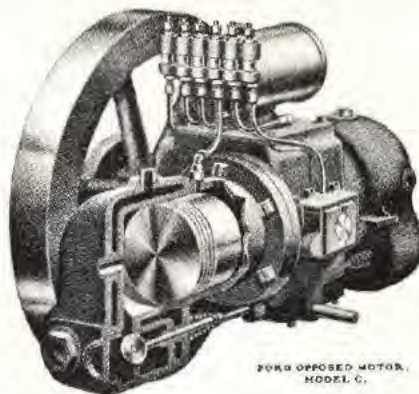


FORD MODEL C, CHASSIS.

SPECIFICATIONS OF MODEL C

PRICE—Runabout, \$850; Tonneau car, \$950; both F. O. B. Detroit.
 MOTOR—Ford two cylinder, horizontal opposed.
 POWER—Ten brake horse power.
 WEIGHT OF CAR—1,250 pounds.
 WHEEL BASE—78 inches.
 TREAD—Standard wagon.
 WHEELS—28 inches diameter, artillery pattern.
 TIRES—3 inch heavy double tube tires.
 MAXIMUM SPEED—30 miles per hour.
 CAPACITY GASOLINE TANK—9 gallons.
 CAPACITY OIL RESERVOIR—3 pints.
 COOLING WATER CAPACITY—3 gallons.
 MILEAGE CAPACITY ONE FILLING GASOLINE—180 miles.
 MILEAGE CAPACITY ONE FILLING OIL—100 miles.

THE CAR OF SATISFACTION

FORD OPPOSED MOTOR,
MODEL C.

Terms of Sale: from 1905 Catalog, "The Ford, 1905"
 All Machines shipped F.O.B. Detroit
 All orders must be accompanied by a deposit of 20% of the full price. The goods will be shipped on sight draft with bill of lading or by Express C.O.D. for the balance due.
 All remittances should be made by Exchange on New York, or Express Money Order, or P.O. Money Order.
 Orders executed in rotation as received.
 Cars sold according to standard guarantee of National Association of Automobile Manufacturers.

Text and Illustrations from 1905, Ford Catalog "The Ford"

THE FAMOUS FORD



THE FORD MODEL F

"Model 'F' has behind it the prestige of 'Ford Success.' It is designed for Automobile users who want a practical and useful Touring Car at a price which makes such a vehicle a profitable investment rather than an expensive luxury. While the materials entering into the construction of all our cars are the very best that can be obtained our facilities and output enables us to market this car at a price which is far below what it is really worth.

For actual reliability, attractive style and for economy of maintenance the Ford Model 'F' is easily ahead of any two cylinder car made.

The famous Ford type of water cooled horizontal two cylinder opposed motor is used. **THE MOTOR** Cylinders are $4\frac{1}{2}$ inch. diameter and 4 inch. stroke. The motor develops sufficient power to drive the car at a 30 to 35 mile clip on ordinary country roads. The cylinder with its water jacket is cast in one piece, thus obviating packed joints so liable to leak.

Main bearings made of the very best bronze obtainable and are easily adjusted by loosening one nut from the top of the machine.

Valve cams of extra large surface are forged solid to an extra large size cam shaft which is thoroughly case hardened. Valve feet



FORD MODEL F CHASSIS

are forged solid, then case hardened and ground to size after hardening. Cam shaft runs in bronze bushings which can be easily removed and replaced at a trifling cost. Crank shaft is drop forged from the very best steel obtainable for the purpose, and is of extra large size, and is accurately ground to size in finishing.

The circulating pump is made of bronze and is of the geared type all water connections being made of large size copper tubing. The radiator is of ample capacity.

Commutator is of the rolling contact type requiring but one wire and can be easily removed for inspection or repairs and contains no moving springs or parts that are liable to wear or become broken. The oiler is of the automatic sight feed type.

CARBURETTOR A simply constructed carburettor is conveniently placed so that if any adjustment is needed it can be easily and readily made.

TRANSMISSION Transmission is a cycloidal train, all gears being made from solid drop forgings and will stand any amount of abuse without breaking. All gears are bushed with fine bronze bushings and run in oil, making this transmission practically indestructible. It has two speeds, forward and reverse, all gears being idle on high speed. This type of transmission has given such universal satisfaction that we consider it far superior to the various slide gear devices especially in simplicity and durability.

THE CAR OF SATISFACTION

THE FAMOUS FORD



FORD MODEL F CHASSIS

The gasoline and water tanks are both located under the front hood with a capacity of nine and four gallons respectively. **GASOLINE AND WATER TANKS**

This car is equipped with hub brakes on both rear wheels which are applied by a foot lever directly in front of the driver. A device is also used enabling brakes to be set for going down hills or wherever it is necessary to use them. **BRAKES**

A single hand lever at the right of the seat controls both the high and low gear. The reverse is operated by a foot pedal and the motor speed can also be regulated by a throttle control, operated by a foot lever. **CONTROLLING LEVERS**

Full elliptic springs are used which are extremely resilient and give perfect comfort in riding. **SPRINGS**

The best roller chain obtainable is used for transmitting the power to the rear axle. The chain adjustment can easily be made by sliding back the axle, the rear springs always remaining parallel to the frame. **DRIVE**

The steering gear is of an improved form, double reduction, bevel gear type, connected by ball sockets to the axle; all joints in the steering connection working on hardened steel pins and bronze bushings. **STEERING GEAR**



FORD MODEL F, AS A RUNABOUT

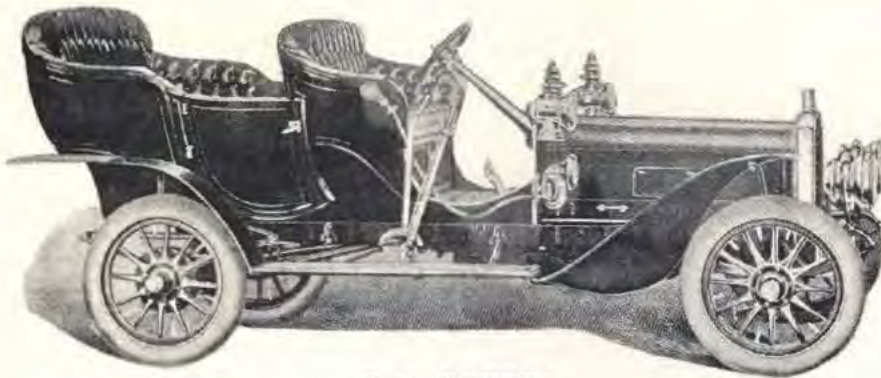
REAR AXLE Rear axle is of an improved open spider type with either thirty-six or forty tooth sprocket. Rear axle shaft is of large size running on roller bearings.

BODY Model 'F' is equipped with finely upholstered body with a divided front seat and removable side entrance tonneau fitted with a single seat across the entire back.

SPECIFICATIONS OF MODEL "F"

PRICE—\$1,200.00
WEIGHT—1,400 Pounds.
MOTOR—Ford two cylinder horizontal opposed $4\frac{1}{2} \times 4$.
WHEEL BASE—84 inches.
TREAD—Standard Wagon.
WHEELS—30 inches.
TIRES— $3\frac{1}{2}$ double tube optional.
MAXIMUM SPEED—35 miles an hour.
CAPACITY GASOLINE TANK—9 Gallons.
CAPACITY OIL RESERVOIR—3 pints.
COOLING WATER CAPACITY—4 Gallons.
COLOR—Rich dark green, yellow running gear.
UPHOLSTERING—Black, of best leather, handsomely tufted.
EQUIPMENT—2 side oil lamps, post horn and necessary tools.

THE CAR OF SATISFACTION



MODEL K WITHOUT TOP

HIGH WATER TANK MARKS
1906 "K"

The Motor
THE six vertical cylinders are cast separately with integral head, valve chamber and jacket. The interchangeable, mechanically operated valves are placed on one side, thus necessitating but one cam-shaft, one set of gears, simplifying the casting, and exposing less cylinder wall to the heat of the burning gas. The cylinders are made of a special cast iron, carefully bored and reamed.

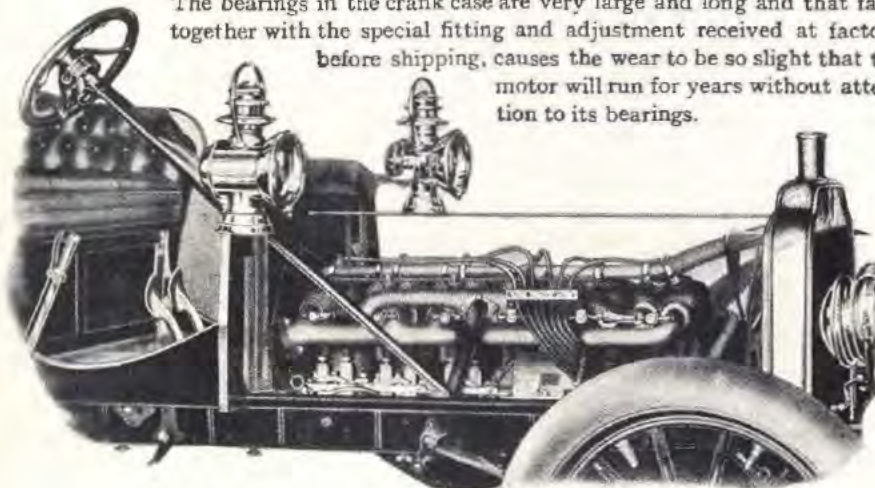
The pistons, piston rings, wrist pins and crank-shafts are machined, then ground to size, which insures an absolutely perfect fit.

The crank-shaft is a solid drop forging with a bearing between each cylinder.

The bearings in the crank case are very large and long and that fact, together with the special fitting and adjustment received at factory before shipping, causes the wear to be so slight that the motor will run for years without attention to its bearings.



LEFT SIDE MOTOR, MODEL K



1906

Specifications, Model K

Motor, 6-cylinder, vertical, $4\frac{1}{2}$ " bore x $4\frac{1}{4}$ " stroke; 40 H. P.
 Speed, 50 miles per hour, down to four miles per hour, on the high gear.
 Improved planetary transmission, with improved clutch.
 Pressed Steel Frame.
 114" Wheel Base.
 Water Cooled; circulation by geared pump.
 Perfected Magneto ignition.
 Mechanical Oilier.
 Gasoline Tank under seat, containing 15 gallons,—good for 250 miles.
 Water Contained in Radiator.
 Hub Brakes,—internal expansion, with lever control.
 Emergency Brake on driving shaft, controlled by foot lever.
 Tops Extra, Prices on application.

Springs, full elliptic on the rear, and half elliptic on the front.

"Famous Ford" Direct Drive Construction.

Ample roller bearings on rear axle, with ball bearing thrust—special design.

Ample Ball Bearings on front wheels.

Wheel Steering (Fitted with Ford reduction gears) takes all the strain from steering over the roughest road; an exclusive Ford feature.

Luxurious Body, ample for five passengers.

Weight, 2,400 pounds.

56-inch tread.

Wheels, artillery, 34-inch.

Tires, 4-inch, double tube clincher

Lubricating oil sufficient for 250 miles.

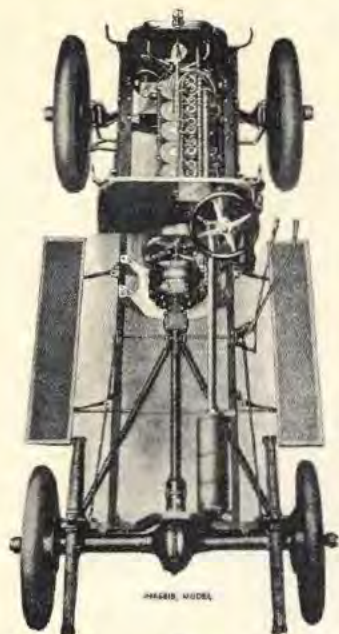
Color, Royal Blue.

Equipment, two side oil lamps and tubular horn

Gas Lamps Extra, Prices on application.

Price, \$2,500, f. o. b., Detroit.

Text and Illustrations from 1906, Ford Catalog "Model K"



HARRIS, MODEL



MODEL K WITH TOP



IN producing Model "N", a four-cylinder runabout to sell for \$500.00, Henry Ford has taken a mighty bound in advance of competitive manufacturers. Building such a car with material and workmanship the very best, is the beginning of a revolution in the automobile business. It means you will not be obliged to pay tribute to a manufacturer for a product that is now a necessity. Full value for the money is given. The general public has been clamoring for a substantial car at a price commensurate with other manufactured commodities



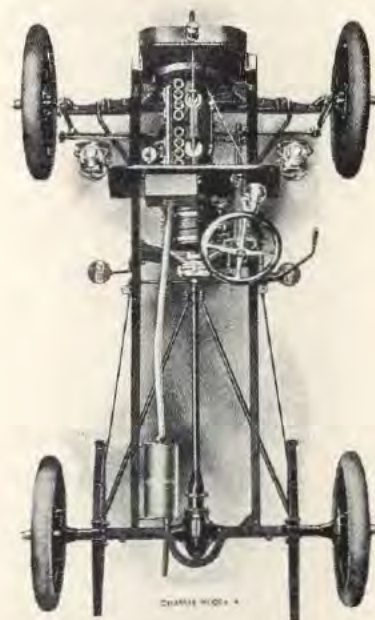
Specifications, Model N

Motor, 4-cylinder, vertical; cylinders $3\frac{1}{2}$ " bore x $3\frac{1}{4}$ " stroke, 17.92 H. P.
Speed, 40 miles an hour down to 3 miles on high gear.
Improved planetary transmission, with improved clutch.
84-inch wheel base.
Pressed steel frame.
Water cooled.
Ignition, two sets of dry cells.
Gasoline Tank, under seat, containing 10 gallons, sufficient for 200 miles.
Water contained in radiator.
Hub brakes—internal expansion, with lever control.
Emergency brake on driving shaft, controlled by foot pedal.
Tops Extra, Prices on application.

Springs, full elliptic in rear, and half elliptic in front.
"Famous Ford" Direct Drive Construction.
Roller bearings on rear axle, with ball-bearing thrust—special design.
Ball Bearings on Front Wheels.
Wheel Steering (Fitted with Ford reduction gears) takes all the strain from steering over the roughest road; an exclusive Ford feature.
Luxurious Body, carrying two passengers.
Weight, 800 pounds.
56-inch tread.
Wheels, artillery, 28-inch.
Tires, $2\frac{1}{2}$ inch, double tube clincher.
Lubricating oil sufficient for 200 miles.
Color, Maroon.
Equipment, two side oil lamps and horn.
Price, \$500.00, f. o. b., Detroit.

\$550.

Model N



CHARLES, MODEL N



WELCH, TYPE 1000, MODEL N

Cut is reversed in catalog. Actually the left side.

3" Tires \$500 Extra
Top \$500 Extra

Text and Illustrations from 1906, Ford Catalog "Model N"



THE FAMOUS "999"

"999," the Ford 4-cylinder racer, built in 1902, was the first American car to lower the world's record of one mile to less than 40 seconds, making a mile in 39½ seconds, and demonstrates the fact that Mr. Ford was early in the field with a 4-cylinder car

CLIPPING FROM "NEW YORK GLOBE"

REGARDING THE FORD EXHIBIT AT THE
NEW YORK AUTOMOBILE SHOW

NEW FORD RUNABOUT

AT ARMORY SHOW

Lively Interest Aroused by Latest Auto Construction—Big Sales and Record Crowds Both There and at the Garden.

BY ALFRED REEVES



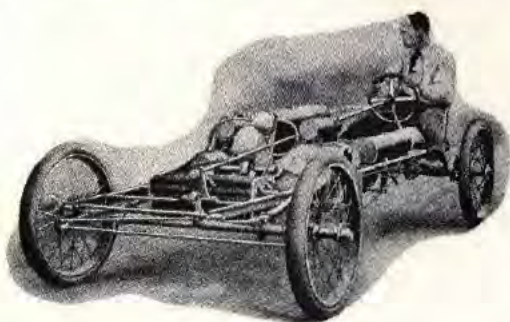
The Model "F" a hold-over from 1905.
Price reduced.

Specifications, Model F

Model F is the general all around car for the man who wants a powerful runabout or a comfortable and fast touring car for five people at a moderate investment and low cost of operating and maintaining, capable of taking all kinds of roads.

Weight, 1,400 pounds.
Motor, Ford two-cylinder horizontal opposed 4½ x 4.
Wheel Base, 84 inches.
Tread, Standard Wagon.
Wheels, 30 inches.
Tires, 3½ inch double tube.
Maximum Speed, 35 miles an hour.
Capacity Gasoline Tank, 9 Gallons.

Capacity Oil Reservoir, 3 pints.
Cooling, Water Capacity, 4 Gallons.
Color, rich dark green, yellow running gear.
Upholstering, black, of best leather, hand-somely tufted.
Equipment, 2 side oil lamps, post horn and necessary tools.
Price, \$1,000.00, f. o. b., Detroit.



FORD LIGHT WEIGHT RACER

This wonderful little car was made of two stock Ford Model C engines and lowered the world's record for a car of its weight on a circular track to 55 seconds. This record still stands, having never been beaten.

There was a sensation at the Sixty-ninth Regiment Armory automobile show today, caused by the arrival of the first Ford runabout, of which at least 10,000—and possibly twice that number—are to be made this year, to sell at \$500 each. It is the first machine to be completed, and naturally aroused the keenest interest among the exhibitors and all other automobilists present.

The new car will prove much better than many anticipated, irrespective of the price. James Couzens, secretary of the Ford Motor Company, and Henry Ford, who is a genius in motor car construction, have made no rash promises; and those who saw the car were taken by surprise.

The runabout is finished in dark maroon, striped in black, has a pair of runabout seats, with a turtle back, and a square radiator. Tires 2½ by 28 of the G. & J. type are fitted. The steering post comes through the dash, and the car looks substantial in every way.

The power plant in front is a four-cylinder motor with the cylinders cast in pairs. There are mechanically operated inlet and exhaust valves of the same size. The flywheel is in front, and combined with it is the fan. A single-piece aluminum crank case has the ends bolted, and the whole is supported on two cross bars. Among the other features are a circulating pump, built in the radiator; I-beam front axle, on which is placed a single front cross spring; bevel gear drive, with the Ford rear axle construction, and a planetary transmission in an aluminum case, which is bolted to the crank case. The runabout at the show has a leather top. It has a speed of forty miles an hour.

Buying automobiles on their reputation, an entirely new departure in the motor car trade, developed today at both the Armory and Madison Square Garden. This may have been hastened by the bad weather that made demonstrations unpleasant, but at any rate hundreds of orders are being placed without the buyer taking even a ride in the machine, where formerly some severe tests were demanded.

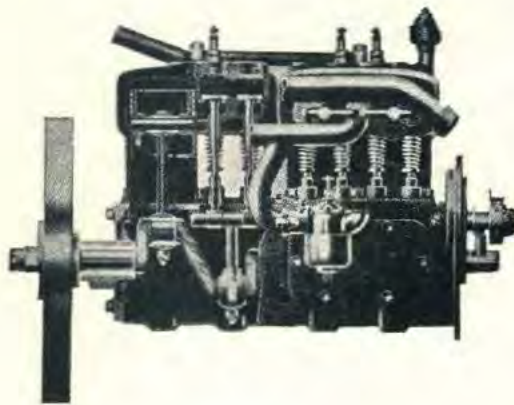
A Ford "Light-weight Racer" was sold in 1902. It may have been this car despite mention of "C" engines.

Text and Illustrations from 1906, Ford Catalog "Model F"

FORD Motor Cars 1907



Model "N" Runabout



Model "R" Specifications



- MOTOR**—4 cylinder, vertical, 4 cycle.
HORSE POWER—15; **BORE**— $3\frac{1}{4}$ " ; **STROKE**— $3\frac{3}{8}$ ".
CYLINDERS—Cast in pairs. Water jackets integral.
VALVES—Inlet and exhaust offset; all on left side.
CAM SHAFT—One piece steel forging. Eight cams integral. All bearing surfaces hardened and ground.
CRANK SHAFT—Set at 180 degrees. Drop forging from steel specially heat treated after forging; no welds. Bearing surfaces ground.
CRANK CASE—Aluminum; side plates removable for inspection or adjustment of bearings.
COOLING—Water; centrifugal pump, gear driven.
IGNITION—Jump spark—Storage and Dry Batteries
FAN—Cast in fly wheel.
CARBURETOR—Ford design—float feed, automatic.
LUBRICATION—Force feed oiler. Also splash system in engine base.
CLUTCH—Multiple disc.
TRANSMISSION—Ford planetary system; all spurs.
FINAL DRIVE—Fly carbon shaft with single universal joint to bevel drive gears in live rear axle. Ford three point system (patented in all countries) with all moving parts enclosed in dust proof casing, running in oil.
FRONT AXLE—One piece steel drop-forging in I-beam section specially treated.
FRAME—Pressed steel.
STEERING—By Ford reduction gear system; irreversible; gears at top of column away from dust and grit.
BRAKES—2 sets. (a) Service band brake on transmission. (b) Internal expanding brakes in rear hub drums.
OPERATION AND CONTROL—High and low speeds by hand lever at right of driver; reverse by foot lever; service and emergency brakes by foot lever, ratchet lock.
SPARK AND THROTTLE—Give all speeds from 4 to 45 miles per hour on high gear.
TIRES—Pneumatic; standard equipment 30"x3".
SPRINGS—Front: Semi-elliptic, transverse spring. Rear: Full elliptic.
DUST PAN—Protects all machinery from mud and grit.
WEIGHT WITH TANKS FULL—1100 pounds.
WHEEL BASE—84". Tread 56".
BEARINGS—Phosphor bronze and babbit in motor. Hyatt roller in rear axle. Large balls in front hubs.
GASOLINE CAPACITY—8 gallons.
PRICE—30"x3" tires, 2 side oil lamps, tail lamp, tube horn, storage battery and ironed for top, \$750. F. O. B., Detroit, Mich.
TOP—Improved full leather top, extra heavy bows, shock-absorbing rest, storm front and side curtains complete. Prices on request.
CATALOG of parts and accessories for the asking.

Text and Illustrations from 1907, Ford Catalog "Model N"

FORD 1907

RUNABOUT "DE LUXE" Model "S" \$700 f. o. b. Detroit

Mr. Ford's original aim in designing his now world-famous four-cylinder runabout was to build a stock model two passenger car that should combine the qualities of strength, lightness, power, speed and hill-climbing ability with those of endurance and economy of up-keep, and to clothe it in a body that should be "neat but not gaudy" and one which should meet as nearly as that is possible, the tastes of average buyers.

In the matter of body design it might be said no two persons fully agree, so the designer must use his own judgment and compromise between what his broad experience teaches him the buyer should have, and those features which the buyer himself thinks he needs.

The Model N was Mr. Ford's conception of a runabout that was "all automobile"—in other words, all efficiency with none of the frills or fussings so dear to the hearts of some motorists.

The tremendous popularity of that model has proven Mr. Ford's judgment to have been correct, and to date he has found no reason to discontinue Model N—the \$600 car.

A demand soon manifested itself, however, for a car of more pretentious appearance, and the class of customers who wanted this were willing to pay the difference; so model R with broad fenders, running board, larger wheels, (30"x3") and somewhat larger body, was designed and the price fixed at \$750. F. O. B. Detroit.



"Watch the Fords go by"

It seemed as if 2500 of these would be ample for this season's needs, but we fell short of the mark. Every Model R has now left the factory and the only ones to be had are those which may be found here and there in the hands of agents and branches. It is too late to build more—we cannot make and finish bodies and wheels in time.

What to do in this crisis was the problem, and as usual Mr. Ford solved it in a way that will be a delight to customers and enable us to take care of another demand which we have long felt but thought to ignore.

The chassis of Models N and R are identical, as are engine and all other parts except body, fenders and equipment. (N at \$600 carries no equipment, it is "just automobile—all automobile.")

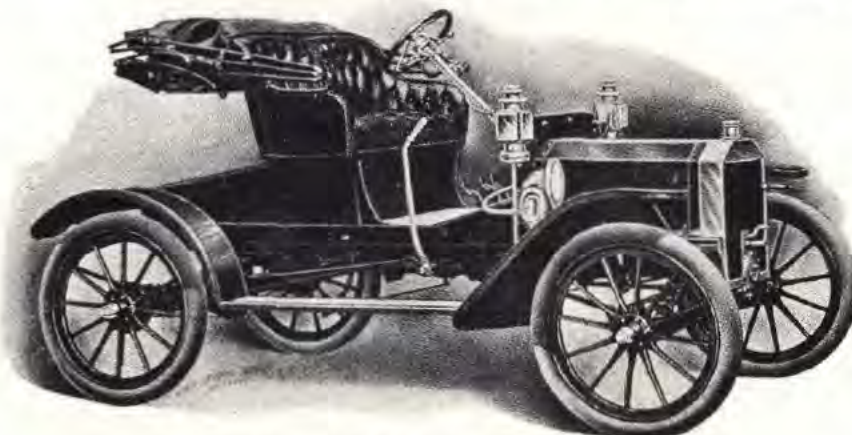
So we now announce an intermediate model, a composite of the two former ones, at an intermediate price—\$700 F. O. B. Detroit. This we call Model "S." Chassis standard 15 h. p. 4-cylinder Ford runabout; wheels 28" shod with 3" clincher tires; broad steel fenders connected by running board, same as Model R; improved three feed mechanical oiler; lamps, horn and storage battery equipment same as Model "R."

The Body is a standard "N," but the seats have been raised, made larger and set farther back from the dash than in the earlier ones. The pointed deck of the Model "N" has been much in favor among buyers and many liked it better than the round one which characterized the Model "R."

So the "S" may be said to combine the choicest features of those two wonderfully popular models, at a cost of \$50 less than Model "R."

Only 1000 of these will be made this season, and unless the Ford faculty for gauging popular demand has lost its cunning, these will be snapped up almost as soon as announced.

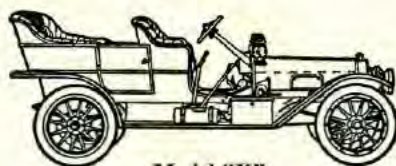
To distinguish them from the other two, model "S" cars are painted Brewster Green as to body with cream running gear.



Ford 4-cylinder—15-18 H. P. Runabout—Model "S"

Text and Illustrations from 1907, Ford Catalog "Model N and S"

Ford 6-Cylinder Touring Car 1907.



Model "K"

MOTOR—6-cylinder vertical.

HORSE POWER—40.

COOLING—Celular radiator.

PUMP—Centrifugal.

CAMS—Forged intergral with shaft.

LUBRICATION—Positive feed mechanical oiler to all motor parts.

IGNITION—Ford dual system; (a) high tension magneto; (b) batteries. Two sets of plugs.

TRANSMISSION—The "velvet Ford" planetary—spur gears.

FINAL DRIVE—Ford triangular system (patented in all countries) all parts enclosed.

FRONT AXLE—One piece drop forging from Chrome nickel steel. I-beam section.

STEERING—By Ford reduction gear system—irreversible.

FRAME—Cold pressed from Chrome nickel steel. Straight sides, channel section.

CONTROLS—Easier than any other large car in the world.

BODY—Straight side tonneau; seats 5 liberally, 7 by adding folding or revolving seats.

COLOR—Optional.

TIRES—34" x 4" front and rear.

PRICE—\$2,800. With cape top and gas lamps, \$3,000.

Up to within a few days of the opening of the New York show prominent American makers, who are conspicuous for the illegitimate relationship of their product to foreign models, tried to disparage the six-cylinder idea in motors. They felt certain nothing would ever come of it. One had been to Europe to find out and he saw nothing to lead him to believe it would be necessary to copy a "six" in the near future.

It must have been rather disconcerting to that gentleman when, a few days later, came reports of the English trade show at Olympia.

Text from "Wanted—More Worlds to Conquer" F.M.C. 1907

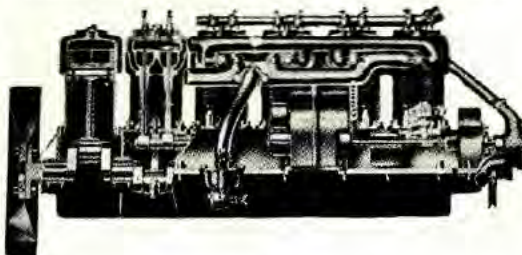
Motor

Model "K"—Six-cylinder vertical; conservatively rated at forty horse power. Cylinders, individual, with water jackets, valve chambers and heads cast integral. Inlet and exhaust valves are located on the driver's side and a single cam-shaft serves to operate the twelve valves. While foreign practice has, until recently, favored the system of placing the exhaust valves on one side and inlet on the opposite side, there is a noticeable deflection from this practice to the more simple and equally efficient "valves all on one side plan."

VALVES in this Ford motor are large. The cam design affords the most efficient opening and closing effects, exhaust ports and pipes are liberal in dimensions, so that the full amount of power justified by the cylinder dimensions is obtained. In the 1908 model the compression is greater than in the 1906 model. This is not to be understood as saying the compression is extremely high, but we obtain greater results now than formerly.

CYLINDERS are rough bored, then annealed to relieve the metal of all strains, after which they are rebored, reamed and finally ground to micrometrical accuracy. This gives an absolutely round and straight cylinder and, owing to the annealing process above described, no distortion will result from overheating in use.

CRANK SHAFT is drop-forged from chrome steel and heat-treated after forging. Crank pins are set at 120 degrees—one third of



a circle—so that in this six-cylinder motor there are three impulses in each revolution. Cylinders fire in the order of 1, 2, 3, 6, 5, 4—the order which, adopted in the first Ford six has proven in the most exhaustive experiments to give the best results. The shaft is forged in one piece—not welded—and is ground to one-thousandth of an inch of true. Bearings are exceptionally long and the diameter is $1\frac{1}{8}$ inches.

FLY-WHEEL—Thanks to the even torque and overlapping impulses of the six-cylinder motor, a heavy fly-wheel is not necessary to store the power between impulses or to absorb vibration, as in motors of less than six cylinders. The Ford fly-wheel weighs but sixty-five pounds and its diameter is fourteen inches, so that there is a greater road clearance in this car than in any other. Fly-wheel is bolted to a flange forged integral with the crank-shaft, is accurately centered and balanced.

PISTONS are cast from a special fine-grain gray iron. After being rough and smooth turned in lathe, are annealed, then re-turned and finally, ground. Four rings of the eccentric type, split diagonally and ground on three sides, are fitted to each piston. Piston pins are of liberal size, made from high-grade steel hardened and ground. Two set screws themselves locked by spring cotters, secure the pins in pistons.

Text and Illustrations from 1908, Ford Catalog "Model K and 6-40 Roadster

Evolution of the Ford Frame

The 1908 Model "K" frame is made from the highest grade of chrome steel, and is deeper and of heavier gage than that of earlier Models. No amount of overloading or service will result in the springing of this frame, and we can conceive of no possible working conditions which would buckle or break it.

Wheels

Wheels of the approved artillery wood type with hubs made heavier than heretofore to withstand the shocks and strains of high speeds over rough roads.

Tires

Front and rear wheels are shod with 34" by 4" clincher tires. That we do not specify other makes of tires is not because of prejudice but for the reason that our output is so great that we must adhere to standard forms in order to avoid serious and costly delays which frequently arise through customers specifying other than standard types. The weight of car and passengers being admirably distributed between front and rear wheels, makes for economy in tire consumption, and the standard equipment of the Ford Model "K" is ample for all requirements.

Fenders

Following the latest development in fender design, the Model "K" fenders enclose the entire car from front to rear. Patent leather guards join fenders to body, serving the dual purpose of flexibility and muffling the "drumming" sound which is always noticeable in all-metal fenders. Concaved sheet metal risers join the running board to the body and all dust, oil, and other objectionable matter are thereby excluded from the car and its occupants, when riding or entering the car.



Ford "6-40 Roadster"

Ford does not, ordinarily, build to meet a limited demand. But there are exceptions to every rule—even Ford rules.

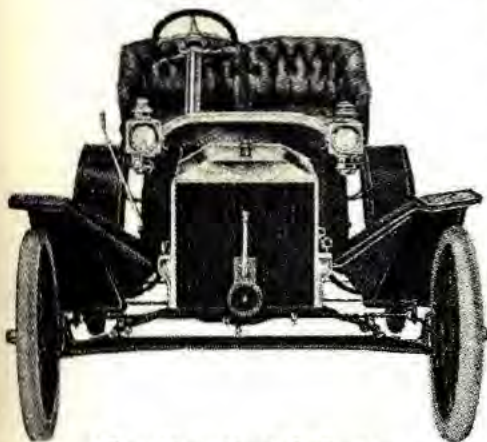
The demand for a high-class, high powered, high speed, highly specialized gentleman's roadster, is necessarily limited to those persons who want the last degree of automobile up-to-dateness, and who have the wherewithall to gratify their desires. Such persons are invariably enthusiasts and men who like to feel under their own hands a car that will respond to the slightest touch—almost the thought—of the driver, and which will on occasion attain any speed of which the road is capable. Conservatism has no place in the consideration of such a machine. The ability to do and to look the part, are qualities demanded by persons who can afford to gratify their tastes for this 20th century luxury.

FORD

Ford 4 Cylinder 15-18 H. P. Runabout—Model "S" Roadster.

Body

The Model "S" Roadster body combines utility and beauty to an extent never before attained in a low priced car. Two semi-individual seats in front, standard widths and height, rumble seat behind, high sides to exclude eddy currents. The whole handsomely upholstered in a rich black M.B. leather, curled hair; ample sized.



Front View—Model "S" Roadster

Box under rumble seat for tools, raincoats, rugs, etc.

Rumble seat removable so that trunk can be carried if desired.

Entire body highly finished and neatly striped and trimmed.

Fenders

Following the latest development in fender design, the Model "S" Roadster fenders enclose the entire car from front to rear. Sheet metal risers join fenders and running boards to the body and all dust, oil and other objectionable matter is thereby excluded from the car and its occupants, when riding or entering the car.

Tires

The Model "S" Roadster is equipped with 30x3" clincher tires. Owing to the fact that no one tire concern can supply us without full requirements, it is impossible for us to give customers an option on make of tire—we must equip each day's output with whatever tires we have in stock. It is sufficient to say we buy the best there is and since the tire pool went to pieces, we have no difficulty in getting any brand we desire—in fact the scramble for the Ford tire business today is in sharp contrast to the attitude of some tire concerns a year ago when a concerted effort was made to prevent Ford carrying out his plans for a four-cylinder runabout at a reasonable price.

In 1908 Model "N" continued unchanged. Early catalog (of Feb. 1908) "N" & "S" do not have fenders enclosed yet. Models "N," "R" and "S" all had 3 pedal control. First of Model T Cars did not.

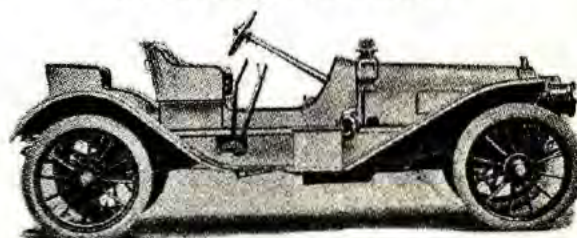
Model "S" Runabout "DeLuxe"



SPECIFICATIONS

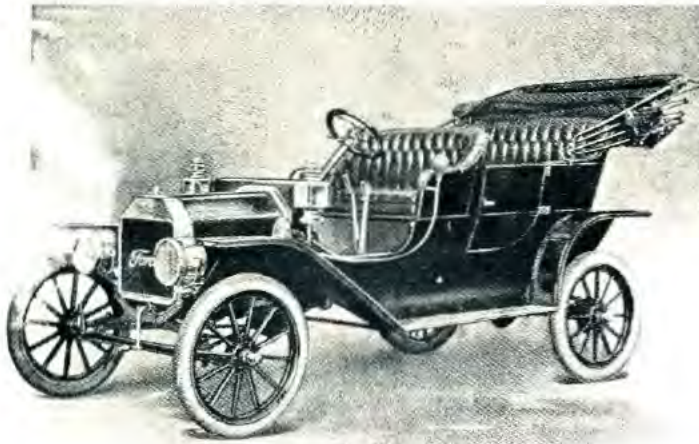
Model "S"—Chassis same as above. Body without rumble seat and with the famous "Torpedo Back" or pointed back; 28" wheels; 3" tires; Brewster Green Body, with cream running gear. Price \$700 F. O. B. Detroit.

Six-Forty Roadster



SPECIFICATIONS

Same motor, axle, and chassis as Model "K" touring car but special springs, "racy" slant to steering post; seats low; rakish body; high sides to exclude eddy currents; detachable rumble seat—when removed touring trunk can be substituted—36"x4" tires. Price \$2800 F. O. B. Detroit.



Ford Motor Cars

With this manufacturer claiming to make the best car, and that manufacturer asserting his to be superior, with the catalog of each claiming all the good features and relegating the bad to the other, the prospective buyer is at a loss to know what to believe and which to buy. Without the past record of the manufacturer as a guide, the chances are in favor of the buyer making a grievous mistake.

In catalog writing the law of inverse ratio often applies. Especially is this true of automobile catalogs. The newer the car the more effusive must be the description and the more extravagant the claims. What the makers lack in experience they must make up in type. But it is actual, practical, convincing experience that counts, and that the buyer of Ford cars obtains, and any statement made herein is made only because Ford experience has justified the assertion and Ford responsibility is back of it.

HIGH PRICED QUALITY IN A LOW PRICED CAR.



“PROVEN BY SERVICE

At the time this edition of the catalog was issued, January 1, 1909, several hundred Model T cars had been delivered and were in actual and satisfactory service . . .

Twelve months actual service in Model T cars, one of which was driven twenty thousand miles before the car was announced, proved to us the car was right. It was given every possible test before the public knew there was such a car, . . . tho to make sure Mr. Ford held it back a year." (from 1909 Catalog, "Ford Motor Cars," p. 6)



The control is on the left side, the logical place for the following reason: The driver is there, nearest the vehicle he's actually steering at continuously. So, with it on the end

Text and Illustration from 1909, Ford Catalog "Ford Motor Cars"

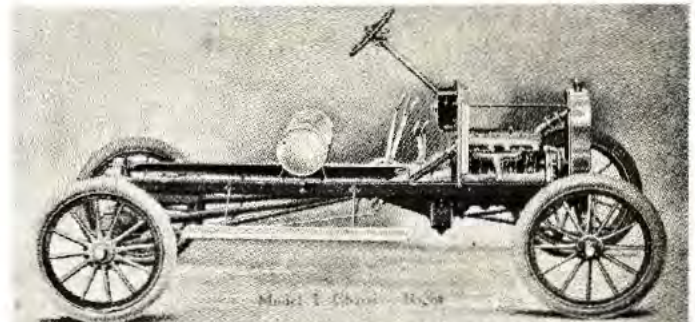
Watch the Fords go by



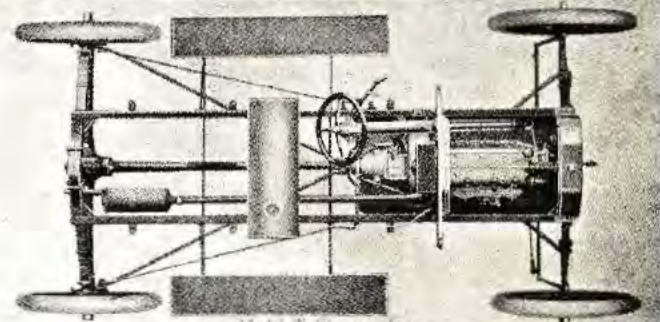
Illustrating
Four Posi-
tions of the
Model T
Touring Car
with Top



Serviceable
and of very
pleasing ap-
pearance
from every
view point



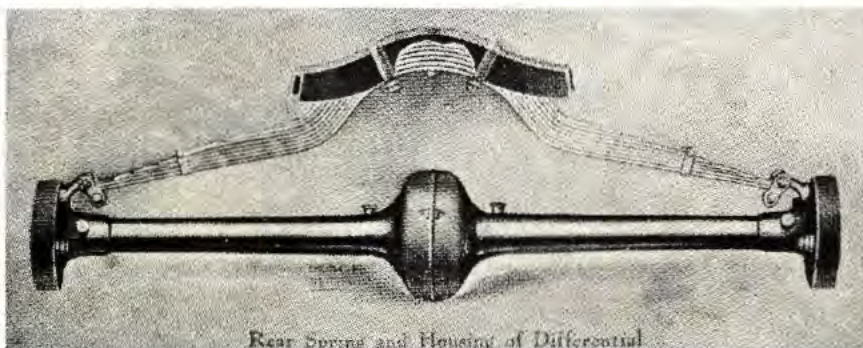
Model T Chassis—Right



Model T Chassis—Front



Model T Chassis—Left



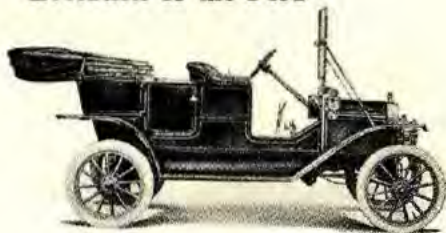
Rear Spring and Housing of Differential

First design of "T" axle housing—simpler and neat

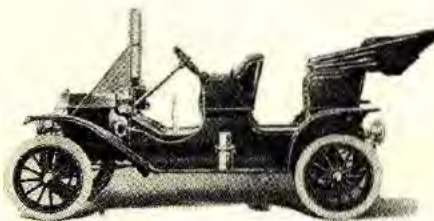


Control

Text and Illustration from 1909, Ford Catalog "Ford Motor Cars"



Model T Touring Car
Four cylinder—20 horse power—3 passenger. \$1050.00 f.o.b. Detroit.
Complete equipment included.



Model T Torpedo
Rear seat detachable. \$950.00 f.o.b. Detroit.
Complete equipment included.



Model T Roadster. A touring car for those. \$900.00 f.o.b. Detroit.



Model T Torpedo or Roadster
With rear seat removed and flat deck and rail (\$5.00) substituted.

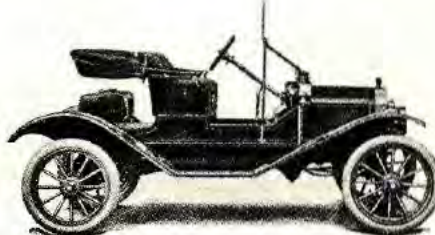


Model T Coupe
An ideal winter car for business or pleasure.
\$1050.00 f.o.b. Detroit.



Model T Town Car
A splendid taxi-cab proposition. \$1200.00 f.o.b. Detroit.

Landaulet listed but not illustrated in 1910.



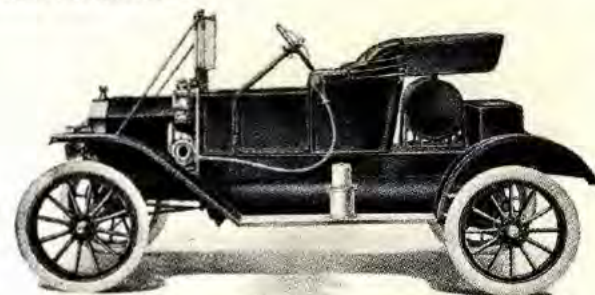
Roadster Town Car and Coupe, same cuts as 1910.
Speedometer, gas lamps and generator are standard equipment on open models.

Ford Model T Four-Door Touring Car
(Front doors are detachable)
3-Passenger—4-Cylinder—20 Horsepower Car
Price \$1400 includes convertible top, automatic
lumen shield, speedometer, two 4-inch gas
lamps, generator, three oil lamps, horn and
radio—f.o.b. Detroit. No Ford Cars sold
un-equipped

Ford Model T Torpedo Runabout
2-Passenger—4-Cylinder—20 Horsepower Car
Price \$950 includes top, automatic lumen
shield, speedometer, two 4-inch gas lamps,
generator, three oil lamps, horn and radio—
f.o.b. Detroit. No Ford Cars sold un-equipped



Ford Model T Commercial Roadster
(Rear seat is removable)
3-Passenger—4-Cylinder—20 Horsepower
Car. Price \$1300 includes top, automatic
lumen shield, speedometer, two 4-inch gas
lamps, generator, three oil lamps, horn and
radio—f.o.b. Detroit. No Ford Cars sold
un-equipped

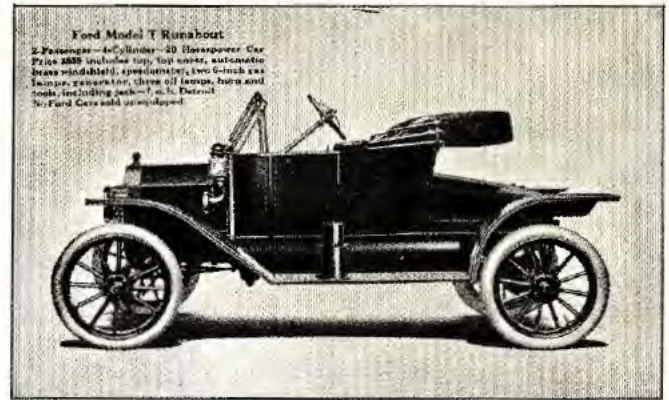
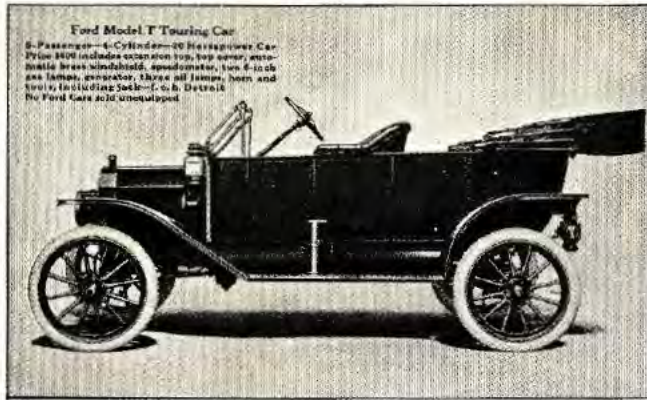


Ford Model T Four-Door Town Car
(Front doors are detachable)
3-Passenger—4-Cylinder—20 Horsepower
Car. Price \$1400 includes speedometer, two
4-inch gas lamps, generator, three oil lamps,
horn and radio—f.o.b. Detroit. No Ford
Cars sold un-equipped



Only the Delivery Car of 1912 models is not reproduced here.

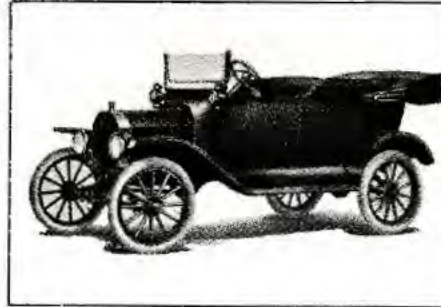
Text and Illustrations from 1910 — 1911 — 1912 Ford Catalogs



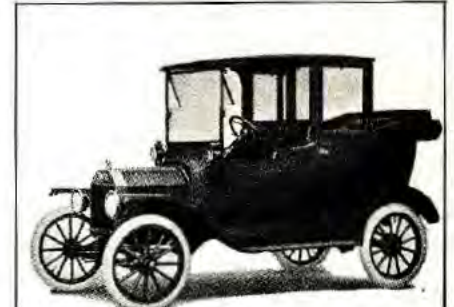
1913 Material from Ford Catalog "The Universal Car"



\$400 Ford Runabout, fully equipped, f. o. b. Detroit



\$400 Ford Touring Car, fully equipped, f. o. b. Detroit



\$600 Ford Town Car, fully equipped, f. o. b. Detroit

1914 Touring Car and Roadster indistinguishable from Town Car differs.

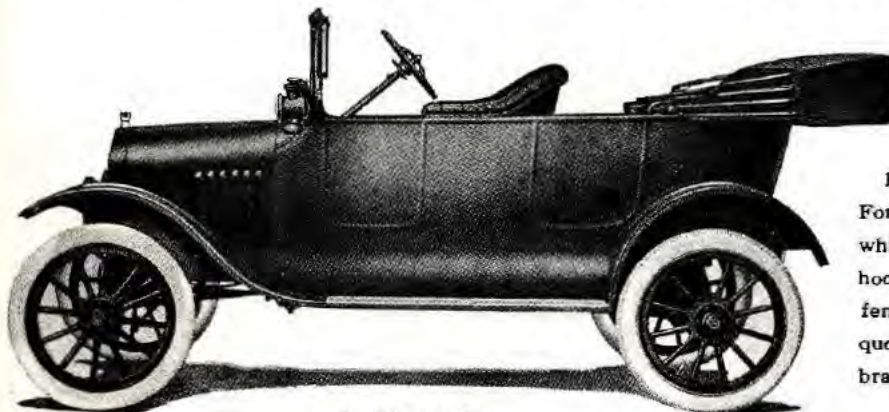


\$750 Ford Coupelet, fully equipped, f. o. b. Detroit



\$975 Ford Sedan, fully equipped, f. o. b. Detroit

First offered in 1915 are the Coupelet at \$750, and the Sedan at \$975.



Ford Touring Car
5-Passenger—4-Cylinder—20 Horsepower—streamline hood, large radiator and enclosed fan, crown fenders,
black finish, nickel trimmings—fully equipped, except speedometer. Price \$360 f. o. b. Detroit

1917 has no chronological significance in the Ford history but it does mark an exterior change which is easily identified: "The stream-line hood, large radiator and enclosed fan, crown fenders, black finish and nickel trimmings" to quote the catalog of 1917, spell the end of the brass radiator Fords.

1915 - 1916 Material from "Ford Times," May 1915 and Catalog 1916 "American Edition"
1917 Material from 1917 Ford Catalog



THE UBIQUITOUS MODEL T

SO much has already been written and so much is still remembered from firsthand experience concerning the Model T Ford that there seems little of value left upon which to expound; but, with no pretense to be either encyclopedic or yet entirely original, this writing is humbly dedicated to those of us now interested in Model T Fords who never before knew them, or having known, forgot.

Part I — The Paradox

Remember Model T! While mundane, it was never mediocre. In its day it commanded honest respect for the service it rendered and for the revolution it wrought, and in our day, it commands a place of honor in our museums and private collections of venerable motor cars. Uncompromisingly erect, unquestionably ugly, funereally drab, Model T combined the web-footedness of the duck with the agility of the mountain goat; it could go anywhere—except in society! And though seemingly conceived in madness, there is somewhat of immortality in this strange car.

It is now exactly a quarter century since the last Model T rolled off the assembly line; yet, it seems surely here to stay, all laws of nature to the contrary notwithstanding. Lee Strout White thought to mark its passing in 1936 with his humorous and knowing article, "Farewell My Lovely"¹; and he marveled then that the Sears Roebuck catalog listed parts for the 1909-1927 Fords—well, it still does! Statistically the "T" is with us yet; for as late as 1949 there were more than two hun-

¹ First published in the *New Yorker*; reprinted in the *Readers Digest* in 1936; now available in small book form, under the title *Farewell to Model T*, from member Floyd Clymer.

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Cartoons by Shaw—Courtesy True
The Man's Magazine

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The author wishes to express appreciation for the assistance given him in preparing this treatise by the following AACA members versed in the subject:

Capt. Robert W. A. Brewer, Curator of the Thomas McKean Collection of the Free Library of Philadelphia; Paul H. Cadwell; Henry E. Edmunds, Archivist, Ford Motor Company; W. Harrison Hall, Jr.; Chris Hannevig; Geo. M. Hughes; Robert C. Laurens; Dr. Paul M. Morgan; Clifford W. Moyer; Joseph J. Murchio; Roy Stewart; and Ralph R. Weeks.

The greater portion of this writing has been drawn from original sources in the form of Ford sales and parts catalogs, Ford Times, Ford Owner and Dealer, Fordex Ford Facts, and the many contemporary trade journals on file in the Free Library of Philadelphia. Most facts presented have been checked, insofar as possible, with personal observations over a period of years at national and regional meets of AACA.

LESLIE R. HENRY

dred thousand registered in the United States; more than ALL the automobiles registered in the country when Model T was created, just forty years before.

From October 1908 until May 1927 there flowed an almost unbroken flood of Fords, all of a mold but not identical, to the number of fifteen million. No other automobile model even began to approach such tremendous volume and only the Rolls-Royce Silver Ghost (1907-1927) enjoyed such duration of production. During most of this time Ford produced as many or more than all other American motor car manufacturers combined, and during all of this time, the Model T, often modified, *was never basically changed*. It is these myriad and often subtle modifications which interest many of us today; it is these that spark many a debate and bring strong men to their knees before the Model T to prove a point in question. Let us look into the seeming paradox of change in the changeless Model T.

While it is not usually difficult for those knowledgeable to establish the age of a Model T by certain features peculiar to a particular "style year," no generalization concerning the Model T is ever safe; too many minute changes were constantly being worked upon it for the purposes of speeding production, cutting costs, or—to a very limited degree—increasing customer appeal. Many arguments are engendered today by such simple facts as the appearance of plain hoods on some Fords in 1915 (which "style year" featured the first louvered hoods), and the appearance of both plain and lipped front fenders on the pre-1917 Fords (compare Figs. 1 and 6 with Figs. 7 and 10.) Actually, Model T cars during a given produc-



Fig. 1

THE FIRST MODEL T — 1909 TOURING (From FORD catalog, 1908).

The "universal car" new; light, fast, agile, with a 22-hp., high compression engine. Note the two pedals and reverse lever which appeared only on the first 1000 of these Fords. Basic design and many parts were unchanged for nineteen years.

tion year did vary in many points and were not so much alike as "peas in a pod" as legend would have us believe. Variations also resulted from the necessity of having parts made by several different contractors whose particular tools and methods dictated such; it was not until the 1920's that Ford attained his goal of producing one hundred per cent of the car in his own factories.

Typical of Ford's cost-cutting program was the fate of the full-leather upholstery prevalent through 1912; this gave way to leatherette door panels in 1913; was followed by leatherette back cushions in 1914; which yielded to all leatherette with leather patches only at the doors in 1915-1916; and finally, led to replacement of even this vestige by cheap, pressed steel caps at the doors in late 1916. While these are indeed generalizations, they serve to exemplify the many changes evolved in the interest of economy during that period when Ford had the whole industry in a dizzy spin; this was the time when Ford introduced the five-dollar day, the five-hundred-dollar car, and the fifty-dollar refund to purchasers.

Cost-cutting did not result in loss of quality in Model T, except in the sense that luxury appointments not affecting serviceability were lost. Simple in the extreme and lacking in many comforts, Model T seemed always to run despite adversity. Into the vital parts went vanadium alloys, new to the automotive industry in 1908. While the structural, mechanical and economic advantages of en bloc cylinder casting had been seen by others before, Ford extended this idea to include

also the upper crank case with main bearings as an en bloc casting, with a removable cylinder head. Although the principle of mass production had been practiced for half a century by arms manufacturers, Ford applied it to the automotive industry in a successful and spectacular way. And then, years ahead of the times, Ford seemed to sit back to watch and to listen as the Model T clattered over the entire nation—the continent—the world.

Doubtless the greatest controversy among Ford devotees centers on the alleged "1908" Model T; but, let there be no doubt left on this point—there never was such! The Ford car for 1908 was the Model S; for 1909 it was the Model T

born in the new Piquette Avenue factory (Detroit) in October 1908. True, there were actually 308 Model T cars² built during the last quarter of 1908, but these were acclaimed the new 1909 style and were always referred to as such in contemporary Ford literature and parts catalogs. For the purpose of dating any automobile we can accept only the model or "style year," rather than the actual date of manufacture of an individual car. This is in line with the long established practice by nearly all automobile makers, including Ford, to introduce a new style at some time other than on New Year's Day—an entirely understandable practice.

It would be much less confusing for us today if the Model T had actually been presented as the 1908 style, for those produced after mid-April differed so vastly from the earlier 1909 Fords as to constitute an evident, though not acclaimed, style change. Ford always referred to these as "the 1909 Fords under number 2500"; we cannot now do otherwise. Rarest of the 1909 Fords were—and are—those of the first 1000, which were characterized by having the wheel brake and reverse band actuated by individual and distinctly different hand levers, as illustrated in Fig. 1. Ford quickly abandoned this system in late February in favor of the well-known, three-pedal system (see Fig. 5) and encouraged conversion of all outstanding Fords to the three-pedal system by offering owners the new parts at cost (15.00),

² See appended list of Model T serial numbers for month and year.

Fig. 2

THE LAST MODEL T — 1927 TUDOR SEDAN (From FORD catalog, 1927)

The "universal car" grown old; heavy, slow, sedate, with 20-hp., low compression engine. Note such advanced features as nicked radiator and lamp rims; long, smooth hood and cowl; large windows, demountable wire wheels with balloon tires, all of which were standard equipment then.



but requiring the return of all original parts to the factory. So thoroughly was the hand reverse lever thus eradicated that in later years Ford, wishing to restore a very early Model T for his museum, had to reinstall a reverse lever, unfortunately however, using for this a brake lever and failing to remove the ratchet release handle! Parenthetically, publicity being what it is, this car is erroneously claimed to be a "1908" Model T Ford. It would indeed be interesting to know just how many Model T cars numbered under 1000 are in existence today and, of these how many still have the two-lever system intact.

The first 2500 Model T Fords were equipped with centrifugal water pumps (Fig. 21); had slightly shorter engine blocks and crank shafts; and had very small commutators (Fig. 18), commonly called "timers" by contemporary owners in their profane moments. These and other such features meant that the later style Ford parts, excepting pistons, rods, and oil pan with transmission case, were not interchangeable with the earlier parts. Thus today a collector fortunate enough to find an early Model T will be unfortunate in a search for parts.

As the demand for gasoline increased, particularly during World War I, its quality was decreased in favor of volume until the late twenties; this held back automobile engine performance. Under these circumstances, while the Model T progressed in style, size, appointments and weight, it retrogressed in engine performance. The early Model T engines had the highest compression, 60 psi,* with approximately $4\frac{1}{2}$ to 1 ratio, which permitted development of 22 hp. These characteristics were first reduced for 1912, again for 1915, and finally, were set in 1917 to a com-

* Pounds per square inch.



No battery to run down, no windows to wash or tires to check.



Fig. 3

1909 TOURING — NO. 8367

Formerly owned and restored by Clifford W. Moyer; now owned by Dr. Paul W. Morgan. Winner of "Best Model T" Trophy, 1948 Glidden Tour. This well known car is remarkable for its aluminum body, believed to be experimental in the era of wooden bodies. Note the front fenders and compare with the plain in Fig. 1. The steel running board was an innovation early in 1909.

pression of 45 psi. at 3.98 to 1 ratio, with a resulting 20 hp.

Fig. 20 shows the horsepower curve for all Ford engines starting with the 1917 style to the end of production. Maximum horsepower was developed at 1500 revolutions per minute with a road speed of 37 miles per hour, at which point the "pulling power" or torque had dropped off to 70 foot-pounds.

With a few notable exceptions, the bodies were of wood until the 1911 style was advanced with sheet steel applied over a wooden frame. Some few touring cars in 1909 had sheet aluminum bodies, one of which is pictured in Fig. 3. It is of interest to note that the 1913 style was the first Ford touring car to have front doors designed in the bodies (see Fig. 8) and that the left front door was a dummy and remained as such (except in the Canadian Fords) until 1926. In 1912 a "Fore-Door" version of the touring car appeared with factory-fitted front door units; these were actually removable and could be purchased as parts for adding to the 1911-1912 touring cars already in use.

All radiators of the Model T "brass era," ending September 1916, were di-

mensionally the same, but differed in that the first 2500 had a leading and a trailing stroke (often called "wings") on the FORD script pressed into the radiator tank, while some very few of these bore no name at all. The later brass radiators displayed the FORD script in its familiar form (Fig. 4).

The winged script and the block lettered FORD hub caps were but carry-over details of the previous 1908 Model S. The "V" shaped radiators sometimes seen were not genuine Ford products, but were simply a dress-up item, as were wooden top trim on doors (Figs. 6 and 9), coil spring shock absorbers, demountable rims, electric conversion units for gas lamps, lined wheel brake shoes, "30 minute" transmission bands, and mechanical starters. Whole industries sprung up and prospered in supplying gadgets to overcome real and imagined deficiencies of Model T, under the theory that anything would be an improvement! And some were improvements which Ford later recognized and adopted.

In this vein, it is interesting to note that a "Hind-View Auto Reflector" was offered as a new accessory made expressly

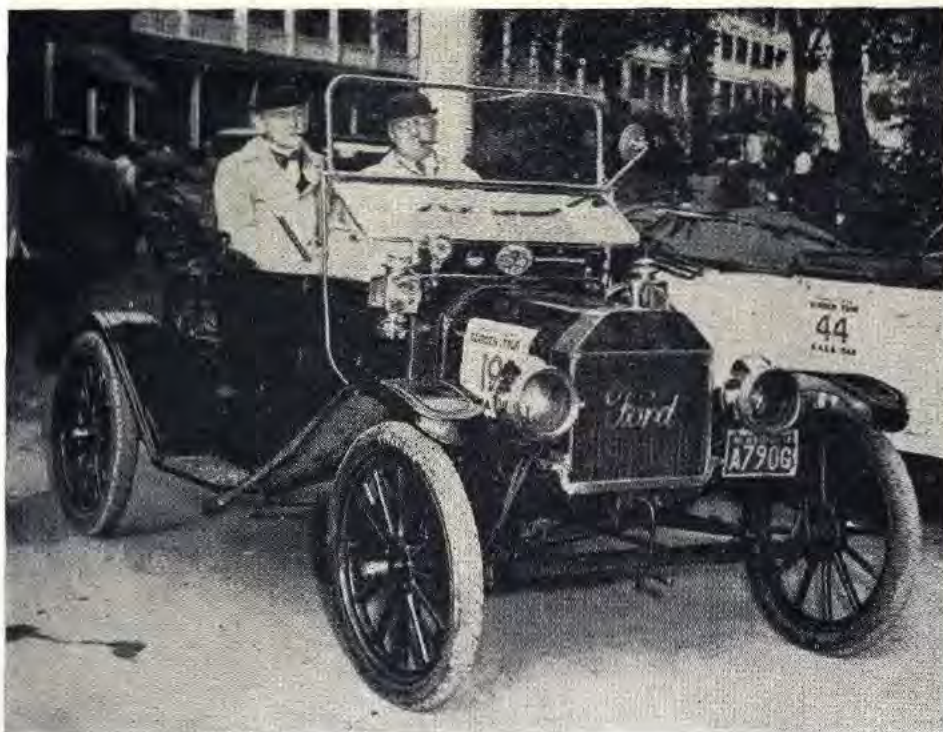


Fig. 4

1910 TORPEDO RUNABOUT

The most-traveled Ford in AACA, it was driven by our late founder-member, Walter Matter, to nearly every meet and tour. This racy Torpedo type, produced only during 1910-12, was distinctive for its curved fenders, round fuel tank on rear deck, long, rakish steering column, low seat, and very low doors (higher in 1912).

for Fords by Kales-Haskel Company in August 1911—interesting because this was only three months after the 1911 Indianapolis Race wherein Ray Harroun innovated the rear view mirror on his winning Marmon "Wasp."

The 1914 style Ford, while similar to the 1913 except for door shape (see Figs. 6 and 8), was the last exhibiting the truly "antique" appearance afforded by the straight fenders front and rear, the acetylene gas lamps, and the bulb horn.

Then came the transitional form of Model T which, while holding somewhat to the old, reached out toward the new. Two enclosed body types were presented for 1915 in the preceeding November; the Sedan with two central, side doors and the Coupelet, the first "convertible" coupe. The open-body types were continued unchanged until April 1915 and must even now be considered as 1914 style Fords, though built in 1915. The new style cars were characterized principally by the magneto-powered, electric head lamps, the straight front but curved rear fenders, the louveres in the little box-like engine hood, the hand Klaxon and the pressed steel cowl fairing sharply out to the body and mounting an unbraced windshield. No



Handles easily in emergencies.

significant change appeared in 1916, except for the elimination of brass from lamp rims and tops. For tail lights, the little round-bodied, black oil lamps remained standard for yet a decade on the lowest cost types of Model T; side lamps having been eliminated in 1921.

But a completely "new look" came to Model T with the 1917 style. Front and rear fenders both were curved and crowned, the engine hood was enlarged, fairing smoothly from the higher, smarter (and cheaper!) pressed steel radiator shell right up to the sharply curved cowl. This comparatively tremendous advance in styling (illustrated in Figs. 12 and 17) served to set a pattern for most of the succeeding decade.

Unchanged in size or appearance, Model T gained mechanical improvements in 1919 (Fig. 13) in the form of the electric starter and demountable rims as limited optional equipment.

The year 1923 brought refinements of lines and trim (see Fig. 14), featuring lowered bodies and the introduction of the one-man top and the four-door sedan.

Like Ford himself, Model T was a paradox. Ford continually resisted change; yet changed. He professed scorn for history; yet spent millions to perpetuate it in the Edison Institute and in Greenfield Village. To demands for a change from Model T, Ford always replied, "Why change when we can't make enough as it is?"; so basically, Model T continued in the pattern of its original conception. Even in 1924-1925, when Model T floated out of Dearborn on "balloon" tires, some types were still offered sans starter and defiantly wearing the little oil tail lamp as a badge of Ford's resistance to change!

It has often been stated that Ford maintained two production lines, one for the cars and one for the jokes, but this is apocryphal. However, both were legion and Ford, quick to appreciate the free advertising value of such jokes, actually promulgated them. He was more interested in their effect than in their veracity, of course; witness his own jest apropos color for Model T, "The customer may have any color he wants—as long as it is BLACK!" This the public heard and remembered, forgetting the colorful Fords of 1909-1913 and shrugging off those of 1926-1927.

Then, in a final splash of color, and after an heroic essay at glamour, Model T was finally stricken from the Ford production schedule in June 1927. For a while parts were stockpiled; then, the 1908 molds were discarded as Ford enthusiastically produced the equally famous Model A.

But the inertia of fifteen million Model T Fords is not yet spent!

Part II — The Chronology

Toward the goal of more positive identifications and to aid in more authentic restorations of antique Fords, this resume of progressive change in Model T is hopefully directed. Some information which might have been included here was not for want of its complete verification or because of its availability in Ford handbooks.

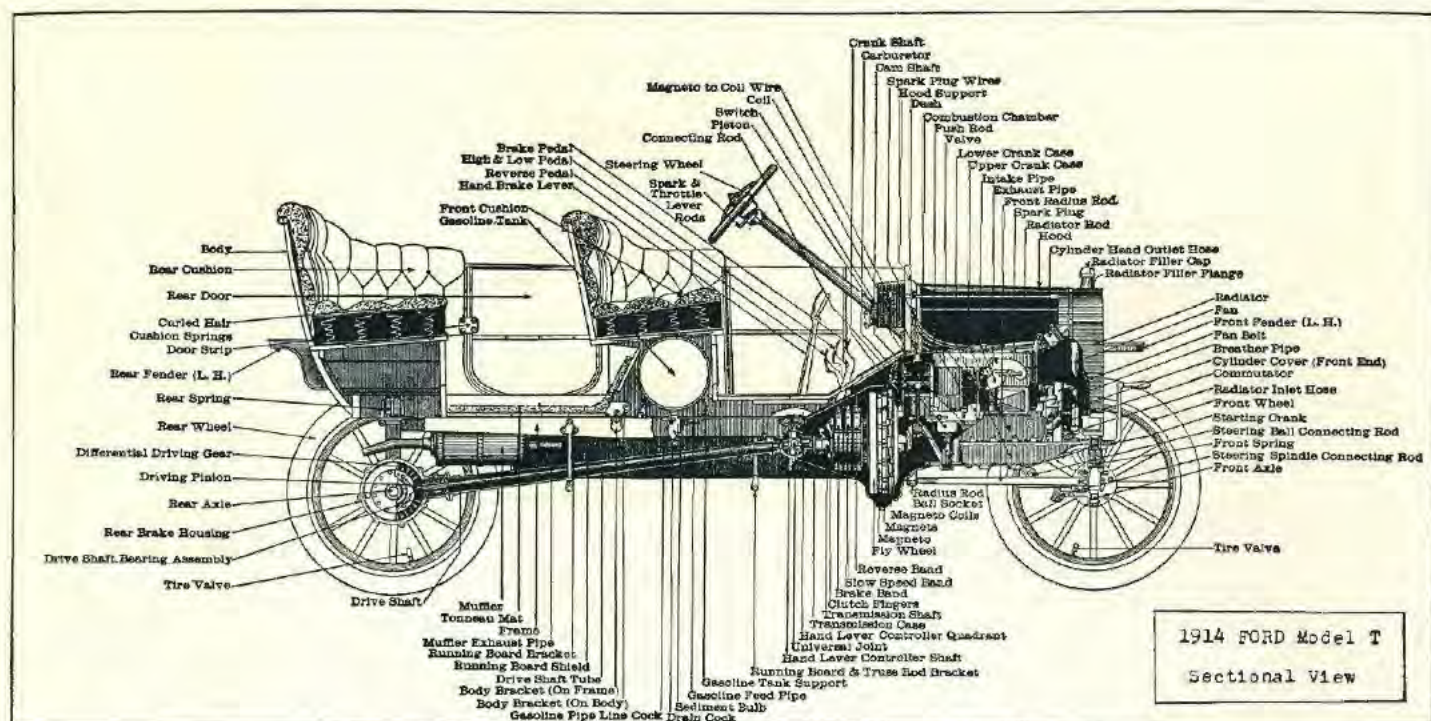


Fig. 5
SECTIONAL VIEW, 1914 TOURING

This excellently portrays constructional details of the last of the truly

"antique" styling; clearly shown is the three pedal system as compared with the two pedal system in Fig. 1. Illustration reprinted by permission of The Norman W. Henley Pub. Co., from *The Model T Ford* by Page.

As a supplement to manuals which tell the "how" of Model T, this summary attempts to tell "what" and "when." Listed only are new items and changes peculiar to each production year and, where no further reference is made, such items may be considered as continued unchanged during the ensuing years. Typical of the "antique" styles of Model T are Ford specifications published January 1912 and reproduced here in Fig. 16.

1909

The newly designed Ford, Model T, was introduced in October 1908.

TYPES AND PRICES

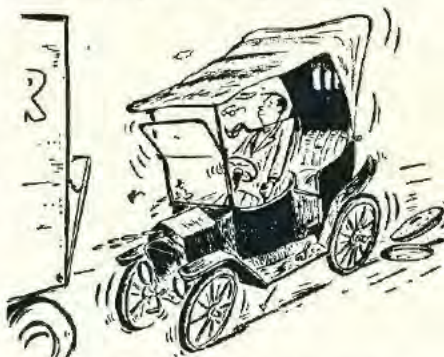
Touring	Runabout	Coupe	Town	Tourster
\$850	\$825	\$950	\$1000	—

SALIENT FEATURES: "Winged" FORD name on radiator tank; one-piece oil pan; flat, rectangular door on transmission cover; open valve chambers.

ENGINE³

Engines under No. 1000 (late February) had a very low, flat cylinder head drilled for fifteen $\frac{3}{8}$ " cap bolts. Compression was 60 pounds per square inch, and ratio was about $4\frac{1}{2}$ to 1. No name appeared on head or on transmission cover door.

Engines under No. 2500 (mid April) had a slightly higher cylinder head for greater water capacity; the head remained flat but was drilled for fifteen $\frac{7}{16}$ " cap bolts and bore the name FORD MOTOR CO. in block letters. All these engines (see Fig. 21) were further characterized by the absence of a front water jacket and by the inclusion of a water pump, gear driven from the camshaft and carrying an eight-bladed fan on the end of the pump shaft. A long oil fill pipe was attached to top of crankcase at left front; the engine number appeared on a boss near bottom of front cylinder at the right. The crankshaft was only 25" long; the very heavy connecting rods were bronze-bushed for a wrist pin held tight in piston.



Instantaneous stops—upon application of brake, clutch and reverse pedals.

The FORD name appeared in script on transmission cover door.

Engines above No. 2500 had no water pumps but were cooled by thermosyphon effect. Therefore, the cylinder head was again given greater water capacity with a jacket dome sloping forward to a vertical hose connection (see part 3001, Fig. 23.) The block was altered because of elimination of the water pump, and the water jacket was extended around the front. The crankshaft was increased to $25\frac{5}{32}$ " and fitted with a pulley for a flat belt drive to the four-bladed fan. The timing gear cover was altered and included an integrally cast oil fill spout (part 3009, Fig. 23). The commutator was enlarged (part 3200, Fig. 18) and remained as standard size thereafter. Connecting rods were lightened slightly, and the bushing was omitted; shaft end was bored to $1\frac{1}{2}$ " with $\frac{1}{8}$ " of babbitt thickness. Cylinder bore and stroke remained at $3\frac{3}{4}$ " x 4" with a displacement of 176.7 cu. in.

The cam was designed to open exhaust valve $\frac{3}{8}$ " before bottom center and to close $\frac{1}{64}$ " past top center. Intake opened $\frac{7}{64}$ " past top center, closed $\frac{3}{8}$ " past bottom center.

BODIES

Colors were optional and available in

³ Because Ford had a unit power plant, transmission data are included with the engine data.

black, red, green, blue, pearl gray and French gray. Wood was the standard material of construction (Fig. 1), but a very few Touring cars had sheet aluminum bodies, presumably experimental (Fig. 3). For this year only, the Tourster body was offered having no doors at all and having identical front and rear seat assemblies. The Coupe was distinguished by having the doors hinged at rear.

Running boards were of wood covered with linoleum on cars under No. 2500, but were later of pressed steel with several rows of interrupted ridges running lengthwise, as shown in Fig. 3; no FORD script appeared on any of these. Fenders were steel, flat-topped and rimmed, and were generally square-ended (as in Fig. 1) though were often lipped in front (as in Fig. 3). Fender finish was always in black japan. Engine hoods were 24" long for Runabouts, 22" long for all other types and continued so until 1917.

STEERING GEAR

This 50" assembly was fitted with a wooden wheel of 13" outside diameter, had a brass spider and had a brass case for the planetary steering gears mounted



Fig. 6

1914 TOURING — NO. 516498

Formerly owned and restored by Chris Hannervig; now owned and rebuilt by Thomas Hespenheide. Another AACA prize winner, this Ford was similar to the 1913 except for rounded door corners. Note particularly the plain but slightly rounded, ends on front fenders compared with the plain but straight ends in Fig. 1, and with the lipped fenders in Fig. 9. Front wheels on this car were genuine Ford accessories, fitted with clincher rims for 30x3½ tires to match the rear.

Fig. 7

1911 TOURING — NO. 56769

Formerly owned and restored by Robert C. Laurens; now owned by Pres. T. Clarence Marshall. This renowned car won the "Best Model T" Trophy, 1949 Glidden Tour. In it are embodied some of the first major engineering improvements to Model T; the tapered axles and drive shaft, larger sloping transmission cover (Fig. 22) and an oil pan (Fig. 23) removable without taking out the entire engine, radiator, dashboard, and steering gear!



directly under the spider. Steering ratio was 3 to 1 reduction.

RUNNING GEAR

Standard tread was 56", with 60" optional for the Southern trade, where wagon ruts were wider. Peculiar to the early Fords was the pressed steel, riveted differential and axle housing which contained straight (untapered) axles and drive shaft running in bronze bushings; only the outer axle bearings were roller. On cars above No. 7500 (mid July) the pinion gear end of the drive shaft was increased in diameter from 1" to 1⅜", and was fitted with a longer bushing. The steering knuckle and spindle unit was forged in one piece and radius rods were socketed into the spring perches atop the front axle.

IGNITION

Alternating current was generated by 16 V-shaped magnets ⅞" wide clamped to the flywheel and rotated past a ring of 16 coils fixed to the inside of the transmission case; voltages up to 28 were obtained, varying with engine speed. This low-tension current was distributed by the commutator, or "timer" to four vibrator spark coils contained in a wooden case on the dash board, thence as high tension cur-

rent to the spark plugs. These were either Heinze coils, size $2\frac{5}{16}$ "x $3\frac{1}{16}$ "x5, or were Kingston coils, size $2\frac{5}{16}$ "x $2\frac{9}{16}$ "x $5\frac{3}{4}$ ".

LAMPS AND ACCESSORIES

The all-brass lamps were made by E. & J., Brown, or Victor and included two 8" acetylene gas head lamps, with a brass generator, two square, oil side lamps, and a square tail lamp. The bulb horn and all other such accessories were of polished brass.

1910

Essentially identical to late 1909 Fords, the 1910 style was announced in October 1909.

TYPES AND PRICES (August)

Touring	Runabout	Coupe	Town	Torpedo
\$950	\$900	\$1050	\$1200	—

SALIENT FEATURES: FORD name appeared in script along with the diamond designs pressed into running boards.

ENGINE

Changes were not obvious, consisting principally of an alteration in the method of fastening magnets to the flywheel starting in March (engine No. 17500) and a second alteration of the flywheel itself to accommodate the larger $\frac{3}{8}$ " magnets installed in May (engine No. 20500) to increase magneto power.



Fig. 8

1913 TOURING — NO. 168839

Owned and restored by W. Harrison Hall, Jr. Winner of The Ford Motor Co. Trophy, 1951 Glidden Tour. Here was the first Ford touring body designed with front doors (left one was a dummy) and integral tonneau, and the last offered in colors with striping until 1926. Note the angularity of the doors. Lamps were then iron with brass trim only.

The standard carburetor was the Kingston Model L-2.

BODIES

No changes were offered except for the new Torpedo Roadster; a racy looking car (Fig. 4) which featured very low doors, curved front and rear fenders and a 16 gallon fuel tank and a tool box mounted on rear deck. The long, 61" steering column and the windshield were set at a very rakish angle to carry out the suggestion of speed. And, with its high compression engine, light flywheel (including magneto), and very light, low body, this car had undoubtedly the best performance and greatest speed of all Model T Fords ever produced.

At this time the doors on the Coupe were hinged in front.

On New Year's Eve cars were shipped from the Piquette Avenue (Detroit) Plant for the last time; on the first day of 1910 deliveries were made from the new Highland Park Plant.

1911

Many new engineering advances appeared in the 1911 style Fords, brought out in October 1910.

TYPES AND PRICES (August)

Touring	Runabout	Coupe	Town	Torpedo
\$780	\$680	\$1050	\$1200	—

Fig. 9

1915 TOURING — NO. 762316

Owned and restored by Leslie R. Henry. Winner of The Ford Motor Co. Trophy, 1930 Glidden Tour. This was the transitional design; first to have magneto powered electric headlamps, curved rear fenders, and sharply faired metal cowl. Note the brass trim on all lamps which serves as a distinction between 1915 and 1916 styles. The tool box was a Ford factory accessory; the wooden door trim was not.



SALIENT FEATURES: Removable connecting rod pan; larger steering wheel; larger transmission cover door, metal bodies.

ENGINE

Most welcome was the inclusion of a removable connecting rod pan (part 3100, Fig. 19), obviating the necessity of removing the entire engine—and all forward body parts—to adjust rod bearings. With this change came a larger, sloping access door for easier adjustment of the transmission bands (part 3376, Fig. 18) and the clutch pedal was altered to fit this enlarged transmission cover. The engine number was relocated to a boss over the water hose connection on left of block.

Enclosure of the valve chambers, entailing a second alteration of the engine block casting, was introduced later in the year. Along with this came steel valve push rods replacing the former brass.

A FORD carburetor, Model G, was issued on many cars; Kingston remained standard.

BODIES

During this year sheet metal bodies became standard but resembled the former wooden bodies closely.

STEERING GEAR

This assembly was lengthened to 56" and the steering wheel diameter increased to 15".

RUNNING GEAR

The drive shaft and the axles were each tapered at one end and were carried entirely on roller bearings instead of partly in bushings; a maleable iron spool piece was inserted between the shaft housing and the differential housing to contain the new roller and ball thrust drive shaft bearings.

The front wheel steering knuckle and spindle unit was assembled of two pieces

to simplify forging and remained unchanged until 1917. A larger ball and socket was fitted to the front radius rod unit.

IGNITION

Spark coils made by Jacobson-Brandon were furnished on many cars this year.

TYPES AND PRICES (August)			
Touring	Runabout	Town	Torpedo
\$690	\$590	\$900	—
Fore-Door		Commercial Runabout	
—		—	

SALIENT FEATURES: Enclosed valve chambers.
ENGINE

For the first time, the engine compress-



Ford Coupelet—2 Passengers—4 Cylinders—20 Horsepower—fully equipped, except speedometer. Having appearance of appearance with the latest device of utility. Top raised or lowered in ten minutes. Price \$590. U. S. Dept.

Fig. 10
1915 COUPLET

First of the convertible cars, it was offered only four years then replaced by the Coupe. Today an excellent example of this rare style may be seen in the collection of Henry Austin Clark, Jr.

LAMPS

Magneto-powered electric conversion units were offered for the first time by K-W Company for Ford gas headlamps; Ford warned that the magneto was not powerful enough for lights and ignition too. Side lamp brackets were changed from round brass to flat iron.

sion ratio was slightly lowered by enlarging combustion space in the cylinder head.

1912

October 1911 saw the first of the new 1912 style Fords.

Fig. 11

1920 SEDAN — NO. 4578835

Owned by Thomas E. Brown. Same as the 1917 Sedan, this car displays the oval rear window, central side doors, two-piece windshield, and accessory tool box. The demountable rims were optional equipment; the spot light an anachronism.



Absolutely burglar-proof.

A third change in timing gear cover plate introduced the unusual timer with a built-in oil fill spout, as shown in Fig. 18, this was soon abandoned in favor of the fourth type cover plate more nearly like the earlier but having an adjusting screw for fan belt tension just above the integrally cast oil fill spout which itself was pierced by a cap screw (see part 3009B, Fig. 23).

BODIES

New in styling was the "Fore-Door" Touring car, unique in that front, or fore, door units were factory equipment. These units were subsequently made available as Ford accessories for shop installation in the regular 1911 or 1912 Touring cars already in use.

A Torpedo Runabout was officially offered and for the last time this year, but it had not the rakish appearance nor yet the performance of the previous 1910-11 Torpedo. It was really the regular Runabout except for the curved fenders, and the tool box and 16 gallon round fuel tank mounted on the rear deck. It had the Standard 56" steering column, the 23"x34 1/4" cherry dashboard, and the regular high doors. The Commercial Runabout was yet another modification, possessing a flat rear deck for light freight with a single, detachable bucket seat on the tool box for the mother-in-law.

After 1912 the erect, brass bound, and brass braced windshield was seen no more on new Fords; neither were the all-brass horn and lamps, nor the all-leather upholstery. Ford had begun to economize and to PRODUCE!

STEERING GEAR

This was the last production year to

have a cast brass steering wheel spider, though the brass steering gear case remained until 1917.

1913

With a definite note of austerity came the 1913 style Model T in November 1912.

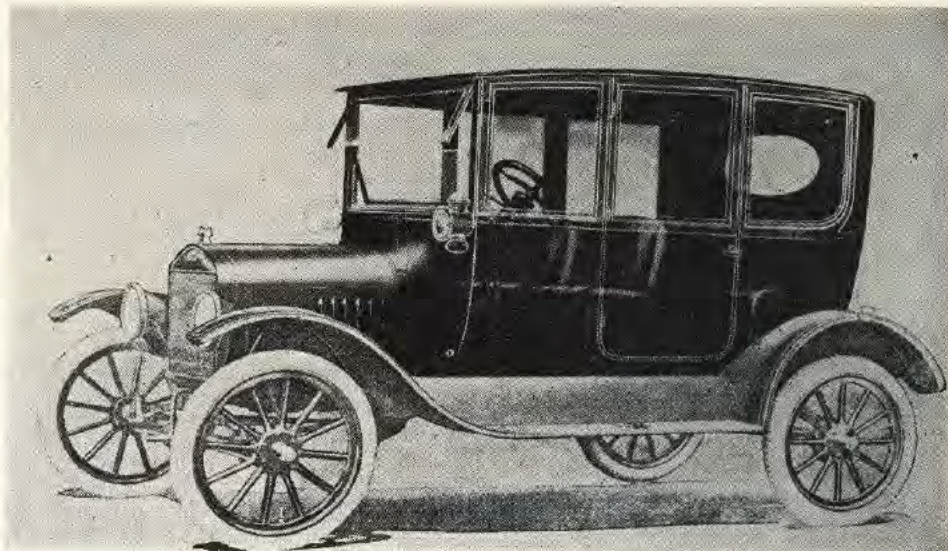


Fig 12

1917 SEDAN (Phantom View—Ford Catalog 1917)

The high, steel radiator shell, the larger rounded engine hood, and the curved, crowned fenders brought a "new look" to Model T this year. This style body, introduced in 1915 remained unchanged until 1923.

TYPES AND PRICES (August)

Touring	Runabout	Town
\$600	\$525	\$740

PROFITS: \$25,000,000 for the fiscal year ending August 1, 1913.

SALIENT FEATURES: First Touring with front doors and integral tonneau; first Runabout with rear "turtle-back" compartment; steel replaced most of the former brass units.

ENGINE

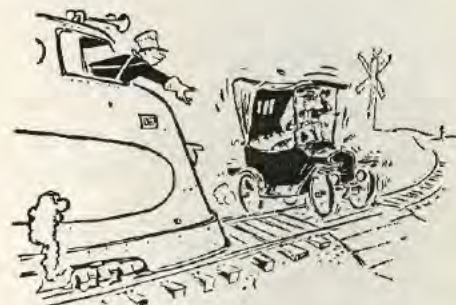
The exhaust manifold and camshaft al-

BODIES

Last to be offered in colors and with factory striping, these were the first to have front doors designed into smooth-sided bodies; the tonneau was no longer a distinct division. A handle projected through the top edge of each door which was sharply rectangular in shape and which extended below the floor level to the top of the splash apron (see Fig. 7).



1911 FORD MODEL T TOURING



its unusual lines command courtesy and respect.



Fig. 13

1919 RUNABOUT — NO. 3000028

Owned by Marvin W. Moyer. The "new look," introduced two years earlier, is displayed by this AACA prize winner in the curved, crowned fenders, the big, pressed steel radiator shell, and the more graceful hood. Starters and demountable rims, offered for the first time as optional factory equipment, were reserved for the closed Fords.

Except for the Fords produced in Canada, and which are not considered in the scope of this treatise, the left front door was a dummy, access there being obstructed by the brake anyway.

The cherry dashboard was continued though reduced in size to $21\frac{1}{2} \times 32\frac{1}{4}$ " better to fit the new body style. At this time the windshield frame was changed from brass to steel, was mounted with the

bottom section sloping backward, and was braced with short steel tubes to the top edge of the cowl (see Fig. 7-8). FORD script on running board was changed from a longitudinal to a crosswise position.

Leatherette was employed for door panels only, while the upholstering remained in leather.

STEERING GEAR

Cast steel replaced the brass steering

spider, but the wooden wheel remained 15" in diameter.

IGNITION

Far outnumbering the wooden coil boxes this year were the new, angular, pressed steel coil cases bearing the FORD name and containing K-W spark coils, size $2\frac{1}{4} \times 3\frac{1}{4} \times 5\frac{3}{8}$ ".

LAMPS AND ACCESSORIES

Here, too, brass was largely replaced by steel, and black-painted lamps were furnished in the following makes and models:

HEAD LAMPS

E & J, Model 66	Brass top and rim.
Jno. Brown (1913-1914)	Brass rim, only
Victor, Model 1	
Corcoran (1913-1914)	Brass top and rim.

SIDE LAMPS (Square)

E & J, Model 30	Round front lens; brass trim.
Jno. Brown (1913-1914)	Brass trim.
Victor (1913-1914)	Brass trim.
Corcoran (1913-1914)	Brass trim.

TAIL LAMP (Square)

E & J, Model 10	Round green, round red, square white lenses; brass trim.
Standard (1909-1914)	Same as above.
Victor	Same as side lamp with one red lens.
Corcoran	Same as above.

The gas generator was made of black iron instead of brass. The bulb horn, while still made of brass, was painted black except for the belled end, and was mounted to project through the dashboard. A Stewart speedometer, chain driven in a flexible housing from the right front wheel, was included at no extra cost. This too was black with a brass bezel.

Fig. 14

1923 COUPE

Owned and assembled by Herbert J. Singe. Featured for 1923 was this lowered body with integral rear compartment, the large rectangular rear window, and rotary window controls. The touring car sported a one-man top and sloping windshield (as in Fig. 15).



Fig. 15

1925 TOURING

Owned new in 1925 by Paul H. Cadwell, this Ford was one of the first to have "balloon" tires, size 4.40x21, as optional equipment. Body lines were the same as introduced in 1923.



SPECIFICATIONS

For all Ford Model T Cars

Motor—Four (4) cylinder, four cycle. Cylinders are cast en-bloc with water jackets and upper half of crank case integral. Cylinder bore is 3 1/4 inches; piston stroke is 4 inches. The Ford Motor is rated at twenty (20) horsepower. Special Ford removable cylinder head permits easy access to pistons, cylinders and valves. Lower half of crank case, one-piece pressed steel extended so as to form bottom housing for entire power plant—air proof, oil proof, dust proof. All interior parts of motor may be reached by removing plate on bottom of crank case—no "tearing down" of motor to reach crank shaft, cam shaft, pistons, connecting rods, etc. Vanadium steel is used in all Ford crank and cam shafts and connecting rods.

Unit Construction—There are four (4) complete units in the construction of Ford Model T—the power plant, the front axle, the rear axle and the frame. Any of these may be removed or replaced as a single unit.

Three-Point Suspension—Each of the Ford Model T units is suspended at three points of the chassis. This method of suspension insures absolute freedom from strain on the parts and permits the most comfortable riding of the car body.

Transmission—Special Ford spur planetary type, combining ease of operation and smooth, silent running qualities. Clutch is so designed as to grip smoothly and positively and when disengaged to spring clear away from the drums, thus assuring positive action and maximum power. Transmission cover is of aluminum.

Magneto—Special Ford design, built in and made a part of the motor. Only two parts to the Ford Magneto, a rotary part attached to the flywheel and a stationary part attached to the cylinder casting. No brushes, no commutators, no moving wires to cause annoyance on the Ford Magneto.

Lubrication—Combination gravity and splash system. Oil is poured into the crank case through the breather pipe on the front cylinder cover. All moving parts of motor move in oil and distribute it to all parts of the power plant.

Cooling—By Thermo-Siphon water system. Extra large water jackets and a special Ford vertical tube radiator permit of a continuous flow of cool water and prevent excessive heating. A belt-driven fan is also used in connection with the cooling system.

Carburetor—New design, float feed automatic with dash adjustment.

Clutch—Multiple steel disc, operating in oil. There are 27 discs on the Ford Clutch.

Fenders—Large and graceful in design, enclosing the entire length of car.

Gasoline Capacity—Touring Car, Commercial Roadster, Town Car and Delivery Car, cylindrical gasoline tanks of 10 gallons capacity and mounted directly on frame under front seat. Torpedo Runabout, cylindrical tank of 10 gallons mounted back of seat.

Steering—By Ford reduction gear system. Steering knuckles and spindles are forged from special heat-treated Vanadium steel and are placed behind front axle.

Valves—Extra large, all on right side of motor and enclosed by two small steel plates, making their action absolutely noiseless. Enclosed valves are dust proof, thereby saving wear on valve stems and push rods and giving perfect valve setting.

Control—On the left side of car. Three foot-pedal controls, low and high speeds, reverse, and brake on the transmission. Hand lever for neutral and emergency brake on left side of car. Spark and throttle levers directly under steering wheel. Ford cars may be stopped or started without removing the hands from the wheel.

Brakes—Dual system on all Ford Model T cars. Service brake operates on the transmission and is controlled by foot pedal. Expanding brake in rear wheel drums serves as emergency brake. It is controlled by hand lever on left side of car.

Springs—Both front and rear springs are semi-elliptical transverse, all made of specially Ford heat-treated Vanadium steel. Ford Model T springs are the strongest and most flexible that can be made. Model T rear springs are extra large, giving easiest riding qualities to car body.

Wheels and Tires—Wooden wheels of the artillery type with extra heavy hubs. Only tires of the highest grade are used on Ford cars. Front 30 x 3 inches. Rear 30 x 3 1/2 inches.

Final Drive—Ford triangular drive system with all shaft, universal joint and driving gears enclosed in dust proof and oil proof housing. Direct shaft drive to the center of the chassis; only one universal joint is necessary. All shafts revolve on roller bearings; a ball and socket arrangement in the universal joint relieves the passengers of all shocks and strains caused by the unevenness of the road. The Final Drive of the Ford Model T is patented in all countries.

Axles—Front axle of I-beam construction, especially drop-forged from a single ingot of Vanadium steel, insuring the highest quality of axle strength obtainable. Rear axle also of Vanadium steel and enclosed in a tubular steel housing. The Ford Differential is of the three-pinion bevel type; all gears are drop-forgings made of Vanadium steel; all teeth are accurately planed and hardened.

Bodies and Capacity—Ford Model T cars are furnished with five styles of bodies—Ford door Touring Car, capable of carrying five (5) passengers; Torpedo Runabout for two (2) passengers; Commercial Roadster, with rumble seat, three (3) passengers; Town Car, six (6) passengers; Delivery Car, two (2) passengers, 750 pounds merchandise capacity.

Prices —Ford door Touring Car, f. o. b. Detroit	\$690
Torpedo Runabout	590
Commercial Roadster	590
Town Car	900
Delivery Car	700

Equipment—All Ford Model T's are sold completely equipped—no Ford cars will be sold unequipped. Standard equipment includes Top, Windshield, Gas Lamps, Generator, Speedometer, Three Oil Lamps, Horn and Kit of Tools.

Weight—Touring Car, 1200 pounds. Others in proportion.

Wheel Base—100 inches; Standard tread 56 inches; 60 inches for Southern roads where ordered. All Ford Model T cars will turn in a twenty-eight (28) foot circle.

Fig. 16

1914

Ford greeted the new year, January 1914, with a new style Model T.

TYPES AND PRICES⁴ (August)

Touring	Runabout	Coupe	Town
\$490	\$440	\$750	\$690

SALIENT FEATURES: Black was the only color offered; doors had rounded corners; back cushions were leatherette and only the seats were leather.

PROFITS: \$30,000,000 for the fiscal year ending August.

ENGINE

The intake manifold was cast of iron instead of aluminum. Transmission cover door was a plain sheet steel stamping; no name appeared thereon. For the last time, pedals were initialed, and the crank was fitted with a curved, aluminum handle.

⁴Prices were actually lower than posted for all Fords sold between August 1914 and August 1915, at which time Ford announced a flat \$50 refund to each customer in line with his profit sharing plan. Yet, during 1914 profits soared to \$30,000,000 despite Ford's introduction of the \$5.00 minimum payment for an 8-hour day. Competitors were paying an average of \$2.34 for a 9-hour day!

BODIES

This was the last year in which Ford held to the truly "antique" styling. The bodies resembled those of 1913, having the small cherry wood dashboards and the straight, flat fenders. However, each door had rounded bottom corners and did not extend below the floor line; the latch handle extended through the inside panel rather than through the top of the door.

For the first time, front fenders were stamped with a strengthening rib across the widest portion. Up to and including 1914, windshields were similar in design though different in materials and mounting, and were made by any one of three Detroit suppliers; the Diamond Manufacturing Company, the Vanguard Manufacturing Company, or the Rand Manufacturing Company.

RUNNING GEAR

The rear cross member of the rectangular frame was lengthened, thereby eliminating the riveted attachment of brackets

formerly used. Wheels were available in black or dark blue until 1920.

IGNITION

Ford spark coils were introduced and the K-W and Heinze coils were altered to conform to the new standard size of 2 1/8"x3 1/2"x5". All coils were housed in a pressed steel box.

LAMPS AND ACCESSORIES

Acetylene gas head lamps and square oil lamps were furnished for the last time with this style. All lamps and accessories



Replacement parts easily obtainable—anywhere in U.S.A.

were the same as offered in 1913, except for some lamp model changes as noted:

HEAD LAMPS

E & J, Model 656 Brass top and rim
Victor, Model 2

SIDE LAMPS

E & J, Model 32 Round lens front;
brass trim.

TAIL LAMP

E & J, Model 12

1915

The transitional styling of Model T for 1915 appeared first in November 1914 with the closed cars, then in April 1915 for all types. Car No. 1,000,000 was completed December 10.

TYPES AND PRICES (August)

Touring	Runabout	Town	Sedan	Coupelet
\$440	\$390	\$640	\$740	\$590

WEIGHTS

1510	1395	—	1730	1540
SALIENT FEATURES: Electric head lamps; louvered hood; curved rear fenders; metal cowl; round oil lamps.				

ENGINE

Compression ratio was again lowered slightly. To supply the extra power required for lighting head lamps, the magneto coils were enlarged and the magnets were again increased in size to $\frac{3}{4}$ ". The transmission pedals were no longer initialed but had vertical ribs on the surface.

A medium weight connecting rod was introduced having a bore of $1\frac{3}{8}$ " and a babbitt thickness of $\frac{1}{16}$ ".

BODIES

Starting November 1915, the new styling was offered only in two entirely new body types, the Sedan, having two central side doors, and the Coupelet (Fig 10), having the first convertible top; the Coupe was discontinued. Gone was the cherry wood dashboard, supplanted by a metal cowl sharply faired down to the original style, box-like engine hood which was still made of aluminum and was inletted with louvers. Until April 1915, the Touring, Runabout and Town types remained in the styling of 1914 and must be considered as such.

Rear fenders were curved for the first time on all body types; front fenders remained straight, flat and, without exception, lipped. The windshield again became erect and was mounted without braces atop the cowl, immediately ahead of the doors (Fig 9).

Upholstering was entirely of leatherette on the open cars, except for a patch of leather at each door where wear was greatest. The closed cars were upholstered in cloth.



No special gasoline necessary. (High-octane may be dangerous)

IGNITION

For the first time all spark coil boxes were made exactly alike of pressed steel with smooth corners and sloping top.

LAMPS AND ACCESSORIES

Since the gas lamps were retained on some Fords until April, all cars until then had the forked lamp brackets even when fitted with electric lamps. But, when all types were at last equipped with the new $8\frac{1}{2}$ " electric head lamps, these were then mounted each on a single, flanged post. The light bulbs were of 9 volt capacity and were wired in series because the magneto voltage ranged from 8 to 28 volts or higher, depending on engine speed. This arrangement was never entirely satisfactory for at low speeds the lights were dim, and occasionally, at high speeds were so bright they would burn out.

Side lamps no longer differed as to right or left, but were interchangeable, being rounded and symmetrical. The tail lamp was similar to the side lamps, except for the ruby lens and a white side lens. All lamps were trimmed in brass.

The bulb horn appeared no more, but was replaced by a hand Klaxon with a polished brass belled end. In August the Stewart speedometer was discontinued as standard equipment but was available as an optional item.

1916

The transitional styling of 1915 remained for 1916, which style year may be considered starting in January.

TYPES AND PRICES (August)

Touring	Runabout	Town	Sedan	Coupelet
\$360	\$345	\$595	\$640	\$505

PROFITS: \$59,000,000.

SALIENT FEATURES: After April, all lamps and the horn were entirely black and the engine hood was made of steel.

BODIES

This transitional style was the last to have the semblance of antiquity afforded by the straight front fenders, the small brass radiator, and the little box-like engine hood, now made of steel instead of aluminum. Later, even the patches of leather on the upholstery at the doors was replaced with leatherette and this was protected from wear by little pressed steel caps.

RUNNING GEAR

The 60" tread, which required larger fenders, longer fender brackets, longer axles, housings, tie rods, etc., was discontinued after July 31 and Dixieland was compelled at last to superimpose the standard 56" tread Fords on their 60" runs.

Hub caps were still fabricated of thin, polished brass.

1917

In September 1916 Model T developed a "new look" for 1917, streamlining came—almost.

Fig. 17
1917 FORD
MODEL T ROADSTER



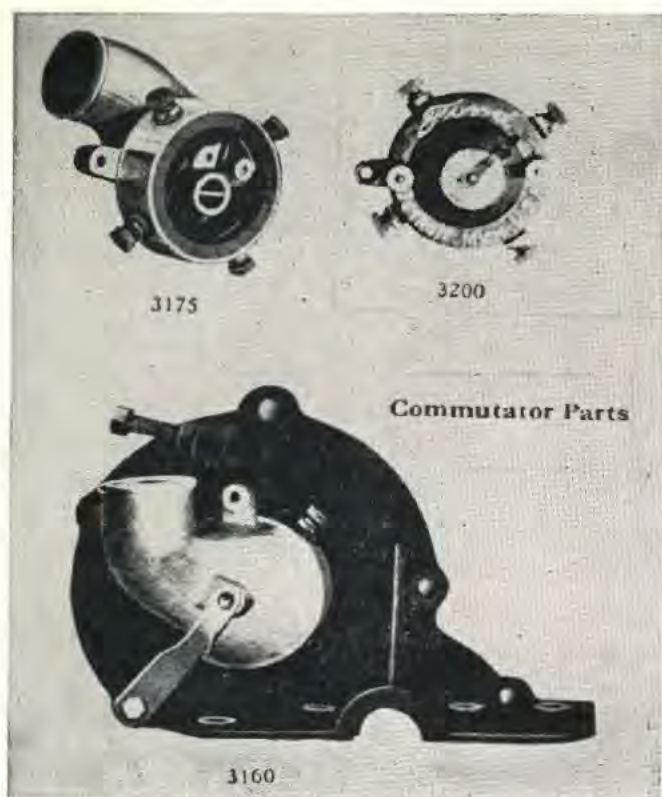


Fig. 18

COMMUTATORS (1912 Catalog)

Rarest of the many forms of Model T "timers" was the early 1912 having the oil fill pipe made integrally with the timer case. Item 3200 above shows the conventional form.

TYPES AND PRICES (August)

Touring	Runabout	Town	Coupelet	Sedan
\$360	\$345	\$595	\$505	\$645

WEIGHTS

1500	1385	—	1580	1745
------	------	---	------	------

PROFITS: \$38,500,000.5

SALIENT FEATURES: High steel radiator shell; larger engine hood matching the cowl contour; crowned, curved, fenders; low compression engine; nickel plated hub and radiator caps.

ENGINE

By increasing the height of the cylinder head, engine compression was lowered to 45 psi. with a 3.98 to 1 ratio. The cast iron nozzle for the water hose on top of the cylinder head was increased in length because of the higher radiator. The fan was made larger and had a peripheral reinforcing ring, which was later omitted.

The transmission cover was cast of iron instead of aluminum, and the pedals were smooth-surfaced. Rubber pedal pads were available and could be slipped onto the pedals.

⁵ Profits were smaller because of the tremendous building program at the new River Rouge Plant, subject of the famous Dodge brothers' stockholders suit.

The muffler still had cast iron heads, but the tail pipe was eliminated.

BODIES

A major step was taken this year toward modernizing Model T. Most striking of all changes was the high, pressed steel radiator shell with the well-proportioned hood clashed down to pressed steel sills and fairing gently back to the cowl contour. Crowned fenders were the completing touch. For the first time nickel plating appeared on the hub caps and radiator cap. The front bracket holding the body to the frame was then made of a steel stamping rather than the steel casting previously used.

STEERING GEAR

The front wheel hubs and the spindles were made about 1/8" longer, the better to accommodate tapered roller bearings introduced as standard this year. These roller bearings could, however, replace the ball-bearings in any of the earlier Fords.

LAMPS AND ACCESSORIES

An electric horn powered by the magneto was included as regular equipment this year.

1918

There was no change from the 1917 to the 1918 style, but starting this year many cars were fitted with squared-end spring leaves, as well as the regular tapered end spring leaves. For the last time, the Coupelet and Town cars were offered; following this year the Coupe type was revived, having doors hinged at the front.

TYPES AND PRICES (August)

Touring	Runabout	Coupelet	Sedan
\$525	\$500	\$650	\$775

1919

While styling remained identical to 1917, many engineering advances were incorporated in the new Ford for 1919.

TYPES AND PRICES⁶ (August)

Touring	Runabout	Coupe	Sedan
\$525	\$500	\$650	\$775

WEIGHTS

1500	1390	1580	1750
------	------	------	------

SALIENT FEATURES: First with electric starter and demountable rims as limited optional equipment.

PROFITS: \$70,000,000.

Motor Company, capitalized at \$100,000,000.

ENGINE

For the open-type cars no engine changes at first appeared; but for all the closed types the engine was modified in order to accept the starting equipment as optional equipment; later, all engines were so modified. The flywheel was altered to take a ring gear; the engine block and (for the fifth time) the timing gear cover were changed to support and drive the 6-volt generator from the camshaft gear, and the transmission cover was redesigned to receive the starting motor.

Because of the generator load on the the timing gears these were changed from spur to helical; this also reduced back-lash and gear noise. The helical gears were interchangeable with the earlier spur type and were recommended by Ford for replacements.

BODIES

Body styles were not changed from those introduced for 1917, except for reviving the Coupe which had doors hinged at front.

RUNNING GEAR

Demountable clincher rims for 30x3 1/2

⁶ Prices remained unchanged, although Ford started paying a new minimum of \$6 per day. This, too, was the year in which the Dodge brothers and five other stockholders were bought out for \$105,818,858, and when Edsel Ford was installed as President of the new Ford

tires were optional equipment for the closed-type Fords only. Tire size in front remained 30x3 otherwise.

The front radius rods were relocated to a position below the front axle on extensions of the spring perches; this better braced the axle against torque.

LAMPS AND ACCESSORIES

All cars fitted with the optional electric starter, generator, and storage battery were also supplied with an electric tail lamp; and the 6-volt lighting system, wired in parallel, was powered by the battery. Later, and until the passing of the hand crank and the oil tail lamp in 1925, the electric tail lamp became a popular accessory for those Fords still lighted by the magneto.

1920

Styling remained unchanged.

TYPES:	Touring	Runabout	Coupe	Sedan
PRICES:	\$575	\$550	\$850 *	\$975 *
(March)				
(Sept.)	\$440	\$395	\$745 *	\$795 *
WEIGHTS:	1485	1380	1685 *	1875 *
SALIENT FEATURES:	Steering wheel was increased to 16" diameter.			

ENGINE

Lightweight connecting rods were introduced having a bore of $1\frac{3}{8}$ " with $\frac{1}{16}$ " of babbitt thickness.

At this time electric starting equipment became optional on all types at an extra cost of \$75.00, adding 90 pounds extra weight.

The Ford carburetor Model NH was introduced on many cars and the Model F carburetor was continued until 1923. Kingston carburetor Model L-2 was discontinued after this year.

BODIES

Bodies remained unchanged from the 1917 style, except that only the Sedan was fitted with a dash board.

Fig. 19

Fuel Tank Measurements for Most Model T Ford Cars			
Gallons	Square Tank	Round Tank	Oval Tank
1	$\frac{3}{4}$ "	$11\frac{7}{32}$ "	$17\frac{1}{16}$ "
2	$1\frac{1}{2}$ "	$29\frac{1}{16}$ "	$23\frac{1}{16}$ "
3	$2\frac{1}{4}$ "	$31\frac{1}{2}$ "	$215\frac{1}{16}$ "
4	3"	$41\frac{1}{32}$ "	$35\frac{5}{8}$ "
5	$3\frac{3}{4}$ "	$51\frac{1}{8}$ "	$45\frac{1}{16}$ "
6	$4\frac{1}{2}$ "	$529\frac{1}{32}$ "	5"
7	$5\frac{1}{4}$ "	$63\frac{1}{4}$ "	$51\frac{1}{16}$ "
8	6"	$71\frac{1}{16}$ "	$67\frac{1}{16}$ "
9	$6\frac{3}{4}$ "	$823\frac{1}{32}$ "	$73\frac{1}{16}$ "

In anticipation of lowered bodies, the original style round fuel tank was abandoned early in 1920 in favor of the oval shape for all type bodies except the Sedan, which still required the square tank (Fig. 12), as used on many of the earlier Coupes. Figure 19 is a gauge table of gallonage for the three regular sizes of Ford fuel tanks.

STEERING GEAR

The familiar cast steel spider was replaced by a pressed steel unit and the wheel, now made of "composition" similar to hard rubber, was increased to 16" diameter.

RUNNING GEAR

The maleable iron spool at rear of drive-shaft housing was replaced by a cheaper, pressed steel, flanged sleeve having exposed bolts.

At last optional equipment for *all* type Fords, the demountable rims, including spare, cost \$21 extra and added about 70 pounds to the car weight.

LAMPS AND ACCESSORIES

The dashboard (Sedan only) sported an ammeter and a combination light and ignition switch mounted in an escutcheon plate. Stewart speedometers, when added, appeared on the lower right edge of the dashboard.

1921

The style was the same as the 1920 except for minor changes.

TYPES:	Touring	Runabout	Coupe	Sedan
PRICES:	\$415	\$370	\$695 *	\$760 *
(June)				
(Sept.)	\$355	\$325	\$595 *	\$660 *
WEIGHTS:	1485	1380	1685 *	1875 *
PROFITS:	Ford owed \$50,000,000 in the post-war depression.			

* Includes starter and demountable rims.

ENGINE

Front engine support and front spring clamp was forged in one single unit; the pair of U bolts formerly holding spring to frame were abandoned.

A Kingston carburetor, Model L-4, was furnished on many cars in 1921-22.

The cast iron muffler heads were no longer used, being replaced by pressed steel units.

1922

This style was identical to the 1921.

TYPES:	Touring	Runabout	Coupe	Sedan
PRICES:	\$348	\$319	\$580 *	\$645 *
WEIGHTS:	1485	1380	1685	1875
PROFITS:	\$119,000,000.			

BODIES

The Sedan with the two centrally located doors and with the oval rear window appeared for the last time this year.

1923

Distinctive, new styling for 1923 appeared in August 1922.

TYPES AND PRICES

Touring	Runabout	Coupe	Sedan 2-Door	Sedan 4-Door
\$393	\$364	\$530	\$595	\$725

WEIGHTS

1650	—	—	—	—
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PROFIT: \$82,000,000.

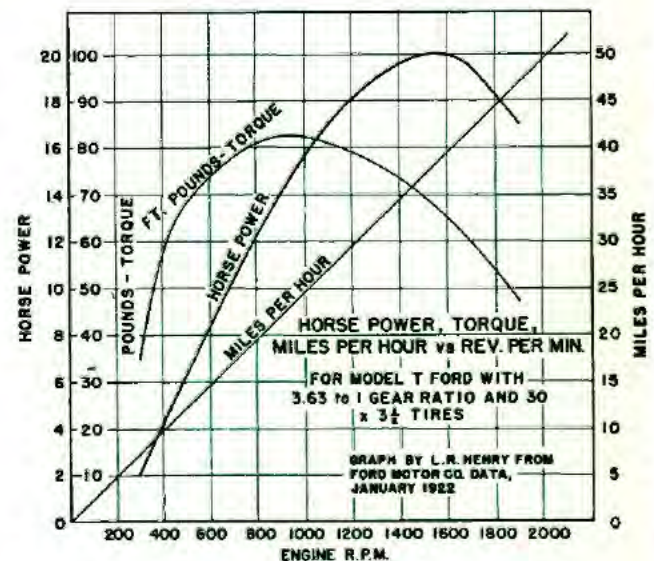
SALIENT FEATURES: Lowered, more "streamlined" bodies; one-man top.

BODIES

The lowered bodies, planned since

* Includes starter and demountable rims.

Fig. 20



* Includes starter and demountable rims.

early 1920 when the oval fuel tanks (and the post-war depression) appeared, marked the first real styling advancement since 1917. On all types the radiator was heightened and sported an apron at the bottom of the shell.

Two sedans were offered for the first time, the two-door and the four-door; these and the Coupe featured a large, rectangular rear window and, for the first time, rotary window regulators, a cowl ventilator, and of course, the square fuel tanks.

The Coupe this year had the rear compartment formed integrally with the body (see Fig. 14); the Runabout still retained the detachable compartment, until the 1926 style, so that it could be readily converted for commercial use.

The open-body types had the oval fuel tank, the new, one-man top, and windshields set at a rakish angle with the upper section pivoted at the top of the frame. Characteristic of the one-man top was the extension of back curtain around the side of the bow sockets (see Fig. 15).

The running board brackets were one-piece flared channel section and were without the familiar tie rod.

1924

There was no change in style for 1924.

TYPES AND PRICES (August)

Touring	Runabout	Coupe	Sedan 2-Door	Sedan 4-Door
\$295	\$265	\$525	\$590	\$685

PROFITS: \$100,000,000 (averaging \$50 per Car). Ford started his first nation-wide paid advertising program.

SALIENT FEATURES: Last year in which the open cars were available with the 30x3 clincher front tires.

1925

Still in the pattern of 1923, the Ford for 1925 had minor improvements.

TYPES AND PRICES

Touring	Runabout	Coupe	Tudor Sedan	Fordor Sedan
\$290*	\$260*	\$520	\$580	\$660

PROFITS: \$80,000,000.

SALIENT FEATURES: First with "Balloon" tires and hand-operated windshield wiper.

BODIES

The names "Tudor" and "Fordor" were coined to designate the two forms of the Sedan; these names are still used by Ford.

The large, black escutcheon plate for the ammeter and the ignition and light switches appeared for the last time on the dashboard. New, as factory equipment,



Full, unobstructed vision.

was the hand-operated windshield wiper.

RUNNING GEAR

Demountable rims for 30x3½ clincher tires were supplied on all body types; the spare was carried at rear on a triangular mounting. Balloon tires, size 4.40x21 were optional equipment for all Fords at \$25.00 extra (see Fig. 15).

This was the last year for the small brake drums and the cast iron brake shoes on the rear wheels.

LAMPS AND ACCESSORIES

This was the last year in which the open cars were available with no starter, with magneto-powered head lamps, and with the same round, oil tail lamp introduced in 1915—Ford did resist change! Customers still willing to crank preferred, however, to have their Ford fitted with the magneto powered electric tail lamp instead of the oil lamp.

1926

In an heroic rejuvenation, Ford brought forth a glamorized Model T for 1926 starting with No. 12,225,528 in November 1925. By July 21, 14,000,000 Model T cars had been built.

TYPES AND PRICES (August)

Touring	Runabout	Coupe	Tudor Sedan	Fordor Sedan
\$380	\$360	\$485	\$495	\$545

PROFIT: \$75,000,000.7

SALIENT FEATURES: Lowered chassis, nicked radiator shell; choice of colors; light-weight pistons.

ENGINE

To help compensate for the heavier bodies, an effort was made to pep up the engine by installing lightweight, cast iron pistons having the oil ring below the wrist pin, and by redesigning the intake manifold for more efficient vaporization of fuel.

The engine block casting was altered to provide bosses to which a pair of ears on the new transmission cover could be bolted.

The transmission brake band was increased in width from 1½" to 1¾", and all bands were factory-fitted with the removable ears to permit relining of bands without removal of the transmission cover.

The water nozzle on engine head had a projection for mounting the fan.

BODIES

After a decade of nothing but black Fords, colors for the closed cars only became optional; blue, gray and brown were offered. This year the cowl ventilator (introduced in 1923) was included in all cars and was made to serve a double duty in that the fuel tank was now located in the cowl and filled through the opened ventilator. Of course there was an exception, the Fordor had the usual, square fuel tank under the seat.

At last the left front door of the open cars was given hinges and allowed to open and the Runabout was finally constructed with an integral rear compartment as the Coupe had been in 1923. Running boards were made 1½" wider.

Since bodies had already been lowered to the practical limit in 1923, these remained essentially unchanged and the height of Model T was reduced 1½" by lowering the chassis. This was accomplished by lowering the crown of the rear spring 1½", and by lowering the crown of the front spring 1", then gaining the extra ½" in front by raising the wheel spindle on the steering knuckle body. Again there was an exception, the Tudor body was lowered another 2½" for a total of 4".

Now proudly displaying a nickel-plated shell, the radiator was ⅝" higher. The engine hood was longer, had more louvers, and sloped smoothly into the cowl which appeared to be but a continuation of the hood. In all, the bodies had thus been lengthened 3½" and a better sense of proportion was gained by enlarging the crowned fenders and by eliminating the the bead on them.

The Coupe and Tudor types only were fitted with a new, one-piece windshield, but on all types the dashboard was furnished with a small, nickel-plated escutcheon plate for the ammeter and switches.

STEERING GEAR

The steering wheel diameter was in-

* \$85.00 extra for the starter!

7 Ford introduced the 5-day work week.

creased to 17" and the planetary steering gear ratio was changed to 5 to 1 reduction to compensate for the extra resistance of balloon tires.

RUNNING GEAR

Balloon tires, size 4.40x21, were standard equipment on all cars, as were the wooden artillery wheels. This year wire wheels of the drop-center type were available as optional equipment. The spare was mounted at the rear on a tubular post with a flange for the wire wheel or with a three-legged spider for the demountable rim, as required.

The rear wheel brake drums were increased in diameter from 8" to 11" and in width from $1\frac{5}{8}$ " to $1\frac{1}{2}$ ", and the brake shoes were of the asbestos lined, self-energizing type.

IGNITION

The metal spark coil box was relocated from the dashboard to a bracket on the left side of the engine head.

LAMPS

Because of the tubular post, the tail light was relocated from the center of the spare tire bracket to the left rear fender.

Head lamps had nickel-plated rims and were at first mounted as usual on flanged posts. Starting January 1926, the head lamps were mounted on a tie bar connecting the front fenders and passing in front of the radiator shell.

1927

After nineteen years, production of Model T ended with car No. 15,007,033 in June, 1927.

TYPES AND PRICES (June)

Touring	Runabout	Coupe	Tudor	Fordor
\$380	\$360	\$485	\$495	\$545

PROFIT: Ford ended the year with a loss of \$30,280,000.

SALIENT FEATURES: The 1927 style was identical to 1926, except that only the wire wheels were available. All cars were offered in colors with maroon and green added.

BIBLIOGRAPHY

Here presented are but a few of the more interesting books dealing with the most forceful and dominant personality of motordom, Henry Ford, and/or his omnipresent Model T car:

Ford, Henry, in collaboration with Crowther, Samuel, *My Life and Work*, Doubleday, Doran & Company, New York, 1922.

Marquis, Samuel S., *Henry Ford, an Interpretation*, Little, Brown & Company, Boston, 1923.

Mertz, Charles, *And Then Came Ford*, Doubleday, Doran & Company, New York, 1929.

Ford, Henry, in collaboration with Crowther, Samuel, *Moving Forward*, Doubleday, Doran & Company, New York, 1931.

White, Lee Strout, *Farewell to Model T*, G. P. Putnam's Sons, New York, 1936.*

Glasscock, C. B., *Motor History of America*, Bobbs-Merrill Company, New York, 1937.*

Simonds, William A., *Henry Ford, His Life, His Work, His Genius*, Bobbs-Merrill Company, New York, 1943.*

Richards, William C., *The Last Billionaire*, Charles Scribner's Sons, New York, 1948.

Bennett, Harry, in collaboration with Marcus, Paul, *We Never Called Him Henry*, Gold Medal Books, Fawcett Publications, Inc., New York, 1951.

Page, Victor W., *Model T, Ford Car*, Norman W. Henley Publishing Company, 254 West 54th Street, New York, (Some still available, \$3.00, from the publisher.)

* Denotes books available through member Floyd Clymer, Publisher, 1268 S. Alvarado Street, Los Angeles, Calif.

A Brief Directory for Parts and Services for Model T Fords

To aid members in the restoration and maintenance of their Model T Fords, the following are suggested as a few sources of supply:

PARTS

B. S. Wisniewski, Inc., 2133 South Kinnichinnie Avenue, Milwaukee 7, Wisconsin (Manufacturer of new parts). Joseph J. Murchio, Antique Auto Museum, Greenwood Lake, N. Y. Roy Stewart, 1228 Providence Avenue, Chester, Pa. Harry Pulfer, 2700 Mary Street, LaCrescenta, California. (Specializes in racing parts). William Scharff, 1322 Myrtle Ave., Brooklyn, N. Y. (Bought out Ford factory stock). Frank Hankins, Route 25, R.D., Riverside, N. J., Montgomery Ward and Co. (See catalog for parts, including tires). Sears, Roebuck and Co. (See catalog for parts.)

SERVICE

Engine reboring, line boring main bearings, rebuilding—Thul Machine Works, 325 East Third Street, Plainfield, N. J. Frank Hankins, Route 25, R.D., Riverside, N. J.

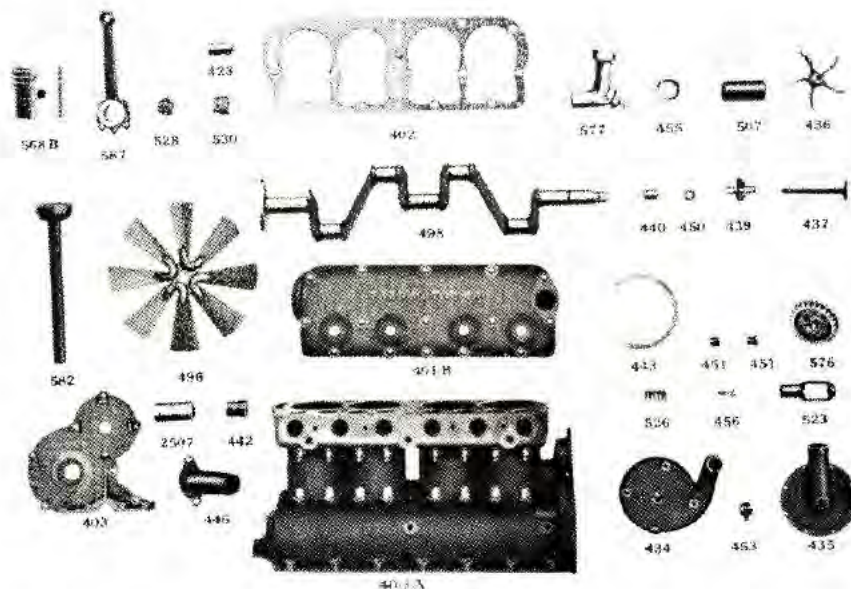


Fig. 21

EARLY ENGINE PARTS (1913 catalog)

These parts were peculiar to the first 2500 of the 1909 Fords. Note the eight bladed fan, the water pump and the flat cylinder head. Head gasket, part 402, clearly shows absence of front water jacket in these engines; compare with parts shown in Fig. 23.

Plate made by R. R. Weeks

Model T Tips and Suggestions

TOWING

NEVER tow a Model T Ford except in an emergency! Because of the unit power plant design which depends on the rapid rotation of the engine flywheel for lubrication of all parts, including clutch and throw-out bearing, towing the Model T in "neutral" position results in damage to clutch parts and transmission bands for want of lubrication.

If the car *must* be towed, then do so with the clutch engaged in high speed position and with the spark plugs removed so the engine may turn over freely. Keep towing speed below twenty-five miles per hour. In such dire cases where a tow truck must be engaged, then lift the rear wheels, lock the steering and tow the Model T backwards on the front wheels.

An alternative method, requiring considerable effort, is to remove the universal joint before towing.

STORING

When storing a Model T, even if only overnight, the high speed clutch should be engaged. This forces the hot oil from between the plates of the multiple-disc clutch, thereby reducing transmission drag on the engine when cranking for starting (in neutral, of course) later. This is particularly true in cold weather.

STARTING

Always unpredictable, Model T sometimes fails to RESPOND to the usual methods of starting even when interspersed with the usually effective invectives, maledictions, imprecations, and profanations. In such case, when even the deoiled clutch fails to help, there is yet a way to coax life into old Model T. Jack up one rear wheel, chock the others fore and aft, engage the high speed clutch, set the spark and gas, then spin the crank. This by-passes the metaphysical transmission and allows the rear wheel to act as a flywheel connected directly to the engine. This method rarely fails.

Sometimes it does, though. Then, if there is any glimmer of spark at all, a shot of ether (sulfuric, not petroleum) from a medicine dropper into the intake manifold or the carburetor of Model T will bring forth a tumultuous roar of explosions from the engine. After a little of this, even the most recalcitrant of Model T Fords will catch on and run without further hypodermics.

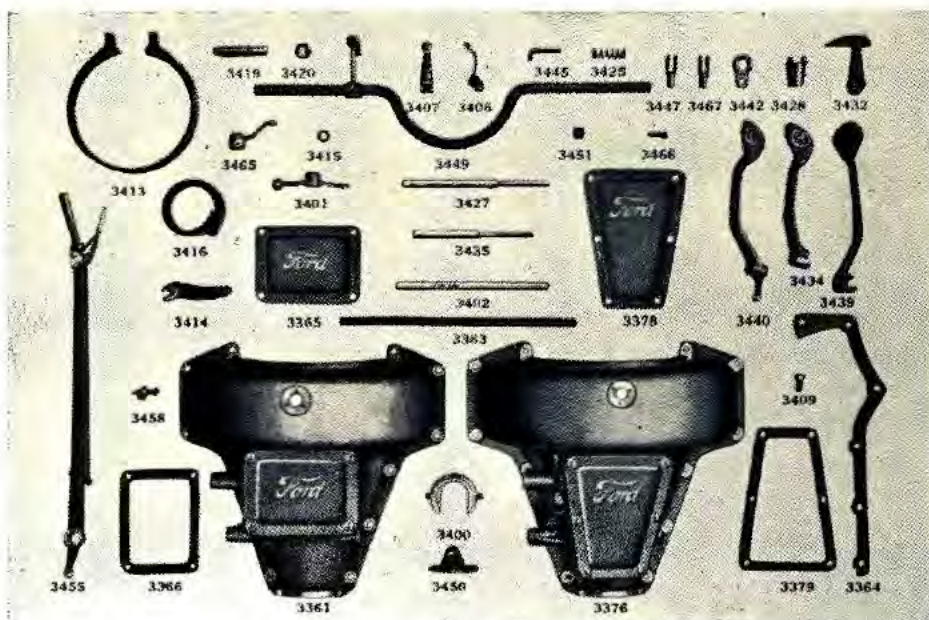


Fig. 22

TRANSMISSION PARTS (1913 catalog)

Part 3361 was the 1909-10 transmission cover with small door for adjusting bands (part 3413); part 3376 was the cover for 1911-18. All were aluminum until 1917 when changed to cast iron. In 1919 a port was added to accept a starting motor. Note the letters on pedals, prevalent until 1915. Ford script did not appear on all transmission doors (part 3378).

Plate made by R. R. Weeks

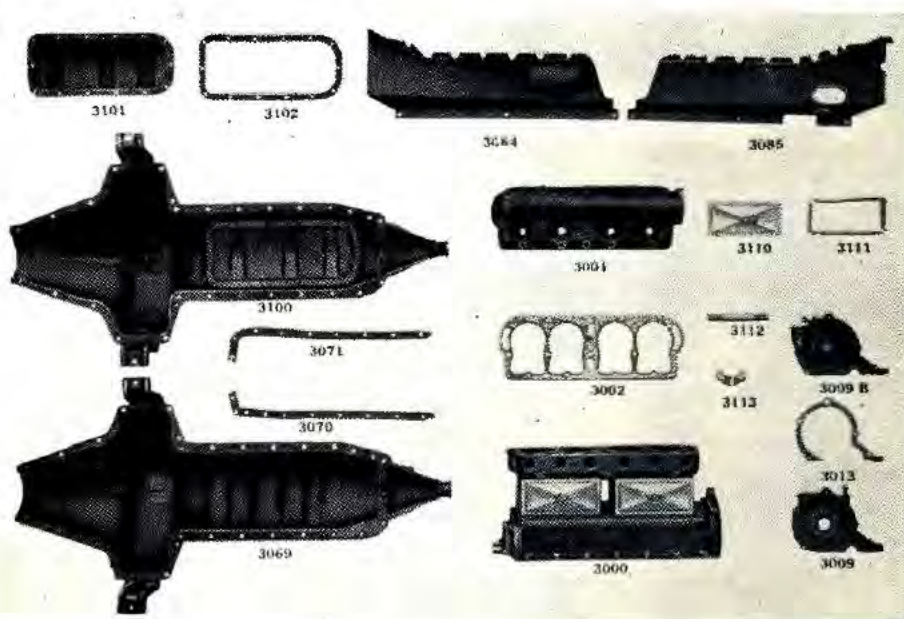


Fig. 23

(1913 catalog)

The engine block, part 3000, was altered in 1911 to provide enclosed valve chambers; compare with part 400A, Fig. 21. The one-piece oil pan, part 3069, was abandoned in 1911 in favor of one (part 3100) with a door for adjusting the connecting rods without removing the entire engine from car. Compare 1909-11 timing gear cover (3009) with the late 1912-19 cover (3009B), and with those shown in Figs. 21 and 18.

Plate made by R. R. Weeks

Never "race" a cold Model T engine—pistons will break!

OVERHEATING

The "antique" Fords will tend to overheat if driven too fast for any distance because the little brass radiators were somewhat undersized. Model T can actually run so hot that shutting off the ignition will not stop the engine—it continues to run after the fashion of a diesel! This is disastrous because if the bearings do not burn out, the magneto magnets will surely become demagnetized and an engine overhaul will be necessary.

LUBRICATION

Straight mineral oils (without additives) of SAE 10 for winter and SAE 20 grade for summer in well adjusted engines are recommended if this oil is drained and changed frequently. But be-

cause of the somewhat limited usage given most antique cars, the "heavy duty" or detergent oils will prove valuable in preventing sludging, valve and ring sticking, and rusting of internal surfaces because of condensed water and corrosive products of combustion.

Do not use any product in the crankcase which contains graphite for this substance will short out the magneto. It is best to use the highest quality oil offered by any of the *major* oil refineries; these companies are highly competitive and each offers quality oils having the best of time-proven additives in them; don't experiment with additives yourself. The detergent oils do not have any deleterious effect on the insulation of the Model T magneto coils, but will keep the engine clean and rust-free.

HILL CLIMBING

Most Model T Fords develop highest

engine torque at about twenty-three miles per hour (as shown in Figure 22) consequently, when approaching a long hill, it is best to gain some momentum first, then allow the car to settle down to this speed for a good, steady pull up the hill. Trying to force the car faster will only cause overheating and a tendency to "choke" the engine.

While capable of attaining speeds up to fifty-five miles per hour on the level, Model T will perform best and last longer at a cruising speed of about thirty-five miles per hour. This speed represents approximately the maximum horsepower while retaining a good degree of torque and maintaining a conservative engine speed of about 1400 revolutions per minute (See Fig. 20). Higher speeds only strain the engine.

We know that Model T is well-nigh indestructible; but there *are* limits.

APPENDIX

PRODUCTION DATA

While the Ford Motor Company was organized June 16, 1903, the following production figures refer to the Ford *fiscal* year, commencing August first:

1903	—	1708	1916	—	533921
1905	—	1695	1917	—	751287
1906	—	1599	1918	—	642750
1907	—	8423	1919	—	521600
1908	—	6398	1920	—	945850
1909	—	10607	1921	—	989785
1910	—	18664	1922	—	1216792
1911	—	34528	1923	—	2055309
1912	—	78440	1924	—	1991518
1913	—	168220	1925	—	1966099
1914	—	248307	1926	—	1629184
1915	—	308213	1927	—	380741

CASTING DATES

Dates appearing on cylinder block castings (as for example 7-15-15) only indicate when the block was cast; this date will usually be several months earlier than the engine number because the castings were allowed to "age" to relieve internal stresses before machining.

ENGINE NUMBERS

Early Model T cars had a body number plate to which the Ford Motor Company attached no significance; the engine number was always considered to be the car serial number also. On some Ford engine numbers a letter was prefixed; the letter "C" indicated Canadian manufacture and

the letter "B" indicated manufacture at the factory in Detroit (rather than at Highland Park). Fords numbered from B-1 to B 12247 were built between October 1, 1912, and September 30, 1913.

Reference to the appended list of motor serial numbers can establish the exact month and year of manufacture for any Model T Ford of known engine number, but will not necessarily indicate the correct "style year" of the car. For example, it is possible for a 1915 Sedan to have the number 590000 (November 1914) while a 1914 Touring could have the number 680000 (March 1915)! Even without such overlapping, the style year rarely coincided with the calendar year, or even with the Ford fiscal year.

Model T Serial Numbers

Date	Motor Numbers	Cars Built
1908		
Oct. 1-31	1 to	11
Nov. 1-30	12 to	89
Dec. 1-31	192 to	207
1909		
Jan. 1-31	310 to	336
Feb. 1-28	647 to	405
Mar. 1-31	1053 to	972
Apr. 1-30	2026 to	667
May 1-31	2692 to	1344
June 1-30	4037 to	1943

Date	Motor Numbers	Cars Built
July 1-31	5981 to	8107
Aug. 1-31	8108 to	9840
Sept. 1-30	9841 to	11148
Oct. 1-31	11149 to	12405
Nov. 1-30	12406 to	13132
Dec. 1-31	13133 to	14161

1910		
Jan. 1-31	14162 to	15500
Feb. 1-28	15501 to	16600
Mar. 1-31	16601 to	19700
Apr. 1-30	19701 to	23100
May 1-31	23101 to	26500
June 1-30	26501 to	29500
July 1-31	29501 to	30200
Aug. 1-31	30201 to	31000
Sept. 1-30	31001 to	31900
Oct. 1-31	31901 to	32500
Nov. 1-30	32501 to	33700
Dec. 1-31	33701 to	34900

1911		
Jan. 1-31	34901 to	37000
Feb. 1-28	37001 to	40000
Mar. 1-31	40001 to	45000
Apr. 1-30	45001 to	50800
May 1-31	50801 to	57200
June 1-30	57201 to	60500
July 1-31	60501 to	62100
Aug. 1-31	62101 to	66700
Sept. 1-30	66701 to	70500
Oct. 1-31	70501 to	83100
Nov. 1-30	83101 to	86300
Dec. 1-31	86301 to	88900

1912		
Jan. 1-31	88901 to	92000
Feb. 1-29	92001 to	95900
Mar. 1-31	95901 to	103800
Apr. 1-30	103801 to	112900
May 1-31	112901 to	123800
June 1-30	123801 to	132000
July 1-31	132001 to	139700
Aug. 1-31	139701 to	144500
Sept. 1-30	144501 to	147300
Oct. 1-31	147301 to	156300
Nov. 1-30	156301 to	161200
Dec. 1-31	161201 to	171300

Date	Motor Numbers	Cars Built
1913		
Jan. 1-31	171301 to	186900 15599
Feb. 1-28	186901 to	203300 16399
Mar. 1-31	203301 to	218900 15599
Apr. 1-30	218901 to	242300 23399
May 1-31	242301 to	260000 17699
June 1-30	260001 to	282799 22699
July 1-31	282701 to	298200 5499
Aug. 1-31	298201 to	306800 8599
Sept. 1-30	306801 to	314800 7999
Oct. 1-31	314801 to	324900 10099
Nov. 1-30	324901 to	344900 19999
Dec. 1-31	344901 to	370400 25499

1914		
Jan. 1-31	370401 to	395500 25099
Feb. 1-28	395501 to	419500 23999
Mar. 1-31	419501 to	447600 28099
Apr. 1-30	447601 to	473200 25599
May 1-31	473201 to	490920 17719
June 1-30	490921 to	507102 16181
July 1-31	507103 to	517800 10697
Aug. 1-31	517801 to	538200 20399
Sept. 1-30	538201 to	558300 20099
Oct. 1-31	558301 to	583400 25099
Nov. 1-30	583400 to	599100 15699
Dec. 1-31	599101 to	611100 2099

1915		
Jan. 1-31	611101 to	614200 3099
Feb. 1-28	614201 to	630500 16299
Mar. 1-31	630501 to	682400 51899
Apr. 1-30	682401 to	723500 41099
May 1-31	723501 to	805500 81999
June 1-30	805501 to	839700 34199
July 1-31	839701 to	855500 15799
Aug. 1-31	855501 to	881000 2599
Sept. 1-30	881001 to	913000 31999
Oct. 1-31	913001 to	949000 35999
Nov. 1-30	949001 to	985400 35999
Dec. 1-31	985401 to	1029200 43799

1916		
Jan. 1-31	1029201 to	1071800 42599
Feb. 1-29	1071801 to	1119000 47199
Mar. 1-31	1119001 to	1167900 48899
Apr. 1-30	1167901 to	1219400 51499
May 1-31	1219401 to	1272000 52599
June 1-30	1272001 to	1326900 54899
July 1-31	1326901 to	1362213 35312
Aug. 1-31	1362214 to	1400900 38686
Sept. 1-30	1400901 to	1452200 51299
Oct. 1-31	1452201 to	1510500 58299
Nov. 1-30	1510501 to	1570700 60199
Dec. 1-31	1570701 to	1614600 43899

1917		
Jan. 1-31	1614601 to	1680000 65399
Feb. 1-28	1680001 to	1739900 49899
Mar. 1-31	1739901 to	1812000 72099

Date	Motor Numbers	Cars Built
1917		
Apr. 1-30	1812001 to	1888000 75999
May 1-31	1888001 to	1968629 80628
June 1-30	1968630 to	2044100 75470
July 1-31	2044101 to	2113500 69399
Aug. 1-31	2113501 to	2162800 49299
Sept. 1-30	2162801 to	2231000 68199
Oct. 1-31	2231001 to	2310400 79399
Nov. 1-30	2310401 to	2383900 73499
Dec. 1-31	2383901 to	2449100 65199

1918		
Jan. 1-31	2449101 to	2503200 54099
Feb. 1-28	2503201 to	2558200 54999
Mar. 1-31	2558201 to	2611400 53199
Apr. 1-30	2611401 to	2657500 46099
May 1-31	2657501 to	2700800 43299
June 1-30	2700801 to	2735700 34899
July 1-31	2735701 to	2756251 55450
Aug. 1-31	2756252 to	2774600 18348
Sept. 1-30	2774601 to	2787800 13199
Oct. 1-31	2787801 to	2792300 4499
Nov. 1-30	2792301 to	2805100 12799
Dec. 1-31	2805101 to	2831400 26299

1919		
Jan. 1-31	2831401 to	2880170 48769
Feb. 1-28	2880171 to	2933000 52829
Mar. 1-31	2933001 to	2997100 64099
Apr. 1-30	2997101 to	3067700 70599
May 1-31	3067701 to	3140000 72299
June 1-30	3140001 to	3210800 70799
July 1-31	3210801 to	3277850 67049
Aug. 1-31	3277851 to	3346900 69049
Sept. 1-30	3346901 to	3429400 82499
Oct. 1-31	3429401 to	3515450 86029
Nov. 1-30	3515451 to	3588000 72569
Dec. 1-31	3588001 to	3659970 71969

1920		
Jan. 1-31	3659971 to	3743075 83104
Feb. 1-29	3743076 to	3817450 74354
Mar. 1-31	3817451 to	3910000 92569
Apr. 1-30	3910001 to	3969150 59149
May 1-31	3969151 to	4055280 86129
June 1-30	4055281 to	4141450 86169
July 1-31	4141451 to	4233350 91899
Aug. 1-31	4233351 to	4329900 96549
Sept. 1-30	4329901 to	4426385 96484
Oct. 1-31	4426386 to	4526540 100154
Nov. 1-30	4526541 to	4617925 91384
Dec. 1-31	4617926 to	4698420 80584

1921		
Jan. 1-31	None	
Feb. 1-28	4698421 to	4736431 38010
Mar. 1-31	4736432 to	4810010 73578
Apr. 1-30	4810011 to	4907500 97489
May 1-30	4907501 to	5008000 100499
June 1-30	5008001 to	5114530 106529
July 1-31	5114531 to	5223135 108604
Aug. 1-31	5223136 to	5337545 114409
Sept. 1-30	5337546 to	5447816 110270
Oct. 1-31	5447817 to	5529519 81702
Nov. 1-30	5529520 to	5602301 72781
Dec. 1-31	5602302 to	5638071 35769

1922		
Jan. 1-31	5638072 to	5683808 45736
Feb. 1-28	5683809 to	5737278 52469
Mar. 1-31	5737279 to	5812608 75309
Apr. 1-30	5812609 to	5922968 110359
May 1-31	5922969 to	6058671 135702
June 1-30	6058672 to	6199796 141124
July 1-31	6199797 to	6334196 134399
Aug. 1-31	6334197 to	6473196 138999
Sept. 1-30	6473197 to	6582724 109527
Oct. 1-31	6582725 to	6713881 131156
Nov. 1-30	6713882 to	6953071 239189

Date	Motor Numbers	Cars Built
1923		
Jan. 1-31	6953072 to	7084225 131153
Feb. 1-28	7084226 to	7217971 133745
Mar. 1-31	7217972 to	7386112 168140
Apr. 1-30	7386113 to	7564111 177998
May 1-31	7564112 to	7738372 174260
June 1-30	7738373 to	7927374 189001
July 1-31	7927375 to	8122674 195299
Aug. 1-31	8122675 to	8311581 188906
Sept. 1-30	8311582 to	8477681 166099
Oct. 1-31	8477682 to	8664281 186599
Nov. 1-30	8664282 to	8843065 178783
Dec. 1-31	8843066 to	9008381 165315

1924		
Jan. 1-31	9008382 to	9232671 224289
Feb. 1-29	9232672 to	9427721 195049
Mar. 1-31	9427722 to	9622521 194799
Apr. 1-30	9622522 to	9814521 191999
May 1-31	9814522 to	9984772 170249
June 1-30	9984772 to	10126471 141699
July 1-31	10126472 to	10266471 139999
Aug. 1-31	10266472 to	10404821 138349
Sept. 1-30	10404822 to	10560821 155999
Oct. 1-31	10560822 to	10734504 172683
Nov. 1-30	10734505 to	10886259 151754
Dec. 1-31	10886260 to	10999901 113641

1925		
Jan. 1-31	10999902 to	11135308 135406
Feb. 1-28	11135309 to	11302019 166710
Mar. 1-31	11302020 to	11477655 175635
Apr. 1-30	11477656 to	11688647 210991
May 1-31	11688648 to	11869207 180559
June 1-30	11869208 to	12052486 183278
July 1-31	12052487 to	12222528 160041
Aug. 1-31	12222529 to	12390760 68231
Sept. 1-30	12390761 to	12599496 108735
Oct. 1-31	12599497 to	12621501 222004
Nov. 1-30	12621502 to	12823126 201624
Dec. 1-31	12823127 to	12990055 166928

1926		
Jan. 1-31	12990056 to	13138675 148619
Feb. 1-28	13138676 to	13286289 147613
Mar. 1-31	13286290 to	13454890 168600
Apr. 1-30	13454891 to	13619705 164814
May 1-31	13619706 to	13769814 150108
June 1-30	13769815 to	13912754 142939
July 1-31	13912755 to	14049029 136274
Aug. 1-31	14049030 to	14194489 145459
Sept. 1-30	14194490 to	14331152 136662
Oct. 1-31	14331153 to	14472253 141100
Nov. 1-30	14472254 to	14577135 104881
Dec. 1-31	14577136 to	14619254 42118

1927		
Jan. 1-31	14619255 to	14623502 4247
Feb. 1-28	14623503 to	14762945 139442
Mar. 1-31	14762946 to	14851445 88499
Apr. 1-30	14851446 to	14927495 76049
May 1-31	14927496 to	15007033 72504

Here ended the production of Model T.



Windshield wiper won't get out of whack.



Planned to sell for \$10 to \$1,000—depending on supply-if-demand.

CHANGES THROUGH THE YEARS IN THE MODEL T

- 1909 -- The first 800 Model T's were brought out with two levers and two pedals, but this arrangement of levers and pedals was quickly superseded by a three-pedal, single-lever arrangement. We have one of these in the Museum. The company then offered a kit for \$15.00 by which the earlier cars could be converted to three-pedal control. Since the original parts had to be returned to the factory, the two-lever Model T has become so rare that only one genuine example is known to exist.
- The first 2500 Model T's had centrifugal water pumps; then the thermosiphon system was introduced, and the water pump was eliminated. These first 2500 cars also had wings on the Ford script embossed on the front of the brass radiator. Early cars had linoleum-covered wooden running boards; later models had steel running boards. The steering wheel was only 13 inches in diameter.
- 1910 -- The metal running boards were stamped with the name "Ford" in script.
- 1911 -- Bodies had been built of wood until this year, when the Touring Car was made with a wooden frame covered by sheet steel. The steering-wheel diameter was increased to 15 inches.
- 1912 -- Separate front-door units were made available as extras that could be used in 1911 and 1912 Touring Cars. This year marked the end of the lavish use of brass and leather. Windshield mountings, lamps, horn, and steering-wheel spokes were hereafter made of black-painted steel.
- 1913 -- Front doors were first introduced on the Touring Cars, but the "door" on the left side was a dummy embossed in the body metal; it did not open. Choice of color disappeared in 1913 and was not offered again until 1926; 1913 to 1925 models were painted black at the factory. During 1913, the wooden coil box on the dashboard began to be replaced by steel boxes stamped "Ford" in script.
- 1914 -- The beginning of the "Any color so long as it's black" policy. This is also the last year of acetylene lighting, the cherry-wood dashboard, four straight-topped fenders, and what is known as the "antique" look.
- 1915 -- The straight-topped rear fenders were replaced by curved ones; the bulb horn was replaced by a hand-operated Klaxon; and acetylene headlights were replaced by electric lights which drew their power from the magneto. A curved steel cowl replaced the varnished cherry-wood panel that divided the body from the hood.
- 1917 -- The year of the big change. The familiar brass radiator disappeared forever to be replaced by a steel shell painted black. All fenders were curved and crowned, while the curved metal cowl between the hood and the body was still further smoothed out. Hub and radiator caps were nickel plated. An electric horn powered by the magneto replaced the hand Klaxon.
- 1919 -- An electric self-starter and demountable rims were offered as optional equipment on the closed cars only.
- 1920 -- Composition steering-wheel rims replaced wood, and the diameter was increased to 16 inches. Self-starters and demountable rims could be had as extras on all body types.
- 1923 -- All bodies were lowered, and the Fordor sedan was introduced.
- 1925 -- Balloon tires became available.

1926 -- Radical changes were made this year. A nickel-plated radiator shell replaced the black-painted steel one; the gas tank on all models except the Fordor was moved forward into the cowl, where it could be filled through the ventilator -- a feature that was kept on the Model A. The coil box was taken from the dashboard and mounted under the hood. The steering wheel diameter was enlarged to 17 inches, and the steering ratio increased to 5 to 1. But the greatest change of all was the reintroduction of color. Closed cars could be had in blue or gray or brown. Wire wheels were offered as optional equipment.

1927 -- No changes. Production ceased on May 27. The last American engine number was 15,176,888. Production ceased in England in December, 1927, when the last right-hand Model T made there was numbered 302,000. The last Australian Model T was numbered 24,301.

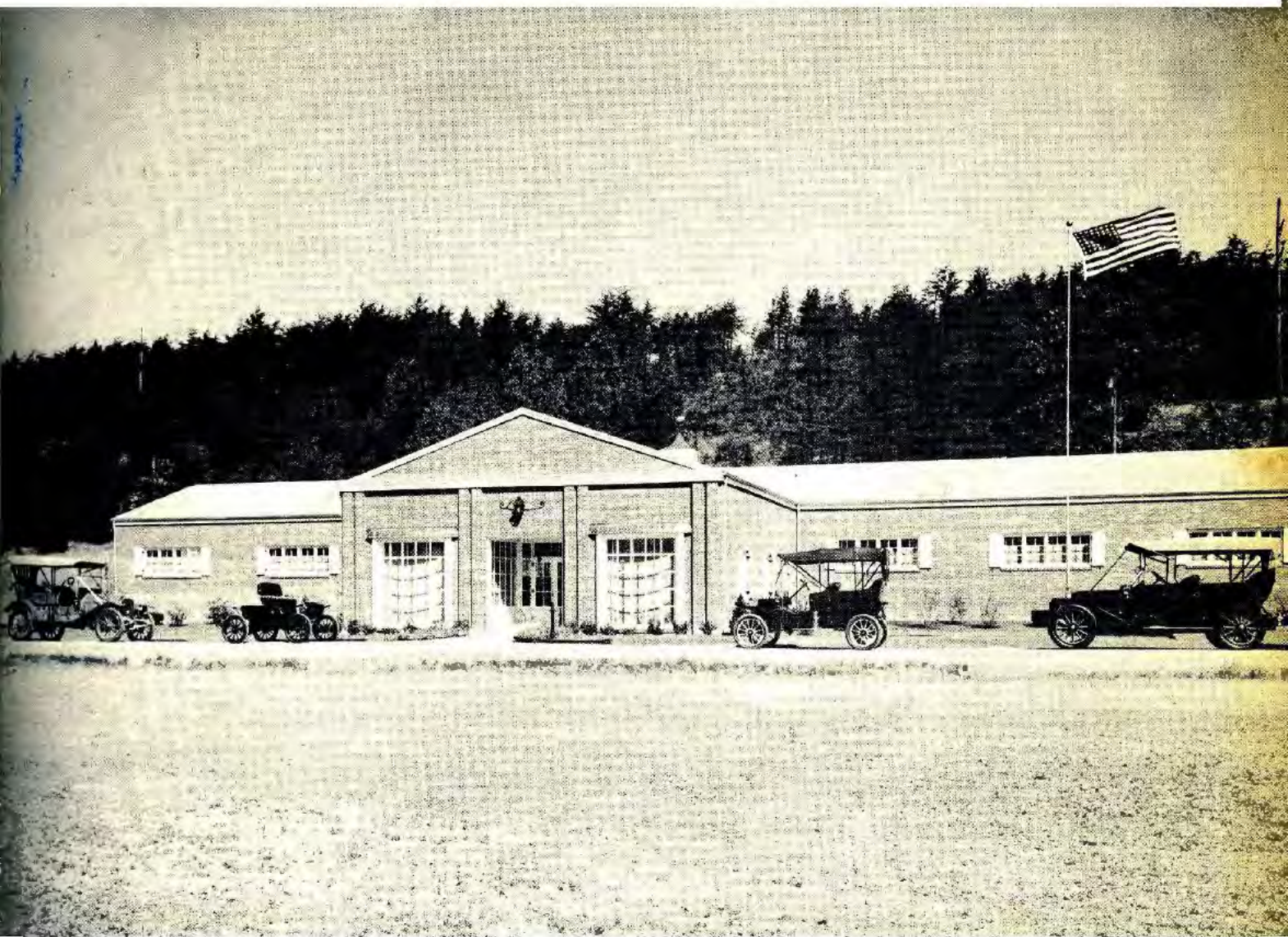
PRICES FOR THE MODEL T TOURING CAR FROM 1908 TO 1927

October 1, 1908	\$850	
October 1, 1909	950	(Including top, windshield, speedometer, headlamps, and acetylene generator -- \$135 worth of extras.)
October 1, 1910	780	
October 1, 1911	690	
October 1, 1912	600	
August 1, 1913	550	
August 1, 1914	490	
August 1, 1915	440	
August 1, 1916	360	
August 1, 1917	360	
February 21, 1918	450	
August 16, 1918	525	
March 3, 1920	575	Demountable rims \$25 Starter \$75
September 22, 1920	440	Demountable rims \$25 Starter \$70
June 7, 1921	415	
September 2, 1921	355	
January 16, 1922	348	
October 2, 1923	295	
	315	With demountable rims
	360	With starter
	380	With starter and demountable rims
December 2, 1924	290	(The all-time lowest price)
	310	With demountable rims
	355	With starter
	375	With starter and demountable rims
June 19, 1926	380	Including starter and balloon tires

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