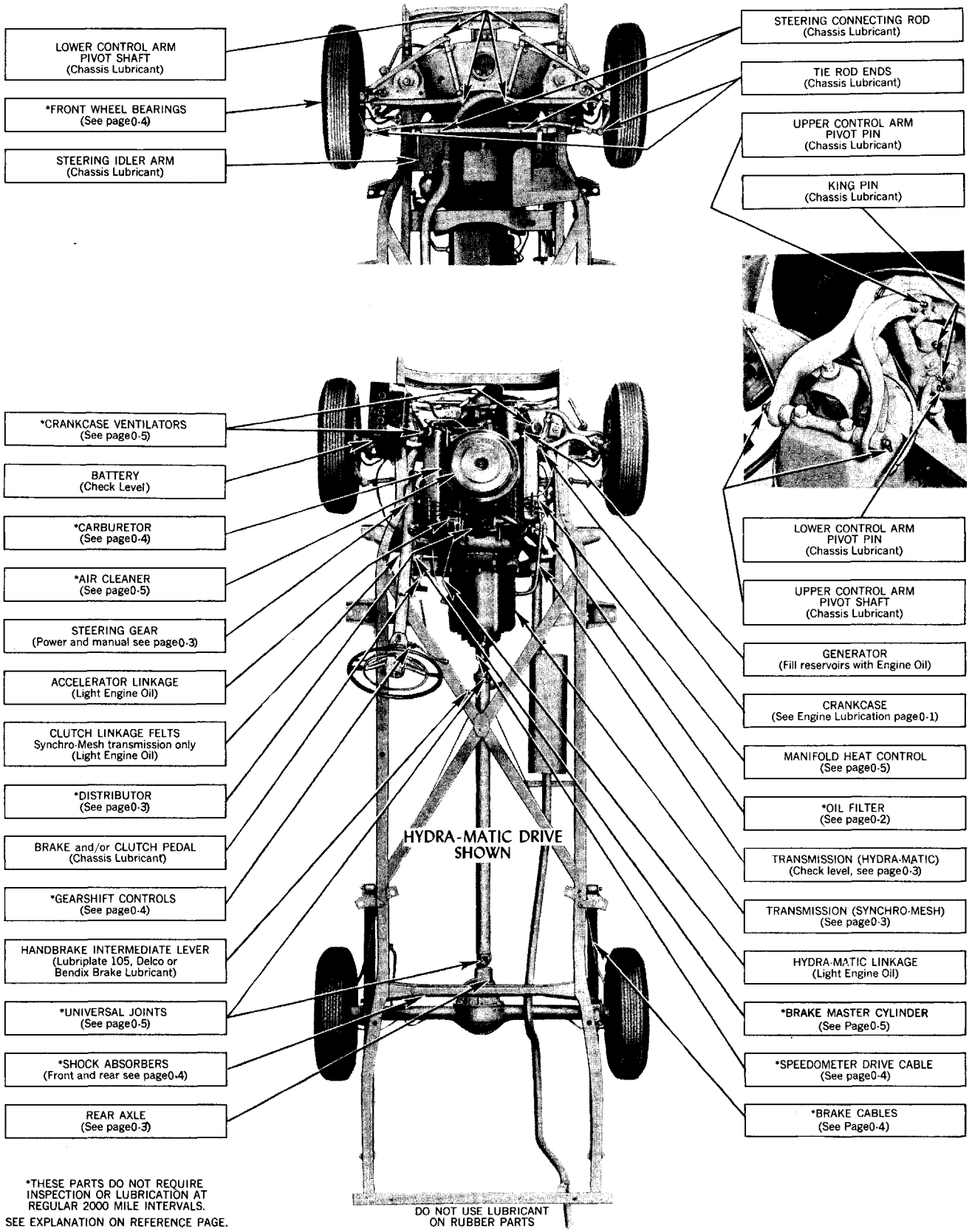
PONTIAC 2000 MILE LUBRICATION CHART



GENERAL LUBRICATION

CONTENTS OF THIS SECTION

Lubrication should be performed according to the Lubrication Chart on page 0–0 and the information of the following pages.

ENGINE

The terms Regular, Premium, and Heavy Duty have generally been used to designate the types of engine oils supplied by the oil industry to meet the requirements of various service conditions. These terms have been replaced by the designations "For Service ML," "For Service MM," and "For Service MS or DG."

Petroleum based engine oils of type MS or DG, as supplied by reputable marketers, are suitable for use in Pontiac engines.

S.A.E. OIL NUMBER SYSTEM

The numerical designations such as 10W, 20W and 20, etc., adopted by the Society of Automotive Engineers, classify lubricating oil only according to Fluidity (viscosity). The oils with the lower numbers are lighter and flow more readily than do the oils with the higher numbers. The letter "W" after the number indicates an oil adapted for cold weather starting. Multi-viscosity type crankcase oils such as 5W-10, 5W-20, 10W-20 and 10W-30 are designed to combine the easy starting characteristics of the lower number with the warm weather operating characteristics of the higher number.

SELECTING OIL OF THE PROPER NUMBER

An oil should be used which provides safe lubrication, satisfactory oil economy under warm climatic conditions, and easy starting at the lowest atmospheric temperatures expected during the period the oil is to remain in the engine. Based on these considerations, the numbers of engine oil which are recommended for the Pontiac engine under various climatic conditions are shown in Fig. 0-1.

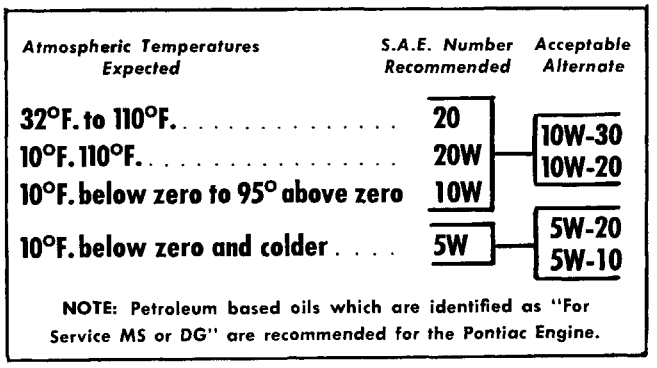


Fig. 0-1 Engine Oil Chart

OIL CHANGE RECOMMENDATIONS

Engine oil should be changed whenever it becomes contaminated. Contamination is usually due to the accumulation of water, dust or dirt, or the breakdown products of the oil and fuel.

Outside of making a laboratory test, it is practically impossible for anyone to tell the amount of contamination in an oil by either looking at it or feeling it. Experience has shown that the degree of contamination is largely dependent on the conditions under which a car is operated.

It is always advisable to drain the crankcase only after the engine is thoroughly warmed. The benefit of draining is lost, to a large extent, if the crankcase is drained when the engine is cold as the oil will be thick and will not drain properly.

The crankcase refill capacity is 5 quarts except when the oil filter element is changed. The refill capacity with an oil filter element change is 6 quarts.

FIRST 1,000 MILES—The oil placed in the crankcase at the factory is a high quality "MS" type, 10W oil containing an extreme pressure additive for break-in purposes, and should be left in the engine for the first 1,000 miles. At the end of the first 1,000 miles, the crankcase should be drained and refilled to the proper level with an oil suitable for your individual climatic and driving conditions as recommended in the above chart. Should it be necessary to add or change engine oil during the first 1,000 miles, an oil not heavier than 10W should be used.

AVERAGE DRIVING—For average driving conditions an oil change is recommended every 3,000 to 4,000 miles. This applies to all engines with the exception of those operated under the conditions described in the following paragraphs.

DRIVING IN DUST—When the car is generally operated in dusty territory, consideration should be given to more frequent oil changes.

SHORT DRIVES IN COLD WEATHER—Short drives in cold weather (freezing temperatures or lower), such as city driving, do not permit the engine to warm up thoroughly, and water may accumulate in the crankcase from condensation of moisture. Under these conditions it may be advisable to change oil at 1,000 mile intervals.

HIGH MILEAGE DRIVING—For the car operating 500 to 1,000 miles per week consideration may be given to greater mileages between oil changes. Oils have a tendency to thicken on continuous high speed driving. This should be kept in mind when preparing cars for cold weather driving.

OIL FILTER

The full flow oil filter (optional at extra cost) is highly recommended for use on the Pontiac Engine. This filter removes harmful particles of dirt, grit or other foreign material before they can cause undue engine wear by imbedding themselves in bearing surfaces or otherwise harmfully affect engine performance.

The filter element should be replacd once yearly or 10,000 miles, whichever occurs first.

ADDING OIL BETWEEN CHANGES

Since the lubrication system in a Pontiac is a full pressure system, it is not necessary to keep oil level up to the "FULL" mark on the dipstick. It is only necessary to keep oil level above "ADD OIL" mark. It takes two quarts to bring the oil level from "ADD OIL" to "FULL" mark. Each time the gas tank is filled, the oil level should be checked. However, it is good economy to let the oil level approach the "ADD OIL" mark before having oil changed.

CAUTION: DO NOT OVER FILL.

CHASSIS AND BODY LUBRICATION

Pontiac cars should be lubricated periodically to retain all the built-in value. However, as with changing engine oil, experience has shown that the need for this vital service varies according to the conditions under which the car is driven.

WHEN TO LUBRICATE

For normal driving conditions, lubrication is recommended every 2,000 miles. This applies to all models with the exception of those driven under the conditions described below.

DRIVING OVER ROUGH AND DUSTY ROADS—When the car is driven over rough or dusty roads, more frequent lubrication might be necessary.

DRIVING IN SLUSH, WATER OR MUDDY ROADS—Cars driven through slush (melting snow), water or on muddy roads should be lubricated at more frequent intervals, due to the washing effect of the water on the lubricant in front suspension parts and the clutch and brake pedal shafts.

LOW MILEAGE DRIVING—Some cars are driven very little and accumulate mileage slowly. It is good practice to lubricate these cars every 1,000 miles.

HIGH MILEAGE DRIVING—Cars operated over 500 miles per week under favorable conditions should be lubricated once a month.

WATER PUMP

No periodic lubrication is required on the packless type water pump.

GENERATOR

At each lubrication period fill the oil cups with engine oil. If the oil reservoir in the commutator end bearing becomes completely exhausted through failure to lubricate at regular intervals, it will require more than a single filling to restore the reservoir. In such a case, the oil cup should be filled three times consecutively, allowing time between fillings for the oil to soak down into the wick. CAUTION: Do not oil with engine running.

STARTING MOTOR

No lubrication required except on overhaul. When overhauling starting motor add a few drops of engine oil to the bronze bushings in both end frames.

DISTRIBUTOR

The distributor shaft should be lubricated by filling hinge cap oil cup with light engine oil at each lubrication.

The other items in the distributor are to be lubricated each spring and fall or every 10,000 miles; the cam requires a slight amount of petrolatum on the cam lobes; the rotor wick should be lubricated with 3 or 4 drops of light engine oil; the breaker point pivot requires a small drop of light engine oil, the breaker plate felt should be lubricated with 4 or 5 drops of light engine oil applied at the oil hole in the plate. Wipe off any excess oil appearing on the breaker plate.

TRANSMISSION—SYNCHRO-MESH

Lubricant change in the Synchro-Mesh transmission is not recommended unless repair work is being done (Page 7-3). Check transmission for leaks at each chassis lubrication. If there is evidence of leakage, the leak should be corrected and lubricant added to bring level to bottom of filler plug hole.

Use Extreme Pressure Gear Lubricant or Multi-Purpose Gear Lubricant S.A.E. 80 or 90 (no special additives to these lubricants are required or recommended).

TRANSMISSION—HYDRA-MATIC

Check level as outlined in the 1955 Hydra-Matic Manual. If level is at lower mark or below, add G.M. Hydra-Matic Fluid or Automatic Transmission Fluid (Type A) identified by Armour Institute Qualification Number "AQ-ATF. . . ." to bring to full mark. (Approximately one pint required to raise level from lower mark to full mark.)

REAR AXLE

Lubricant change in the rear axle is not recommended unless repair work is being done. The rear axle should be checked for leaks at each chassis lubrication. If there is evidence of leakage the leak should be corrected and lubricant added if needed. Level should be even with bottom of filler plug hole.

Use S.A.E. 90 Hypoid Lubricant (suitable for passenger car duty) in the rear axle. After the unit is thoroughly broken in (several thousand miles), Multi-Purpose Gear Lubricants may be added on the responsibility of the lubricant supplier (no special additives to these lubricants are required or recommended).

Because of the importance of using hypoid lubricant in the differential during break-in, a container of this lubricant is furnished with each service ring gear and pinion set or differential carrier assembly. Hypoid lubricant is also available separately (Group 5.529) if for any reason a refill is required on a rear axle which is not thoroughly broken in (several thousand miles).

STEERING GEAR (POWER AND STANDARD)

Lubricant change is not necessary unless unit is disassembled for repairs. At each chassis lubrication, unit should be checked for leaks. If there is evidence of leakage from the steering gear, the leak should be corrected and All-Season Steering Gear Lubricant (Group 6.803) added to bring to proper level. If unit does not leak it is only necessary to check level once yearly (preferably in the fall).

POWER STEERING HYDRAULIC SYSTEM

If there are any leaks in the hydraulic system, they should be corrected. Add fluid recommended for Hydra-Matic to bring level up to mark near top of reservoir. In an emergency, a good grade of S.A.E. 10 W oil may be used: replace with specified fluid as soon as possible. It is not necessary to change fluid unless unit is disassembled for repair.

REAR SPRINGS

No lubrication is required.

CLUTCH RELEASE BEARING

The clutch release bearing requires no periodic lubrication. It is a ball bearing, lubricated and sealed with enough lubricant for life.

FRONT WHEEL BEARINGS

Front wheel bearings require no periodic lubrication. They should be lubricated only when it is necessary to remove wheels for other work, such as brake relining. The bearings should then be thoroughly cleaned and the balls and races packed with high melting point water resistant wheel bearing lubricant. If wheel bearings are found to be discolored—turned blue or straw colored—it does not indicate that they have been overheated due to lack of lubricant. This discoloration is merely a chemical reaction of substances in the lubricant and does not affect the serviceability of the bearing in any manner. Wheel bearings that are not properly adjusted, i.e., too tight or too loose, are usually the cause of wheel bearing failure and accordingly wheel bearing adjustment and lubrication should only be undertaken by authorized Pontiac dealers.

GEAR SHIFT CONTROLS

The gear shift control linkage is lubricated at assembly and requires further lubrication only when the parts become dry and sticky. Use Lubriplate 105 or equivalent.

SPEEDOMETER DRIVE CABLE

Lubricate speedometer cable when dry. In some cases the lubricant placed in the conduit at the factory may become dry causing a slight binding of the cable. A dry cable will usually be noticeable by wavering of the speedometer needle. A very dry cable, of course, will be noisy. When lubricating the speedometer cable, first remove it from the top and wipe all of the old grease from the cable.

Only the lower two-thirds of the cable should be greased. Then, when assembling the cable in the casing from the top, the lower two-thirds of the cable properly lubricates the upper one-third of the casing, thus resulting in an even coating of the correct amount of lubricant for proper performance. Use a suitable speedometer cable grease which will not become hard and stiff when cold.

BRAKE CABLES

Brake cables should be lubricated yearly (preferably in the fall) or when the rear wheels and drums are off to replace brake shoes and linings or to make a major adjustment. Lubriplate, Delco Brake Lubricant, or Bendix Brake Lubricant is recommended.

Lubricate as follows:

1. Thoroughly clean cable from conduit to cable spreader.

2. Remove retainers at forward end of conduits.

3. Pry apart the two fingers of the anchor which are clinched around the cable conduit, then loosen (but do not remove) the two bolts which hold the conduit anchor to the brake backing plate. NOTE: If the anchor is removed, the cable tension spring on the brake cable will expand through the hole in the backing plate. This may allow the cable end to become disconnected from the brake operating lever and require removal of drums to permit re-engaging the cable with the operating lever.

4. Slide the conduit forward on the brake cable.

5. Clean the cable, examine for broken strands, and apply Lubriplate, Bendix Brake Lubricant or Delco Brake Lubricant to the cable.

6. If conduit anchor at backing plate has been removed, see that rear brake drums are removed. Inspect cable connections to hand brake actuating lever to be certain lever is seated in lever hook.

7. Slide brake cable conduit back in position and secure at forward end with retainer.

8. Tighten two bolts holding anchor to backing plate and then clinch two fingers of anchor around cable conduit. See that rubber boot is in place over front end of cable conduit.

SHOCK ABSORBERS

Give visual inspection for leaks and jounce car at each lubrication period to see that shock absorbers are in operative condition. If inoperative or if leaks are found, the unit should be replaced.

CARBURETOR

CARTER

Lubricate accelerator pump arm countershaft every spring and fall or every 10,000 miles. Apply two drops of light engine oil in dust cover screw hole and center lubrication hole on 2 barrel and in two oil holes under dust cover on 4 barrel.

ROCHESTER

No lubrication required.

CARBURETOR AIR CLEANER AND CRANKCASE VENTILATORS

The carburetor air cleaner and crankcase ventilators should be cleaned and re-oiled in the spring and fall, or every 10,000 miles. If the car is operated in areas where dust conditions are bad they should be serviced every 2,000 miles or more often if required. Proper cleaning should be performed as follows:

STANDARD CARBURETOR AIR CLEANER AND CRANKCASE VENTILATOR

1. Remove filter element from carburetor air cleaner and remove oil filler and ventilator cap.

2. Clean elements by plunging up and down in a can of gasoline or kerosene (oil filler cap cannot be disassembled so complete assembly should be cleaned). CAUTION: Do not allow gasoline or kerosene to contact fireproof coating inside carburetor air cleaner cover.

3. Re-oil elements by dipping in engine oil and allowing excess oil to drain off before assembly.

4. Clean dirt out of element seat in silencer body and reassemble. Be sure filler cap is properly positioned on tube.

HEAVY DUTY (OIL BATH) AIR CLEANER AND CRANKCASE VENTILATORS

1. Remove filter element and oil reservoir from air cleaner. Also remove oil filler and ventilator caps and ventilator outlet pipe filter.

2. Wash accumulated dirt from air cleaner filter element by plunging it up and down several times in a can of kerosene or other suitable solvent. Drain thoroughly, but do not oil. (Do not wash or oil felt.)

3. Clean oil reservoir and refill to indicated level with S.A.E. 50 oil (for temperatures above 32°F.) or S.A.E. 20 W (for temperatures below 32°F.).

4. Clean oil filler and ventilator cap filters and ventilator outlet filter by plunging them up and down several times in a can of kerosene or other suitable solvent. Re-oil elements by dipping in engine oil and allowing to drain thoroughly.

5. Reassemble air cleaner. Install air cleaner and oil filler and ventilators, and crankcase outlet ventilator on engine.

NOTE: When installing the air cleaner on cars equipped with the four-barrel carburetor, always tighten the top wing nut with the cleaner top cover centered over cleaner oil reservoir before attaching the silencer brace. This prevents improper seating of the cleaner top cover and the resultant air leak which causes noisy operation.

When the cleaner top cover is removed for service, care should be taken to prevent damage to the lip which contacts the cleaner oil reservoir. Damage in this area will also result in an air leak.

BRAKE MASTER CYLINDER

If there is evidence of leakage in the brake hydraulic system, the leak should be corrected and fluid added as needed. Otherwise fluid level should be checked at the time of brake adjustment.

When adding fluid, bring level to 7/8" from gasket surface of filler neck (1/2" from top of filler cap opening with power brakes) as instructed in Brake Section of this manual. NOTE: Always use recommended brake fluid (Page 5–12).

UNIVERSAL JOINTS

The universal joints are of the roller bearing type and are packed with lubricant at the factory. Every 25,000 miles the universal joints should be disassembled, cleaned and packed with high melting point wheel bearing grease. More frequent lubrication is not necessary and is not recommended.

MANIFOLD HEAT VALVE

Check heat valve in right bank manifold for freedom of movement; if sticking, lubricate bushing with graphite in alcohol.

RUBBER BUSHINGS

Rubber bushings are used in spring shackles, on the shock absorber mountings and on the stabilizer bar. These rubber bushings should not be lubricated under any circumstances. The use of engine oil will cause rapid deterioration of the rubber necessitating replacement. If a rubber lubricant or castor oil is used, the friction between the rubber and metal is destroyed reducing the effectiveness of the rubber bushings and causing rapid wear.

BATTERY

Observe liquid level. If low, add distilled or "demineralized" water to bring level to bottom of vent well. Inspect top of battery and retainer. If damp or corroded, clean with soda solution or dilute ammonia water; dry thoroughly (See page 12–4). Inspect retainer for presence of four spacers; replace if missing or damaged.

BODY

DOOR LOCK AND STRIKER

Wipe lock and striker parts clean and apply a light coat of stick-type lubricant on teeth of striker and surface of lock bolt housing. Clean off excess lubricant.

DOOR HINGE HOLD OPEN SPRINGS AND STRAPS

Coat front door hinge hold open springs and friction surface on rear door hold open straps with Lubriplate 105 or equivalent.

DOOR HINGE

Apply light engine oil when dry.

DOOR AND REAR DECK LOCKS

Whenever it becomes difficult to insert the key into the lock, a small amount of powdered graphite should be blown into the lock cylinder.

HOOD LATCH AND SAFETY HOOK

Apply light engine oil to hinge pins and Lubriplate 105 or equivalent to latch and safety hook friction surfaces.

HOOD HINGE

Apply light engine oil when dry.

FUEL TANK FENDER DOOR

Apply light engine oil to hinge pin.

HEATER DEFROSTER AIR VALVE LEVER TRUNNION

Lubricate trunnion and defroster air valve lever pivot (mounted on defroster on engine side of dash) and trunnion at blower inlet valve with light engine oil.

REAR DECK LID LOCK BOLT

Spring and fall or every 10,000 miles apply Lubriplate 105 or equivalent to slot in deck lid lock bolt which contacts lock striker.

STATION WAGON

Apply light engine oil to rear gate hinges.

CONVERTIBLE COUPE HYDROLECTRIC PUMP MOTOR

The hydrolectric pump motor does not require service unless malfunction develops.

SERVICE CRAFTSMAN NEWS REFERENCE

News Year	News No.	Page No.	Subject

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News Year	News No.	Page No.	Subject