

*Your 1956*



STUDEBAKER



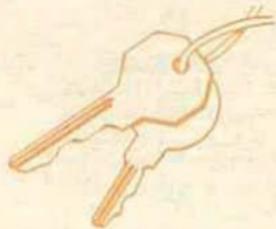
## SERVICE POLICY

With delivery of your car you receive a Service Policy signed by the dealer who sold you the car. Through this Service Policy he provides two inspection and adjustment services, the first at about 1000 miles or after 30 days of operation, and the second within 90 days or 4000 miles.

The Warranty on your car, given by your dealer to you as a part of your Service Policy, is printed in full on the inside back cover of this Owner's Guide. Parts to be replaced under this Warranty can be replaced, without charge for material or labor, by *any* authorized Studebaker dealer in the United States and Canada. The Service Policy, properly signed by your dealer, will serve to identify your car to any other authorized Studebaker dealer. You should, therefore, carry your Service Policy with you for presentation when necessary.

Should you have a question about service while traveling, always get in touch with the nearest Studebaker dealer for advice and assistance.

# YOU OWN A NEW STUDEBAKER



It's a happy day for you when you take delivery of a new car. And especially so when your new car is a 1956 Studebaker.

Everyone feels a strong pride in ownership of a new car. They want to keep it running and looking like new.

In this Owner's Guide you'll find some suggestions that will help you achieve that worthy goal.

For example, you will want to "break-in" your new Studebaker carefully. And you will want to become familiar with all the instruments and controls, and the use of such major optional equipment items as Climatizer, Overdrive, Hill Holder, Power Steering, and the like. And you'll not want to overlook monthly and other periodic services such as lubrication and various inspections and adjustments that keep your car smooth-running and give you that wonderful feeling of dependable assurance whenever you turn on the ignition key, be it torrid summer or below-zero winter.

You own a new Studebaker. We suggest you use this Owner's Guide to help you get all the comfort, performance, economy, and service we know it can give you.



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## INFORMATION FOR REGISTERING YOUR 1956 STUDEBAKER

### SERIAL NUMBER

The serial number is on a plate attached to the left-front door hinge pillar post. Record it here.

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### BODY NUMBER

The body number is on a plate attached to the dash under the hood. Record it here.

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### KEY NUMBERS

#### Ignition

This number is on a metal tag furnished with the keys. Record it here.

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#### Package Compartment

This number is on the compartment key or on the lock housing. Record it here.

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### ENGINE NUMBER

The engine number is on a machined pad at the upper left front of the cylinder block. Record it here.

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### LICENSE DATA

	Cham- pion	Com- mander	Presi- dent	Golden- hawk
Model Number.....	56G	56B	56H	56J
Number of Cylinders....	6	8	8	8
Cylinder Bore.....	3" (76 mm.)	3-9/16" (91 mm.)	3-9/16" (91 mm.)	4" (100 mm.)
Stroke.....	4 3/8" (111 mm.)	3 1/4" (83 mm.)	3 3/8" (92 mm.)	3 1/2" (89 mm.)
Piston Displacement.... (cu. in.).....	185.6 (3044 cc.)	259.2 (4251 cc.)	289 (4720 cc.)	352 (5773 cc.)
Horsepower (NACC or RAC rating).	21.6	40.6	40.6	51.2

Weight—See your dealer. Weight depends on extra equipment you have elected and other factors.

### CAUTION

*Carbon monoxide is a deadly gas. It has no odor, no taste, no color. It is in the exhaust fumes of all gasoline engines. Never start an engine in a closed garage. Always open the doors wide before starting the engine. Keep them open wide as long as the engine is running.*

*In this book we discuss conveniences and units that are standard equipment on some models and optional on others, that are optional on all models, and in some cases, equipment that is available on some models but not on others. Therefore, mention of some item of equipment is not to be taken as making that item standard equipment on any given model except as was explained to you when you purchased the car.*

## LET'S GET OFF TO A GOOD START



A "run-in" schedule gives new parts a chance to heat up and cool off, to rub against one another until they work smoothly as a team. Besides moving engine parts, the transmission, rear axle and differential, steering linkage parts, and brakes must also "wear in" on a new car.

For best run-in results:

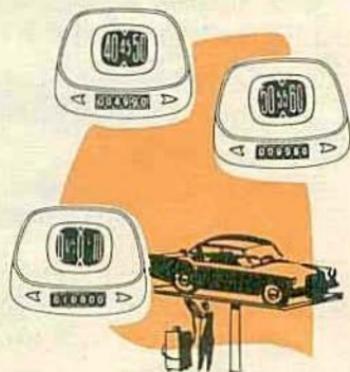
1. Drive under 50 miles (80 km.) an hour through the first 500 miles (800 km.).

2. Drive under 60 miles (95 km.) an hour through the second 500 miles (800 km.).

3. Change the engine oil for sure at the end of the first 1000 miles (1600 km.).

4. Let the engine warm to normal operating temperature at low speeds before stepping up to 50 or 60 miles (80 or 95 km.) an hour.

5. While driving during the run-in period, don't hold steady mile after mile at 50 or 60 miles (80 or 95 km.) an hour—give the engine a break. Drop down to 30 or 40 miles (45 or 65 km.) an hour every now and then. Driving at *varied* speeds is the important thing. Sustained creeping is just as harmful as sustained high speed during break-in driving. And, of course, never resort to "jack-rabbit" starts or slow speed lugging.



## FUEL ECONOMY



Studebaker cars are famous for their economy of operation, and have a world-wide reputation for the mileage they can get from a gallon of gasoline. Not only did all three Studebakers win firsts in their class in the 1954 Mobilgas Economy Run, but a Studebaker Land Cruiser won the grand sweepstakes. A 1955 Commander repeated this sweepstakes win in the 1955 competition.

While you will not attempt to get the same miles-per-gallon that the economy run winners achieved, you can get far better than average gasoline mileage if you follow the suggestions given below.

The kind of gasoline you use in your new car has much to do with its performance,

economy, and service.

So buy it from a dealer who sells the product of a reputable company and in enough volume to keep his gasoline fresh. Gasoline that stays in storage tanks a long time becomes stale. It takes on moisture, dirt, and tank settlings.

**Speed** Drive at moderate and constant speeds.

**Idling** When you park, even for a few minutes, turn off the engine. Idling, for whatever purpose, is pure waste of gasoline.

**Stopping** Come to a gradual stop whenever possible. This saves not only fuel, but also brake linings and tires.

**Accelerating** Pick up speed gradually. Fast get-aways and quick pickups waste gasoline. Use them only to get out of tight spots.

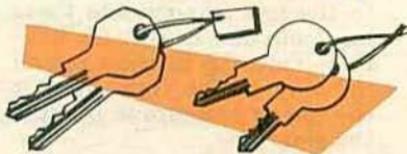
**Tires** Keep your tire pressure right all the time. Soft tires waste gasoline (they add to the friction the engine must overcome). Too hard or too soft tires lead to uneven tread wear. They also give a poor

ride and invite damage to the casing.

**Lubrication** Keep engine and chassis well lubricated all the time. This cuts down friction, makes engine do less work, saves gasoline.

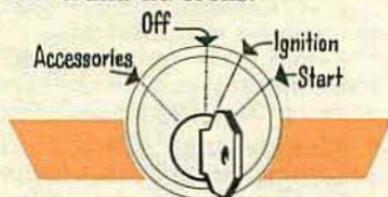
**Mechanical Condition** Let your Studebaker dealer tune the engine regularly. This assures top mechanical efficiency, a necessity for good gasoline mileage.

## READY FOR TAKE-OFF!



**Your Keys** There are two kinds of keys and you have two of each kind. The hexagonal-headed key (with the metal tag) is for the ignition and door locks. Record the tag number on p. 3 of this book, then throw away the metal tag.

The round-headed key is for the package compartment and trunk lid locks.



**Starting** Turn the ignition key just to the spring-loaded stop at the right. This completes circuits to the ignition system, heat indicator, fuel gage, radio, and any other accessories wired through the ignition switch. Turn the key to the left to complete these same circuits except for ignition. Turn the ignition key all the way to the right against the spring pressure to operate the starter.

Before you start the engine, be sure the parking brake is applied and the transmission is in neutral. If you have automatic transmission, the selector lever must be at the P or N position (the starter won't operate with the selector lever at D, L, or R).

## If the Engine is Cold . . .

Press the accelerator pedal down firmly all the way to the floor board. Let up on it entirely. Do not repeat this. Never for any reason pump the accelerator. The single movement to the floor board sets the automatic choke mechanism for easy starting when the engine is cold.

Now, turn the key all the way clockwise and hold it until the engine starts. Then release the key; it will spring back to the "ignition" position.



## If the Engine is Already Warm . . .

Press the accelerator about one-third the way to the floor board and hold it there while you operate the starter. As soon as the engine starts, release the accelerator.

If, after a few seconds, the engine does not start, hold

the accelerator fully against the floor board and operate the starter.

Release the parking brake, and you're ready to go, shifting and driving in the usual way.

If your car has automatic transmission, just select the driving range you want and away you go. (See p. 12 for more information about the operation of overdrive and automatic transmission.)

## HOW TO WARM IT UP

Proper warm-up has much bearing on long engine life and economical operation. High speed or fast getaway before the engine reaches normal heat range is not good for the moving parts inside.

Your car's engine works best when the heat indicator shows in the normal range—near the 180 mark on Goldenhawk and coupes heat indicator and on other models the red indicator is about  $\frac{3}{4}$  the way across the face of the dial.

The automatic choke keeps the engine running fast enough to avoid a chance stall while the engine is warming up. Sometimes this may cause the engine to "race." If it does, quickly press down and release the accelerator.

Before driving, notice the *oil pressure gage*. Be sure it shows definite pressure or that the indicator light is out. If the indicator pressure is very low, stop the engine immediately and find out why.

## SUPPOSE IT WON'T START

Sometimes—for example, if the battery is dead—you need help to start.

Here's how:

1. Turn on the ignition.
2. Depress and release the accelerator.
3. Put the gearshift in high gear (third) position or the automatic transmission selector lever in N position.
4. If you have overdrive, pull the OD control all

the way out.

5. Release the parking brake.
6. Have someone push your car.



In conventional and overdrive-equipped cars, hold the clutch pedal down until your car reaches 10 to 15 miles (15 to 25 km.) an hour. Slowly let up on the clutch pedal. Continue being pushed until the engine starts.

In cars with an automatic transmission, compress the accelerator pedal halfway down, wait until you are moving at 20 to 30 miles (30 to 50 km.) an hour, then move the selector lever to D or L position. On Goldenhawk, move the selector to the  $\Delta$ D position (triangle at the left of D).

A push is much safer than a tow. Towing always brings up the possibility that, when the engine starts, your car might overtake the tow car.

## PEDALS, KNOBS AND BUTTONS

On the floor are three pedals, left to right: clutch pedal, brake pedal, and accelerator pedal. On cars with automatic transmission there is no clutch pedal.

The *clutch pedal* disengages the clutch when depressed; making gear shifting smooth and easy.

The *brake pedal* operates the hydraulic service brakes with even pressure on all four wheels and in relation to the amount of pressure you put on the pedal.

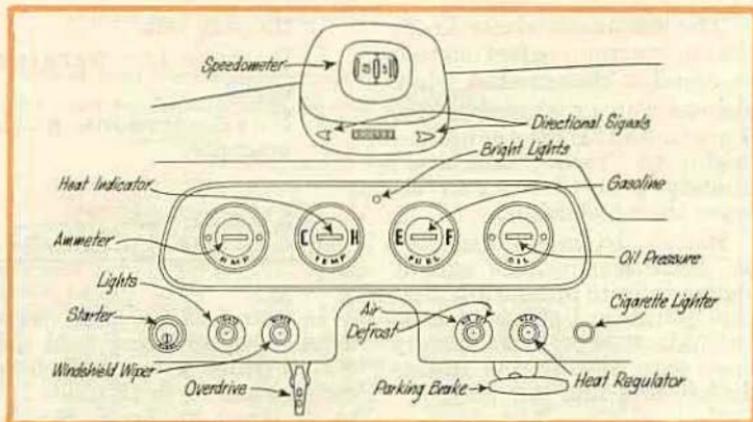
*Power brakes* are especially designed to retain "pedal feel" for you even though the effort requirement is much reduced. Use the brakes exactly as you would conventional brakes, with this one exception: do not apply as much force on the pedal; the power system does most of the work. Therefore, make a few trial applications just to accustom yourself to the light touch. Power

is available all the time the engine is running. There is a power reserve, however, equal to about three normal brake applications even after the engine stops running. When the reserve is used up, or the engine has not been operating to accumulate a reserve, the brakes are controlled hydraulically by your foot just as in a car not equipped with power brakes.

The accelerator pedal controls the amount of fuel fed to the engine.

On or under the instrument board are various knobs, switches, and buttons. Sedan and station wagon models are equipped with clearly labeled instrument panel switches that pull outward or rotate to operate various electrical items. Coupe and hardtop models use clearly labeled toggle switches.

Each push-pull type switch, when pulled or turned to the first position, is in the partial position; when pulled or turned to the limit of its travel is in the "full" position.

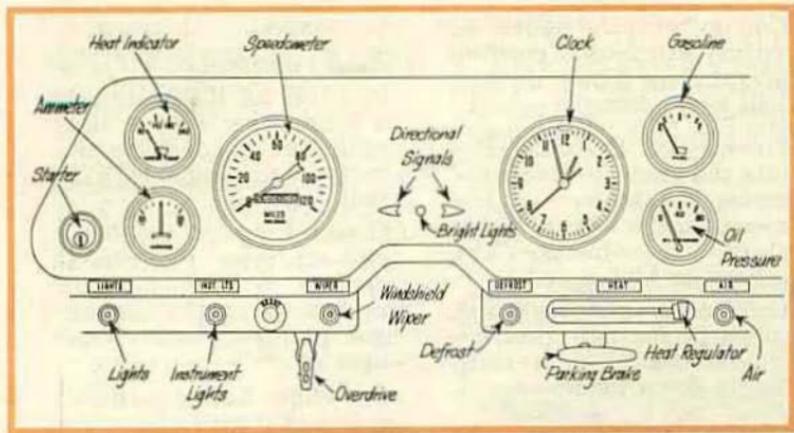


Thus, the light switch in the first position operates parking lights and taillights; in the full out position the headlights and taillights are on. The air, defroster, and wiper switches operate their respective motors at slow speed when their switches are at the first position and at full speed when the switches are at the second position. Toggle switches go up for FULL, down for LOW, mid-way for OFF. Other driver controls are:

**Heat** Heat knob position

controls the amount of heat available through the Climatizer System; on Sedans and Station Wagons: rotate the heat knob clockwise for more heat, counterclockwise for less. On coupes and hardtops, slide the heat control lever progressively towards the left for more heat, to the right off.

**OD** handle for control of the overdrive transmission. In for available overdrive operation; out for conventional transmission operation.



**Parking brake** handle. Pull straight back to apply parking brakes. Turn quarter turn to right and push in to release. Handle will turn to horizontal position about halfway forward; keep pushing forward until it reaches the stop at the end of its forward travel.

**Climatizer vent door** control lever, below the right side of the instrument board.

Move this lever left to open the outside right fender vent door, to right

to close the door.

On the face of the board you will find:

**Lights** On coupes and hardtops, move toggle up for headlights and taillights; down for parking lights and tail lights.

On sedan and station wagon models, pull the switch to the first position for *parking lights and taillights*, to the second (full out) position for *headlights and taillights*. With the switch at either pulled-out position,

turn it clockwise for *instrument lights*. The more you turn it, the dimmer will be the instrument lights.

**Inst's., (Coupes and Hardtops)**. Move toggle up for bright instrument lights or down for soft instrument lighting. (Headlights or parking lights must be turned on.)

On sedan and station wagon models, first turn on parking lights or headlights, then turn light control switch clockwise. The more it is turned clockwise, the dimmer the instrument lighting will be.

**Directional Signal Indicators** are on either side of the center of the panel instrument group on coupes and hardtop models and at each side of the speedometer on sedans and station wagons. When the directional signals for left turn are flashing, the green arrow pointing to the left side of the car will flash; when the right turn signals are flashing, the green arrow

pointing to the right side of the car will flash. If either front or rear flasher bulb on either side of the car fails to operate, the indicator light on that side will either flash more brightly and rapidly than normal or fail to light. In either case, see your Studebaker dealer. The lights stop flashing and the control lever returns to neutral after you have completed the turn.

**Tell-tale for Headlight beam** is the round red light that lights when the headlight beam is in the up or "bright lights" position. It does not light when the low or passing beam is in use or when the lights are turned off.

**Air** is the switch to control the Climatizer fresh air intake blower. On coupes and hardtops, toggle up is high blower speed; toggle down is low blower speed. On sedans and station wagon models a rotary push-pull type switch is used.

**AIR:** Pull knob to first posi-

tion operates the blower on slow speed; second position operates the blower on high speed.

**DEFROSTER BLOWER:** Rotate the knob clockwise operates the blower on low speed, to the left (counterclockwise) operates the blower on high speed.

On coupes and hardtops, toggle up for high speed defroster blower operation; toggle down for low speed.

**Windshield Wipers** The electrically operated windshield wipers have two speeds. Coupes and hardtops, use toggle switch. Toggle up for high speed; toggle down for low speed.

On sedan and station wagon models, the windshield wiper is controlled by a push-pull switch. The first position of the switch is low wiper speed, the second position is high wiper speed.

If your car has vacuum operated wipers, the speed increases by pulling the knob outward until maximum

wiper speed is obtained.

**Radio control panel** is removable for installation of a Studebaker custom-built radio. See the operating instructions included with the radio set.

**Cigar Lighter** is of the pop-out type. Push in to operate. When heated, the unit clicks out to the normal position. Remove and light up.

**Package Compartment** is provided with a lock. The key that opens this lock also opens the luggage compartment. An automatic compartment light is available as an accessory for owners who desire this convenience. See your dealer. We also suggest you keep this Owner's Guide in the package compartment for future reference.

**Dimmer** On the toeboard, just to the left of the clutch pedal (brake pedal on cars with automatic transmission, you will find the *headlight dimmer switch*). When bright lights are on and you

are approaching oncoming traffic, press this button to change the headlights to the passing beam. Then press again to restore bright lights.

### Cowl Vent Operation

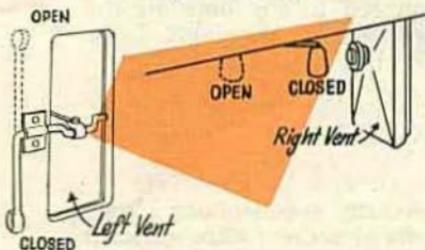
Opening the cowl vents in hot weather will provide additional fresh air to the front compartment..

To open left cowl vent:

1. Move control lever on left kick pad to the full up position.

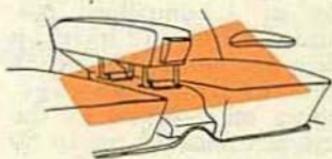
To open right cowl vent:

1. Move Climatizer vent door control handle, below the right side of the instrument board, all the way toward center of the car.
2. Open inner door in right kick pad.



## CENTER ARM REST

This rear seat movable arm rest is found in the rear seat of coupes and hardtop models only. It has two positions. To raise the arm rest, lift up and forward, the arm rest snaps into place.



To lower the arm rest, squeeze the release lever (just behind the front lower section of the rest) and move the arm rest to the rear and down.

## DOOR LOCKS

All doors have push-button inside lock controls. To lock front doors from the inside, close the door and push down on the push button. You can still open the front door with the inside handle, but no one can open it from the outside.

If you open it from the inside or with the key from the outside, the lock button returns to the unlocked position.

To lock rear doors, push the locking button down with the door open or closed. These locks are made especially so that, once locked, you cannot open them with either the inside or outside door handles until the lock button is pulled up into the unlocked position.

You will find outside locks, worked by your ignition key, on both front doors. You can lock either of these doors from the outside after you close the door.

## TRUNK LOCK

To unlock, put in the key, turn it a half-turn to the right (clockwise), then turn the wings of the chrome circle a half-turn to the right (clockwise) until you hear the latch snap open.

## GAGES

*Speedometer* Besides showing you the car's road

speed, the speedometer includes an odometer that shows you *how far* your car has gone.

**Heat Indicator** Electrically operated, this gage indicates the heat of your car's engine as long as the ignition key is turned to right or left. Give it a few seconds to register.

When the indicator shows any green, the engine is operating at normal temperatures. If it turns red through the entire range, the engine operating temperature is above normal. Coupe and hardtop models are equipped with a direct reading type gage which indicates the temperature of the coolant in the cooling system.

**Ammeter** When you're running on the road, the indicator will normally be dark. If the indicator stays red for a prolonged time while running, see a Studebaker dealer. Coupe and hardtop models are equipped with a direct reading type gage.

**Oil Pressure Indicator** Indicator light will be off when the car is traveling at road speed, indicating adequate oil pressure.

If the oil pressure indicator shows red at highway speeds, after warm-up, stop at once and check the oil level. Add oil as required and proceed cautiously to your Studebaker dealer or a competent mechanic. Coupe and hardtop models are equipped with a direct reading type gage. Working oil pressure in the engine is indicated up to 80 lbs. per sq. in.

**Gasoline Gage** A simple indicator of your fuel supply, green at the F indicating a full tank, red at the E indicating an empty tank. The gage operates only when the ignition key is turned either to right or left. Coupe and hardtop models are equipped with a direct reading type gage.

**Tachometer** This registers the number of crankshaft revolutions per minute and is calibrated in hundreds;

i.e., you must add 00 to a reading for the "engine RPM" being indicated.

**Vacuum (Goldenhawk)** This registers the amount of vacuum in inches of Mercury (in/Hg) being built up by the engine whenever it is operating. No load operation (such as at idle) results in high vacuum (14-17 in/Hg); heavy load operation (such as rapid acceleration, steep climbing) results in low vacuum readings.

## HOOD RELEASE

Pull the lever just beneath and inside the front of the hood as far out as it will come. This releases both the hood lock and safety latch.

Raise the hood and put the prop rod in the hole on the underside of the hood front cross bar.

## HOW TO USE OVERDRIVE

At any speed above about 22 to 27 miles (35 to 43 km.)

## AUTOMATIC TRANSMISSION



*The Selector Lever* The selector lever indicator tells you which of the five ranges the transmission is in at any time. These are P (Park), N (Neutral), D (Drive), L (Low), and R (Reverse). The lever must be raised at the various stops between certain pairs of ranges.

*P (Park) Range* — This safely and positively locks the rear wheels when the car is stopped. Raise the lever slightly going into or out of Park.

*Do not move lever to P while car is moving.*

Start the engine with the selector lever in Park (a decided convenience when on a grade). This also avoids "creep" on cold days.

an hour, you can place the car "in overdrive," if the OD handle just under the instrument board is pushed all the way to the bracket, by quickly releasing the accelerator pedal. After that, and until you either reduce speed below about 20 to 17 miles (32 to 27 km.) an hour or push the accelerator pedal all the way to the floor board (kick-down position), you will continue to drive in overdrive.

On long hills, or to get a spurt of additional power to pass cars or trucks on the highway, you can "kick down"—that is, press the accelerator hard against the floor board. This returns the transmission to conventional gear. After a kickdown, you stay in conventional until you again release the accelerator pedal at any speed above about 22 to 25 miles (35 to 40 km.) an hour.

### You Can Lock Out Overdrive, Too

There are times, as in the mountains, for example, when

you may want to remain in conventional gear all the time, at all speeds, to get the benefit of engine braking. Just lock out the overdrive this way:

1. *Car standing still:* Pull OD control handle full out — toward you.
2. *Car moving less than 25 miles (40 km.) an hour:* Accelerate engine and at same time pull OD control handle full out — toward you.
3. *Car moving more than 25 miles (40 km.) an hour and overdrive already engaged:* Press accelerator to floor (kickdown). This puts transmission in conventional. While in conventional, pull OD control handle full out — toward you.

Remember, if you use a push to start the engine, you must lock out the overdrive.

You can push the OD control inward, preparing for overdrive engagement, at any time. If the car is moving, accelerate a little as you do this.

**N (Neutral) Range**—This range lets you idle the engine for prolonged periods.

Neutral also lets you rest assured that the car will not start to move should anyone by mischance nudge the accelerator pedal.

Neutral and Park are the only ranges in which the starter switch will work.

**D (Drive) Range** — The transmission shifts itself from power ranges to direct drive, or vice versa, whenever it is best to do so from standpoints of economy and performance. All you have to do is to move the selector lever to D after you start the engine. Then just leave it there. When you want to go faster, step on the accelerator. When you want to stop, step on the brake pedal. Leave the selector alone. To go again, step on the accelerator.

The Twin Ultramatic Goldenhawk D range has two positions. These are located by the triangles on either side of the  $\Delta D\Delta$ . Use the  $\Delta D$  at left for all normal forward driv-

ing; use the  $D\Delta$  for traffic and quick getaways.

**L (Low) Range**—This is your emergency engine braking range. Use it to go down extra long or steep hills. (See "Engine Braking"). L is also the range you will find easiest to use for rapid shifts to and from R so as to rock the car out of mud, sand, or snow.

**R (Reverse) Range**—This position gives you the reverse driving ratio to make the car "go backwards."

To prevent damage to the transmission or abrupt braking action, **DO NOT MOVE THE SELECTOR LEVER TO R (Reverse) position while the car is moving.**

**Getting the Most from the Automatic Transmission** Here are some ways to use your automatic transmission for the least effort on your part:

**Additional Power and Acceleration** for hill climbing or passing while the selector lever is in D range (below about 55 miles (88,5 km.)

an hour) may be had by pushing the accelerator pedal all the way to the floor board (kickdown position).

The Twin Ultramatic in the Goldenhawk D range has two positions. These are located by the triangles on either side of the  $\Delta D\Delta$ . Use the  $\Delta D$  at left for all normal forward driving; use the  $D\Delta$  for traffic and quick getaways.

**Hard Pulling**, such as you encounter in deep snow, mud, or other adverse driving, is best done by moving the selector lever to the L (Low) position.

**Engine Braking** is a big help when you come down long, mountainous grades. In the Goldenhawk slow your car to 25 miles (40 km.) an hour or less with the brakes, and in Champion and Flight-hawk models to 40 miles (65 km.) per hour. Then move the selector lever to the L (Low) range.

In all other models, use low this way: Slow to 60 miles (160 km.) an hour and move

lever to L. This gives you intermediate range until speed drops below 20 miles (32 km.) an hour, when transmission goes into low range. If you move into L below 20 miles (32 km.) an hour, transmission operates in low range until manually shifted to P, D, N, or R.

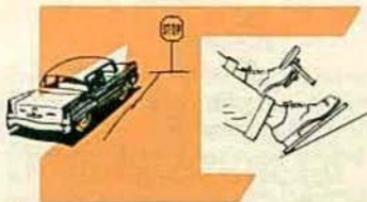
**To Rock Out of Mud, Sand, or Snow,** depress the accelerator pedal *slightly* and hold it steady while you make quick, alternate movements of the selector lever between L (Low) and R (Reverse) ranges.

**Prolonged Idling** is sometimes unavoidable. In such cases, move the selector lever to the P or N position.

**Towing Cars Equipped with Automatic Transmission** If your car must be towed, put the selector lever in the N (Neutral) position if transmission oil level is OK and unit is not damaged. Do not tow the car faster than 30 miles (50 km.) an hour, nor further than 15 miles (25 km.).

For any other towing, raise rear wheels or disconnect propeller shaft.

## HILL HOLDER



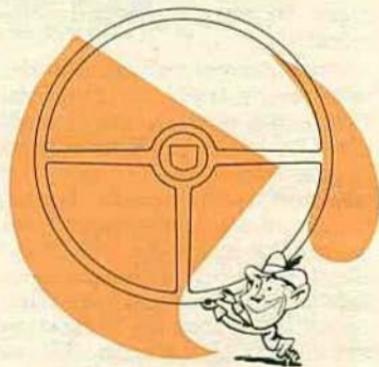
The Hill Holder (not available on cars with automatic drive) keeps the same pressure on the brakes when you stop on an upgrade as you applied with the brake pedal—as long as you hold the clutch pedal down. This frees your right foot from the brake pedal so that it is ready to use on the accelerator.

When you want to move on, you select your gear, release the clutch, and accelerate as usual. Releasing the clutch also releases the Hill Holder and the brakes.

## POWER STEERING

As long as the engine is running, the power steering unit is ready to operate. Its use is no different from conventional steering except that control is almost effortless and virtually no discernible work on your part is necessary to steer or park the car.

When the engine is not running or if for any reason the pump drive is inoperative, the steering is manual, not under power. Your car will handle and "feel" as though there were only the conventional steering gear.

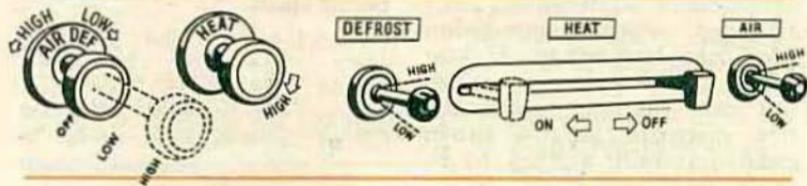


## USE YOUR CLIMATIZER FOR WINTER COMFORT

**Do This for Heat in Winter** Open the right fender outside ventilator door. Be sure the inner ventilator door on the right kickpad is closed tight.

Rotate the heat control knob to the position that suits you best. The further you rotate the knob clockwise, the more heat will be available. A few trials will show you where you like it best. A thermostat in the system maintains the heat output at this setting. On Coupe and Hardtop models move the heat control lever from left to right to obtain desired temperature.

Now, turn on the blower with the control marked Air. On coupe and hardtop models, the lower position of the toggle is low speed; the upper position, high speed. In sedans and station wagons, pull knob marked "Air" "Def.". First position is slow speed; full out is high speed. High speed is best for quick heating after which low speed (or



even blower OFF) usually provides satisfactory circulation of warm, fresh air.

**Defroster is Separate** The defroster is a separate system from the Climatizer car heating system.

In sedans and station wagons turn the defroster blower control marked "Air" "Def." clockwise for low speed, counterclockwise for high. When the windshield is clear, reduce defroster blower speed or turn it off. (In coupes and hardtops, toggle up for high.)

**Air and Defroster Blowers** may be operated at the same time by turning the knob and pulling it out. On coupes and hardtops, of course, just turn on both Air and Def toggle

switches.

**Sticky Weather Tips** In some weather conditions, it is particularly hard to rid windows of fog or slushy snow. You can direct more defrosting and Climatizer heat to any particular window just by opening that window about one-eighth of an inch. Usually you will do this with one or both of the front ventilator windows. In such weather you will probably do best to have the Heat control full on and both Climatizer (Air) and defroster blowers at full speed.

After the windows are clear, you can close them for best car comfort results from your Climatizer and readjust the Climatizer Heat control and blowers as you wish.

## AIR CONDITIONING CONTROLS

The air conditioning unit is controlled by the three knobs on the special panel at the lower middle of the main instrument panel.

The two outer knobs control the speed of the blowers in the unit at the rear of the car. The knob on the right of the panel operates the blower at the right of the car; the knob at left operates the blower at the left of the car. Both knobs operate their blowers at slow speed when pulled to the first position; at full speed when pulled all the way out.

The center knob controls the amount of cooling action from the air conditioner. The further out you pull this knob, the cooler will be the air supplied through the transparent outlets by the blower fans.

The maximum cooling ac-

tion will be obtained by pulling all three knobs as far out (toward you) as they will go. To shut off the air conditioner, push the three knobs all the way in. Intermediate positioning of the knobs will result in intermediate degrees of cooling.

We suggest that to maintain fresh air circulation in conjunction with the use of your air conditioner, you close all the windows, the left fender vent, and the inner door of the right fender vent. On cars equipped with Climatizer, open the right fender outside vent door so that the air will enter the car beneath the front seat. This will give the air a chance to lose any heavy dust particles in the entrance ducts and also keep rain water from entering the car. If your car does not have a Climatizer, open one front door ventilator window to admit fresh outside air.

See your Studebaker dealer for any service of your air conditioner.

## SEAT ADJUSTMENT

You can adjust the front seat by moving the control at the left front corner of the seat cushion upward and sliding the seat forward or rearward to suit you. As the seat moves, the tilt of the seat back automatically adjusts to the best position.

If you find that you want the steering wheel adjusted or the seat raised or the tilt changed, or the whole seat further to the front or rear than you get with the normal adjustment, just ask your Studebaker dealer to make the necessary adjustments.

## POWER SEAT

Electric motors move the seat backward and forward in cars equipped with power seat.

On the lower front edge of the front cushion, near the center, is the control button for the power seat operation. When you raise the button, the seat moves forward; when

you press down on the button, the seat moves backward. The seat movement stops when you release the control button.

## POWER WINDOW CONTROLS

The master control for power window operation is on the driver's door. This control has as many buttons as there are power operated windows in the car. Each door with a power-operated window also has a control on that door for its window. To raise any given window, push the control button upward; to lower the window, push the button downward. Releasing the button at any point of window travel will stop the window at that point.

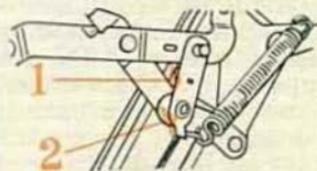
From the rear of the car to the front (or left to right as you face the master control) the control buttons operate these windows: left front, right front (only control buttons on two-door models or sedans with power windows in front only), right rear, and left rear.

## STATION WAGON

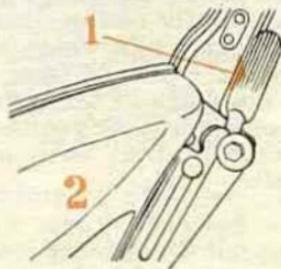
The station wagon tail gate, rear quarter window, and rear seat conversion for extra cargo space are easy to operate as described below.

### Tail Gate Safety Locks

Put upper tail gate hinge safety strap over stud when you want to hold gate open.



1. Hinge safety strap 2. Stud

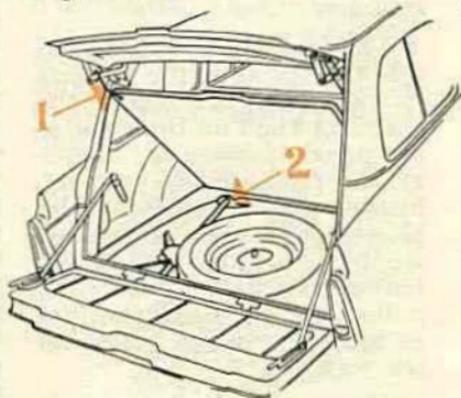


1. Lower tail gate handle  
2. Lower tail gate

Lower tail gate (below, left) shown locked. To unlock, move handle on each end of gate toward front of station wagon.

### Spare Tire Access

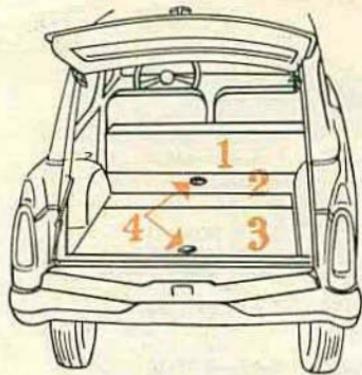
Strap and buckle hold jack in place at the left of the tire.



1. Hook over hinge  
2. Notch for jack

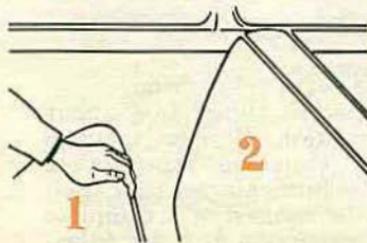
### Rear Seat Conversion

View on next page shows cargo space obtained by folding down the rear seat.



1. Rear seat cushion
2. Rear seat back rest
3. Spare tire access cover
4. Handholds

View below shows how rear cushion (hinged on forward edge) folds neatly upright to provide added cargo space.



1. Rear seat cushion
2. Rear seat back rest

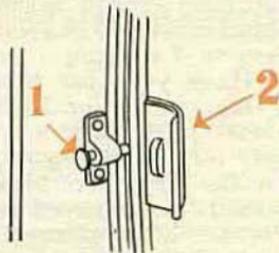
View below shows convenient handhold for raising or lowering rear seat back rest.



1. Rear seat back rest
2. Handhold

## Rear Quarter Window

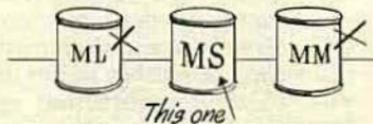
Rear quarter window lock button and latch plate. To open, pull button and at the same time move glass toward rear.



1. Lock button
2. Latch plate

## ENGINE OIL

1. Only good quality oil gives the protection a fine Studebaker engine deserves.
2. We recommend for use in Studebaker engines, oils from containers bearing the label "For Service MS" alone or in combination with any of the following: MM, ML, or DG. We recommend *against* the use of oil from a container bearing the label "For Service DS" or showing the classification DS in combination with any other of the accepted A.P.I. service classifications: MS, MM, ML, or DG. We also recommend *against* the use of oil labeled only "For Service ML."



3. Only clean, fresh oil can do a good job, so change oil regularly. After the initial drain and refill at 1000 miles (1600 km.), change oil under average operating conditions every 2500 to 3000 miles (4000 to 4800 km.). Severe operation, dust-bowl driving, and other unusual circumstances may make more frequent oil changes necessary. Consult your Studebaker dealer if you have a special operating condition.
4. Use thinner oil in winter than in summer, as shown by the viscosities given in the oil chart at the right.
5. Replace oil filter cartridge (if car is so equipped) every 5000 miles (8000 km.) or at least twice a year. If your car does not now have one, we recommend you consider ordering this fine protection optional equipment at once.

### OIL CHART

Lowest Temperature Anticipated	Recommended Viscosity	Acceptable Alternate
32° above zero F. (0°C.)	S.A.E. 30	S.A.E. 20W-40 S.A.E. 10W-30
10° above zero F. (12° below zero C.)	S.A.E. 20W	S.A.E. 10W-30
10° below zero F. (23° below zero C.)	S.A.E. 10W	S.A.E. 10W-30
Under 10° below zero F. (23° below zero C.)	S.A.E.5W	S.A.E. 5W-20

Note—There is a trend by major refiners toward oils marketed for wider ranges. We consider these "multi-viscosity" oils satisfactory if used according to the schedule above in the column "Acceptable Alternate."

## REGULAR LUBRICATION A "MUST"

Have your car lubricated every month (or 1000 miles [1600 km]). Such a rule will pay off. It saves you money in the long run because it avoids unexpected need of service. The car runs better, steers better, rides better if it gets its monthly or 1000 mile

(1600 km.) lubrication.

Another thing, too, about lubrication. Be sure to have an authorized Studebaker dealer lubricate your car. You will be assured of a complete car inspection at every lubrication. This is good preventive medicine for your car. In-



spection reveals coming needs for adjustments and other service and helps you to prevent neglect that might lead to future inconvenience.

### If You Must Buy a Lubrication Elsewhere . . .

We are quite particular about the types of lubricant used in some parts of all Studebaker cars. If someone other than a Studebaker dealer lubricates your car, be sure he understands what points to lubricate and what lubricants to use, as shown on oil company and similar lubrication charts.

**Universal Joints** Use lightweight chassis lubricant at 1000 mile (1600 km.) in-

tervals. Use only a *low pressure* (hand) gun to lubricate these bearings.

**Conventional Transmission** Fill to the level of the filler plug hole with S.A.E. 90 mineral oil gear lubricant or S.A.E. 40 engine oil, summer and winter.

**Overdrive Transmission** Use the same lubricants as for conventional. Fill *slowly* through overdrive case fill hole, insert plug loosely, then fill slowly through main case fill hole. Check level of overdrive case. When both cases are full, insert fill hole plugs securely.

**Rear Axle Lubricant** Use Studebaker hypoid lubricant or any S.A.E. 90 hypoid lubricant (multipurpose type gear lubricant).

During seasonal periods where temperatures of ten degrees below zero Fahrenheit (23° below zero C.) or below are commonly encountered, S.A.E. 80 gear lubricant may be used. This lubricant, how-

ever, is *not* recommended for year-round use or where an extended trip takes the vehicle from an extremely cold area into warmer climates.

**Steering Gear** Saginaw gears use any S.A.E. 90 multipurpose gear lubricant from reputable refiners. To add small amounts to Ross gears, it is all right to use any good S.A.E. 140 gear oil; for a *complete refill*, however, use only Kendall 400 (preferable) or Kendall 200.

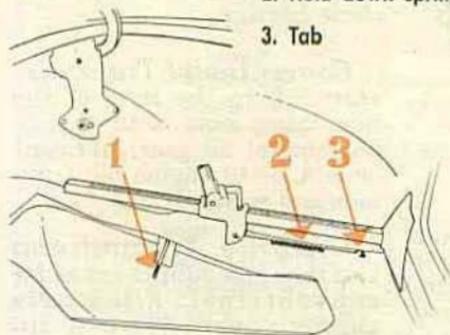
## TIRE CHANGING

Here's a reminder list about tire changing:

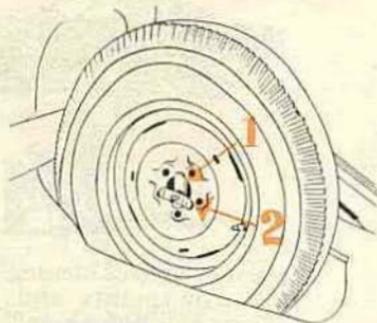
1. Be sure parking brake is on tight.
2. If on a steep grade, block front or rear wheels.
3. Place the jack base so that the jack lip will contact the underside of the bumper support brackets on the flat tire side of the car and at the same time have the base about one inch inward

from the outer edge of the bumper.

4. Wheel lug nuts on left side of car have left-hand threads; those on right side of car have right-hand threads.
5. To store the jack, place it to the right of the spare tire. Attach one end of the hold down spring to the tab on the floor pan and the other end in the hole of the jack lifting pad. Then operate the jack to apply enough tension on the spring to hold it in position.



1. Hold down bolt
2. Hold down spring
3. Tab

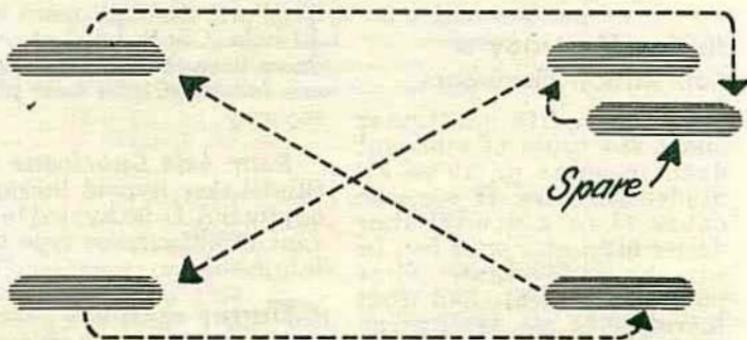


1. Retainer
2. Wing nut

## MAKE YOUR TIRES LAST LONGER

Cross-switch your tires every 4000 miles (6400 km.). Balance wheel-and-tire assemblies whenever they need it. Your Studebaker dealer will advise you. You'll get a good many miles of extra service out of your tires if you do.

Keep tires properly inflated.



Tire Rotation Plan

Tire condition and inflation, it is worth while to keep tires balanced and properly inflated at all times. have much to do with the riding comfort of your car, so

# TUBELESS TIRE MAINTENANCE AND REPAIR INFORMATION

Tubeless tire repairs are quite easy to make; in fact, some types of repair are easier than on tire-and-tube assemblies. Your Studebaker dealer and in general, most tire dealers and filling stations are acquainted with the repair and mounting of tubeless tires.

It is possible, of course, that in some remote areas you may find yourself in need of tire service and the serviceman may not be familiar with the recommended repair procedures. This information therefore, is supplied for his benefit. Since it is comprehensive and detailed, he will find here the answer to any questions he may have about tubeless tire service.

## How to Mount and Demount Tubeless Tires

**Straightening the Flange** Examine all rim flanges for sharp dents. Straighten any dent visible to the eye (see Fig. 1). The flange is the only



Fig. 1

support for the tire bead.

**Cleaning the Flange** Clean rim flanges thoroughly with No. 3 coarse steel wool to remove all oxidized rubber, soap solution, etc. If flange is rusted, clean with a wire brush, or, in extreme cases of pitted rims, a file is more effective. The drop center well need not be smoothed. See Fig. 2.



Fig. 2



Fig. 3

**Inspect and File Butt-Weld** After cleaning the rim flange, examine the butt-weld joint to be sure that no groove or high spot exists as shown in Fig. 3. Such condition may cause a leak when the tire is mounted.

To eliminate any possibility of air loss, file grooves or high spots flat and smooth as shown in Fig. 4.

**Valve Installation** Lubricate the rubber valve with vegetable oil soap to help it snap into position more easily. After the valve is installed,

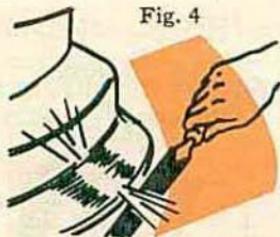


Fig. 4

remove valve cap and core. The larger opening permits a surge of air to enter the tire and forces the tire beads into position.

You can remove the complete valve assembly by knocking it out with a rubber hammer.

**Clean Rim-Seal Ridges and Moisten Beads** Just before mounting tire, clean rim-seal ridges and moisten base of beads with clear water or sparingly apply tire mounting compound. This will help the beads to snap into place easily when inflated.

**Mounting Tire on Wheel** Mount tire in the usual manner—do not use hammers.

Take small bites with a tire iron. This will avoid damag-

ing the rim-seal ridges. Tire irons should be free of burrs for any tire installation. Tire mounting machines can be used; however, parts contacting tire beads should be smooth and clean. Start the tire over the rim flange so that the valve stem will be near that section of the bead which goes over the rim flange last. Otherwise the base of the valve may prevent the bead from dropping into the well, when the last section is being pried over the rim flange. See Fig. 5. Align balance mark on tire with valve in wheel.

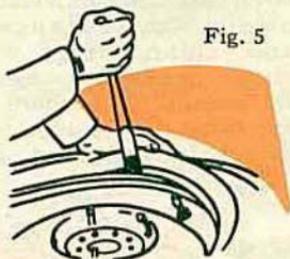


Fig. 5

**Inflating Tire** Be sure the valve core is removed to increase flow of air during inflation. Hold the tire and wheel assembly in a vertical

position and bounce on floor at various points around its circumference to snap beads out against the rim flanges. This will provide a partial seal to start inflation.

*NOTE.*—If a seal cannot be effected in the foregoing manner with the rush of air, it can be accomplished by applying to the circumference of the tire a tourniquet of heavy sash cord and tightening with the use of a tire iron. Where available, tubeless tire mounting bands should be used instead of sash cord.



Fig. 6

When inflating, hold wheel vertically (see Fig. 6), and inflate until beads are completely forced against both rim flanges. Then remove air

chuck, insert valve core, and temporarily reinflate to 50 pounds (22,68 kgs.) pressure. Test complete wheel assembly in a water tank. This will disclose any leaks in the area of beads, valve, or rim itself.

Be sure to deflate tire to recommended operating pressure.

**Demounting Tire** Do not use tire irons to force beads away from rim flanges. To do so might damage the rim-seal ridges on beads and cause a leak when remounted.

A "bead breaker," such as shown in Fig. 7, is recommended.



Fig. 7



Fig. 8

### Removing Outside Bead

After both beads are broken loose from rim flanges, remove tires in the usual manner, being careful not to damage the rim-seal ridges. (See Fig. 8.) Start removal of bead at valve to eliminate possibility of bead catching at valve base.

When the tire is removed from the rim, inspect it carefully to determine whether the loss of air was caused by (1) a puncture, (2) a break in the tire, (3) improper fit of the beads against the rim.

If the trouble seems to be improper fit of the beads against the rim, these sug-

gestions should correct the trouble:

- (a) Straighten the rim if it is bent or dented. See Fig. 1.
- (b) Clean the rim flange thoroughly with steel wool.
- (c) Inspect the wheel butt-weld. Be sure there is no groove or high spot (flange area only). To eliminate any possibility of air loss, grooves or high spots must be filed flat and smooth. See Figs. 3 and 4.

### How to Repair Tubeless Tires

**NOTE.**—*Proper repair of tubeless tires requires certain special equipment in some cases. These materials are furnished in a kit by the makers of the tires. Kits usually contain rubber plugs, plug inserting needle or finger, knife, cement, semi-fluid tire compound, compound gun, and puncture rasp. For hot patch applications a special clamp (avail-*

able through auto stores and jobbers) must be used to hold the patch in place. Cold patch repairs are made with standard cold patches used in conventional tire repairing, but the cold patch method should be used only as a temporary method until a hot patch or other permanent repair can be made.

## Nail Punctures

Nail punctures in tubeless tires tend to produce slow leaks rather than fast leaks that result in a flat soon after the puncture. It is even possible that a nail puncture will result in no discernible loss of air at all.

It is therefore advisable to inspect the tires from time to time for the presence in the casing of nails or other foreign objects. When they are found, remove the objects only when the tire can be properly repaired immediately thereafter. A fast leak will occur as soon as the nail or similar puncturing object is removed.

## Injuries up to 1/4" (6,4 mm.) Diameter

Preferred Repair: Hot Patch Method. Temporary Alternate: Cold Patch Method. Plug Method for injuries of 1/16" to 1/4" (1,6 mm. to 6,4 mm.) diameter.

### Hot Patch Method

1. Remove tire and wheel assembly from car.
2. Inflate tire to recommended operating pressure.
3. Dip assembly in water tank and locate leak, Fig. 9. Mark with crayon.

Fig. 9



4. Demount tire. Clean out injury with rasp.
5. Fill injury with tire compound, using gun,

from outside of tire. Replace nail in gun nozzle after using.

6. Thoroughly clean inside of tire around injury with solvent. Allow to dry.
7. Roughen area around injury with hand buffer or wire brush.
8. Carefully center hot patch over injury and hold in place. Apply hot patch clamp and tighten maximum finger tight. Ignite patch.
9. Allow to cool for at least 15 minutes or until cool to touch. Carefully remove cup and blow out any ashes remaining in tire.
10. Remount tire. Inflate to operating pressure. Re-check in water tank.

### Cold Patch Method

Steps 1 through 7 same as for Hot Patch Method, above.

8. Cement area around injury. Allow to dry. Apply cold patch and stitch down.

9. Remount tire. Inflate to recommended operating pressure. Re-check in water tank.

### Plug Method

Steps 1 through 4 same as for Hot Patch Method, above.

5. Clean an area 3" (76 mm.) in diameter around injury on inside of tire by light rasping or buffing. Wash, using solvent sparingly and apply rubber cement. Allow to dry.
6. Prepare plug by wire brushing or rasping flat side of plug. Apply cement to flat side of plug and allow to dry.
7. Dip plug inserter (wire needle or finger) in cement to lubricate it and start through hole from inside of tire. See Fig. 10. Apply cement to stem of plug for a lubricant and pull plug through hole with needle or finger while cement is still wet. Pull plug with steady move-

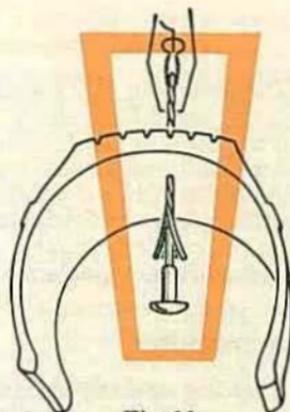


Fig. 10

8. Trim plug slightly above flush of tread surface.
9. Remount tire. Inflate to recommended operating pressure. Re-check in water tank.

## Injuries Not Exceeding 1/16" (1,6 mm.) Diameter

### GUN METHOD

(Tire Compound)

1. Remove tire and wheel assembly from car.
2. Inflate tire to recommended operating pressure.
3. Dip assembly in water tank and locate leak. Mark with crayon.
4. Wipe injury dry. Reduce air pressure to 5 pounds (2,27 kgs.).
5. Probe injury with hand rasp and remove all foreign matter. DO NOT enlarge hole. Then dip rasp in solvent (gasoline) and thoroughly clean injury.
6. Turn the screw in the head of the tire compound gun until sealing compound appears. Pinch off excess compound.

## COOLING

Whenever you buy gasoline, have the attendant check the radiator coolant level. A small amount will evaporate over a period of time, but if you have to add coolant in fairly large amounts or frequently, see your Studebaker dealer.

all available antifreezes, we have an antifreeze tailor-made for our own label. This permanent-type antifreeze is what our investigation and experience with cars and trucks proves is the best that can be made. Its quality is never below the best to be found, and its formula is always uniform.

### Rust Inhibitor

In spring or early summer, when you have your radiator cleaned and refilled, be sure to have your Studebaker dealer put in a can of Studebaker Rust Inhibitor (AC-1480). This will protect the radiator during the summer months against rust, one of the radiator's worst enemies.

All good quality antifreezes have a rust inhibitor included in them.

### Tailor-made Antifreeze

Because we cannot know the quality or uniformity of

We strongly recommend that you have your Studebaker dealer install the required amounts of Studebaker Permanent Antifreeze (AC-1897) every fall. We also suggest that you have him check your cooling system protection once a month in cold weather—when you have your car lubricated.

You are protected against cooling system rust formation with Studebaker Permanent Antifreeze thru-out the season because it contains the proper amounts and chemically correct types of rust and corrosion inhibitors.

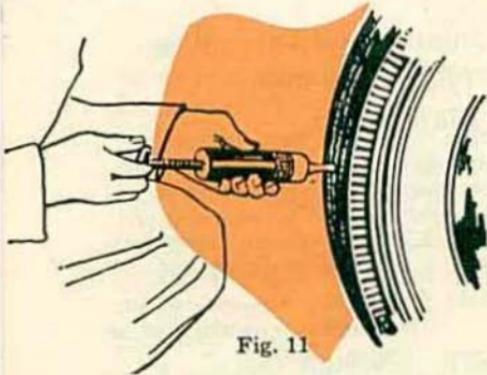
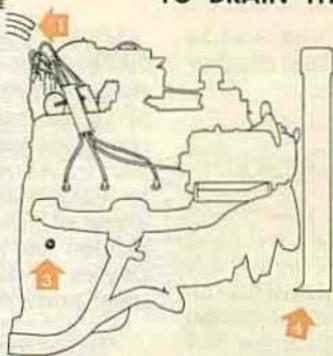


Fig. 11

7. Hold gun nozzle directly against hole being repaired. See Fig. 11. *Do not attempt to insert nozzle in the hole.* If nozzle can be inserted in the hole, it shows that the hole is too large for repair by gun method and hot patch or rubber plug method should be used. Replace nail in gun nozzle after using.
8. Allow to stand for at least 15 minutes before reinflating tire to recommended pressure. Re-check in water tank.

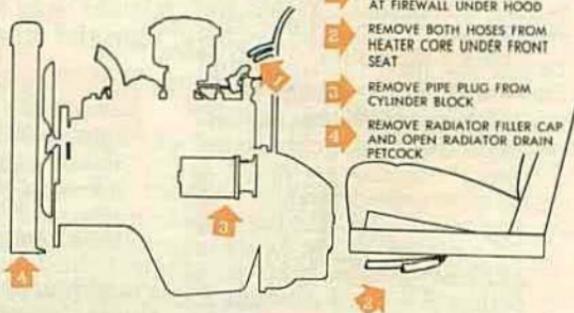
## TO DRAIN THE COOLING SYSTEM

- 1 REMOVE ONE DEFROSTER HOSE AT FIREWALL UNDER HOOD
- 2 REMOVE BOTH HOSES FROM HEATER CORE UNDER FRONT SEAT
- 3 REMOVE PIPE PLUG FROM REAR OF CYLINDER BLOCK (ONE ON EACH SIDE OF ENGINE)
- 4 REMOVE RADIATOR FILLER CAP AND OPEN RADIATOR DRAIN PETCOCK



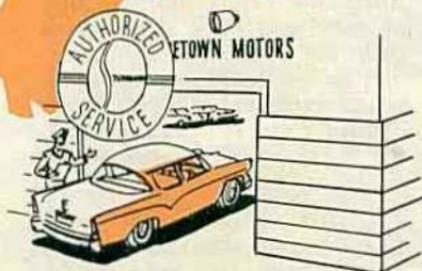
COMMANDER & PRESIDENT

- 1 REMOVE ONE DEFROSTER HOSE AT FIREWALL UNDER HOOD
- 2 REMOVE BOTH HOSES FROM HEATER CORE UNDER FRONT SEAT
- 3 REMOVE PIPE PLUG FROM CYLINDER BLOCK
- 4 REMOVE RADIATOR FILLER CAP AND OPEN RADIATOR DRAIN PETCOCK



CHAMPION

## SERVICE



Generally speaking, you need consult your Studebaker serviceman at least once a

month (or every 1000 miles [1600 km.]) for a regular lubrication and inspection. Twice each year, in the fall and in the spring, he will recommend that you have some extra services performed, according to a schedule he has based on years of experience.

## ADJUSTMENTS

**Carburetor in High Altitude** Your Studebaker dealer can make any adjustments necessary for use of your car

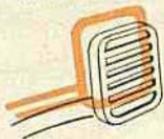
in high altitudes.

**Brake Adjustment** Your brakes are self-centering and self-energizing.

Every time you apply the brakes, the linings wear a little. Occasionally, a minor adjustment should be made to restore full pedal reserve. Have your Studebaker dealer make this adjustment.

**Clutch Pedal Travel Adjustment** The clutch pedal moves down a little before

you feel the resistance of the release mechanism. This is the free travel. It should be between one inch (25 mm.) and one-half inch (13 mm.). Have your dealer make this adjustment for you when necessary.



**Hill Holder** If your car has a Hill Holder, be sure it is checked for adjustment whenever the clutch pedal travel is adjusted.

**Fan Belt Adjustment** Your Studebaker dealer can check this and make any needed adjustments.

**Front Wheel Camber Adjustment** The camber is set at the factory  $\frac{1}{2}^\circ$  greater on the driver's side of the car than on the other side. If a front end alignment check shows that camber needs adjustment, have it set as nearly to  $\frac{3}{4}^\circ$  positive on the driver's side and  $\frac{1}{4}^\circ$  positive on the other side as possible. In any

setting, the driver's side should have  $\frac{1}{2}^\circ$  more camber than the other side.



**Body Drain Holes** You can clear the door drain holes with a penknife or some similar flat object. Insert it into the holes and run it back and forth a few times to loosen any congestion.

Your Studebaker dealer will take care of clearing body drain holes.

**Power Steering Maintenance** For best results, use only Studebaker Type A Automatic Transmission Fluid (AC-2261) in the reservoir of your power steering oil pump. If you must add to or refill the reservoir some place where you cannot get Studebaker Fluid, use a good quality of Type A (AQ-ATF) transmission fluid. Be sure the symbol "AQ-ATF" is on the container.

Check the oil level every 5000 miles (8000 km.). Be sure reservoir cover and head of the screw are clean before removing cover to open reservoir. Allow no dirt or dust to enter the reservoir. Add Type A (AQ-ATF) fluid as needed to maintain fluid at proper level as indicated by level mark on the reservoir.

**Automatic Transmission Maintenance** Check the fluid level every 1000 miles (1600 km.).

**NOTE.**—If you must add to or refill your automatic transmission some place where you cannot get Studebaker Type A Automatic Transmission Fluid, be sure that only such fluids with the following identification on the container are used: brand name including the words "Fluid Type A" plus the symbol "AQ-ATF" embossed on the top of the container.

**Drain and refill** every 15,000 miles (24,000 km.) or once a year. Use only Studebaker Type A Automatic Transmission Fluid. This fluid meets AQ-ATF standards for

automatic transmission oil. See note above about using non-Studebaker brands of Type A fluid.

**Flightomatic** Adjust transmission bands at 15,000 (24,000 km.) intervals or as operation of transmission indicates.

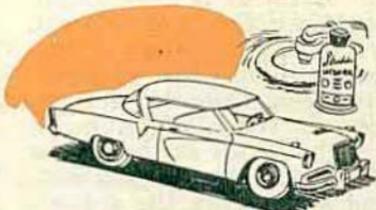
**Power Brakes** For any service requirements, see only an authorized Studebaker dealer.

**Battery** Check water level every 1000 miles (1600 km.). Add distilled water as needed to maintain level in each cell. Be sure car is grounded whenever battery is being charged. *Hydrogen gas is given off by a charging battery. Keep fire away.*

**Air Cleaner** Service every 1000 miles (1600 km.) or oftener as needed in abnormally dusty operation. To service "dry" type, replaceable element air cleaner, remove element and tap against a solid object to remove accumulated dust. Do not use

compressed air to remove dust. **DO NOT MOISTEN ELEMENT AT ANYTIME.** Replace element every 10,000 miles (16,000 km.) in normal service.

## APPEARANCE



Many owners have their new cars Lustur-Sealed with Studebaker Lustur-Seal No. 1 before delivery or shortly thereafter. Lustur-Seal No. 1 is a marvelous power-applied material that conditions and protects the finish for the years to come.

Once a car is Lustur-Sealed, periodic washing and the no-rub application of Studebaker Haze-Cream about three times a year are all that is needed to keep a "like new" appearance.

Lustur-Seal No. 1 is the *only material* that we will approve for application to the paint during the first 60 days of the car's life.

After 60 days, if you do not have your car Lustur-Sealed, we suggest you use Studebaker AC-1468 Cleaner and AC-1489 Polish for keeping the finish in tip-top condition. If there are tar or asphalt specks on the finish, remove them with Studebaker AC-1467 Tar and Road Oil Remover. Your dealer has all of these car care materials in stock.

Alcohol, antifreeze with alcohol in it, calcium chloride and other salts used to melt snow and ice or settle dust can harm a car's paint, chromium, and stainless steel. As soon as possible after exposure, flush off these chemicals with clear, cold water. If repeatedly subject to chlorides in winter or summer, wash the car once a week to help prevent damage. *Heavily coat all chrome and stainless steel with paste wax about once a month.*



**Washing the Car** First, flush off all foreign matter from the finish with cold water. Then take a clean sponge and use it with running water to remove dirt. Dry the finish with a clean, damp chamois skin. Use straight horizontal or vertical strokes.

Keep *chromium-plated and stainless steel* parts clean and free of dirt and foreign matter as much as you can. They are of a somewhat perishable nature. If not cared for the finish may deteriorate. For general cleaning, use clear water and clean cloth or apply Studebaker AC-1464 Chrome Cleaner as directed on the container.

**Upholstery** You can wash the seat and side upholstery

with a good, frothy suds of neutral soap and warm water. Put on moderate amounts with a damp cloth, sponge, or soft brush. Remove the suds with a clean cloth or sponge and wipe the surface several times with a dry cloth. While the material is still damp, brush it lightly with a whisk broom or any brush of medium stiffness. Let air circulate freely over the wet upholstery. When it is dry, brush it with the lay of the pile or nap. This will loosen any matting and restore the appearance.

**Leather and Vinylite** Use lukewarm water and saddle soap. It leaves the fabric clean, soft, and pliable. (Sports stores, shoe stores, and shoe repair shops sell saddle soap.)

Apply saddle soap with a soft sponge. Rinse the sponge from time to time in clean water. When you finish cleaning the leather, polish it with a clean, soft cloth.

To remove stubborn spots on Vinylite, scrub lightly with kitchen cleanser.

**Stains** If any bad stain occurs, **DO NOT USE ANY COMMERCIAL SPIRITS OR SOLVENT CLEANERS.** Instead, get Studebaker Kar Kleen and follow label directions *exactly*. (Remove label from container and read both sides). Solvents only spread staining agent and disperse its concentration over a wider area of the fabric. Some solvents "set" a stain so that even Kar Kleen cannot do a totally satisfactory job of stain removal.

**White Sidewall Tires** Studebaker AC-1464 Chromium Cleaner is just the thing for cleaning white sidewall tires.



**SUGGESTED  
AUTHORIZED  
STUDEBAKER  
ACCESSORIES**

- Bumper Guards • Climatizer • Kar Kleen
- Radio with Rear Seat Speaker
- Spotlight • Back-up Lights
- Outside Mirrors • Kleenex Dispenser
- Directional ("Turn") Signals
- Electric Clock • Cigarette Lighter

## SERVICE INFORMATION

If emergency adjustments or repairs must be made at shops other than authorized Studebaker dealerships, ask the repairman to refer to this section of your Owner's Guide to be sure that he understands the several "special-to-Studebaker" measurements and other service data given below.

### BRAKES

Pedal Free Travel.....

1/16" to 3/16" (1,6 to 4,8 mm.)  
(Before the master cylinder piston starts to move.)

### CAPACITIES

	Champion			Commander & President			Goldenhawk		
	U.S.	Imp.	Liters	U.S.	Imp.	Liters	U.S.	Imp.	Liters
Engine Oil (Qts.).....	5.00	4.20	4,75	5.00	4.20	4,75	5.00	4.20	4,75
Radiator (Qts.).....	11.00	8.50	9,50	17.00	14.30	16,50	25.00	20.80	23,70
w/Climatizer.....	12.50	9.50	11,00	18.50	15.50	17,75	26.50	22.00	25,30
Trans.—Conv. (Pts.).....	1.60	1.33	0,75	2.40	2.00	1,15	—	—	—
Overdrive (Pts.).....	2.75	2.30	1,30	3.40	2.75	1,60	3.70	3.08	1,74
Automatic (Qts.).....	9.00	7.47	8,60	9.00	7.47	8,60	11.50	10.35	10,93
Rear Axle (Pts.).....	2.50	2.10	1,20	3.00	2.50	1,50	3.00	2.50	1,50
Gas Tank (Gal.).....	18.00	15.00	68,00	18.00	15.00	68,00	18.00	15.00	68,00

### CLUTCH

Pedal Free Travel.....

Champion—Commander—President  
1/2" to 1" (13 to 25 mm.)

Goldenhawk  
1 1/4" to 1 1/2" (32 to 38 mm.)

### ELECTRICAL

BATTERY is Willard Model No. 25M-50, 12-volt with negative ground, and 1.260 specific gravity.

#### CIRCUIT BREAKERS AND FUSES

Circuit Breaker—Head, Parking, Tail, Back-up and Instrument Lights	20
Circuit Breaker—Body and Stop Lights.....	15
Climatizer and Defroster Fuse.....	SFE-14
Overdrive Fuse.....	3AG 20
Radio Fuse.....	SFE 9
Directional Signal Fuse.....	SFE 9
Clock Fuse.....	1AG 3
Cigar Lighter.....	Thermal
Windshield Wiper Circuit Breaker.....	5
Seat Adjuster Circuit Breaker.....	20
Window Lift Circuit Breaker.....	20

#### Amperes

#### Location

On Headlamp Switch
Back of Instru. Board
On Switch
In Relay on Dash
In Lead Behind Instru. Board
In Bracket Behind Instru. Board
In Lead Behind Instru. Board
Back of Socket
In Switch
Upper Left Cowl Panel
Upper Left Cowl Panel

## ENGINE

Oil pressure at 40 mph (65 km.p.h.).....	between 20 and approximately 40 lbs. per square inch
Pressure at which relief valve opens.....	approx. 40 lbs.
Valve seat angle.....	45°
Valve tappet clearance—hot, idling engine.....	Champion: set cold only. .023"-.025" (0,58-0,64 mm.)—Commander, President Automatic Take-up, hydraulic lifters—Goldenhawk
—cold engine.....	.016" (0,41 mm.)—Champion .025"-.027" (0,64-0,68 mm.)—Commander, President Automatic Take-up, hydraulic lifters—Goldenhawk

## STEERING

Toe-in.....	1/16" to 1/8" (1,6 to 3,2 mm.)
Caster.....	-1° to -2-1/2° No load (Not more than 3/4° variation between wheels.)
Camber.....	0° to + 1° No load (See page 30 for camber adjustments.)
King Pin Installation.....	5-1/4° at 0° camber

## TIRE PRESSURE

NOTE.—Pressures are given in psi—pounds per square inch—and kg/cm<sup>2</sup>—kilograms per square centimeter.

6.40 x 15 tires take 26 psi (1,83 kg/cm<sup>2</sup>) pressure front and  
24 psi (1,69 kg/cm<sup>2</sup>) pressure rear.

6.70 x 15 } tires take 26 psi (1,83 kg/cm<sup>2</sup>) pressure front and

7.10 x 15 } 22 psi (1,55 kg/cm<sup>2</sup>) pressure rear except that Commander station wagon  
rear tires use 24 psi (1,69 kg/cm<sup>2</sup>).

NOTE.—Under conditions where car loading in excess of four passenger weight is considered normal with 4-ply tires, 26 psi (1,83 kg/cm<sup>2</sup>) pressure both front and rear is recommended. When special 6-ply tires are used and under conditions where loading in excess of four passenger weight is considered normal, 26 psi (1,83 kg/cm<sup>2</sup>) front and 30 psi (2,10 kg/cm<sup>2</sup>) rear pressure is recommended.

## IGNITION

	Champion	Commander & President	Goldenhawk
Breaker point gap.....	.020" (0,51 mm.)	.013"-0.018" (0,33-0,46 mm.)	.016" (0,41 mm.)

NOTE.—Check breaker point gap every 10,000 miles (16,000 km.)

Breaker arm tension.....	17-20 oz. (482-567 gm.)	17-21 oz. (482-595 gm.)	19-23 oz. (539-652 gm.)
Spark plug gap.....	.028"-0.033" (0,71-0,84 mm.)	.033"-0.038" (0,84-0,97 mm.)	.033" (0,84 mm.)

NOTE.—In normal use, check every 5000 miles (8000 km.) and replace after 10,000 miles (16,000 km.). Under some conditions of operation, it may be desirable to clean and adjust spark plugs every 2500 miles (4000 km.).

Firing order.....	1-5-3-6-2-4	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2
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NOTE.—In V8 engines, No. 1 is the front cylinder on the left bank and No. 2 is the front cylinder on the right bank.

## LAMP BULBS

	Bulb Manufacturer's Number	
Back-up.....	12 Volt Mazda No. 1073	
Cigar lighter.....	12 Volt Mazda No. 53	
Clock.....	12 Volt Mazda No. 57	
Directional } Front & Parking Lamp.....	12 Volt Mazda No. 1034	
	Rear & Taillight.....	12 Volt Mazda No. 1034
	Tell-tale.....	12 Volt Mazda No. 53
Dome.....	12 Volt Mazda No. 1004	
Headlight.....	12 Volt Mazda No. 5400	
Instruments.....	12 Volt Mazda No. 57	
License plate.....	12 Volt Mazda No. 67	
Package compartment.....	12 Volt Mazda No. 57	
Parking.....	12 Volt Mazda No. 1034	
Radio.....	12 Volt Mazda No. 1891	
Stop.....	12 Volt Mazda No. 1034	
Tail & Directional Signal.....	12 Volt Mazda No. 1034	
Tell-tale for headlight beam.....	12 Volt Mazda No. 53	
Trunk.....	12 Volt Mazda No. 67	
Oil Pressure.....	12 Volt Mazda No. 53	
Charge indicator.....	12 Volt Mazda No. 53	

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## WARRANTY

Dealer warrants to Purchaser each part of each Studebaker-Packard Corporation product sold by Dealer to Purchaser to be free under normal use and service from defects in material and workmanship until such product has been driven, used or operated for a distance of four thousand (4,000) miles or for a period of ninety (90) days from the date of delivery to the original Purchaser, whichever event shall first occur. Dealer makes no warranty whatsoever with respect to tires or tubes. Dealer's obligation under this Warranty is limited to replacement at Dealer's Service Department of such parts as shall be returned to and acknowledged by Dealer to be defective.

This Warranty shall not apply to any product which has been subject to misuse, negligence or accident, or in which parts not made or supplied by Studebaker-Packard Corporation are used if, in Dealer's sole judgment, such use affects its performance, stability or reliability, or which shall have been altered or repaired after delivery in a manner which, in Dealer's sole judgment, affects its performance, stability or reliability.

This Warranty is expressly in lieu of all other warranties, express or implied, and of all other obligations or liabilities on the part of Dealer and Studebaker-Packard Corporation.

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*Studebaker-Packard Corporation has reserved the right to make any changes in design or to make additions to or upon its product without incurring any obligations to install the same on motor vehicles previously built.*





## **BATTERY WARRANTY**

The Willard Storage Battery Company provides a 90 day standard factory warranty on the battery. They also provide an adjustment policy prorated on a sliding scale based on the length of service of the battery. Your Studebaker dealer will be pleased to handle details of battery warranty service for you.





KEEP THIS BOOKLET IN A CONVENIENT PLACE IN YOUR  
CAR. IT CONTAINS IMPORTANT INFORMATION ABOUT  
THE OPERATION AND CARE OF YOUR STUDEBAKER.



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