

# *The* BUICK *BOOK OF FACTS*



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A DIGEST OF INTERESTING INFORMATION ABOUT THE 1930 BUICK...  
THE GREATEST BUICK  
OF THEM ALL

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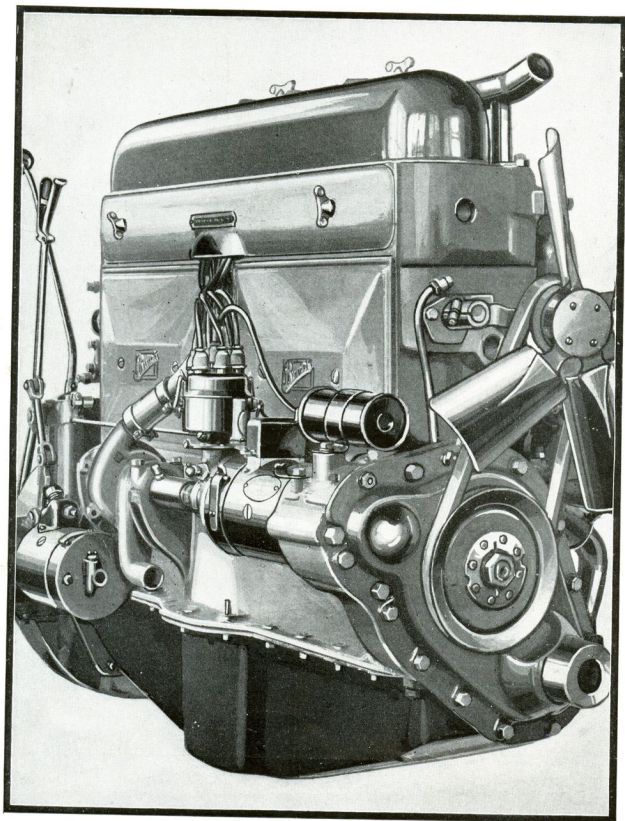


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BUICK MOTOR COMPANY

FLINT, MICHIGAN

Division of General Motors Corporation



*Correct design, persistent development and precise manufacture have made the Buick valve-in-head engine the preferred engine in the fine-car field—for power, for performance, for silky smoothness, for quietness and for remarkable economy of fuel and maintenance cost.*

## Introductory

**F**OR over a quarter of a century the development of better automobiles by Buick has been going steadily on. But never has a new Buick line been introduced which presented so many significant improvements as do the Buicks for 1930.

All three wheelbases have been lengthened. Over-all height has been reduced, which further emphasizes the length and grace of the car. Hundreds of improvements make it easier and pleasanter to drive. Scores of thoughtful details make it rich in luxury. Real beauty exists in its easy, flowing lines, its lustrous colors, its costly textiles and appointments.

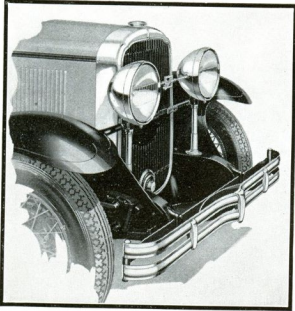
More than a million Buick owners alone eagerly await the announcement of the new Buick each year. More than twice as many buyers of fine cars buy Buicks each year as of any other make of car selling for \$1200.00 or more.

This is because Buick builds into the Buick car an extra margin of strength which makes for great endurance and reliability. Buick cars deliver more miles of uninterrupted service—Buick cars last longer—and the foundation of Buick leadership is the remarkable Buick chassis and famous Buick valve-in-head engine.

These are facts of importance to you. You can easily check them by inspecting the new Buick for 1930—by getting behind the wheel and actually driving it. For your comparison, the most important features are summarized here, arranged logically for ready reference.

## Appearance

Your first glimpse of the 1930 Buick, from the front, will reveal the pleasing grouping of radiator, headlamps and fenders. And you will note at once



*Front of 1930 Buick, showing the carefully blended design of radiator, fenders, headlamps and bumpers.*

the slim grace of the new radiator shell and the rigid headlamp mounting, vertically and horizontally braced.

Your eye follows naturally back along the shining hood to the rise of the broad, sloping windshield, capped by the smart visor which merges gracefully with the roof line.

Moving to the side, you get the full effect of the long, low lines—the added grace of lowered roof and lengthened wheelbase. Simplicity is the keynote, with unbroken horizontal lines and plain surfaces just relieved where necessary by graceful curves. You note the sturdiness of the wheels, the generous sized tires, the bold sweep of the fenders, the rich depth of the colors, the liberal use of chromium plate. And you see what clear vision is afforded

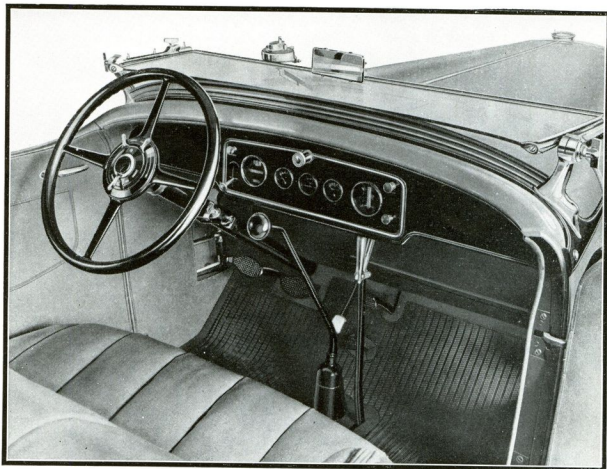
by the wide plate glass windows, with their tapered pillars for added strength, beauty and driving safety.

Going to the rear, you will be struck by the originality of the pleasing blending of lines. The general effect is low and the unity of design is perfect. The corners round gracefully at top and sides, the plate glass window is beautifully proportioned and placed and the new fluted gasoline tank cover adds a finishing touch of real beauty.

You will observe that the bumper brackets are integral with the frame, making a very neat and strong installation. The tail light, stop and backing light combination is decorative and sturdy, completing the finely finished whole.



*The new radiator shell is graceful in outline and the automatic shutter is very attractive.*



*This driving compartment is typical of the 1930 Buick. Note completely equipped, direct and indirectly lighted instrument panel, side cowl ventilators and draft-light floor openings.*

## Luxury

Taking the driver's position, in all closed models, a few turns of a handle adjusts the seat to your leg-length, so that pedals and controls are where they would be if the car had been made to your measure. The steering column also is adjustable.

Comfort is the foundation of luxury. And the same care that has provided for the driver's comfort has also been extended to that of the passengers. Observe how all seats conform to a comfortable sitting position. All are done over spiral cushion springs topped by a network of smaller springs, providing the utmost riding luxury.

Over this foundation in closed models is the soft padding and rich, pliant, genuine mohair fabric of a

recently perfected type. This new fabric, which preserves all the soft beauty of finest mohair, has a specially processed backing which is water-proof and dust-proof. Actual tests prove that this material is many times longer-lived than ordinary mohair with its customary backing and that it will not mat down readily.

The interior colors are in perfect harmony with the exterior Duco colors and, with the nickered Ternstedt fittings and beautiful coachwork, give an interior that is restful and luxurious. The carpets are soft, velvet pile and window curtains are silk-finished, woven in pleasing patterns.

You will note the spaciousness of both driving and rear compartments

—the generous seat width and leg room — the ample head room and the comfortable width of all doors.

All details are complete and include such items as padded arm rests, dome and corner lights, vanity and smoking cases.

## Convenience

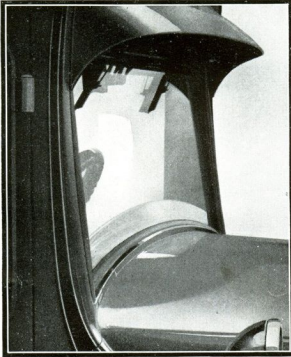
Starter switch and hand levers are conveniently placed and the side cowl ventilators, the double windshield wiper and rear view mirror are all

On the steering wheel are the control levers, horn button and tilt-ray headlamp control. The theft lock is mounted on the steering post.

Window regulators are on all windows and remote control door handles on all doors. Smoking and vanity cases are furnished for all sedan models.

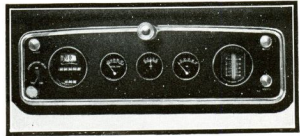
Buick's new automatic radiator shutter, thermostatically controlled, aids the engine to "warm up" quickly and keeps it automatically at the correct operating temperature.

Other mechanical features which contribute to the convenience of operation and the minimizing of attention are the oil filter, air cleaner, crankcase ventilator, heater intake manifold, dash gasoline gauge and automatic fuel pump.



*The new sloping Fisher VV windshield kills glare from headlights of other cars.*

within easy sight and reach. The new sloping Fisher VV windshield kills all headlight glare from rear or sides and is a big contribution to the comfort and safety of night driving.



*The new instrument panel is both directly and indirectly lighted, with instruments compactly grouped. All dials and levers are in plain sight and reach.*

## The Buick Engine

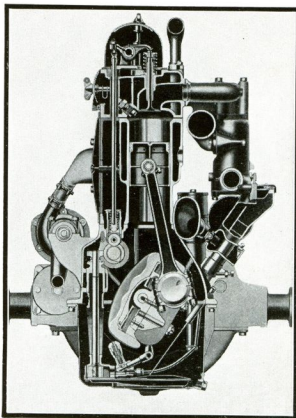
The superiority of the valve-in-head principle of engine design, so thoroughly demonstrated over a period of 26 years, is the reason for the presence of this type of power plant under the hood of the new 1930 Buick—the greatest Buick of them all.

A valve-in-head engine powered the first Buick, built more than a quarter-century ago. And concentration upon the same principle of design, throughout the years intervening, has enabled Buick to remain consistently ahead in the vital factors of power, smoothness,

stamina, and the unflagging day-after-day reliability for which it is noted.

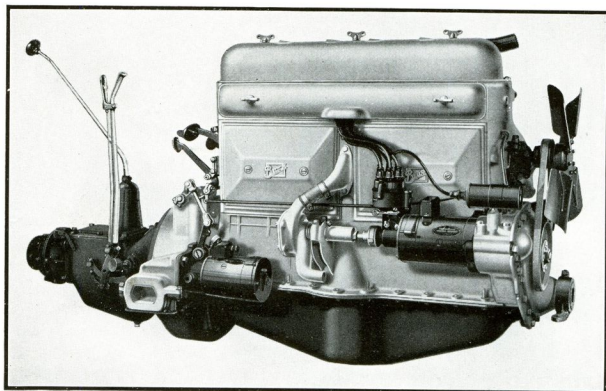
The famous Buick valve-in-head six cylinder engine furnishes remarkable performance throughout the entire speed range. It performs brilliantly at five miles per hour or seventy-five. When you apply the gas at any speed you get instantaneous response, also the power flow is exceedingly smooth from the lowest idling speed to top speed. No other car in the fine car field is powered with such an all around reliable and smooth operating engine as the Buick for 1930—the greatest Buick of them all.

The universal reliance upon valve-in-head engines wherever the ability to take long-sustained punishment is requisite, is evident from the use of this type almost exclusively in racing craft of land, water and air, as well as in trans-oceanic aircraft and other uses in which life itself depends upon engine stamina and perfect reliability.



*Cross-section of Buick engine from the front, showing structure of the principal working parts.*

This reliability reaches new heights in the 1930 Buick and is achieved with greater silence and power than before.



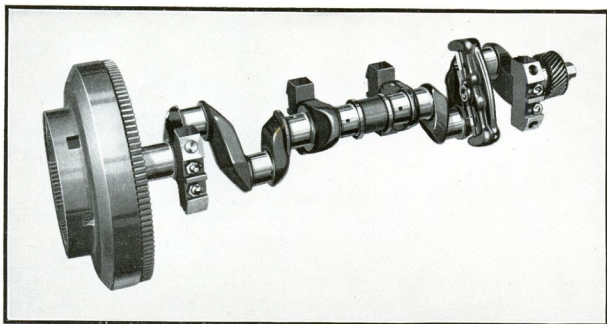
*Right side view of Buick engine, showing clean-cut appearance and compact installations of ignition, generator and starting systems.*



## The Crankshaft

The crankshaft in the Buick engine is drop-forged and specially heat-treated. It is scientifically counter-weighted and equipped with a torsion

The crankshaft is fitted with four counter weights which counteract the tendency of the shaft to deflect, due to centrifugal forces. The torsion



*Note the design, strength and beautiful finish of this counter-balanced crankshaft and flywheel, with the ample size of the four steel-backed main bearings.*

balancer to reduce engine vibration to a minimum. The entire shaft assembly is most accurately balanced both statically and dynamically—all-important factors in the phenomenal smoothness of the engine.

The crankshaft bearings are steel-backed, babbitt-lined, of the same type and construction used in airplane engines to give the longest possible life.

balancer absorbs the tendency of the crankshaft to twist under the power impulses and delivers these impulses back to the shaft after the piston forces are spent. Its bearings are lubricated under pressure from the crankshaft oiling system. As part of the crankshaft, it is enclosed in the crankcase and protected from dirt and atmospheric conditions.

## The Camshaft and Timing Gears

The camshaft is a drop forging, hardened and ground. It is driven by timing gears which are helical cut. The crankshaft and generator shaft gears are steel. The camshaft gear running between the two is of Textolite composition. This type of drive

insures quietness and accuracy without the necessity of adjustment.

The cams are scientifically contoured for accuracy of timing and extreme quietness of valve operations. The camshaft is held in perfect alignment by four large bronze bearings.

## Valves

The valves are one-piece construction. Inlet valves are made of chrome nickel steel and the exhaust valves of silchrome No. 1 steel, which has remarkable heat resisting properties. These silchrome exhaust valves will withstand the super-heat of the exhaust gases to which they are constantly exposed without distortion. Buick valve-in-head engines are so

designed as to provide an unusual supply of water in the jacket which practically surrounds the valve seats. This large volume of water better dissipates heat at that point, and makes for long life of the valves.

Rocker arms, push rods and the entire valve mechanism are fully lubricated, the over-head mechanism is completely enclosed.

## Pistons and Connecting Rods

Conforming to long-established Buick practice, pistons are of cast iron, having the same co-efficient of expansion as the cylinder block. This enables them to be fitted closely for quietness, insures long life and maximum efficiency. There are two compression rings and one oil control ring, all above the piston pin.

The connecting rods are drop-forgings, specially heat-treated, with bearings of finest babbitt material bonded directly to the rod. The wrist pins are hardened and ground and operate

in bronze bushings fitted in the pistons.

In addition to being accurately machined, pistons and connecting rods are assembled in balanced sets of six, each piston and rod being carefully weighed and marked for assembly. Balance of all reciprocating parts is an extremely important factor in smooth, vibrationless operation which is so characteristic of Buick cars.

Oil is forced under pressure to the connecting rod bearings, through holes drilled in the crankshaft, which gives a positive and adequate lubricant supply.

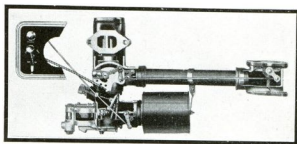
## Fuel System

The well known Buick carburetor system again is found on all models. This system provides heat automatically to warm the fuel mixture, insuring most efficient engine operation under all driving conditions. Manual control of the heat is also provided by a convenient lever on the instrument panel.

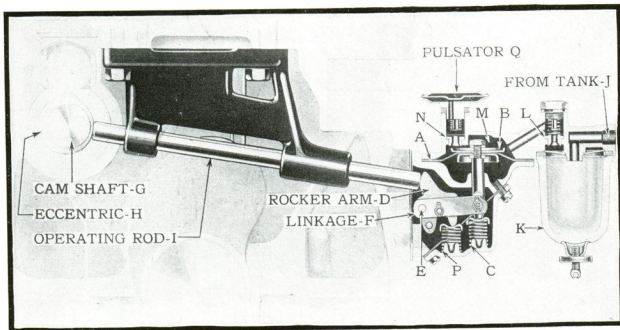
All air entering the carburetor is first passed through an air cleaner to prevent dust and grit from getting into the working parts of the engine.

Fuel is supplied to the carburetor

by means of an automatic fuel pump, which regulates the flow of the fuel according to the needs of the engine.



*This sectional view shows how exhaust heat is supplied to the fuel mixture and how the heat is controlled from the dash.*



*The gasoline pump is automatically operated, and driven by the camshaft, furnishing a constant fuel supply to the engine at all driving speeds.*

This insures a constant fuel supply to the carburetor under all driving conditions. The fuel is pumped directly from the storage tank at the rear of the car, the only gasoline under the hood being the small quantity in the carburetor and fuel filter. The fuel filter strains the gasoline before it enters the bowl of the carburetor, removing all water and dirt.

Every precaution has been taken in the Buick engine for the efficient and economical use of fuel. The valve-in-head design, dissipates the least possible heat through the water-jacketed space; the location of the valves, permits the easy entrance and exit of gases; the carburetor heat control and automatic radiator shutter aids in developing great power from little gasoline.

## Lubrication

Lubrication is full pressure to main and connecting rod bearings and rocker arm shaft. Oil is forced by a gear pump located at the lowest point in the oil-sump. Pistons, piston pins and cylinder walls are lubricated by an oil spray shot under pressure through a small hole in the upper side of each connecting rod bearing.

The oil pump forces the oil through distributing pipes to the four crankshaft bearings and through holes drilled in crankshaft to the six connecting rod bearings.

An additional supply line from pump carries oil under pressure through the oil filter mounted on right side of dash, to the hollow rocker arm shaft from which it is distributed to the rocker arm bearings and ball ends of push rods. From the front end of rocker arm shaft, the surplus oil is carried to the timing gear case, furnishing lubrication for the gears and also the front camshaft and generator shaft bearings.

Proper lubrication is further safeguarded by the crankcase ventilator

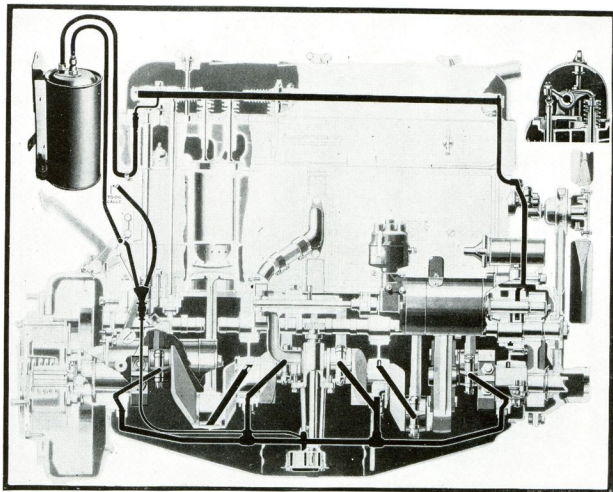
and oil filter. The crankcase ventilator prevents harmful dilution of the engine oil by removing water and fuel vapors. The oil filter removes all grit and foreign matter from the oil.

Water and fuel are the two elements which cause dilution of the crankcase oil. The water is a by-product of combustion and is the most harmful of the two diluents. A small amount of fuel is not harmful and is really necessary in cold weather. The ventilator will prevent accumulation of water in crankcase and hold the fuel dilution to desirable limits. This ventilator works on the vacuum principle, as the accompanying diagram shows.

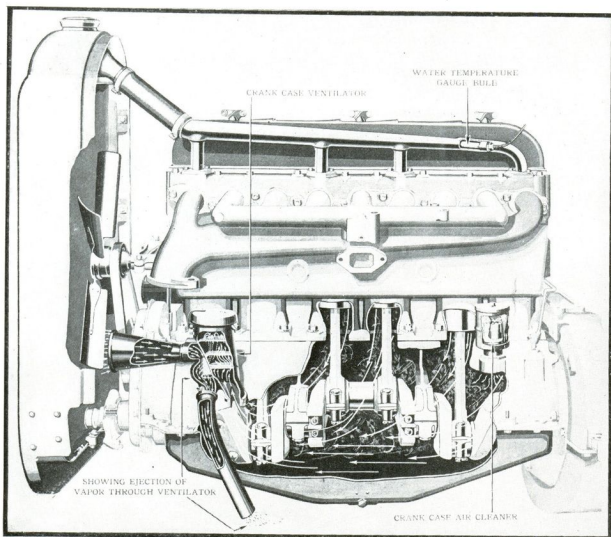
The function of the oil filter is to

remove from the crankcase oil, all particles of dirt and carbon not already eliminated from circulation by the oil pump screen. When the filter is new its capacity is such that the quantity of oil in crankcase will pass through the filter approximately every five minutes, at a car speed of 25 miles per hour. This rate of flow will gradually decrease as the filtering element accumulates foreign matter. The filter requires no adjustment or attention other than a replacement of the element after approximately 10,000 miles of driving to insure the maximum efficiency of the filter.

Owing to its construction the filter replacement may easily be made at a reasonable cost.



*This view shows the Buick full pressure oiling system, carrying oil under pressure to main and connecting rod bearings and to the valve actuating mechanism.*



*This diagram shows how vacuum removes water vapors from the crankcase before they can condense and dilute the oil.*

## Cooling System

Cooling water is circulated by means of a centrifugal pump, driven from the generator shaft. The radiator is the cellular type, with large core area, sufficient to cool the engine in the hottest weather, under hard pulling or during prolonged hard driving.

The radiator is fitted with a vertical shutter which is automatically controlled by a thermostat. At all seasons and in all climates, this arrangement keeps the engine at the most efficient operating temperature, by regulating the amount of air that passes through the radiator.

A thermostat placed in the upper tank of radiator automatically operates the radiator shutter.

When the engine is cold, the shutter is closed, cutting off the passage of air through the radiator. When the temperature of the water reaches a predetermined point, the thermostat opens the shutter to the degree necessary to maintain the correct operating temperature.

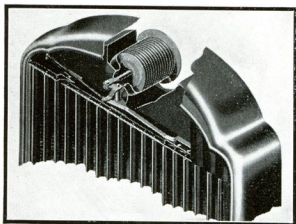
In addition to controlling the water temperature, the shutter also controls the temperature of the air under the hood, thus assisting in carburetion and

greatly reducing the "warm up" period.

An indicator is mounted on the instrument board of all models, which registers the temperature of the water in the cooling system.

The water pump consists of an impeller fastened to the shaft, and a water-tight housing with inlet and outlet connections.

A four-blade fan is driven by a  $\frac{5}{8}$ " V-belt. It runs on a plain bearing which is lubricated by a simple, self-contained oil pressure system.



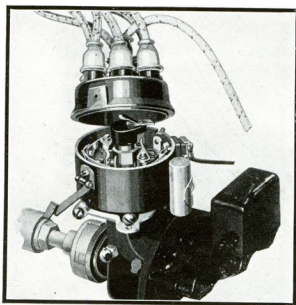
*The expansion and contraction of the thermostat automatically opens or closes the radiator shutter.*

## Electrical System

The Delco-Remy electrical system is the two-unit type, with separate generator and starter. Both are mounted on the right side of the engine and are fully enclosed for protection against dust and water.

Double breaker arm distributors are employed on the Series 50 and 60 engine, to insure proper firing of the larger engine under all conditions.

The single breaker arm type used on Series 40 is of adequate capacity to properly fire the smaller engines.



*The double breaker arm distributor which is used on the Series 50 and 60 engine.*

Headlamps are tilt-ray, controlled by a convenient switch on the steering wheel. This enables the driver to deflect the rays downward upon approaching another car at night, at the same time keeping a strong light on the road immediately ahead.

Stop and back-up lights also are provided, the latter automatically turning on when the gears are shifted into reverse. This is a big convenience, and safety factor when backing the car at night.

A thermostat is provided in the generator, for automatic regulation of the charging rate to meet varying requirements.

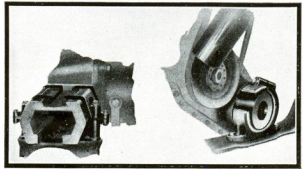
The distributor is mounted on the rear end of the generator.

At normal engine speeds the spark advance is automatically regulated but under certain conditions the spark lever on the steering wheel should be used.

The spark should be retarded during the starting operation and at slow idling speeds, or when engine labors under heavy pull. Under all other conditions it should be fully advanced.

## Rubber Engine Mountings

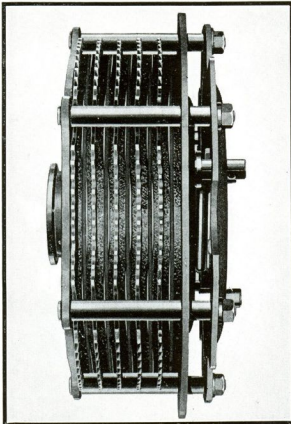
The Buick engine is mounted on flexible rubber mountings, as shown in the accompanying illustration. This is an additional Buick safeguard against the transmission of sounds to the car body. These flexible mountings, while they hold the engine firmly, are so designed that rubber under pressure cushions the engine and insulates it from the frame.



*The left view shows the rear flexible engine mounting and the right shows the front.*

## Clutch

The famous Buick multiple disc clutch has 10 discs with a friction area of 212 square inches. The driving discs are waved in such a manner



*Note the wavy discs in the Buick multiple disc clutch, which insures soft, gradual engagement.*

as to allow them to take up the load gradually, making for utmost smooth-

ness of operation and long life. The clutch runs inside the flywheel housing and is fully protected.

This type of clutch consists of two sets of plates, the driving plates being lined on both sides with friction facing. The driven plates are of special steel of uniform thickness, and accurately made to insure smoothness of operation. When the pedal is depressed, the clutch plates separate, and as a consequence there is no driving connection between the crankshaft and the rear axle. When the pedal is released, the plates are brought together by the clutch spring and the resulting friction causes the clutch to revolve as a unit and thereby establishes a direct driving connection between the engine and the rear axle, when the transmission control lever is in other than neutral position.

Only the finest materials are used in its construction and it is carefully balanced before installation to make it run smoothly and quietly. It will operate for long periods without adjustment and when adjustment is required, it is simply and easily accomplished.

## Transmission

The transmission is the selective sliding gear type, three speeds forward and reverse. All gears are of chrome nickel steel, heat-treated. New Departure ball bearings and large bronze bearings keep shafts and gears in permanent alignment, reduce friction to a negligible point and make for long wear and quiet operation.

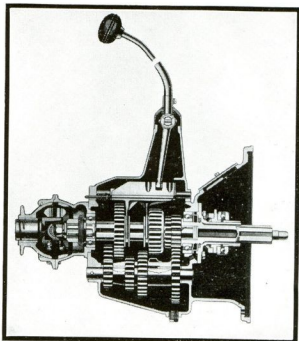
The speedometer gear is enclosed in a housing at the rear of the transmission, where it is fully lubricated and protected from water and grit.

The change speed gears are carried on two shafts, the lower of which is known as the countershaft and carries the counter-gears, while the upper or main shaft carries the sliding gears. The main shaft is mounted on a New Departure ball bearing in the clutch gear at its forward end.

The countershaft is stationary and the counter-gears revolve on it. The reverse idler gear is mounted on a separate shaft and is in constant mesh with one of the counter-gears. The

sliding gears on the main shaft can be moved along the shaft to engage with any of the counter-gears.

The high and intermediate sliding gear has internal teeth on its forward side so that it can be moved over the clutch gear to lock the main shaft and clutch gear securely together.



*Cross section of the Buick transmission and universal joint, showing construction and bearings.*

## Rear Axle and Torque Tube Drive

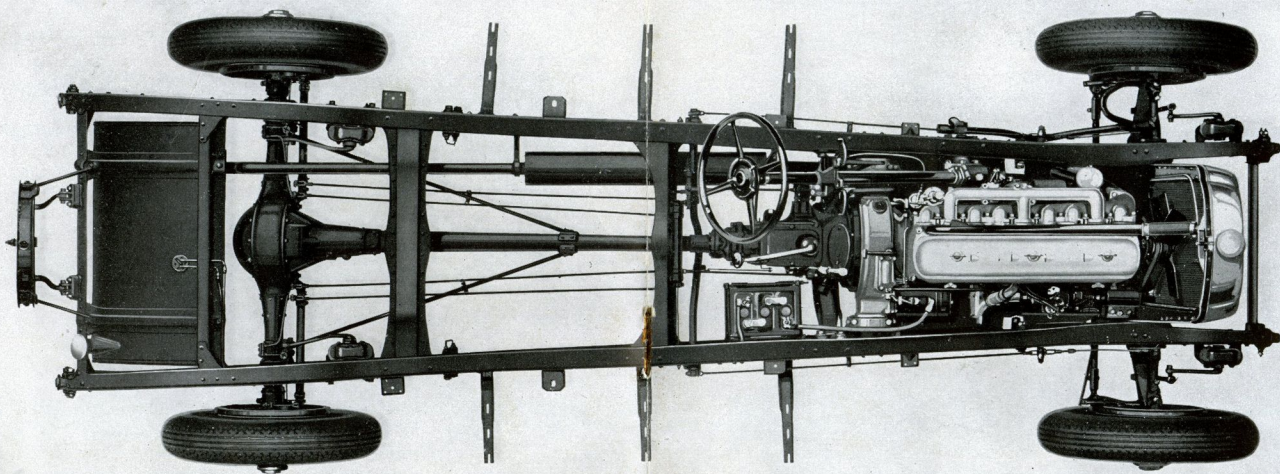
One of the many costly Buick features is the torque tube drive. This construction is not only tremendously strong, but it completely encloses and protects the propeller shaft and keeps it in perfect alignment with the rear axle.

Only one universal joint is necessary with this type of construction and it is located at the front end of the shaft, being automatically lubricated directly from the transmission case.

The rear axle is the three-quarter floating type, which means that the housing supports the full weight of the car, relieving the axle shafts from all save driving strains. In case of rear spring breakage, a Buick can still be driven without harming it, as no torque is taken by the rear springs.

Only the finest materials are used in this rear axle. All gears and pinions are of costly alloy steel and axle shafts are manganese steel, to guard against

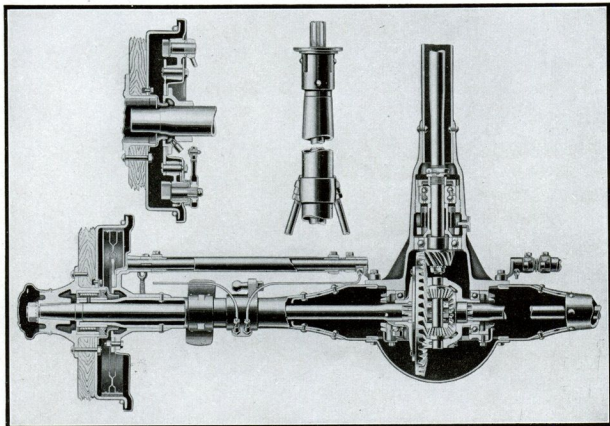




## *The Greatest Chassis of Them All*

This is the Buick Chassis for 1930. It is one of the most highly specialized chassis in the world and possesses excellent qualities not to be found in any chassis in its field. The Buick valve-in-head engine—the Buick multiple disc clutch—the Buick torque tube drive—

the Buick three-quarter floating rear axle—Buick Controlled Servo Mechanical four-wheel-brakes—Semi Elliptic rear springs—Double acting Lovejoy hydraulic shock absorbers—as well as many other fine engineering features, here find their finest expression.



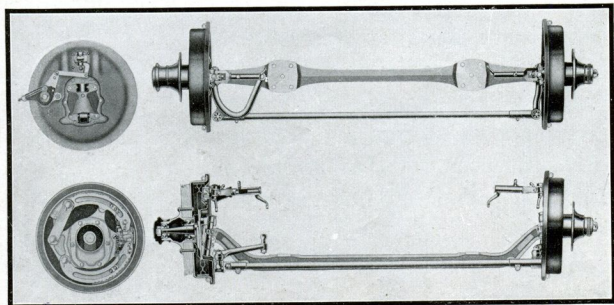
*Sectional views of Buick three-quarter floating rear axle, torque tube drive and wheel hubs, showing general design and bearing installations.*

breakage. New Departure ball bearings are used on the pinion shaft and differential, with Hyatt bearings in the rear wheels.

The entire design and construction of this rear axle is remarkably strong. The great width of the chassis frame

places the weight of body and passengers unusually close to the rear wheels, which reduces to a minimum the strain on the axle housing.

The differential case is all in one piece, for greatest strength and maximum operating efficiency.



*Buick front axle, showing I-beam construction, protected steering cross-rod and detail of four-wheel brake mechanism.*

## Front Axle

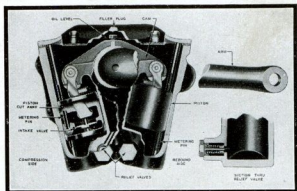
The front axle is the reverse Elliott type, I-beam section, with tie rod located behind the axle for protection. King bolts and steering spindles are of generous size, ball thrust bearings insuring easy steering and minimum wear. The front wheels run on two New Departure ball bearings each.

The axle proper is a single forging of enormous strength, of carbon steel very heavy in section. The I-beam section incorporates the same principle as is used in the great girders of buildings and bridges and will meet all road shocks with a wide margin of safety because of its great strength.

## Springs and Shock Absorbers

Both front and rear springs are semi-elliptic, the front being overslung and the rear underslung. All spring eyes are bushed with bronze, lubricated by the Zerk high pressure grease gun.

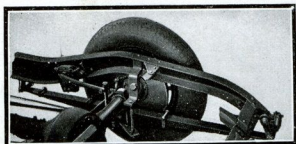
the "ride" or clearance between the frame and the axles. This in turn lowers the center of gravity. As a result, Buick cars not only compensate perfectly for rough road surfaces, but are remarkably free from side sway and "rolling" on curves.



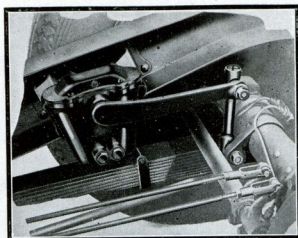
*Sectional view of Lovejoy double-acting hydraulic shock absorbers.*

The new Lovejoy shock absorbers are of the double-acting piston type, which means that they dampen the road shocks as well as rebounds. The diagram on this page shows the arrangement of both the compression and rebound sides of these shock absorbers. They are the highest type of shock absorbers yet developed and will last for a great many years with a minimum of care or adjustment.

This suspension, with the improved Lovejoy double-acting hydraulic shock absorbers, is a real triumph in riding ease. These Lovejoy shock absorbers prevent striking the axle and reduce



*View of Buick rear installation of Lovejoy double acting shock absorber, showing frame attachment.*



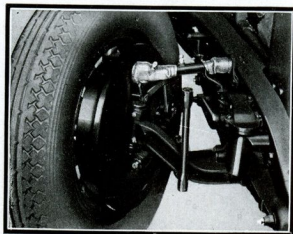
*Another close-up of Lovejoy installation on 1930 Buick frame and axle.*

## Controlled Servo Brakes

Buick Controlled Servo Internal four-wheel brakes are mechanically operated. Being fully enclosed, they exclude mud and water. This not

An independent system of emergency brakes is furnished, located in the rear drums and operated by a hand lever beside the gear shift lever.

Briefly, these brakes have the following advantages: (1) Operate with low pedal pressure. (2) Require infrequent adjustment and when necessary is accomplished easily and quickly. (3) Fully enclosed and not affected by weather conditions. (4) Long life of brake linings, and brakes remain at their maximum efficiency during life of linings. All four brakes will operate independently of each other insuring driving safety.

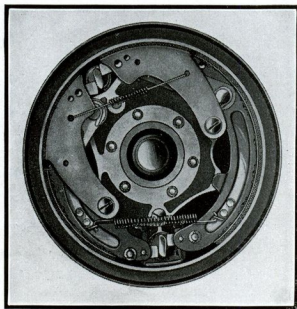


*View of front wheel Buick controlled Servo brake installation, showing strong connections and weatherproof housing.*

only maintains a remarkable uniformity of operation in all kinds of weather but materially increases the effectiveness and life of the brakes.

These brakes are self-actuating and this action is fully controlled through the foot pedal, because of the patented hinged shoe construction.

Buick Controlled Servo brakes are very accurately made, all drums being carefully machined. As a result, adjustment is correspondingly accurate and is quickly made from the outside.



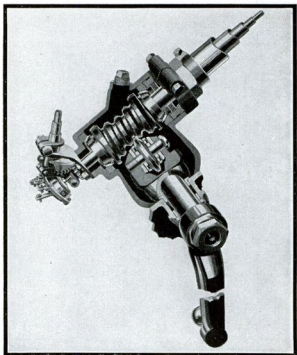
*View of Buick controlled Servo brake mechanism showing operation of shoes against drum.*

## Steering Gear

Remarkable steering ease is obtained in the Buick for 1930. All road shock is eliminated from the steering wheel and the car will travel in a straight line at any driving speed, without the front end "wandering" which is frequently found in many cars at high speed.

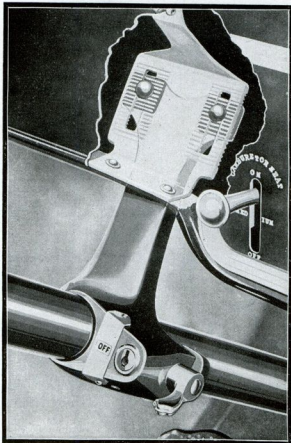
The steering gear is known as the worm and roller type, is fully adjustable and very accurately made. Both upper and lower bearings are of the tapered roller type.

The shock eliminator is incorporated as a part of the spring shackle

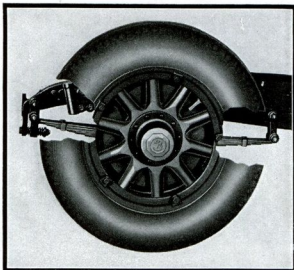


*Cut-away view of steering gear, with worm, roller mounting and bearings.*

at the front end of the frame on the steering gear side. Its function is to absorb road shocks before they can be



*View showing adjustable steering column and lock for steering wheel and ignition.*



*Front end of frame on left side, showing Buick road shock eliminator.*

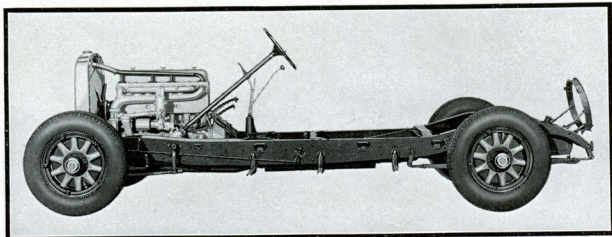
transmitted to the steering gear and through it to the steering wheel. This road shock eliminator allows free action of the front springs thereby absorbing road shocks and assuring better steering and roadability of the car.

The steering gear consists of a worm on the lower end of the steering tube which engages with a single roller mounted on the roller shaft.

The worm is mounted between two tapered roller bearings while the roller is mounted on a pin in the forked end of the roller shaft and provided with roller thrust bearings. The roller shaft is carried in two bronze bearings in the housing cover. The result is a steering gear which is remarkably free from wear and requires adjustment only at long intervals. Both worm and roller are drop-forged and hardened to give strength and long life.

A lock is provided for locking the steering gear in conjunction with the ignition. It is mounted on the steering column and bolted to the back of the instrument board. In one operation, it locks both the steering wheel and the ignition and provides the most effective protection against theft.

## The Chassis



*Side view of the Buick 1930 chassis, showing the sturdiness of its construction and the clean-cut mounting of all chassis units.*

The chassis on all 1930 Buicks are entirely new. The frames are tapered and are extra wide at the rear, providing a rigid support for the bodies. The depth of side members has been increased, as well as the width of the flanges. All cross members are exceptionally strong and are secured to the side members through wide flanges. This produces an unusually stiff and rugged frame, greatly contributing to the riding qualities and life of the car.

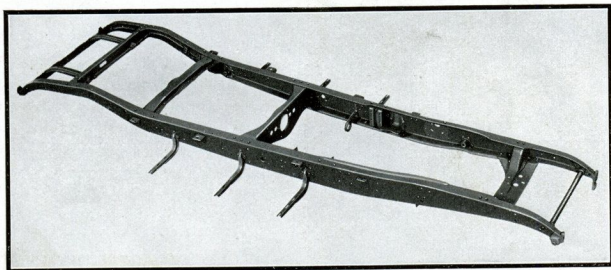
The brackets at the side of the frame for supporting the body are short and stiff and the front end of the body is

bolted directly to the frame side member, through the wide, strong flange.

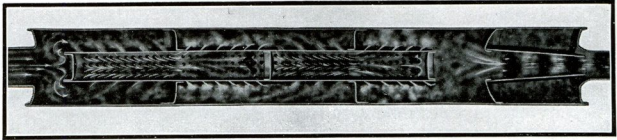
Front and rear bumper brackets are integral with the frame. This makes a neat and strong installation.

The new Buick frame is well braced by exceptionally strong cross members. The frame itself is channel section, channels in the 40 Series being 7 inches deep—those in the 50 and 60 Series being  $7\frac{3}{4}$  inches deep. The flanges are  $2\frac{1}{2}$  inches and 3 inches wide, respectively.

This frame is unusually wide at the rear— $44\frac{1}{4}$  inches wide for all series.



*The Buick frame, showing depth of side channels, wide flanges, and exceptional bracing by sturdy cross members.*



*The new and efficient Buick muffler, showing the course of gases.  
This muffler is both strong and quiet.*

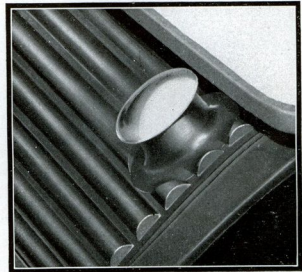
This brings the body weight close to the rear wheels and lessens greatly the strain on the rear axle housing. The frame has a decided kick-up at the rear and this, with the underslung rear springs, makes possible the lowering of the center of gravity without sacrificing any road clearance.

All brake pull rods are mounted to give them full protection and to prevent their rattling on even the roughest road.

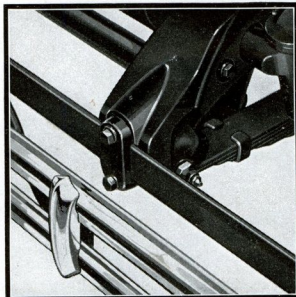
The battery is firmly mounted on the right side of the frame, where it is easily accessible through the front floor boards.

The new tire carrier is an especially strong design, heavily made and securely braced to the cross members of the frame at four points.

A new type muffler is provided which silences the exhaust without any sacrifice of power. The muffler parts are made of heavy gauge steel. All joints and seams in the entire assembly are securely welded. The muffler is rigidly mounted in the frame.



*This view shows the new fluted gasoline tank cover and new filler cap.*



*Close-up of left front frame side member, showing integral bumper mounting.*

The new gasoline tank cover not only adds a finished appearance to the rear end of the car, but lends extra strength. It is firmly fastened to the two rear cross members. The gasoline tank filler cap is a new type, which is very accessible and permits easy filling of the tank. All openings at the rear of the car are completely covered with neat metal trimming.

Fender brackets are channel section and are firmly secured to the chassis frame. These are placed on either side.

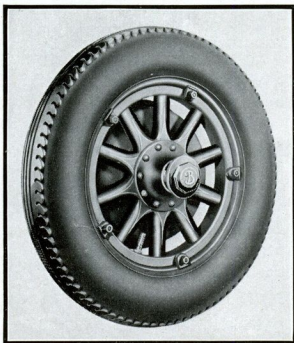
## Wheels

All models have wood wheels as standard equipment. Ten large spokes are used with ten spoke bolts to give great strength as well as sturdy appearance. Demountable wood, wire or disc wheels together with fender wells are available as additional equipment at slight additional cost.

The front wheels are equipped with adjustable ball bearings and the rear with Hyatt roller bearings.

The new chromium plated hub caps are of a very distinctive design which adds greatly to the appearance of the car.

Demountable rims are the bolted-on type and are easily and quickly removed.



*This is the sturdy type of wheel furnished on 1930 Buick cars.*

## Chassis Lubrication

The Buick centralized lubricating system is a great convenience. Many points which are inaccessible are tubed to Zerk fittings which are clustered at a trap door in the side aprons. This principle of design reduces the number of points to be lubricated.

It consists of a compressor and ball-check valve fittings located at the various points requiring lubrication

and these fittings are so located as to provide maximum convenience.

To force grease to the bearings, it is necessary only to place end of grease gun on the fitting and push the handle, which may be accomplished very readily with one hand.

When pressure contact is made the rim of the nipple seats in the cup of the nozzle and effects a leak-proof seal at any angle within 25 degrees of the axis of the nipple.

During the forward stroke of the handle, the piston injects the lubricant in the hollow stem through the nozzle, containing ball check, directly into the nipple of the Zerk fitting.

The hollow stem is automatically refilled by vacuum suction, through an inlet which is opened by the piston at the end of the return stroke. The high pressure will force grease into any bearing.



*You need not get under the Buick car to lubricate the chassis.*



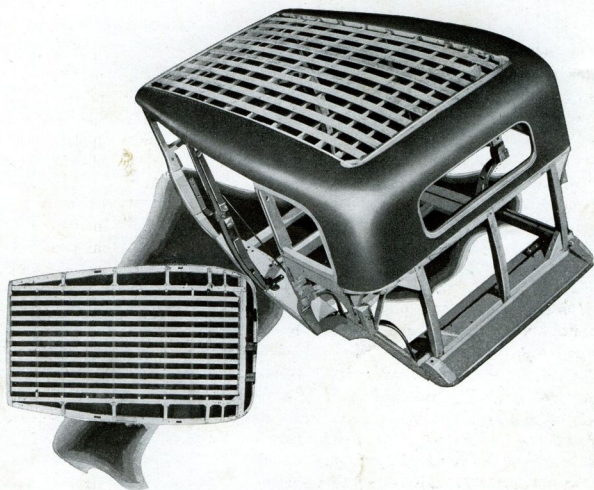
## Body by Fisher

The foundation of strength and durability in this Buick body is the scientifically braced wood framework which has been developed over long years of experimenting and practical service tests.

The quality of wood used, the care in the selection of wood, the precision with which wood parts are cut out, the accuracy with which they are assembled—all these are the factors which make Fisher Bodies the most dependable and longest lived bodies on the market.

Strengthening this sturdy wood framework is a highly developed system of bracing. Sturdy steel braces

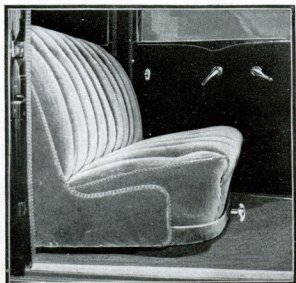
are used to bind the wood members together and support them at every point where strains may occur. This system of bracing has been used for years and has proven its satisfaction on hundreds of thousands of bodies in actual service. Developments, of course, have been constantly made to improve the system of bracing in this body for Buick. For instance, a new brace has been added which places Fisher Body still farther ahead of competition in point of strength. This is a triangularly shaped pressed steel brace which is used at the lower back corners, where the back body sills join the side body



*This view shows the sound construction of body and roof in the 1930 Buick bodies by Fisher.*

sills. This brace adds greatly to the strength of these joints, offsetting completely the weaving caused by driving over uneven roads. Body by Fisher today is the only body so scientifically, and practically braced where added strength is needed.

Another source of value and durability is the complete waterproofing of the wood framework. In production, after the framework has been assembled, a thick coat of wood preservative is sprayed over it and dried into the wood by heat.



*View showing the convenient adjustable driver's seat in all Buick closed cars.*

The most advanced type of roof construction is used in the Fisher Body for the new Buick.

It differs essentially from the older type of roof in the kind of roof rail used.

The older type of roof employed a solid roof rail. The new roof has a skeleton rail structure which is considerably lighter in weight than the solid roof rail, but is actually as strong as a solid roof rail. This strength is assured by binding the members of the skeleton roof rail together by

strong wooden cross members, securely screwed and glued into the roof rail sections. This whole structure is further reinforced by the use of the metal roof rail panel. Stronger joints are used where the roof is mortised to the body pillars. Instead of extending partially through the rail, the mortised joints extend entirely through the skeleton rail, and the joints are permanently secured by wooden wedges which are driven into the ends of the pillars.

New beauty of design is permitted by this new roof, because the lightened wood structure makes possible the use of the roof rail panel which extends upward over the line of vision, and permits the carrying of the duco finish up as far as the eye can see.

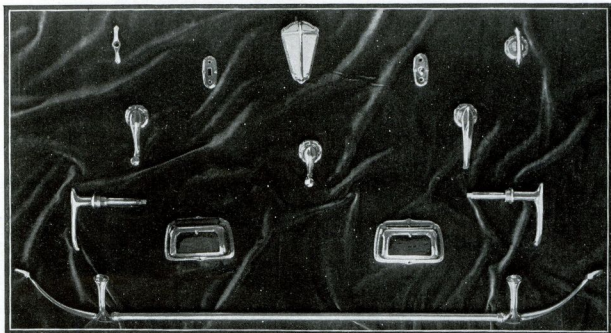
Because the new roof is lighter in weight, the car's center of gravity is lowered. This is a new safety feature because the lowered center of gravity enables the car to hold to the road better and makes it easier to handle at high speeds.

The roof covering is a high grade of fabric, consisting of two layers of cloth joined together by a layer of rubber. The back of the material is treated with aluminum acetate which not only makes it waterproof but water repellent.

The adjustable front seat is a distinctive feature. Its design and adoption is a refinement of comfort which provides an exclusive advantage for Buick bodies by Fisher.

At different times, several people may drive the same car and still enjoy the most comfortable position, regardless of their height or size.

Then too, the individual driver may adjust the seat to suit the varying



*This is typical hardware in Buick 1930 cars, all specially designed and handsomely finished.*

needs of driving. He may adjust the seat up close to the wheel when he wants to sit erect as is required when driving in heavy traffic or he may place the seat further back from the wheel to permit a reclining, restful position when on long drives over the open road.

It is particularly convenient in a case where the husband and wife both drive the car. Either of them may adjust the seat without inconvenience or difficulty to suit their own desires, and it can be re-adjusted in a moment.

The adjustment is controlled by a conveniently placed regulator handle. The seat can be moved backward and forward over a range of four inches, and can be adjusted to any point within that range. The adjusting mechanism acts on the screw principle which enables the seat to remain securely in whatever position is desired.

Adjustment can be made by the driver while the seat is occupied and while the car is in motion.

The exterior fittings are chromium plated. The interior fittings are finished in highly polished nickel.

New, specially designed smoking sets and vanity cases have been adopted in these bodies. These are tastefully finished in nickel with inlays of the upholstery material used in the body, and are not merely useful and convenient, but actually contribute to the embellishment of the interior of the car. The lady's vanity case contains a mirror and a memorandum pad. In the large sedan, the smoking set includes a memorandum pad and a cigar lighter. It is also equipped with very neatly designed corner lights.

The outside door handles are of a new type, the most important feature of which is the protection it provides against theft. If, when the doors are locked, pressure is exerted upon the handle grip to force the lock, a pin of soft metal which secures the handle to the lock shaft shears off and permits the handle to rotate on the shaft without forcing the lock.

## Performance

The climax of all these engineering superiorities is not only in the long life, the dependability and the luxurious ease of riding which the Buick affords, but also in its surpassing performance. Thorough tests which have been conducted at the General Motors Proving Grounds, reveal the outstanding performance of 1930 Buicks as indicated in the following charts.

You will note for example that the Buick will accelerate in high gear from 5 to 25 miles per hour in 8.4 seconds. Other interesting figures are also shown. Emphasis is placed on the fact that these are clocked miles per hour and not speedometer readings.

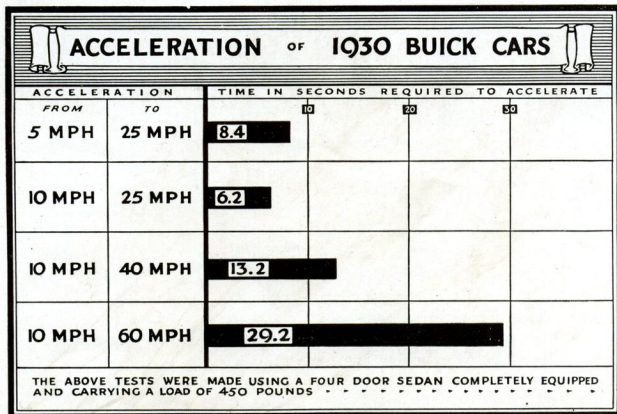
The hill climbing chart reveals an equally startling performance. The 1930 Buick will start at 5 miles per hour at the bottom of an 11.6% grade

and within 1,400 feet of climbing, attain a speed of 26 miles per hour or more, all in high gear.

These new Buick cars will all attain a speed well in excess of seventy actual miles per hour, without a trace of vibration and with apparent ease.

These figures suggest what you may expect when you ride in this superb car. But they do not reveal the matchless smoothness, the silence, the ease of riding and handling which are just as distinctive. These and many other Buick attributes must be experienced to be appreciated.

The 1930 Buick is the greatest of them all, as you yourself will say when you have tried it. Buick dealers everywhere invite you to get behind the wheel and get the facts.



Acceleration chart showing actual Buick performance by strict test.

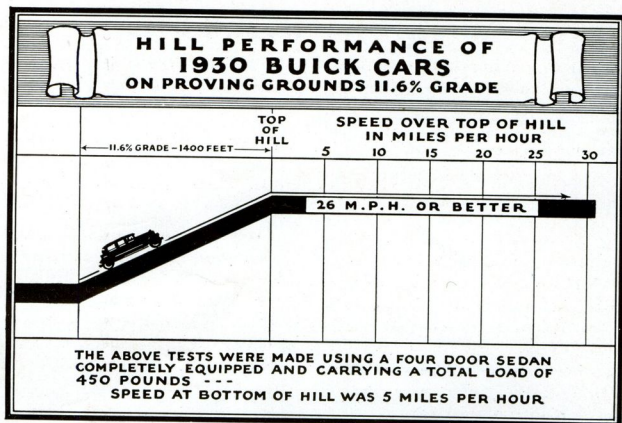


Chart showing Buick closed car hill performance, scientifically checked.



IN buying a Buick automobile you secure not only a fine motor car, but service equally fine. More than four thousand Authorized Buick Stations throughout the United States insure you the best of service wherever you go.

## Buick Specifications

### Engine

- Type**—Valve-in-head, six cylinder.
- Bore and Stroke**—118" Series— $3\frac{7}{16}$ " x  $4\frac{5}{8}$ ".  
124" and 132" Series— $3\frac{3}{4}$ " x 5".
- Cubic Displacement**—118" Series—257.5 cu. in. 124" and 132" Series—331 cu. in.
- Horse Power**—118" Series—80.5 H. P. 124" and 132" Series—98 H. P.
- Crankshaft**—Drop forged, hardened and ground. Counter weights and torsion balancer—4 main bearings steel backed.
- Connecting Rods**—Drop forged, heat treated. Connecting rod bearings—babbitt, bonded to connecting rod.
- Pistons**—Cast iron—2 compression rings—1 oil ring (above the pin).
- Valves**—Inlet chrome nickel—Exhaust silichrome No. 1.
- Timing Gears**—Crankshaft and generator shaft—steel. Camshaft—Textolite, helical cut.

### Lubrication System

- Type**—Gear pump.
- Feed**—Pressure to main and connecting rod bearings, and rocker arm shaft. Piston pins and cylinder walls are lubricated by oil shot through a hole in connecting rod bearing upper cap.
- Oil Pressure**—Series 118"—35-40 lbs.  
Series 124" and 132"—25-30 lbs.
- Oil Filter**—AC cartridge type.
- Crankcase Ventilator**—Buick vacuum type.
- Chassis**—Centralized lubrication—Zerk.

### Fuel System

- Carburetor**—Marvel. Type—air valve triple jet. Heat control—automatic, and manual on instrument board. Fuel feed—AC fuel pump. Air cleaner—AC.

### Cooling System

- Type**—Automatic radiator shutters, thermostatically controlled. Pump type, centrifugal. Pump drive—generator shaft. Radiator type—cellular. Fan—4 blades. Fan drive— $\frac{5}{8}$ " V belt. Fan lubrication—self contained oil pump—fan bearings.

### Clutch

- Type**—Multiple dry disc. Number discs—10. Friction area—212 sq. in.

### Transmission

- Type**—Sliding gear. Location—unit with engine. Gear material—chrome nickel steel. Counter shaft—idler gear. Main shaft pilot bearings—plain. Main shaft bearings (front and rear)—New Departure ball. Speedometer—driven at transmission.

### Universal Joint

- Number of joints—one. Lubrication—automatic from transmission.

### Frame

- Material**—Pressed steel.
- Channel Width**—118" Series—7".  
124" and 132" Series— $7\frac{3}{4}$ ".
- Flange Width**—118" Series— $2\frac{1}{2}$ ".  
124" and 132" Series—3".
- Cross Members**—Number of members—118" Series—6. 124" and 132" Series—7.
- Frame Width**—Front, 118" Series—30".  
Front, 124" and 132" Series— $30\frac{1}{4}$ ".  
Rear, all Series— $44\frac{1}{4}$ ".

### Steering Gear

- Type**—Worm and roller. Thrust bearings upper—taper roller. Thrust bearing lower—taper roller.

### Rear Axle

- Type**—Three-quarter floating. Housing material—pressed steel. Final drive—spiral bevel. Differential pinions—two. Differential bearings, pinion shaft bearings (front and rear)—all New Departure ball. Wheel bearings Hyatt roller. Axle shaft material—Manganese steel. Differential case—one-piece. Drive—torque tube.

### Front Axle

- Type**—Reverse Elliott. Section—I-beam. Material—carbon steel. Tie rod location—rear of front axle. Knuckle bearings—bronze. Vertical thrust bearings—ball. Front wheel bearings—ball.

### **Front Springs**

**Type**—Semi-elliptic. Overslung. Eye bushings—bronze. Bolt lubrication—Zerk fittings.

**Length of Spring**—118" Series— $36\frac{3}{8}$ ".  
124" and 132" Series— $37\frac{1}{8}$ ".

**Width**—2".

### **Rear Springs**

**Type**—Semi-elliptic. Underslung. Eye bushings—bronze. Bolt lubrication—Zerk fittings.

**Length of Spring**—118" Series—55".  
124" and 132" Series— $58\frac{1}{4}$ ".

**Width**— $2\frac{1}{4}$ ".

### **Shock Absorbers**

**Make**—Lovejoy.

**Type**—Double-acting hydraulic.

**Location**—Front and rear.

### **Brakes**

**Service Brake**—**Type**—Buick controlled Servo internal mechanical expanding—self energizing two-shoe cam. **Location**—front and rear. **Equalized**—front to rear.

**Hand Brake**—Independent. **Location**—rear wheels—Internal mechanical—shoes—two. **Actuation**—cam.

### **Electrical System**

**Make**—Delco-Remy. **Type**—two-unit. **Voltage of system**—6 volts. **Head lamp type**—guide tilt ray. **Instrument board lighting**—direct and indirect. **Battery**—Exide.

**Number of Plates**—118" Series—13.  
124" and 132" Series—15.

**Stop and Back-up Light**—15 candle power.

**Head Lamp**—21-21 candle power.

