

## STUDEBAKER OFFERS FOR 1933 · · ·

100 HORSEPOWER COMMANDER EIGHT, in the \$1000 Field



· · · TWO NEW PRESIDENT EIGHTS

AT PRICES FAR BELOW ANY PRESIDENT PREVIOUSLY OFFERED

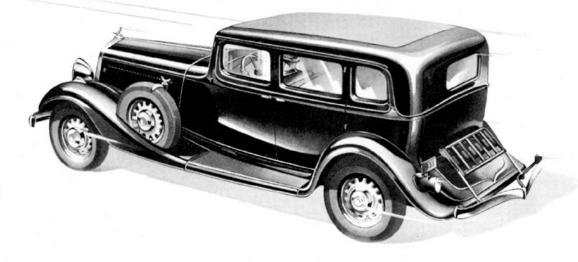
Before you purchase a new car ask yourself this question:
"When Champions are available at such prices, can I afford to
buy any car without first seeing these new Studebakers?"

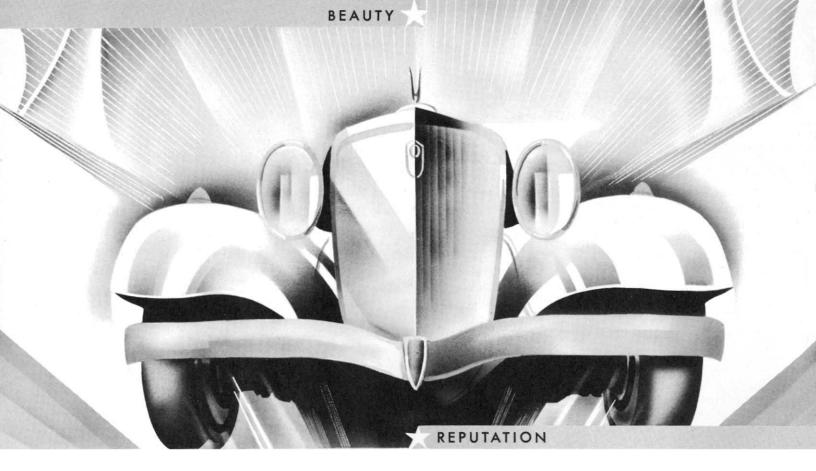
Power brakes, the greatest single engineering feature of the year, which eliminate 50 per cent of pedal pressure—automatic choke control—automatic heat control—automatic ride control—automatic spark control—automatic starting—safety glass, Free Wheeling—these and other features combined with a mastery of detail, make the Studebakers for 1933 truly the motor cars of a new day.

Not only in design do the new Studebakers excel! But also in value! The world famous Commander—the car which established motoring history by traveling 25,000 miles in less than 23,000 minutes, the car which set two new transcontinental records and put more expensive cars to shame in stock car races throughout the country—is now within reach of thousands of additional motorists.

Now, too, for the first time the Champion President Eight invades a new and lower price field! All-time record breaker of 19 Indianapolis races and holder of more official American records than any other stock car, the brilliant President needs no introduction. It has built a reputation for performance and endurance that has no peer in motoring history. And now this great car is offered to you at a lower price than you ever expected! And then in the smart new Studebaker Six there are outstanding improvements and refinements never before available in a car priced so low.

These Studebakers are offered to you as the outstanding values of 1933. You owe it to yourself—to see—to drive a new Studebaker.





# THE NEW STUDEBAKERS

By Lincoln J. Carter

Studebaker presents new cars for 1933 that add new meaning to its spirit of constant progress and its deeprooted traditions of quality. They look and act like the thoroughbreds they are—the finest of a long line of genuine champions.

Rather than adopt a self-satisfied attitude toward past accomplishments and devote

their entire attention to some one innovation for exploitation, Studebaker's staff of trained engineers and technicians elected to pursue a much more difficult course. For an entire year they have been studying and testing to perfect features which have already been tried and proved in every last detail.

The result is a balanced excellence that only a ride can express. Months of usage will only reveal its

#### AUTHOR'S NOTE:-

Imagine a Commander Eight with 100 Horsepower in the \$1000 field!

I honestly believe that the hardest assignment I have ever had is to describe adequately to you these new Studebakers. Suppose I say they are "wonderful"? Suppose I use every superlative in Mr. Webster's big book? I still am only repeating phrases that have been repeated for years by copy writers for even the most inexpensive cars.

I have ridden in these new Studebakers. I have felt a performance that is new. I have experienced a thrill that is going to make it hard for me to return to my present love. I have been lulled with a new meaning of the word "comfort" and have known the mental ease of real safety.

That is all right for me, but what about you? How can I describe these cars so that you will really believe me? I give it up—it can't be done with a typewriter. The only way you can know is to do as I have done—take a ride. It needn't be long, for here is where a little goes a long way.

If you are going to buy a car, you owe it to yourself to gamble at least ten minutes of your time and take a ride. If they are only half as good as I say they are, I know you will agree with me that Studebaker is the car to buy.

true measure. These new Studebakers will delight you—they will surprise you—they will give you a sincere appreciation that here, indeed, is the motor car of a newday.

The new Studebakers look as modern as they are: gracefully beautiful, without becoming radical. Surging speed has been caught in an inter-

pretation so rhythmic, so pleasing, that every line flows easily and naturally from front to back without a single violent or sudden deviation to mar the whole.

Slanting radiator and radiator aprons blend into fenders to give a very clean, simple touch to the front of the cars. The roof line sweeps gently back into a concave rear deck with a treatment that is doubly attractive because it conceals the rear springs and spring shackles. All fenders have been dropped low on the sides so that none of the chassis mechanism spoils the charm.

This new body treatment justifies itself from the practical standpoint, as well as from the aesthetic. It combines patrician grace with the scientific findings of aeroplane experimentation to lower wind resistance nine per cent. Power is saved in the higher speed ranges and ease of handling, acceleration and flexibility are increased.

Another enhancement of appearance having utilitarian value is the dropping of wheel sizes one inch. It permits larger tires giving all the advantages of "doughnuts" with none of the drawbacks caused by the extreme. A new metal artillery wheel has also been developed that is a marked improvement in appearance. It can be either chromium plated or painted. Wire wheels are optional.

Typical of the thorough attention which makes the new Studebakers so outstanding is the use of power brakes as standard equipment for the first time on any car in the Studebaker price field. Foot pressure is assisted by a vacuum cylinder controlled by the brake pedal. Just a touch will bring the car to a stop very firmly, and very agreeably and pleasantly for the driver. A woman can stop a Studebaker President almost without effort. The brake is so designed that deceleration is proportional to the pressure exerted by the driver, with the power cylinder exerting its

full share of the effort at all times. In sudden stops at high speed, the danger of locking the wheels and skidding is minimized.

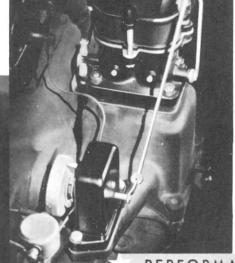
Another striking improvement is in lubrication. Steering tie-rods on The Studebaker Six, The Commander Eight and President Eight chassis are bushed with rubber and require no grease. On all models, ball bearing spring shackles have removed eight points of lubrication. The steering drag link, from steering knuckle arm to steering column, has a magazine type oiling system requiring attention only at 5,000-mile intervals. These and other developments leave but *four* points requiring lubrication every 2,500 miles—all the remainder need be inspected and lubricated only at 5,000-mile intervals.

It is the details of a motor car that make it a masterpiece—or just another car. This is particularly true of the motors. Every single important factor that goes for endurance, performance and long life is made up of small parts. When any of these parts are slighted, perfect balance is lost.

There are motors built today that give a lot of horsepower for a short time; or ample power for a long time, if they are given plenty of attention. But nowhere in the industry is there a motor equaling Studebaker for perfection of detail and in giving full power day in and day out, month in and month out, with no attention at all.

The entire new Studebaker line comes out with

the most highly perfected system of carburetion ever offered to the buy-



PERFORMANCE

The new Automatic Choke control completely eliminates the need of an annoying dash button and the attendant evils of "overchoking."

SAFETY

Power brakes, in which the pressure of the driver's foot is assisted by the power of the motor, are a notable safety feature of the new Studebakers.

VALUE



Automatic Ride Control, introduced by Studebaker in 1932, protects you against both the expected and the unexpected bump in the road without fumbling for a lever on the dash.



Through the untiring efforts of Studebaker engineers, many lubrica-tion points have been eliminated in the new cars. Only four points in the entire chassis need lubrication more frequently than at 5,000

ing public on a motor car, greatly improving the performance of the engine.

First, there is an automatic choke control. When starting the engine on a cold day this choking device regulates the amount of gasoline which is fed to the intake manifold without the driver fumbling with an annoying dash button. Now, you simply start the motor, and drive right out as fast as you care to go.

There is also automatic heat control, through a valve in the exhaust manifold made of heat resisting metal and having a weight holding it shut. When the valve is closed all the heat from the exhaust manifold and cylinders circulates around the hot spot of the

carburetor while the engine is warming up. After the car is warmed up and you drive with open throttle, the greater pressure of exhaust gas opens the valve and entirely shuts off the heat. This is an ideal condition, because no heat is needed when the car is running fast. But you do need every bit of heat when starting out on a cold day, or when idling along a boulevard.

The shape of the combustion chamber has been changed slightly

and compression raised. Duplex down-draft carburetion is on all the eight cylinder models. Down-draft carburetion, a new type Lanchester vibration damper that makes the engine smoother and silent timing gears on The Studebaker Six are other notable improvements.

There are four chassis in the line: The Studebaker Six, 85 horsepower; The New Commander Eight, 100 horsepower; the President Eight, 110 horsepower; and the Speedway President, 132 horsepower. A fivepassenger Sedan, Convertible Sedan, Convertible Roadster, St. Regis Brougham, and Coupe are available in all lines. In addition a Limousine and seven-passenger Sedan are offered on the Speedway President chassis.

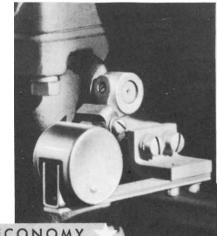
Kick shackles to take away wheel shock and road shimmy are now standard on all four chassis. Automatic ride control gives every car in the line the same riding ease that has characterized the larger Studebaker models.

New and improved exhaust and intake silencers mounted in rubber give the nearest approach to absolute silence ever known in an automobile. New propeller shafts in both of the President models have roller bearings instead of plain bearings and in test runs they have averaged 22,000 miles without attention.

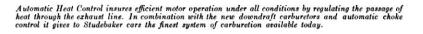
The New Studebakers are the roomiest, most comfortable cars you ever rode in. Nothing has been neglected, from insulation of the armored-steel bodies against heat, cold and noise, to the scientific design of seat cushions which contribute to utter relaxation.

As in the 1932 Studebakers, free wheeling with synchronized shifting and safety glass in the windshield and all windows are provided as standard equipment on all models at no extra cost.

> These new Studebakers are the best performing, best handling, most trouble-free cars that have ever been presented to the public. They are champions every bit—with a beauty all their own. You owe it to yourself to see them, to drive them, before you buy any automobile.



ECONOMY





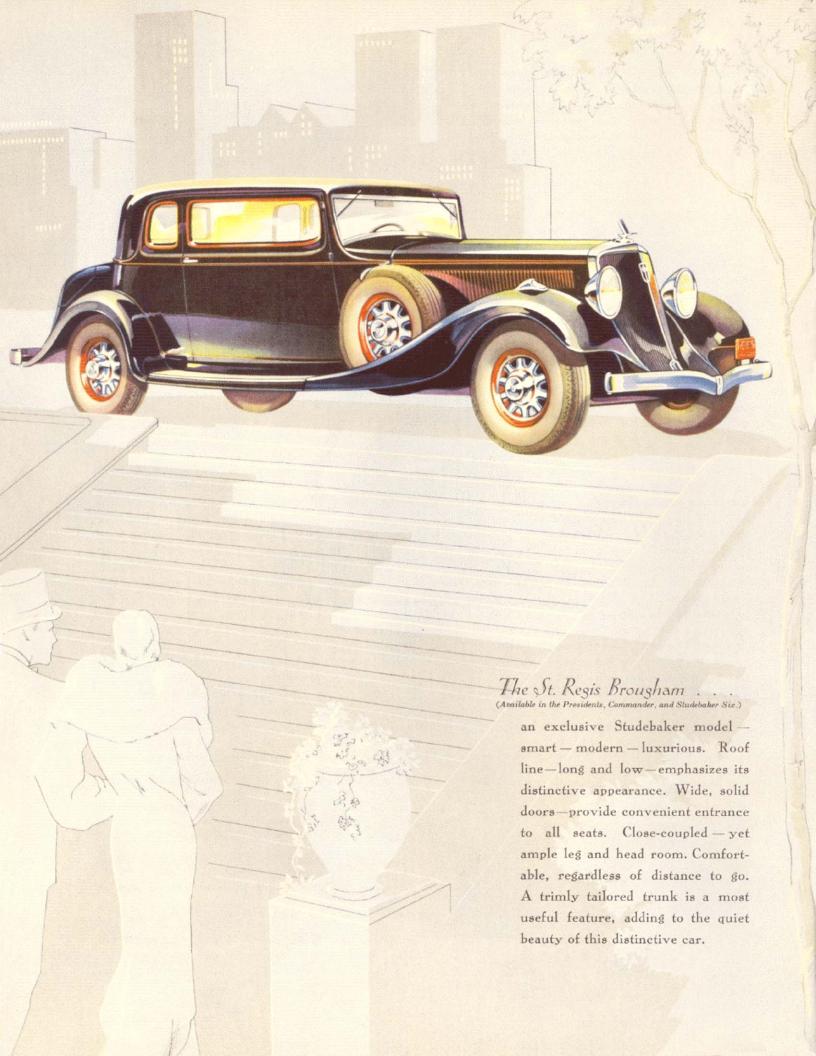
Reproduced by permission of the Metropolitan Museum of Art, New York.

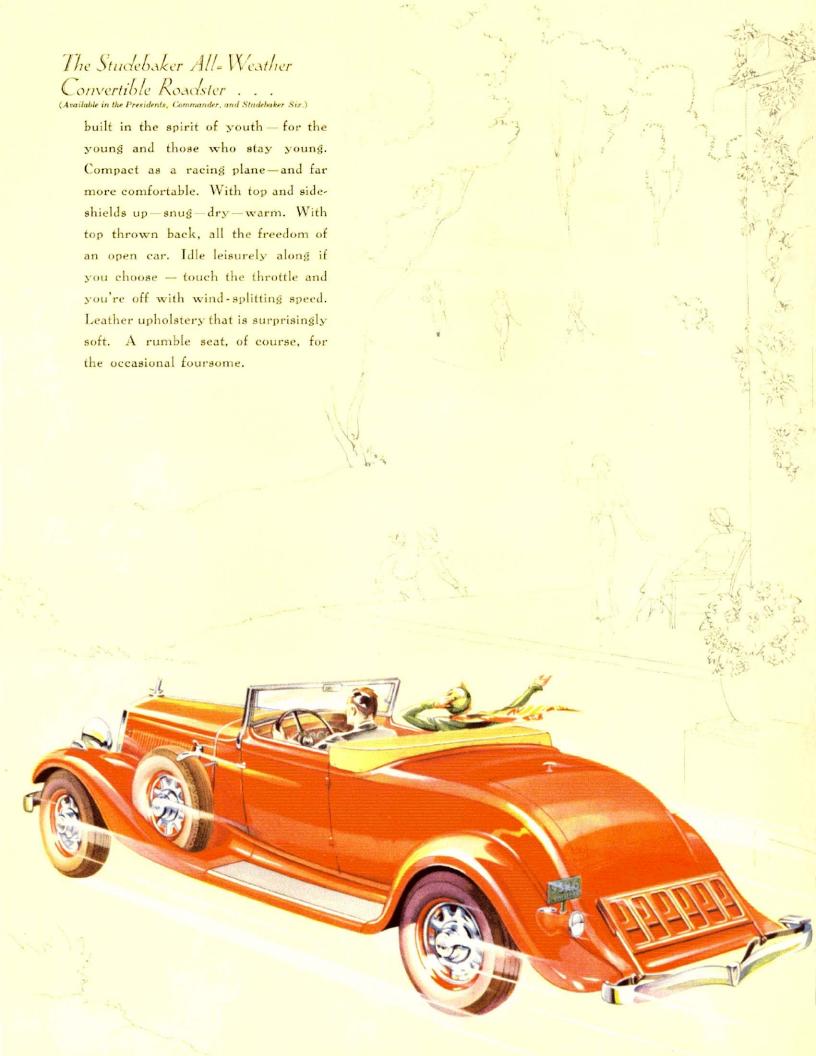
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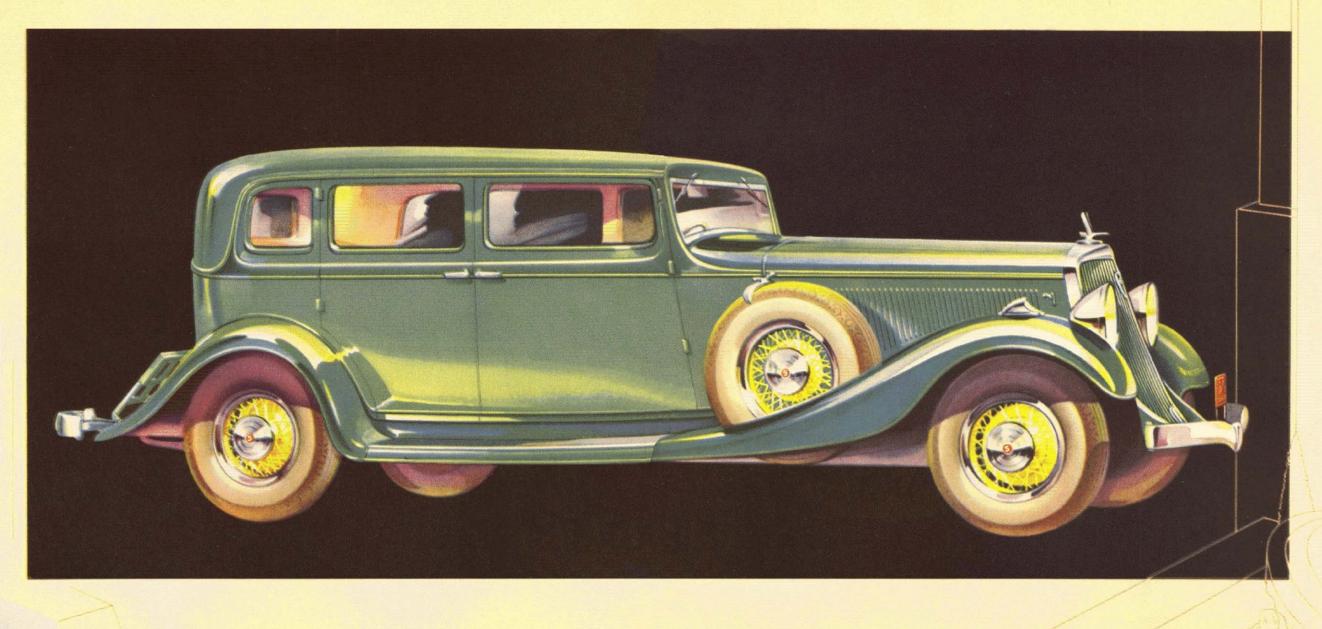
### ROSPIGLIOSI CUP

Benvenuto Cellini, goldsmith, sculptor, author, soldier of fortune, was born in Florence in 1500. Protege of kings, statesmen and popes, who alike paid tribute to his artistry. He sought perfection and achieved immortality. The most notable example of his craftsmanship is the Rospigliosi cup.

All fine things, whether they be in the realm of the goldsmith, the sculptor, the artist, the architect—yes, even the automobile craftsman—are fine because they reflect the vision—imagination—patient attention to detail—and the ceaseless striving for perfection of the men who wrought them. That is why the new Studebaker is a truly fine motor car.







## The Studebaker Five Passenger Sedan . . . . (Available in the Presidents, Commander, and Studebaker Six.)

eminently safe — delightfully comfortable — remarkably economical — the most preferred body type. Easy entrance — through wide angled doors. Seats, front and rear, roomy enough for three. Complete insulation against weather and noise. All the safety precautions so necessary in a family car. The pleasant quietness — the unbelievable softness of deep cushions — the convenience of its thoughtfully selected appointments — all invite you to enjoy such comfort as you've never dreamed of.



built for those who refuse to grow old. Low-swung—lean as a Derby winner—smart. With top and sideshields up, it's a sedan—weathertight—but with top flung back—door windows up or down—there's the freedom of all outdoors. Leather upholstery for comfort and wear. Instant speed when desired, but equally at home idling down shady lanes.







# ASK ME ANOTHER!

- Q: What is the actual horse-power developed?
- A: Speedway President 132 at 3400 to 3600 R. P. M.
  President 110 at 3600 to 3800 R. P. M.
  Commander 100 at 3800 R. P. M.
  Studebaker Six 85 at 3200 to 3600 R. P. M.
- Q: What is the compression of Studebaker engines?
- A: The standard compression for each motor is 5.5 to 1.
- Q: Is it necessary to use an anti-knock gasoline with Studebaker's 5.5 to 1 compression heads?
- A: No. They operate on "regular" gasoline.
- Q: What engineers were first to isolate the causes for motor roar, and to silence them through the adoption of the carburetor muffler?
- A: The Studebaker engineers were the first to find that carburetor roar was caused by high speed hydraulic knocks in the intake manifold, due to the quick closing of valves—producing the same effect as when a faucet in a high pressure water system is turned off quickly and produces a series of knocks back through the pipes. The first carburetor silencer appeared on the Studebaker cars which were introduced on July 10, 1930. Today there is hardly a car produced which has not followed Studebaker's lead in adopting some kind of carburetor muffler.
- Q: How much of the carburetor roar is eliminated on Studebaker cars?
- A: At least 90% of the roar at all ranges of speed is silenced.

- Q: Is there any evidence of unusual efficiency in the Studebaker cooling system?
- A: Yes. The great popularity of Studebaker cars wherever long distances between cities and high speed driving combine with great heat and many grades to put cooling systems to the most severe test.

In the new Studebakers the cooling is more efficient than ever before. Radiation has been increased in proportion to increased performance.

#### VALVES

- Q: What characteristic of the valve action is in a large measure responsible for the outstanding performance of Studebaker cars?
- A: The careful attention given to the valve lift and timing of the valve opening and closing best suited to each engine has had much to do with it. The valves of Studebaker engines are opened and closed at the most advantageous times to permit the greatest amount of explosive mixture to enter the cylinders and to provide the most complete removal of the burned gases. The shape of the cams is such that the valves are raised and lowered quietly.

Even more important, possibly, had been the design and control of the springs so that the action of the valves faithfully follows the cam—even up to the highest speeds. If at any time the springs do not hold the valve action to conform to the shape of the cam, the engine has, in effect, a different cam for that period. The valve spring vibration damper has helped in this direction, as well as reducing valve spring breakage. This damper was originated by Studebaker engineers.



#### CRANKCASE VENTILATION—OILING

- Q: Are Studebaker motors equipped with a crankcase ventilating system?
- A: Yes. A special breather pipe is provided at the back of each motor, to prevent the dilution and deterioration of oil from the condensation of either gasoline or water.
- Q: What is the best evidence of the high degree of efficiency of the oiling system in Studebaker motors?
- A: The fact that the standard stock oiling-system has been used in making the stock car and racing records held by Studebaker motors, including the all-time record of 30,000 miles in 26,326 consecutive minutes and in the 500-mile Decoration Day race at Indianapolis. A regular commercial mineral oil (S.A.E. 30) was used. Five Studebaker racing cars were entered in the 1932 race at Indianapolis. No oil was added during the race and only two quarts were required to fill up each crank-case after the race was over.

#### FUEL SYSTEM

- Q. What type of carburetion system is used on the new Studebaker cars?
- A: Down-draft. With Studebaker engineers the the adoption of a down-draft system has gone hand in hand with intensive experiments to make the most of it. These experiments were going on for several years during which none of the cars which rushed into the adoption of down-draft carburetors were able to get the results that Studebaker was getting with the up-draft type. The Studebaker engineers waited and experimented until the related problems of carburetion and manifold design had been satisfactorily solved. The result is a new type of fuel feed and new standards of fuel efficiency.
- Q: Besides the introduction of the down-draft principle, has any important change been made in the manifold design?
- A: Yes. The manifolds in the new cars are equipped with an automatic control for warming up the engine, and are also equipped with an automatic system for choking the carburetor.
- Q: How does the automatic heat control work, and under what conditions?
- A: This important improvement operates from a valve in the exhaust pipe which is locked shut when the engine is cold. This valve is made of

heat-resisting metal, and is ordinarily held shut by a weight. When the valve is closed all the heat from the exhaust pipe and cylinders is forced to go around the hot spot just below the carburetor. The pressure of the exhaust gas lifts the weight after the manifold is hot and thermostat is unlatched and allows the gas to pass directly to the exhaust pipe. When driving at open throttle, the high velocity of the exhaust blows open the valve and shuts off almost all heat from the carburetor. This is the ideal condition, because when the throttle is wide open extra heat is not required. But when driving on a cold day at low velocity with the throttle closed-or when the engine is idling at five to seven miles an hour-the driver needs every bit of heat he can get-and he gets it. This type of heat control is a distinct improvement over that which opens the valve and takes the heat off from the carburetor only after it is warmed up. The trouble with the latter type of heat control is that it doesn't respond quickly enough for the changes in the engine and road, whereas the Studebaker valve responds instantly and completely to those changes and conditions. This is one of the most important advance steps of recent years in carburetion.

- Q: How is the automatic choke operated?
- A: As the name implies, the choke is operated automatically. The choke button has disappeared from the dash and with it have disappeared the back firing, the flooding and all the other troubles which resulted from the inability of even the expert driver to manipulate the choke so as to give the correct mixture for varying speeds and throttle openings. As far as the driver is concerned, he opens the throttle slightly, turns on the ignition and drives away regardless of whether it is Christmas in Canada or Fourth of July in Florida.

The action of the automatic choke depends primarily upon a thermostat located upon the intake manifold. This thermostat is in reality a spring, the tension of which increases as the temperature decreases. The thermostatic spring is connected through a linkage with the choke valve of the carburetor and controls its opening in accordance with the temperature. Being a spring, it permits the choke opening to increase as engine speed or throttle opening is increased—which is the condition desired. Various other features are incorporated to perfect the operation of the choke. For example, the choke is

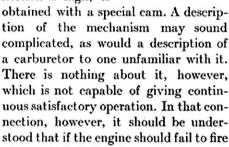




## ASK ME ANOTHER!

locked positively when cranking at low temperature and the lock is thrown out of engagement when the engine starts, by means of a piston connected to the manifold suction. The slight increase in throttle opening necessary to give

the desired idling speed when the engine is cold and the friction is high, is

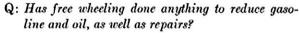


because of some fault in ignition, carburetion, or in the choke itself, the operator still is capable of changing the mixture as well as with a manually controlled choke. The linkage between the foot throttle and choke is such that fully opening the throttle will lean the mixture and leaving the throttle closed will enrich it. This information may furnish comfort to the skeptical purchaser, but there is no more reason to expect that it will actually be needed in starting than there is to expect that a hand crank will be required.

- Q: What is the most important single factor in the performance of an automobile engine?
- A: Carburction—because power, fuel consumption, smoothness and reliability are all dependent upon it.

#### TRANSMISSION AND FREE WHEELING

- Q: What two great modern improvements in the transmission did Studebaker pioneer in 1930?
- A: Free wheeling and helical gears.
- Q: What did Studebaker's introduction of free wheeling do for the automobile owner?
- A: Free wheeling brought motor compression under absolute control, thereby not only introducing a new and delightful sensation into automobile operation, but greatly increasing safety and making substantial cuts in operating costs. The driver can now have all the braking power of the motor that he wants—but doesn't have to have it unless he wants it.



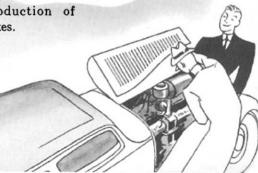
- A: Yes. Because the motor is idling at least 20 per cent of the time the car naturally uses less gasoline and oil. The saving runs anywhere from 15 to 30 per cent or more in the use of gasoline, depending on the driving habits of the individual.
- Q: Has Studebaker free wheeling been a success?
- A: It has been an unqualified success. Free wheeling, which was pioneered by Studebaker and
  which has since been adopted by almost all other
  automobile manufacturers, remains what Studebaker first said about it and what others are now
  saying—the greatest automotive improvement
  since the introduction of the self-starter.
- Q: Have Studebaker engineers improved the free wheeling originally introduced in July, 1930?
- A: Yes. In 1931 they developed a vastly finer free wheeling, perfectly combined with synchronized shifting and automatic starting. It is the last word in easy, restful driving, brilliant performance and thrifty operation
- Q: What is the size—diameter—of the wheels used on all Studebaker cars?
- A: Seventeen inches.
- Q: Why has the wheel size been dropped from eighteen to seventeen inches?
- A: Because it enhances the appearance and at the same time permits of an increase of the tire section, thus making enough of a step toward the so-called "doughnut" tire to give Studebaker all of the benefits and none of the drawbacks caused by going to extremes.
- Q: What are the specifications for the tires?

A: Speedway President	7.00 x 17—6 ply.
President	6.50 x 17—4 ply.
Commander	6.00 x 17—4 ply.
Studebaker Six	5.50 x 17—4 ply.

#### BRAKES

Q: What great improvement in braking efficiency has been pioneered by Studebaker for 1933?

A: The introduction of power brakes.



- Q: What is the advantage of this new development in passenger cars?
- A: It enables the driver to stop the car much more easily and surely. The force exerted by the operator on the brake pedal is multiplied and assisted by a vacuum cylinder, controlled by



the brake pedal and powered by vacuum drawn from the intake manifold. With a very light application-just a touch on the brake pedal-the driver brings the speed of the car down with a new firmness and quickness and at the same time .more agreeably, pleasantly and smoothly than ever before.

Q: Do all Studebaker

cars have this power equipment?

A: Yes. Every model from the Speedway President to the Studebaker Six-without extra charge.

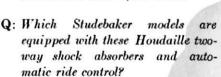
#### SPRING SUSPENSION

- Q: What is the advantage of ball bearing shackles?
- A: They improve riding qualities, eliminate shackle noises and require lubrication attention only about every ten thousand miles. The riding qualities are improved because the ball bearing shackles greatly reduce friction at the spring ends and allow such freedom of action that it is possible to get the full measure of comfort and ride control which has been built into Studebaker springs and shock absorbers. The shackle noises are eliminated because there are no shackle bolts to wear and loosen. Before their adoption, the ball bearing shackles were put through the most rigid tests on the Studebaker proving ground to insure their strength and long life. These tests included thousands of miles over STOP ON A

a "shackle road" crisscrossed with ditches 36 inches wide and 18 inches deep, over which the cars were driven at all speeds and for thousands of miles. The obvious economy of maintenance is made possible by the fact that it is necessary to inspect the ball bearings and repack them in grease only at intervals of about ten thousand

#### AUTOMATIC RIDE CONTROL AND CHASSIS LUBRICATION

- Q: From the standpoint of the owner, what is the major advantage of the ride control used on Studebaker cars?
- A: It is entirely automatic in its operation and is effective throughout the whole speed range and under all conditions of temperature, road and load.
- Q: What does it do and does the driver have to give it any attention at all?
- A: Automatic ride control protects you against both the expected and unexpected hole or bump in the road without the necessity of the driver trying to adjust a dash lever properly. The whole operating mechanism is built into a powerful Houdaille shock absorber long the choice of builders of America's finest cars. The only attention required is inspection for lubrication each 5,000 miles.



- A: All Studebaker models are so equipped without extra cost.
- Q: At what intervals do the various points on the Studebaker chassis require lubrication?
- A: None requires attention under every 2500 miles and there are only two points on the Speedway President; one point on the President Eight, and two points on the Commander and the Studebaker Six where attention is required this often. Most of the other points require attention only

DIME

every 5,000 miles and therearefiveimportant points on each model which do not require attention under 10,000 miles.



#### STUDEBAKER BODIES

- Q: So far as the body is concerned, what have been the principal precautions taken to insure the utmost in safety of Studebaker cars?
- A: The adoption of steel as the basic material and the use of safety glass in all windows.
- Q: Did Studebaker pioneer in these directions?
- A: Yes. Studebaker was the first important manufacturer to adopt the policy of steel body construction -in 1926; and also was the first manufacturer in the medium price class to take the important step of equipping all cars with safety glass without extra charge. This was in December, 1931.
- Q: What was the reason for the adoption of steel construction in 1926?
- A: At this time the number of cars on the highways had greatly increased over the previous years and the higher driving speeds were beginning to be taken as a matter of course. The Studebaker management felt that in case of accident the passengers in Studebaker cars should be protected just as far as possible against the crushing effect of the impact.
- Q: Is there any point of superiority in Studebaker bodies over the steel construction recently adopted by other manufacturers?
  - A: Yes. Since Studebaker adopted this type of construction in 1926 Studebaker engineers have put these bodies through an intensive period of development, with the result that they have a degree of strength, rigidity and quietness which no other manufacturer has yet been able to attain. It is no idle advertising "claim" to say that these are the strongest, safest bodies used on any car at this time. They ARE!
  - Q: Are Studebaker bodies notably quiet?
- A: A ride in the car is the best answer to this question. Certainly there is no body more quiet

has been used in building a type of body with welded joints which cannot become loose and squeak and rattle.

Besides this, each Studebaker body is insulated against noise and also against heat in summer and cold in winter with a thoroughness which is a typical result of the attention to details which

> characterizes all of the work in the Studebaker Engineering Department.

- Q: What steps have been taken to assure a thoroughly insulated body?
- A: (1) A specifically developed acoustic material is applied to every panel of every body - doors, cowl, back top-everywhere; (2) a similar material, waterproofed, is used under the floorboards to insulate against the heat and noise of the

road; (3) a heavy jute packing, about an inch thick and half an inch of Masonite have been built into the forward part of the car between the front compartment and the engine; (4) a layer of sponge rubber in some models and jute in others has been cemented underneath the floor mats; (5) a blanket of padding is used between the wire mesh in the roof and the top material.

- Q: Has Studebaker taken the lead in roominess of bodies?
- A: Yes. Studebaker was the first one in its price range to adopt wider treads and to provide ample width for three large passengers at the shoulder width as well as on the cushion. Studebaker wheelbases also allow for ample leg room.
- Q: What precautions are taken to assure fast colors and the durability of lacquer used on Studebaker cars?
- A: Lacquer experiment stations are maintained in Amarillo, Texas, for observing the effect of sun and quick changes of temperature; and at Coral Gables, Florida, for observing the effects of dampness and salt air.





