



**BUICK**

VALVE-IN-HEAD

**FOUR**

CYLINDER

M O D E L

ROADSTER

AND

TOURING CAR

*The*  
**BUICK**  
*Valve-in-Head*  
**FOUR**

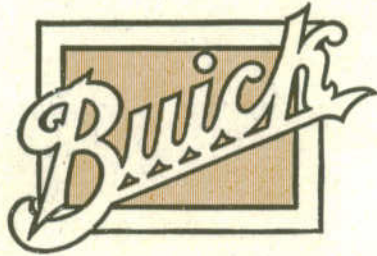
Two-Passenger Roadster Model D-4-34  
Five-Passenger Touring Car Model D-4-35

**BUICK MOTOR COMPANY**

*Pioneer Builders of Valve-in-Head Motor Cars*

MAIN OFFICE AND FACTORY, FLINT, MICHIGAN  
BRANCHES IN ALL PRINCIPAL CITIES. DEALERS EVERYWHERE





**T**HE owner of a BUICK finds behind the name on his car qualities that make it *more* than a name—fourteen years of leadership based on the superiority of the Valve-in-Head principle and actual Valve-in-Head performance on the road. The name on every Buick radiator is a hallmark of thoroughness, right designing and serviceability, combined in the Buick to a degree which has never been found in any other car.

**T**HE Buick Valve-in-Head motor always attains a new high level of popularity as each succeeding year brings about a spread of the KNOWLEDGE of the principles upon which it is built.

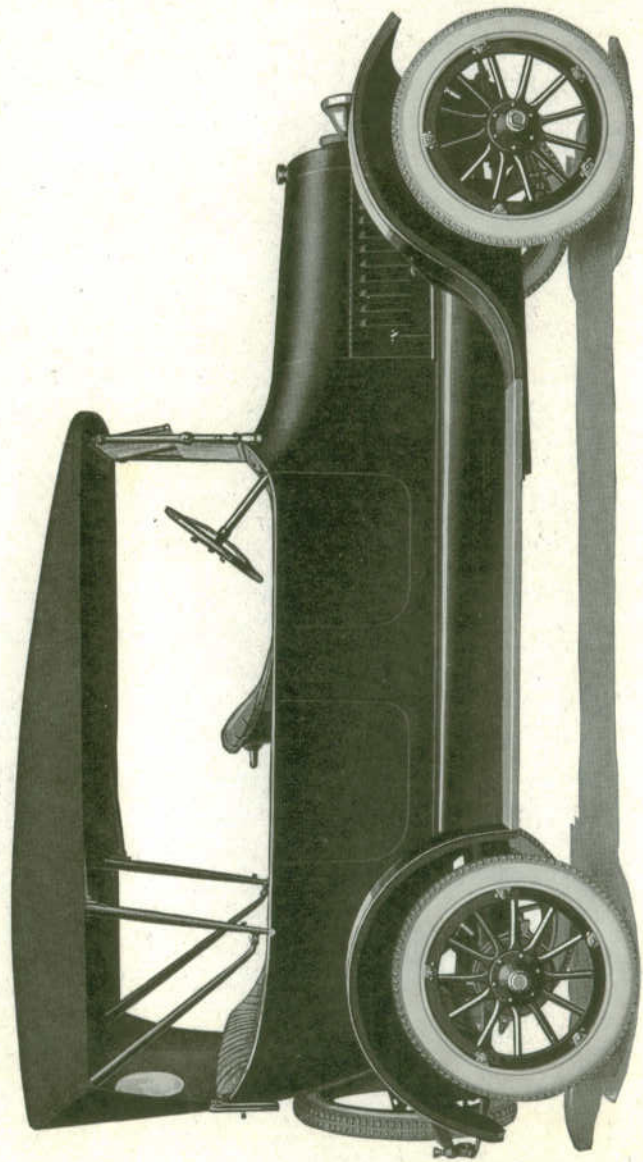
The Valve-in-Head principle of motor construction (fully explained on succeeding pages in this catalog) has been dominant in the manufacture of Buick cars since the first car of that name was placed on the market. Buick engineers knew from the first that there would be an ever increasing spread of knowledge concerning motor car mechanics, and that the demand for a Valve-in-Head motor would always be in exact ratio to the spread of this knowledge.

They knew this because all the laws of engineering science fortified their conviction that the Valve-in-Head motor approaches the ideal in internal combustion engines.

The tremendous success achieved by the Buick Motor Company is due, more than anything else, to a strict adherence to this one type of motor. Right in principle from the first, it now has back of it years of proof that it is also right in service. In all parts of the world, and on roads of every description, this wonderful motor has measured up to the sternest demands of the most exacting motorists.

The Buick Valve-in-Head four-cylinder models have met with the most enthusiastic approval of the general public, and the Buick Motor Company sincerely aspires to retain this good will as its greatest single asset.





BUICK FOUR-CYLINDER TOURING CAR, MODEL D-4-35

*Right side view—Showing one-man top in position. Clean side lines and wider running board*

## *Thirty-five Horsepower*

*Convincing Construction*

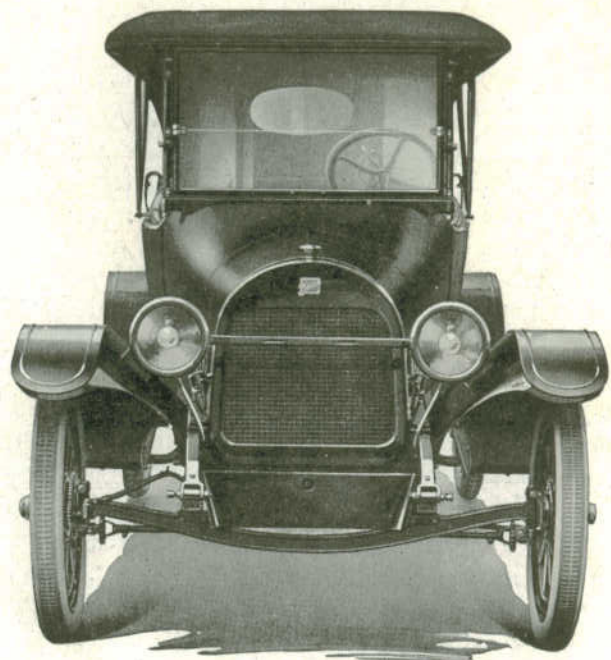
**T**HE Valve-in-Head motor of the four-cylinder Buick has an S. A. E. rating of eighteen horsepower, but an actual brake-test rating of thirty-five. When you consider its weight, less than twenty-one hundred pounds for the Touring model and nineteen hundred for the Roadster, with a wheelbase of one hundred and six inches, the superb amplitude of this engine power becomes evident! Nothing in hills or strenuous touring can sap strength like this. The motor is of the unit type, three-point suspended, with semi-steel, block-cast cylinders and detachable head.

Cranking, ignition and lighting centers in the famous Delco electric system. Mere mention of this system is in itself sufficient warranty of the efficiency and trouble-proofness of Buick electrical construction.

The frame is of reinforced pressed steel, channel section, tapered toward the front to facilitate narrow turning, and strengthened by four heavy cross-members. Attachment to the axles is by extra long, flat, semi-elliptic springs, both front and rear, with a three-quarter floating axle with roller bearings carrying power to the rear wheels. Two sets of brakes, internal expanding and external contracting; left drive, center control, three speeds forward and reverse, accelerator and starter pedals; independent throttle and spark lever on steering wheel.

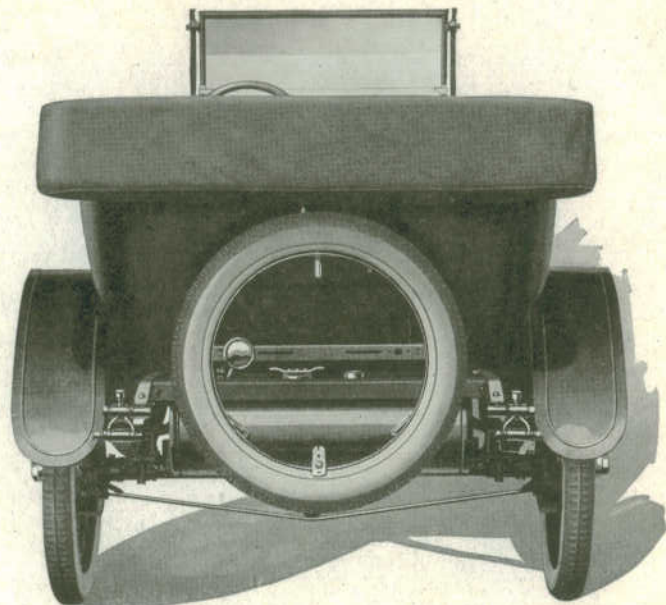
In appearance, the exquisite lines of either Touring or Roadsters are all that could be desired. For equipment, the car carries speedometer, vacuum fuel system, double-bulb electric head lamps, tail, trouble and instrument lights, license brackets, motor-driven electric horn; one-man top with adjustable side-curtains and dust-cover; extra demountable rim and tire carrier at rear of frame; rain-vision, adjustable, ventilating windshield; complete set of tools.





*Direct front view—Top up, showing distinctive radiator, I-beam front axle and ample road clearance*

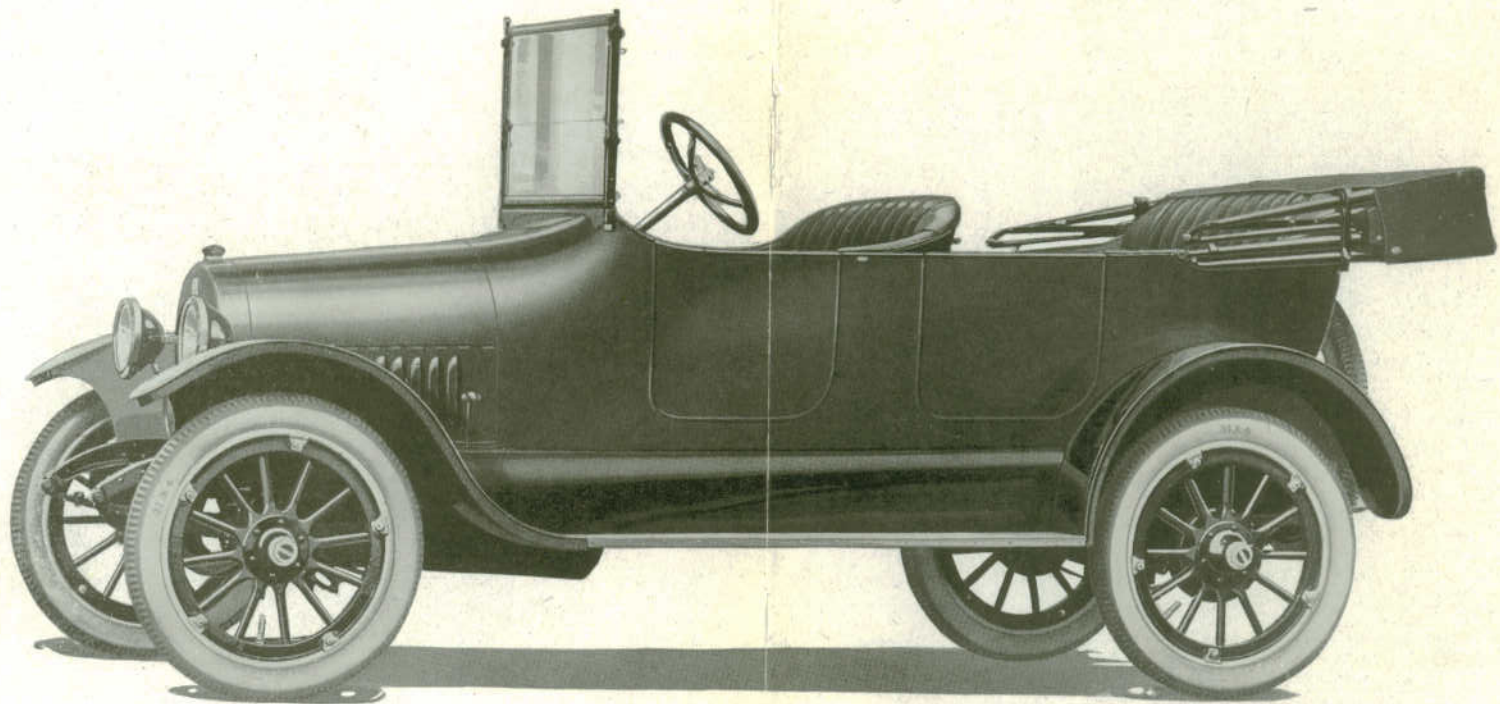
**F**ront view of the Buick "Four" carries the graceful and sturdy lines characteristic of all Buicks. It has drop forged I-beam front axle with ample road clearance, honeycomb radiator, double bulb head lights, supported by heavy front fender irons and front license brackets.



*Rear view—Showing gas tank, disposition of tire carrier, tail light and license bracket*

**T**HE gasoline tank at rear supplies fuel uninterruptedly to the motor through the vacuum system. Tire carrier and extra demountable rim, tail light and bracket, are all compactly located. This rear assembly of the Buick Four is strictly in accord with modern design.





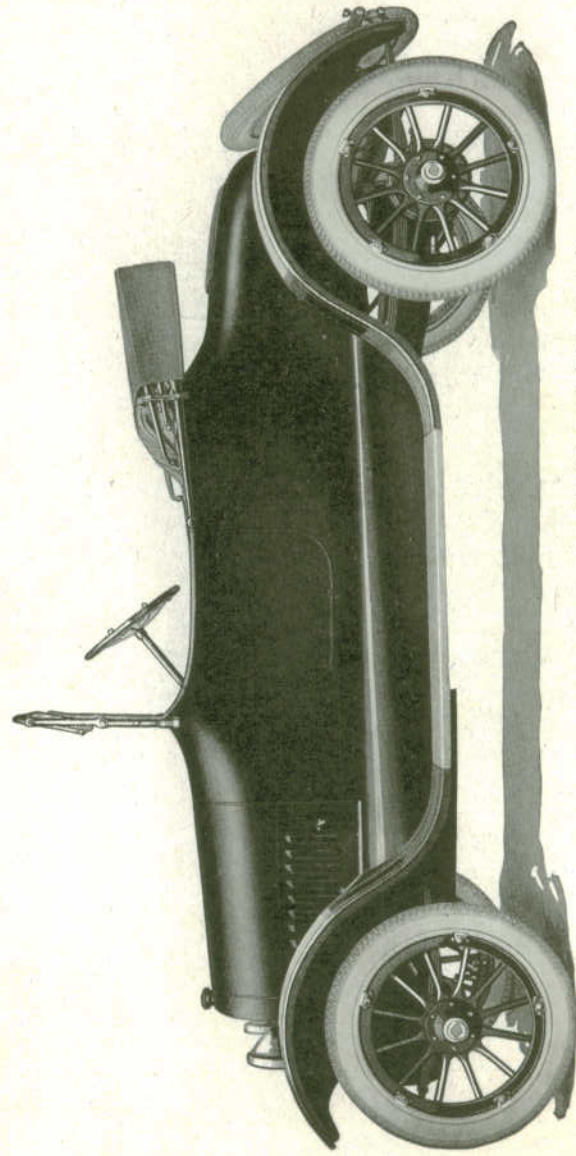
*The biggest thing about this Four is the Buick "Valve-in-Head" Motor*

The most obvious, and yet the most erroneous way to sell these four-cylinder model Buicks would be to call attention to their low cost. In reality, it is the last reason in the world why you should buy a Buick, although a reason that has its appeal to a great many people. The best reason in the world

why you should buy it is because it has a Buick Valve-in-Head motor. Beause of its Buick designing, Buick integrity of workmanship, Buick Valve-in-Head power, Buick provision for comfort, substantial service and gallant conduct on rolling macadam or rugged climbs—at all times—under all conditions.

*Model D-4-35 completely equipped (specifications on page fourteen), sells for \$675, f. o. b. Flint*





BUICK FOUR-CYLINDER ROADSTER, MODEL D-4-34

*To those who want a dependable car with small investment and low running expense, the Buick Four makes its appeal*

**T**HIS Buick Roadster, Model D-4-34, is a practical car for professional and business men and those drivers who want to do their about-town motoring in an equipage less expensive than the bigger touring or town car, but not less exclusive in appearance or tardy in attaining its destination!

It takes the road with that dependable ease for which Buicks have long been envied. Lighter in weight than the touring model, it has capacity for travel afforded by the thirty-five horsepower Valve-in-Head motor, and the rugged chassis construction.

In equipment this Roadster is complete. Extra demountable rim and tire carrier at rear—speedometer, motor-driven electric horn, rain-vision ventilating windshield, gasoline gauge, and electric lights.

The high standards of years of Buick manufacture insure the correctness of its construction. Buick values show inevitably in this car—in its finish, its well-done details, its dimensioning, its design, its fittings and its Valve-in-Head sufficiency of power.

Finish and color treatment of this Buick Valve-in-Head Four are exceptional. Body, hood, fenders and running gear are done in black; and wheels in black with white stripe. Tufted, genuine black leather upholstery, covered floor and running boards with aluminum bindings, give the final touches to an external trimness that is peculiarly Buick.

The exceptionally large carrying compartment beneath the after-deck is readily accessible on account of the lifting door or deck top, which gives one easy and immediate access to this compartment without the annoyance or loss of time occasioned by removing the spare tire. This is but one of the many little points of excellence in this Roadster that will demonstrate by actual service the satisfaction of owning a Buick.



## What Buick Valve-in-Head Means

**A** GREAT many present and prospective users of motor cars have the idea that all motors are substantially alike, and that they differ only in detail. There is a fundamental difference between the Buick and other cars, due to the Buick Valve-in-Head motor.

The Buick Valve-in-Head motor is different in appearance because the valves through which gas enters and leaves the cylinders are in the tops, or heads, of the cylinders; in other types of motors these valves are placed in pockets at the side of the cylinder.

The dead gases resulting from each explosion in the Buick cylinders are more completely expelled than in any other type of motor, thus preventing the incoming charge of gas from being weakened through mixture with remaining portions of dead gases, consequently increasing the efficiency of the motor.

An automobile motor is by far the most important part of a motor car, the whole question of the car's worth depends upon its motor. All automobile motors are *heat* engines, regardless of their form of construction or their number of cylinders. By that it is meant that *heat* is the force which furnishes the power of the motors.

Gasoline is the fuel which supplies the *heat*.

When gasoline is taken into the carburetor it is vaporized and mixed with air, or transformed into gas. This gas is taken into the cylinders, and by means of an electric spark it is burned, or, as we generally say, it is "exploded."

This burning, or "exploding," of the gasoline, creates a very high degree of *heat*. *Heat*, as everybody knows, expands, and *it is this expansion of heat against the pistons which causes the automobile to move.*

The *heat* pushes the piston downward, and this movement of the piston is transferred to the crankshaft, and thence to the rear axle, and from there to the rear wheels.

All the *heat* which goes elsewhere than against the piston is waste. The Buick motor conserves, and uses, a higher percentage of this *heat* than any other motor.

When gas is exploded in the cylinder of an automobile motor there are just two places the heat can go, two avenues of escape for it.

*It can find an outlet by pushing the piston downward.*

*It can escape through the cylinder walls into the water that is used to keep the cylinders from getting too hot.*

The walls of the cylinders are hollow, and through this hollow portion a current of water passes, to take up some of the *heat* which would otherwise melt the iron of the cylinders.

Right at this point is where Buick superiority begins. In the Buick *more* of the *heat* goes against the pistons, and *less* into the water, than in any other motor. The Buick Valve-in-Head motor is guaranteed to have more power and to be more economical in gasoline consumption than any other type of motor ever built.

In the Buick Valve-in-Head motor the valves are in the tops, or heads of the cylinders. This means that the valves are in a spot that is *already* water-jacketed, so that no *additional* water-jacketed space is necessary to accommodate them.

In the "L" and "T" head motors, the valves are placed in little compartments alongside the upper parts of the cylinders—and these little compartments must be water cooled, exactly the same as the cylinder proper. That means a larger water-jacketed area and *an increased opportunity for heat to escape.*

There is less opportunity for *heat* to escape into water in the Buick Valve-in-Head motor. That means more *heat* against the pistons, which means more power for the rear wheels and less fuel consumption.

You have often heard that the Buick is the most powerful motor. The Buick Valve-in-Head arrangement is the reason for that greater power.

The Buick motor will develop from fifteen to twenty per cent more power than similar sized motors of the other types, and the reason for that greater power is simply the fact that in the Buick motor there is fifteen or twenty per cent *less* waste of *heat*.

The Buick Valve-in-Head principle is the most important one in the whole field of motor car operations.



## Specifications

**BODIES:** D-4-34, two-passenger Roadster type. Roomy baggage compartment under rear deck. D-4-35, five-passenger Touring type. Both models have streamline body and hood with deep cowl and instrument board; extra wide seats and doors.

**FINISH:** Handsomely painted; body, hood, fenders and running gear, black; wheels black with white stripe; deep tufted black genuine leather upholstery with wide, comfortable cushions.

**CONTROL:** Friction retained spark and throttle levers on top of steering wheel; independent foot accelerator; pedals for clutch, service brake and starter; levers for gear shifting, and emergency brake conveniently located in center of driving compartment; lighting and ignition switches mounted on instrument board directly in front of driver; center control.

**WHEELBASE:** 106 inches.

**MOTOR:** Four-cylinder, four-cycle, Valve-in-Head type, unit power plant, suspended at three points from main frame; cylinders 3 $\frac{3}{8}$ " bore x 4 $\frac{3}{4}$ " stroke, semi-steel block casting with detachable head; heavy crankshaft with three large babbit-lined main bearings, exceptionally large valves with noiseless adjustable ball end push rods; 35 actual brake horsepower.

**COOLING:** Water cooled with centrifugal circulating pump driven by spiral gears; ample jacket space, with large inlet and outlet passages; cellular type radiator of large capacity; pressed steel radiator fan driven by an adjustable flat belt from the camshaft.

**LUBRICATION:** Self-contained, constant level circulating splash system, with special plunger pump driven from camshaft; separate oil lead direct to timing gears.

**CARBURETOR:** Special automatic float feed, supplied by vacuum system from gasoline tank on rear end of frame.

**IGNITION:** High tension, jump spark system; current supplied by Delco generator; spark advance controlled by lever on top of steering wheel.

**STARTER:** Complete Delco, single-unit system for electric starting, lighting and ignition, built integral with the motor and operating in conjunction with storage battery under front seat; current supply automatically regulated; starter operated by pedal.

**CLUTCH:** Large leather-faced cone clutch with expanders under leather to insure smooth action. Clutch springs fully adjustable; operates easily with light pressure on pedal.

**TRANSMISSION:** Selective, sliding gear type; three speeds forward and reverse; heat-treated, chrome nickel steel gears; clutch gear runs on noiseless roller bearings, square shaft on large double row ball bearing, and countershaft on bronze bushings.

**DRIVE:** Through single large universal joint and fully enclosed propeller shaft to bevel gears in rear axle; propeller shaft housing attached to large ball and socket joint on rear of transmission; torque taken through propeller shaft housing and ball joint; drive through rear springs.

**REAR AXLE:** Three-quarter floating type, with shafts running on roller bearings; ball thrust bearings for differential and driving gears; all weight carried on axle tubes; large beveled driving gears, ratio 4 to 1.

**BRAKES:** Two sets operating on rear wheel drums; service brakes, external contracting type; emergency brake, internal expanding type.

**FRONT AXLE:** Drop forged, I-beam section, yokes integral with drop forged steering spindles; drop forged tie rod yokes; all heat-treated; large cup and cone ball bearings for front wheels.

**WHEELS:** Wood; artillery type with large hub flanges; 12 spokes, demountable rims.

**TIRES:** 31" x 4"; non-skid tread, front and rear.

**STEERING GEAR:** Semi-irreversible split nut and worm type, with adjustable ball thrust bearing to take up wear; 16-inch steering wheel; spark and throttle levers on top of wheel; left-hand drive.

**FRAME:** Reinforced, pressed steel, channel section; tapered toward front to secure short turning radius; four heavy cross members.

**SPRINGS:** Extra long and flat semi-elliptic springs both front and rear; front 2" wide by 30" long; rear 2" wide by 48" long.

**STANDARD EQUIPMENT:** Electric head, tail and instrument lights, with license brackets; double bulbs in head lights; electric horn; speedometer mounted on instrument board; extra demountable rim with tire carrier on rear of frame; one-man type top with side curtains and dust cover; Bair top holders; adjustable, rain-vision, ventilating windshield; complete set of tools, including jack, pump and tire repair kit; robe rail on D-4-35. (No allowance will be made for any part of standard equipment omitted on customer's order.)

**WEIGHT:** D-4-34—1935 lbs.; D-4-35—2052 lbs.

**PRICES:** D-4-34, complete, f. o. b. Flint, \$660. D-4-35, complete, f. o. b. Flint, \$675.


**EVERY** Buick owner is entitled to and will receive prompt and efficient service—the kind that will insure him the motoring pleasure he expects. No matter where you go, there is a Buick branch or a Buick dealer close at hand.

Atlanta	Buick Motor Company
Battle Creek	Buick Motor Company
Boise, Idaho	Randall-Dodd Auto Company
Boston	The Noyes-Buick Company
Buenos Ayres, Argentine Republic	General Motors Export Company
Buffalo	Buick Motor Company
Charlotte, N. C.	C. C. Coddington
Chicago	Buick Motor Company
Cincinnati	Leyman-Buick Company
Cleveland	The Ohio-Buick Company
Dallas	Buick Automobile Company
Denver	MacFarland Auto Company
Detroit	Buick Motor Company
Indianapolis	Buick Motor Company
Kansas City, Mo.	Buick Motor Company
Lake Charles, La.	Calcasieu Motor Company
Lincoln, Neb.	Nebraska-Buick Auto Company
Little Rock, Ark.	Arkansas-Buick Auto Company
London, England	General Motors (Europe) Ltd.
Los Angeles	Howard Auto Company
Louisville, Ky.	Leyman Motor Company
Madison, Wis.	Hokanson Automobile Company
Milwaukee	Buick Motor Company
Minneapolis	Pence Automobile Company
New Orleans, La.	Jos. Schwartz Co., Ltd.
New York City	Buick Motor Company
New York City	General Motors Export Company
Oklahoma City	Buick Motor Company of Oklahoma
Omaha	Nebraska-Buick Auto Company
Philadelphia	Buick Motor Company
Pittsburgh	Buick Motor Company
Portland, Ore.	Howard Auto Company
Rochester, N. Y.	C. L. Whiting
Saginaw, Mich.	Garber-Buick Company
Shreveport, La.	Bernstein Bros.
St. Louis, Mo.	Vesper-Buick Auto Company
Salt Lake City	Randall-Dodd Auto Company
San Antonio, Texas	Buick Auto Company
San Francisco	Howard Auto Company
Seattle, Wash.	Northwest-Buick Company
Sioux City	Nebraska-Buick Auto Company
Sydney, Australia	General Motors Export Company
Washington, D. C.	Buick Motor Company

*Distributors for the*

**BUICK MOTOR COMPANY, FLINT, MICHIGAN**





*Buick*

VALVE IN HEAD  
MOTOR CARS  
ENTER THEIR  
FOURTEENTH  
SEASON OF  
SUCCESSFUL  
MANUFACTURE

