

BUICK 1914

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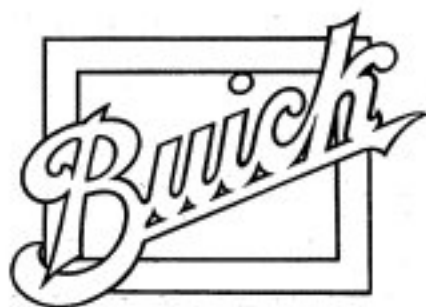
ADVANCE
SPECIFICATIONS

Buick Motor Cars

for

1914

FOURS AND SIXES



BUICK MOTOR CO.

FLINT, MICH.

The Buick Creed

A BUICK automobile must be so built that it will, at all times and under all circumstances, give the owner uninterrupted use of his investment. Every BUICK owner is entitled to, and will receive, prompt and efficient service—the kind that will insure him the motoring pleasure he expects.

BUICK reputation, so pre-eminently firm and fair, was not won by chance, but is due to the policy established with the production of the first BUICK car and so consistently adhered to ever since—that of giving the owner the maximum of service for the minimum of cost.

No matter what its price, a BUICK car must and will give the maximum of that service for which it was intended, and must bear its proportion of the responsibility of maintaining that high prestige which BUICK cars have attained.

THE 1914 BUICK

No line of Motor Cars at any price can show more value than will be found in the Buick for 1914.

Every time tried feature is retained and such new ones as have demonstrated their worth have been added.

The Famous Overhead Valve Motor will continue to demonstrate itself as the greatest power producer ever used in an automobile.

The same economy of fuel consumption, same durability and consistent service coupled with the old recognized go-ability insures the same reliable Buicks.

The Delco system for starting, lighting and ignition is recognized as the very best apparatus of its kind and its installation in every model proves our contention that nothing is too good for the Buick.

All equipment will be in keeping with that standard and permits the assertion that more than ever will the past leadership of Buick cars be maintained and strengthened for 1914.

The Buick family for 1914 will consist of the following models:

B24 and B25—The wonderful little motor that has been such a consistent performer for years is still used in these models, and every detail that has become such a part of it remains unchanged. Small refinements have been made and such additions as might enhance its efficiency. The Roadster (B24) is a beautiful job with deep roomy seat, lots of leg room and a general air of comfort about it. The Touring Car (B 25) is large and roomy, with wide seats, beautifully trimmed and refined in every single line and detail.

Models B36, B37 and B38.

These models retain all of the valuable features of their predecessors and combine with them such new ones which have been thoroughly demonstrated by engineering tests as being in keeping with the necessities of a general purpose all around reliable car. No car at any price can give better service and no car will produce for its owner more miles at less cost. The Roadster (B36) a car of rare beauty, rich lines and handsome appointments, carries everything that goes toward making it an ideal roadster.

The Touring car (B37) has a beautiful body built on the latest lines with deep gracefully curved cowl and wide deep seats. Nothing has been left off that is required to make it the Buick's Best Buy. The Coupe (B38) combines all the characteristics of its mates with the luxury of a coupe body complete in its every detail, trimmed luxuriously and finished in the best possible manner.

The New Buick Six.

B54 and B55—Something new in the Buick family but as it is built upon those Buick principles of proven merit, which have been demonstrated by years of experience as being right, there can be no question as to its quality or performances. The same characteristics which made the Buick two and four cylinder cars leaders in their class will make for the six a position equally as enviable. The Six Roadster (B54) a big powerful car built on the most approved lines and especially for the owner who has a desire for exclusiveness in design and great possibilities for speed and power. The Six Touring Car (B55) carries with it the very latest and most approved ideas in body construction and comfortable equipment, extra deep cushions and wide seats, liberal tonneau space, ample leg room, convenient driving position, and in fact everything an up-to-the-minute six cylinder car should have.

Buick Overhead Valve Motor

Develops More Speed and More Power.

IT IS A WELL KNOWN FACT that the Buick overhead valve motor will develop 15 to 20 per cent more power than motors of other types, all things being equal, but the reason may not perhaps, be generally understood. The principle reasons for its higher efficiency as a power producer are therefore briefly given.

An internal combustion motor is in reality a heat engine, and the greater the conservation of heat units, the more power will be produced. Obviously the loss of such units means loss of power. Therefore, were it possible to maintain heat in metal cylinders to extremely high temperature, the more power it would produce. It is not practical, however, to operate any mechanical part, the surface of which is at a high temperature, especially a motor cylinder, so a cooling device must be provided. This in most cases is done by surrounding the walls with a jacket of water the office of which is to keep the cylinders cool, but in such cooling many of the heat units are destroyed and wasted.

In the overhead valve motor, the cylinders are without pockets, and resultantly present the least surface to the cooling agent and lose, therefore, fewer heat units. On the T or L type, the combustion chamber is larger and has one or two pockets, or chambers, which must be as perfectly water jacketed as the cylinder wall. This presents greater cooling surface which is continually giving up or losing many heat units which in the straight cylinder of the overhead valve type are retained. This means greater power development in the same size cylinder.

GAS EXPANSION OR EXPLOSION.

All motors must depend for their power upon the expansion of the gas in the cylinders. This expansion is due to the firing or burning of the gas under compression, and the rapidity with which the gas burns determines the rapidity with which the pressure on

the piston head is developed. It is this pressure on the piston that produces the power.

The distance from the point of the spark plug to the farthest point in the combustion chamber is less than half that in a T head motor and some of the manufacturers of this type have taken to using two spark plugs at the extreme ends of their combustion chamber and are thus able to secure about the same results we obtain with our overhead and one plug.

In the L type, the spread of flame through the gas ordinarily must pass from the point of fire, or spark, across the cylinder and around into the chamber over the exhaust valve. This is necessarily a slower process of burning the gases and there is a corresponding loss of power development.

Therefore, as the gas expansion depends upon the rapidity of flame propagation, or as commonly called the explosion, it can be seen that the overhead valve motor possesses an important advantage over both other types. Not only does its explosion become more positive, but it cleans or scavenges its cylinders of burned gas more readily after the charge has been fired. This is due to the fact that the exhaust stroke forces the burned gas straight out through the exhaust valve at the top of the cylinder and not from the cylinder to a pocket and then out. On the pocket type, a certain part of the old gas remains after the exhaust valve closes and is thus mixed with the fresh gas, reducing the charge and causing a deterioration in its quality. No such condition is possible on the overhead valve where the fresh charge has a perfectly clean cylinder and fills same to its fullest capacity with clean gas. This naturally produces greater expansion or piston pressure when fired.

DEPOSITS OF CARBON.

The absence of pockets or chambers in the straight walled cylinders of the overhead type makes possible the more accurate machining in their manufacture and insures a more symmetrical chamber for combustion. As this chamber is merely the upper part of the cylinder it allows this full machining, whereas the pockets on other types which from their very nature make it almost impossible to reach with any tool and, therefore, cannot be machined or smooth-

ed out. From necessity there must be certain places in these pockets where there are small irregularities and where the wall is rough.

The smoother the surface, the less is the tendency to carbonization, and it naturally follows that these rough places provide a greater opportunity for pre-ignition due to the overheating of any deposits or projections which may exist, especially when the motor is under heavy duty, or where full throttle or high speed is required.

The fully machined, smooth, straight cylinder of the overhead means an absolutely consistent motor, as all cylinder surfaces are exactly alike, and each cylinder will handle its charge in exactly the same way, under all driving conditions. No irregularity or roughness can exist in any part of it.

The conclusion that must, therefore, be reached after a careful study of the shape of the combustion chambers of the three types of motors is that the overhead is the most reliable and most powerful motor, granting of course that the elements of carburetion and ignition are equal.

ECONOMY OF FUEL CONSUMPTION.

We have already seen that the purer the charge the more quickly it burns. This explains the fuel economy of the Buick motor and its ability to handle lower grade fuel. A charge of inferior fuel drawn into a cylinder mixed with a quantity of already burned gas further reduces its burning value and its power developing possibilities. If the charge is quickly fired and the dead gases are completely exhausted from the cylinders, the power production is naturally much greater.

The overhead permits of lower compression than is possible with other types. To illustrate, take the same charge and cylinders of the same dimensions. On the T head, the gas must fill completely not only the head of the cylinders but both valve chambers, and the piston necessarily must travel closer to the top of the cylinder to compress the charge, usually on an ordinary size motor within about $\frac{3}{8}$ of an inch. On an L head, there being only one chamber to be filled, the piston does not need to go as high, probably about $1\frac{1}{8}$ inch from the top. On the overhead, having

no extra pockets or chambers to fill, the piston does not have to travel as far and stops compression $1\frac{1}{2}$ inches from the top. This, together with the difference in the rapidity in the spread of flame after the firing previously mentioned, makes a difference in favor of the overhead of 20 per cent over the T, and 15 per cent over the L type in power production.

VALVE LOCATION IMPORTANT ADVANTAGE.

The location of the valve is another important item and here again the overhead valve demonstrates its superiority. The oil that lubricates the piston is usually splashed or forced into the cylinders and distributed by the piston along the walls of the cylinder. More or less of this oil works its way past the rings up into the combustion chamber. This surplus must be eliminated and it is therefore thrown out through the exhaust valve.

If it passes out as a vapor no harm is done and no opportunity to carbonize is given, but if it does not vaporize and goes out as oil it is sure to create carbon because when it reaches hot surfaces like the valve heads, etc., the volatile parts are quickly thrown off, leaving deposit or carbon.

The overhead valves being located in the head of the cylinder and farthest from the piston, are much less liable to become covered with oil and hence are less likely to carbonize. On other types, the valves are low in the combustion chamber, practically on a level with the piston when it is at the upper center, and any surplus oil is thus thrown into the pockets and covers the valves and valve seats.

The arrangement of valves on the Buick car permits a longer duration of opening on the intake, thus getting the charge of clean gas of the fullest capacity. By reason of the smooth pocketless combustion chamber this gas is rapidly burned or expanded at the power stroke, after which the burned gases are quickly and completely discharged through an unobstructed exhaust, thus making positive the highest possible motor efficiency and explains the reason for Buick superior power performances in every kind of condition and warrants the assertion that **WHEN BETTER CARS ARE BUILT BUICK WILL BUILD THEM.**

DETAILED SPECIFICATIONS

Models B24 and B25

BODY—Model B24: Two passenger Roadster type, with deep cowl. Extra width doors; 25 gallon gasoline supply,—Model B25: Touring type, five passenger, deep cowl, extra wide doors; good wide seats and ample leg room.

FRAME—Pressed steel, special construction, extra strong; three and one half inch drop.

SPRINGS—High quality spring steel, heat treated. Front, semi-elliptic; rear, three-quarter elliptic with scroll ends.

FRONT AXLE—Drop forged I-beam section with drop forged yokes, tie rod ends and steering spindles. Front wheels fitted with large cup and cone ball bearings.

REAR AXLE—Heavy construction, three-quarter floating type; heat treated axle shafts, running on special alloy steel roller bearings; 12 inch brake drums.

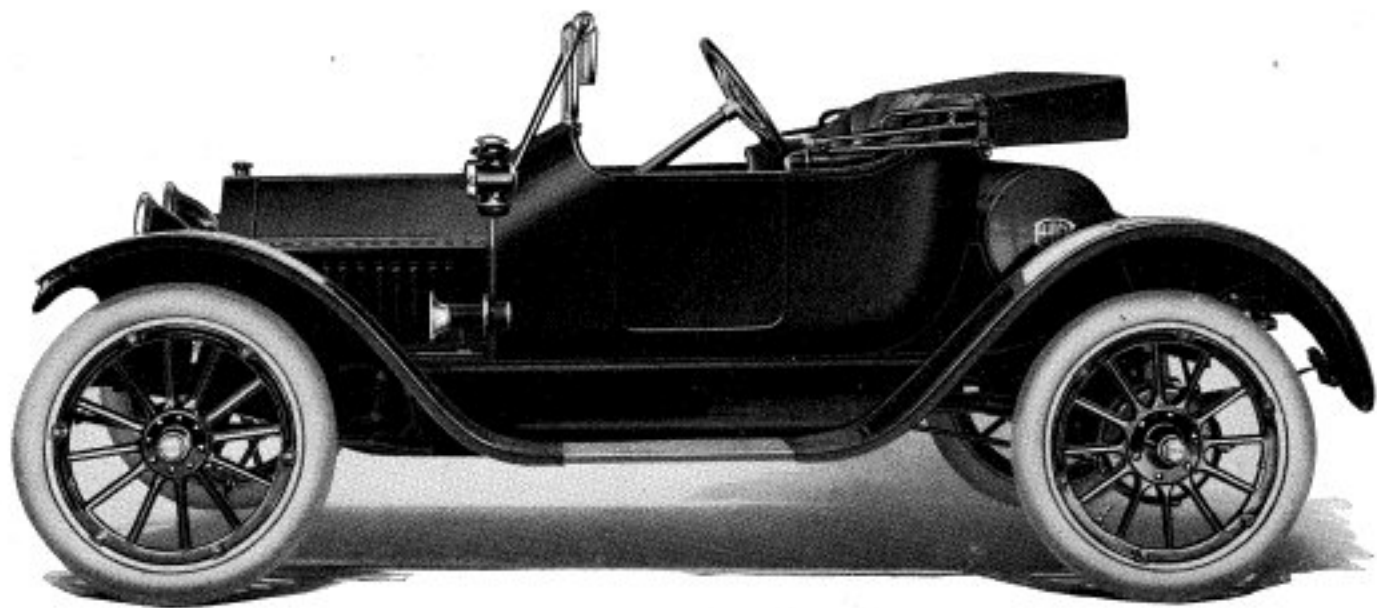
WHEELS—Wood, artillery type, with demountable rims; large hub flanges.

TIRES—Both Model B24 and B25, 32 x 3½ inches.

WHEEL BASE—105 inches.

TREAD—56 inches (60 inches special when desired.)

MOTOR—Four cylinder, four cycle, valve-in-the-head type. Cylinders semi-steel analysis, cast in pairs. Three bearing crank shaft with die cast bronze backed, babbitt lined bearings. Exceptionally large bearing surfaces. Valves and valve mechanism exceptionally quiet. Ball ended adjustable push rods working in felt oil retaining socketed rocker arms. Develops fully 28 horse power.



1914 Buick, Model B-24.

MODELS B24, B25

COOLING—Water circulated by gear driven centrifugal pump, bolted to crank case. Nickel plated brass inlet and outlet water manifolds. Radiator vertical tube and plate type with large water capacity. Pressed steel fan (attached to motor) belt driven from crank shaft pulley, running on plain bearings for quietness.

IGNITION—Jump spark; current supplied by Delco system which furnishes also current for electric lights and for the electric cranking device, reserve set of dry cells.

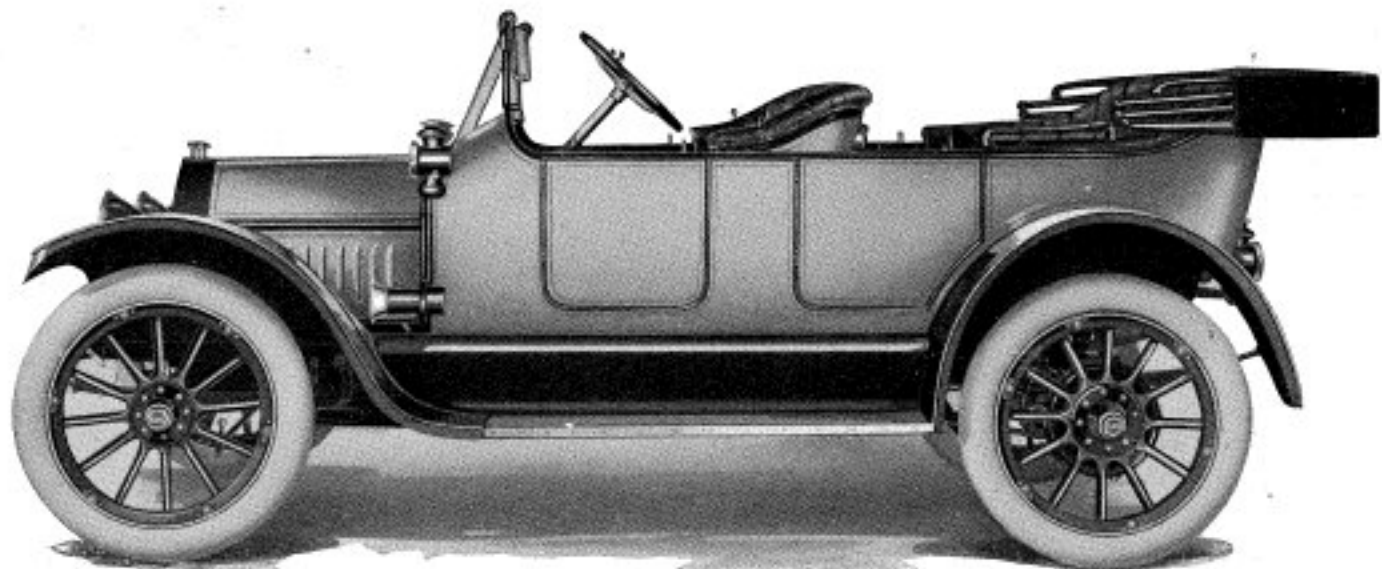
CARBURETOR—Automatic float feed of great efficiency, requiring the minimum of adjustment to meet weather changes.

LUBRICATION—Self contained, constant level splash system with distributing pipe enclosed within crank case; oil circulated by gear pump. Sight feed on dash.

CLUTCH—Large leather faced aluminum cone of special design; springs under leather to prevent harsh action.

TRANSMISSION—Sliding gear, selective type, three speeds forward and reverse. Heat treated nickel steel transmission gears. Clutch gear, heat treated and special steel, running on annular ball bearings; counter gear, nickel steel, heat treated running on bronze bearings.

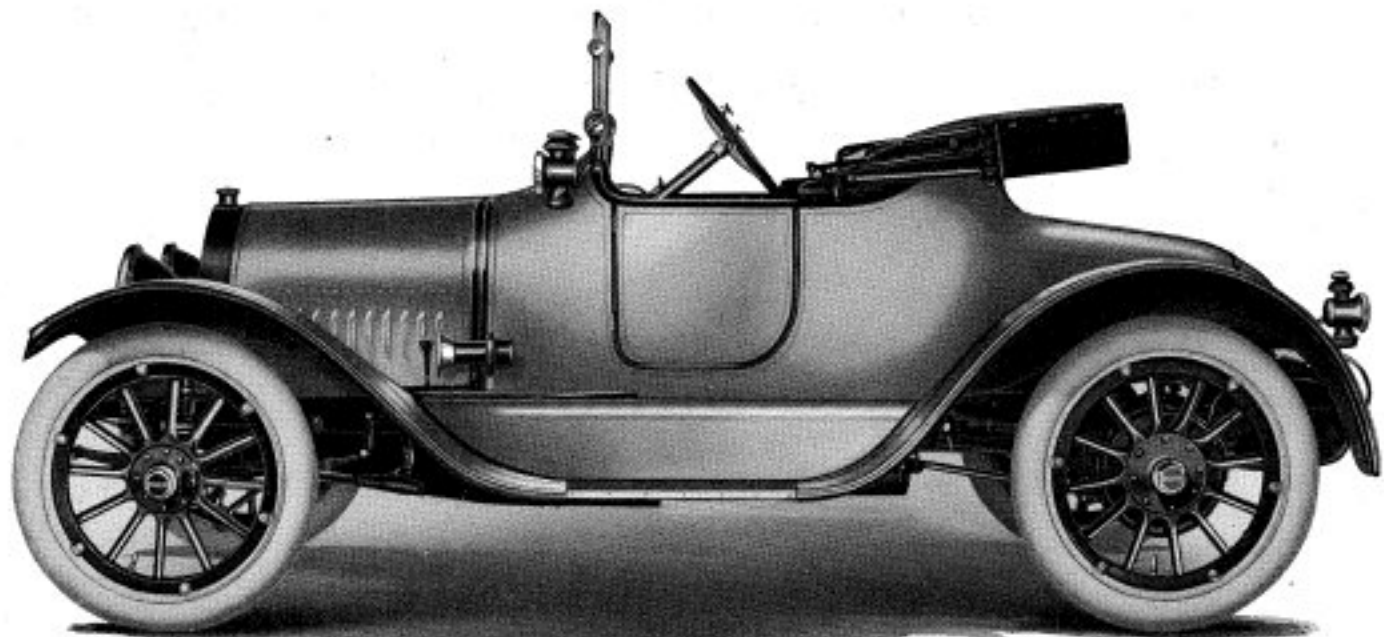
DRIVE—Direct to bevel gears in differential; propeller shaft running on special alloy steel roller bearings with ball thrust. Nickel steel, heat treated drive shafts, carried on special alloy steel roller bearings. Differential gears, steel drop forgings, case hardened; bevel pinion, case hardened nickel steel. Teeth, corrected form, insuring uniform strength in both pinion and bevel gears.



1914 Buick, Model B-25.

MODELS B24, B25

- BRAKES**—Emergency, internal expanding; service, external contracting. Both on rear wheel hubs. Very effective and positive, but entirely eliminating dragging and "grabbing"; anti-rattling.
- STEERING GEAR**—Located on left side; semi-irreversible; split nut and worm type; fully adjustable; ball thrust bearing. Seventeen inch steering wheel with inserted spider. **LEFT DRIVE.**
- CONTROL**—Friction-retained spark and throttle levers on top of steering wheel. Independent foot accelerator and muffler cut out. Pedals for service brake and clutch; levers for gear changes and emergency brake conveniently located in center of body. **CENTER CONTROL.**
- FINISH**—Round front, deep tilt cushions upholstered in black leather over genuine curled hair and deep coil springs. Dash, three ply veneer with deep handsome cowl. Running boards and front floor boards oil treated and linoleum covered with aluminum bindings. All bright parts nickel plated.
- COLOR**—Body B24, maroon or gray; B25, blue-black or gray; chassis and wheels blue-black.
- STARTER**—The Delco System electrical self cranker as an integral part of the car combined with the necessary equipment for lighting and for ignition.
- STANDARD EQUIPMENT**—Combination oil and electric side and tail lamps, electric head lights current supplied by Delco self generating system in connection with large storage battery, all lamps black, nickel trimmed, electric horn, robe rail, one extra demountable rim, tire irons in rear and complete set of tools; high grade mohair top and dust hood, new style rain vision wind shield with short stay rods. (No allowance will be made for any part of standard equipment, omitted by customer's order.)



1914 Buick, Model B-36.

DETAILED SPECIFICATIONS

Models B36, B37 and B38

BODY—Model B36; Two passenger closed back roadster type, undivided seat, extra wide doors, large air pressure gasoline supply tank at rear of frame. Handsomest roadster body built. Model B37: Very roomy, deep cowl, fore door touring type; five passenger; sides flush and smooth; extra wide rear seat.—Model B38: Handsome coupe of beautiful lines and luxurious trimming.

FRAME—Pressed steel, special construction, extra strong; four inch drop.

SPRINGS—First quality spring steel, heat treated. Front, semi-elliptic; rear, three quarter elliptic with scroll ends.

FRONT AXLE—Drop forged I-beam section, heat treated with deep forged yokes, tie rod ends and steering spindles. Front wheels fitted with extra large cup and cone ball bearings.

REAR AXLE—Three quarter floating type; nickel steel, heat treated, steel axle shafts, running on special high duty roller bearings, universal bearing on front end of third member takes all driving and torsional strains relieving universal joint.

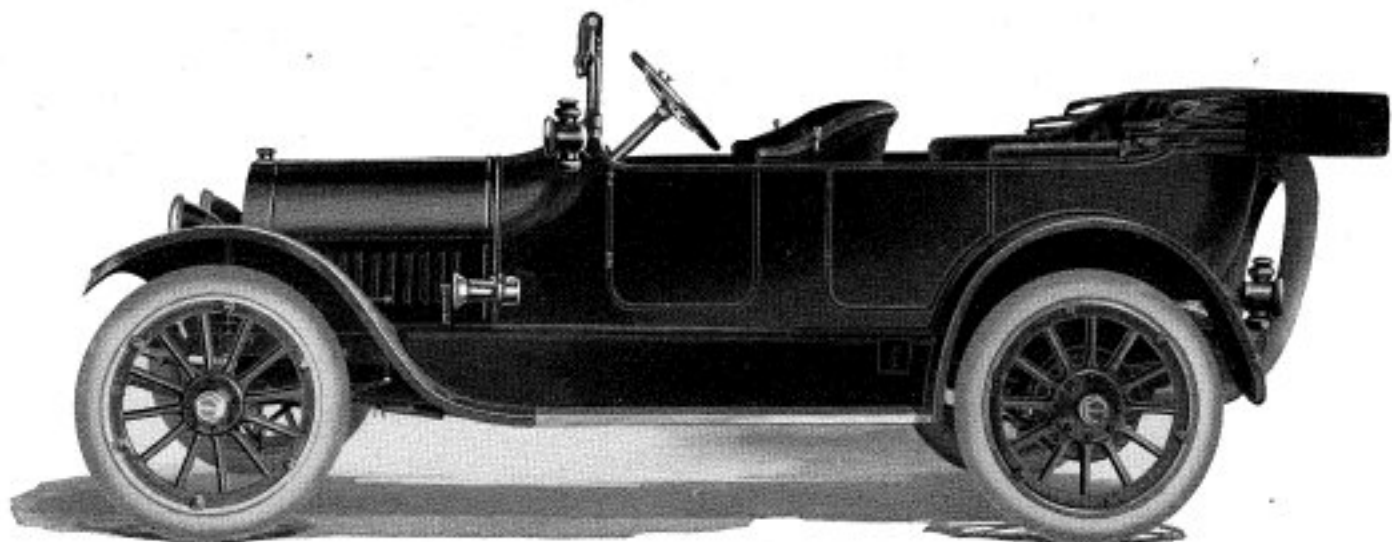
WHEELS—Wood, artillery type, with demountable rims. Extra large hub flanges.

TIRES—34x4 on all three models.

WHEEL BASE—112 inches.

TREAD—56 inches (60 inches special when desired.)

MOTOR—Unit power plant, four cylinder, four cycle, valve-in-the-head type. Cylinders semi-steel analysis, cast in pairs. Three bearing crank shaft with die cast bronzed backed, babbitt lined bear-



1914 Buick, Model B-37.

MODELS B36, B37, B38.

ings. Exceptionally large bearing surfaces. Develops fully 35 h. p. under brake test. Valve mechanism exceptionally quiet, with ball end adjustable push rods working in socketed felt oil retaining rocker arms.

COOLING—Water circulated by gear driven centrifugal pump. Nickel plated inlet and outlet water manifolds. Radiator, vertical tube and plate type with large water capacity. Pressed steel fan running on anti-friction bearings, belt driven from pump shaft pulley; center distances of fan pulleys easily adjusted to take up stretch in belt.

IGNITION—Jump spark; current supplied by Delco system which also furnishes current for electric lights and for the electric cranking device, reserve set of dry cells.

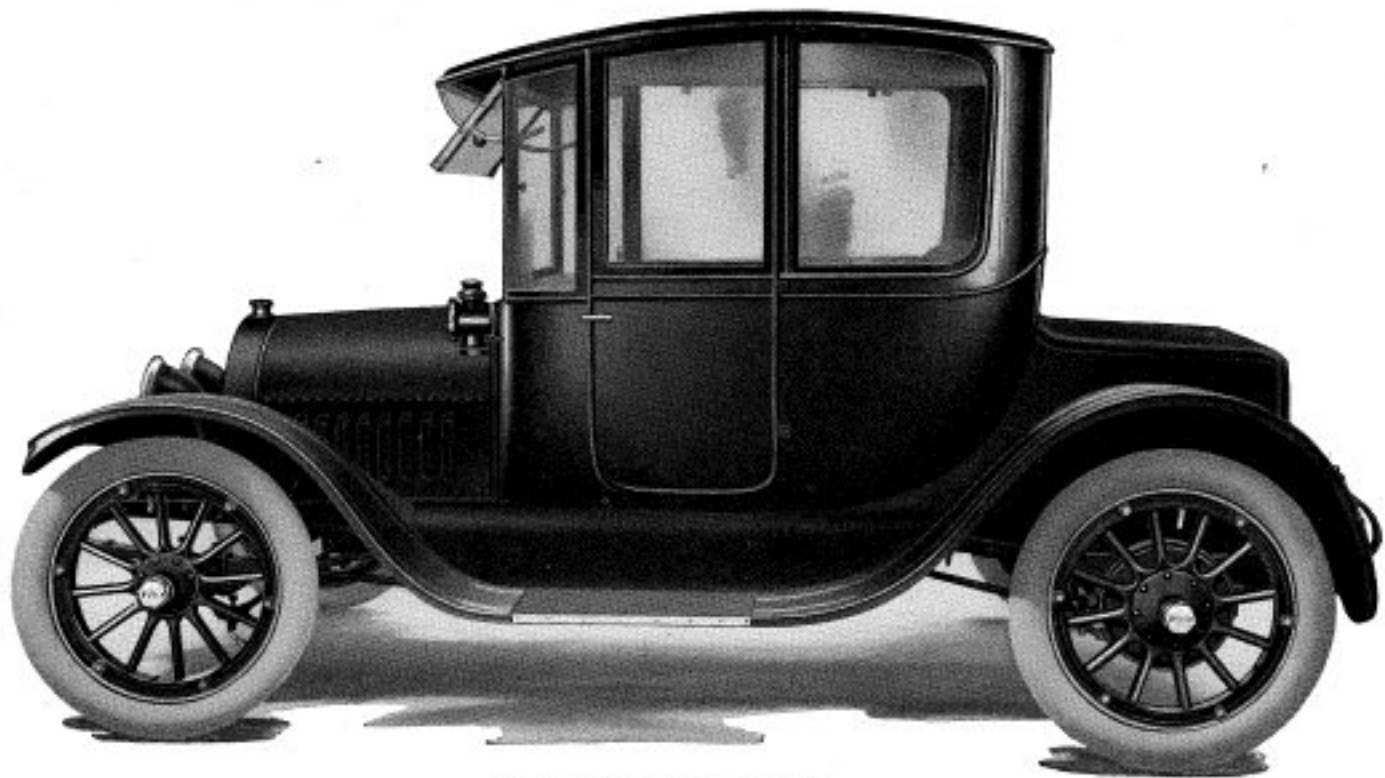
CARBURETOR—Highly efficient automatic float feed.

LUBRICATION—Self contained, constant level splash system with distributing pipe enclosed within crank case; oil circulated by gear pump. Sight feed on dash.

CLUTCH—Extra large leather faced aluminum cone; springs under leather to prevent harsh action.

TRANSMISSION—Sliding gear, selective type, three speeds forward and reverse. Heat treated nickel steel transmission gears. Clutch gear, heat treated special steel, running on annular ball bearings counter gear nickel steel, heat treated, running on bronze bearings.

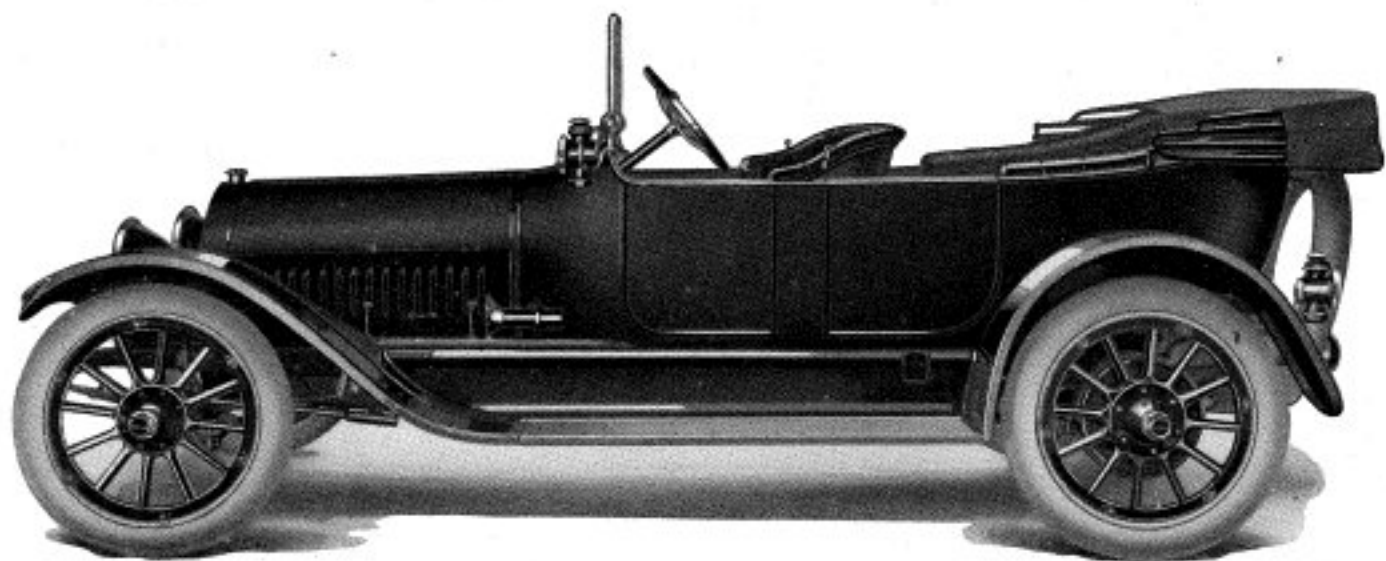
DRIVE—Direct to bevel gears in differential; nickel steel, heat treated propeller shaft, running on special alloy steel roller bearings, with ball thrust. Drive shafts, carried on special alloy steel roller bearings. Differential gears, open hearth carbon steel forgings, case hardened; bevel pinion case hardened nickel steel. Teeth, corrected form, insuring uniform strength in both pinion and bevel gears.



1914 Buick, Model B-38.

MODELS B36, B37, B38.

- BRAKES**—Emergency, internal expanding; service, external contracting. Both on rear wheel hubs. Very effective and positive, but entirely eliminating dragging and grabbing; anti-rattling.
- STEERING GEAR**—Located on left side; semi-irreversible; split nut and worm type; fully adjustable; ball thrust bearing. Eighteen inch steering wheel with inserted spider. LEFT DRIVE.
- CONTROL**—Friction-retained spark and throttle levers on top of steering wheel. Independent foot accelerator and muffler cut out. Pedals for service brake and clutch; levers for gear changes and emergency brake conveniently located inside in center of car CENTER CONTROL.
- FINISH**—Handsomely painted. Round front deep tilt cushions. Upholstered in extra fine quality black leather, over genuine curled hair and deep coil springs. Handsome cowl, extra deep. Dash three ply veneer. Running boards and front boards specially oil treated and linoleum covered, with heavy aluminum bindings; all bright parts are heavily nickel plated.
- COLOR**—Body blue-black or Buick gray; chassis and wheels blue-black.
- STARTER**—The Delco system electrical self cranker as an integral part of the car, combined with the necessary equipment for lighting and for ignition.
- STANDARD EQUIPMENT**—Combination oil and electric side and tail lamps, specially designed electric head lights with outside focus adjustment; current supply, Delco self generating system in connection with large storage battery; electric dash light, electric horn, tire irons, foot rest on touring car, one extra rim, complete set of tools, and robe rail on touring car; high grade mohair top, combination mohair and rubber dust hood, new style solid ventilating clear vision wind shield on B36 and on B37 special rain vision and ventilating, demountable rims. (No allowance will be made for any part of standard equipment omitted by customer's order.)



1914 Buick, Model B-55.

DETAILED SPECIFICATIONS

Models B54 and B55

BODY—Model B55; Five passenger wide door touring type, straight line construction with deep cowl, extra wide seats and large roomy tonneau.—Model B54: Two passenger roadster type, deep cowl, extra width door with wide seats and deep cushions.

FRAME—Pressed steel, extra heavy construction with four inch rise over rear axle.

SPRINGS—Highest grade spring steel, heat treated front, semi-elliptic; rear three quarter elliptic; very long and wide with scroll ends.

FRONT AXLE—Drop forged I-beam section with drop forged yokes, tie rod ends and steering spindles. Front wheels fitted with extra large cup and cone ball bearings.

REAR AXLE—Full floating type, heat treated nickel steel axle shafts; special high duty ball bearings. Universal bearing on front end of third member takes all driving and torsional strains and relieves the universal joint.

WHEELS—Wood, artillery type, with demountable rims. Extra large hub flanges and heavy spokes.

TIRES—36x4½ inches.

WHEEL BASE—130 inches.

TREAD—56 inches (60 inches special when desired.)

MOTOR—Six cylinder, four cycle, valve-in-the-head type. Cylinders cast in pairs, semi-steel analysis; noiseless ball end adjustable push rods working in felt socketed rocker arms. Five bearing crank shaft with bronze backed, babbitt lined bearings. Exceptionally large bearing surfaces. Develops 48 actual h. p. under brake test.

COOLING—Water circulated by gear driven centrifugal pump. Nickel plated inlet and outlet water manifolds. Radiator, verticle tube and plate type with large water capacity. Fan running on plain noiseless bearing, positive belt driven from pump shaft.

IGNITION—Jump spark; current supplied by Delco system which also furnishes current for lights and for electrical cranking device, reserve set of dry cells.

CARBURETOR—Automatic float feed, supplied by air pressure engine driven pump flow from extra large gasoline tank at rear of car; auxiliary air pressure hand pump.

LUBRICATION—Self contained splash system; oil circulated by gear pump; sight feed on dash.

CLUTCH—Extra large leather faced aluminum cone; springs under leather to prevent harsh action.

TRANSMISSION—Sliding gear, selective type, three speeds forward and reverse. Heat treated nickel steel transmission gears. Clutch gear, heat treated special steel, running on annular ball bearings counter gear, nickel steel, heat treated, running on bronze bearings.

DRIVE—Direct to bevel gears in differential; nickel steel, heat treated propeller shaft, carried on extra efficient high duty ball bearings, with ball thrust bearings. Drive shafts, nickel steel, heat treated, running on special high duty bearings. Differential gears, steel drop forgings, case hardened. Bevel pinion heat treated nickel steel Teeth, corrected form, insuring uniform strength in both pinion and bevel gears.

BRAKES—Service-external contracting, emergency-internal expanding; both on rear wheel hubs. Brake drums extra large. Very effective and positive, but entirely eliminating dragging and grabbing.

STEERING GEAR—Located on left side, semi-irreversible; split nut and worm type; fully adjustable; ball thrust bearing. Twenty inch steering wheel with inserted spider. **LEFT DRIVE.**

CONTROL—Friction-retained spark and throttle levers on top of steering wheel. Pedals for service brake and clutch, foot accelerator and muffler cut-out on the left side, levers for gear changes and emergency brake inside in center of the body. **CENTER CONTROL**

FINISH—Nickel trimmed throughout. Round front deep tilt cushions luxuriously upholstered in black leather over genuine curled hair and deep coiled springs. Running boards and floor boards oil treated, linoleum covered and aluminum bound.

COLORS—Body, blue or black; chassis and wheels blue-black.

STARTER—The Delco system electrical self cranking as an integral part of the car combined with the necessary equipment for lighting and for ignition.

STANDARD EQUIPMENT—Electric side and tail lamps, electric head lights with current supplied by Delco self generating ignition in connection with large storage battery; all lamps black with nickel trimmings, motor driven electric horn, electric dash light and complete set of tools, robe rail, foot rest, cocoa fibre tonneau mat, one extra demountable rim and tire irons (placed at rear of car) high grade mohair top, combination mohair and rubber dust hood, speedometer, new style ventilating clear vision wind shield. (No allowance will be made for any part of standard equipment ommitted by customer's order.)

1914 PRICES

Model B24	\$ 950
Model B25	\$1050
Model B36	\$1235
Model B37	\$1335
Model B38	\$1800
Model B54	\$1985
Model B55	\$1985

F. O. B. Flint, Mich.