justments or lack of proper lubrication will result in failure of gears and bearings.

Evidence of these conditions voids the warranty on parts, therefore these adjustments should in all cases be made by some authorized Auburn Service Station.

DUAL-RATIO

The Dual-Ratio rear axle permits car driver to select the ratio best adapted to the driving conditions. The two ratios available in this axle, both operating on the one ring gear and pinion, are 5.1 to 1, and 3.4 to 1. The latter ratio gives high speed performance with a saving of approximately one-third in engine revolutions per minute, and a lessening of wear on all moving parts; while the 5.1 to 1 ratio gives extreme accelerating and hill-climbing performance. See instructions on page 3.

The shift from one ratio to the other is made by utilizing the vacuum of intake manifold through a valve located below the instrument cluster. The lever shows "high" and "low" position.

With the Dual-Ratio it is necessary to use special lubricants in order to give satisfactory operation and long life to the gears. Auburn dealers will be able to supply you with recommended lubricants.

Use a tablespoonful of "Fine Oil" or "Spring-Eze" in Dual Ratio Control cylinder every 5000 miles.

The rear axle housing is filled up to oil level when car is delivered. The level should be checked after each 5,000 miles service, adding only enough recommended lubricant to bring it to the oil level hole in housing cover.

CAUTION: When additional lubricant is required be sure to use only the recommended lubricant which your dealer can supply.

The following lubricants are approved for use in Dual Ratio Differentials:

Amalie Lead Base .....L. Sonneborn and Sons
Elco No. 28, or No. 1403EP (Grade X) .....Elco Grease & Oil Co.
Penola Compound No. 6 .....Pennsylvania Lubricating Co.
Quaker State Hypoid Gear Grease .....Quaker State Oil Company
Sturaco .....D. A. Stuart & Company
Mobile Oil "E.P." for summer use above 32°F.....Socony Vacuum Corporation
Mobile Oil "E.P.W." for winter use below 32°F....Socony Vacuum Corporation

The above lubricants come within the SAE viscosity range of 165 at 210°F.

WHEEL BEARINGS

All wheel bearings should be removed for a thorough cleaning, greasing and readjusting twice a year, or oftener if the service is severe.

At least once a year they should be boiled in washing soda and water.

When thoroughly cleaned and dried, cover them with a good grade of clean cup grease, free from acids or solids.

Pack bearing cages with grease and reassemble. Be sure that lock washers, nuts and cotter pins are securely in place.

Wheel bearings must not be adjusted too tightly.

TRAYER SPRING BOLTS

8-105 Salon Models are equipped with Trayer Threaded Spring Bolts. These are lubricated by the Bijur Chassis Automatic Lubricating System and require very little attention. The threaded bushings must always be tight

in the spring eyes and brackets so they do not move endways. If the bushings loosen they would allow the spring to work back and forth and develop rattles. If these become loose they should be replaced with bushings oversize on outside diameter.

L.S

BRAKES

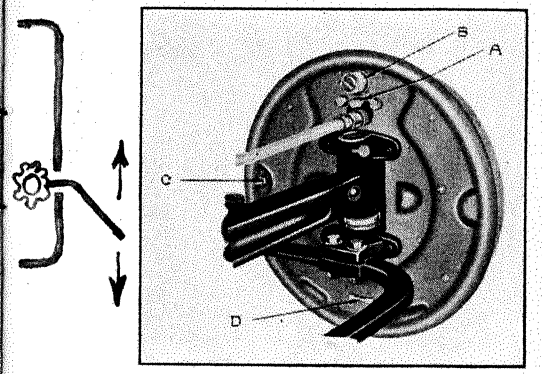

Figure 1

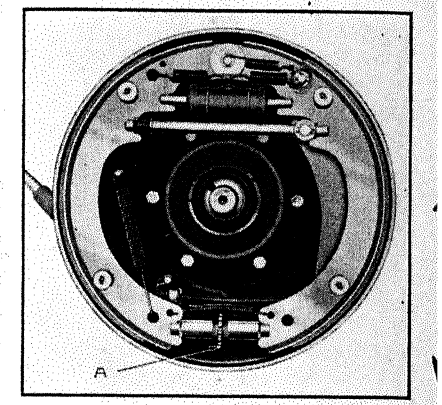

Figure 2

These models are equipped with special Auburn Hydraulic Brakes. The Supply Tank from which fluid is delivered to the Master Cylinder in which hydraulic pressure is originated must be kept filled with genuine Wagner's Brake Fluid Special No. 5 which can be supplied by any Auburn Distributor or Dealer.

Should air enter the system due possibly to insufficient fluid in supply tank, the system will have to be "bled," an operation which we suggest you have done by your dealer or any Auburn Service Station, after which the tank will have to be refilled with recommended fluid.

When brake lining wears down so foot pedal goes almost to floor board, thereby reducing the braking effect, adjustments can easily be made to bring shoes into closer relation with drums.

A. Jack up all four wheels. Loosen lock nut on eccentric adjustment (C) Figure 1.

Turn the eccentric in direction wheel revolves in forward movement of car until a slight brake drag is felt when turning wheel by hand. Then just free the drag by turning eccentric in opposite direction and lock the eccentric in this position.

B. Remove cover plate (D) Figure 1, and with screw driver, or special Auburn brake tool AP-35, turn adjusting screw (A), Figure 2, toward rim of backing plate until slight brake drag is felt when turning wheel by hand. Then back off the adjusting screw 7 notches. This adjustment, when made at each wheel, will give uniform shoe setting. Shoes should show a tight .010" clearance at anchor end (top) and a loose .010" clearance at bottom. Always replace cover plate (D).

Should major adjustments be required, consult an Auburn Service Station.

NOTE: Severe application of brakes on a new car is injurious to the brake system. Abusive handling may cause roughening of linings and drums and result in unsatisfactory performance, whereas careful and light appli-

LINING - 1 3/4" X 13 1/2" PER AXLE

cation while new will result in proper burnishing of drums and linings and insure satisfactory performance later on.

The parking brake operates the rear service brakes through a mechanical linkage from a lever located in center of front compartment.

SHOCK ABSORBERS

The Lovejoy Hydraulic Shock Absorbers are double action rebound control, resisting spring action in both directions, and working against rebound of body or chassis. The resistance is caused by the piston pumping oil through a variable valve

On Custom models a lever to left of instrument panel controls the ride. Moving this lever toward the "off-position" gives a softer adjustment of shock absorbers, permitting full action of the chassis springs and absorbers, and is the recommended position for ordinary driving.

"Full-on" position may be used when driving at extremely high speeds, but is not an advisable ride adjustment as it restricts the movement of the cushioning fluid in the shock absorbers, and benefit of free spring action is lost.

The oil used is a special low viscosity oil that will remain fluid at temperatures as low as −40° F. The same oil is used for winter and summer. This special oil, only, should be used, and it can be obtained from Auburn dealers, or from United Motors Service Stations. It is supplied in half gallon cans, which is more than required to fill a complete set.

Should the shock absorbers become noisy, consult your dealer, or any United Motors Service Station.

TOPS

Our Phaeton and Cabriolet Tops can easily be lowered and raised by one person.

To Lower Phaeton Top:

1. Loosen snap fasteners all the way around.
2. Remove the two acorn head screws (one on each side) on top of removable center body pillar.
3. Remove the two acorn head screws (one on each side) at base of top folding hinge on No. 3 bow.
4. Open both rear doors. Loosen lock nuts and wing screws attaching front bow to windshield.
5. Lift up front end of top and No. 3 bow, push it back and fold it.
6. Pull all top material from between the slat irons to avoid chafing; fasten top down with the hold-down straps, running them through the footman loop on each side rail.
7. After top is down, take off the center pillars by removing acorn screws at base, and store them under front seat.

To Raise Phaeton Top:

1. Replace the center pillars and bolt them firmly to body. You will note they are marked on inside at lower end for Right and Left, and must be replaced according to the marking.
2. Loosen the hold down straps. Stand in rear compartment, take hold of No. 3 bow and lift up and forward, raising both sides simultaneously.
3. Sit down in compartment and move top forward to its place, after

which refasten all lock nuts and snaps and wing and acorn head screws that were loosened and removed.

To Lower Cabriolet Top:

1. Loosen snap fasteners all the way around.
2. Remove the acorn head screw from No. 2 bow on each side.
3. Break the joints of prop irons on each side.
4. First loosen the lock nuts, then the wing screws that hold top to windshield.
5. Break back the top and lay it back in position. Pull all top material from between slat irons. Fasten top in place with the hold down straps.

To Raise Cabriolet Top:

1. Loosen hold-down straps and lift up the top.
2. Get inside, take hold of front header, lift up and draw top forward in place and close the joints.
3. Refasten top in place with acorn head screws and clamp it fast to windshield. Refasten all snap fasteners.

NOTE: Special care must be taken in folding tops down to see that no material is left between any part of the slat irons as the weight of top will press on it and injure or cut through the fabric.

To Lower Speedster Top:

1. Loosen the two fasteners on each side of body.
2. Raise deck lid and loosen the top deck fasteners under deck lid.
3. Pull out the top material and raise deck lid to full open position.
4. Remove the bow over windshield.
5. Lower the top into the compartment, taking care to see that the top material is folded in at each end.
6. Place front bow in last with top side downward. One end of bow to be placed in first and pushed as close to side of body as possible. The other end can then be put in place.
7. Close deck lid, and be sure it is locked in place.

To Raise Speedster Top:

1. Open deck lid and take out front bow.
2. Lift out the top by pulling rear or bottom bow up and forward.
3. Attach front bow to windshield by fastening center thumb screw in first, then pull down each end and insert the two end thumb screws.
4. Partly close deck lid and insert bottom edge of top in the opening around outside of deck lid.
5. Reach under deck lid while partially raised and hook the fasteners. Be sure the stay straps are hooked over fastener stud before the fastener is attached.
6. Close the deck lid and hook the two fasteners on each side of body.

General Care of Tops:

The fabric used in our Phaeton and Cabriolet tops should be carefully cleaned occasionally in order to preserve its appearance, and add to its life. The following method is recommended:

Dissolve one bar of H. & H. Soap in two gallons of water, heated to approximately 180 degrees F. Apply this hot solution to the topping with a sponge, carefully rubbing it, and then use a pail of clear water to remove the suds. The results will be satisfactory. H. & H. Soap, or cleaner, can be purchased in any retail grocery.

Do not use cleaning fluids which are similar in nature and of same action as gasoline. They would remove the dirt and grease, but would be injurious to the combining compound of the top material, causing separa-