

GROUP 1**LUBRICARE AND BEARING SERVICE****SECTIONS IN GROUP 1**

Section	Subject	Page	Section	Subject	Page
1-A	Lubricare Instructions.....	1-1	1-B	Bearing Service.....	1-9

SECTION 1-A**LUBRICARE INSTRUCTIONS****CONTENTS OF SECTION 1-A**

Paragraph	Subject	Page	Paragraph	Subject	Page
1-1	Every 1000 Miles—Chassis and Body.....	1-1	1-5	Once a Year—Hydro-Electric Power System.....	1-6
1-2	Every 5000 Miles—Chassis and Body.....	1-4	1-6	Non-Periodic Lubricare Information.....	1-6
1-3	Every 10,000 Miles—Chassis.....	1-5	1-7	Engine Oil Recommendations..	1-7
1-4	Every 15,000 Miles—Dynaflow Transmission.....	1-5	1-8	Rear Axle Lubricant Recommendations.....	1-8

SERVICE BULLETIN REFERENCE

Bulletin No.	Page No.	SUBJECT

1-1 EVERY 1000 MILES—CHASSIS AND BODY**a. Chassis Lubricare**

1. *Engine.* Check engine oil level after allowing time for oil to drain down (5 min.). The oil level should be maintained at all times within 1 quart of the "Full" arrow, or not lower than the middle hole in gauge rod. The lower or "Add Oil" arrow on gauge rod is a *danger mark and not a working level*. The space between arrows on gauge rod represents 2 quarts. See figure 1-2.

See paragraph 1-7 for engine oil recommendations and when to change oil.

2. *Front Suspension, Brake, Clutch and Transmission Controls.* Wipe dirt from lubrication fittings, then apply a good grade of water-resistant chassis lubricant, under pressure, at the following points (fig. 1-1):

Lower Control Arms, inner and outer ends

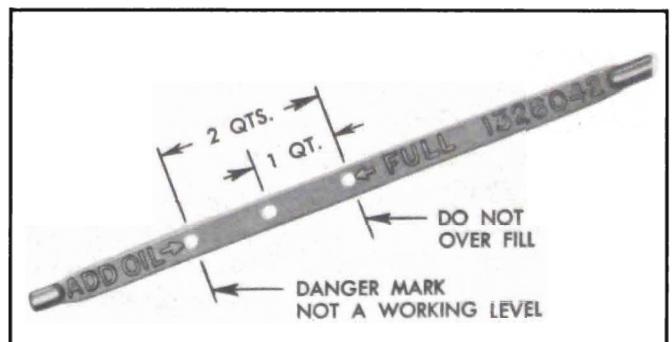


Figure 1-2—Markings on Engine Oil Gauge Rod

Support Upper Pivot Pins
Steering Knuckle Bushings
Tie Rod Ends, inner and outer
Transmission Shift Idler Lever Pin
Clutch Release Equalizer
Clutch and Brake Pedals.

3. *Syncro-Mesh Transmission.* Check oil level, after allowing time for oil to settle. Clean

the surrounding area before removing filler plug. Level should be maintained at filler plug opening by adding Multi-Purpose Gear Lubricant (U.S. Army Spec. 2-105B). Use SAE 90 for temperatures not lower than 10°F below zero; for temperatures continuously lower than -10°F use SAE 80. NOTE: *Draining and flushing transmission is not necessary at any time unless the lubricant has become contaminated.*

4. **Rear Axle.** Check oil level, after allowing time for oil to settle. Clean the surrounding area before removing filler plug. Level should be maintained at filler plug opening by adding SAE 90 Multi-Purpose Gear Lubricant (U. S. Army Spec. 2-105B). NOTE: *Draining and flushing is not necessary at any time unless the lubricant has become contaminated.* When complete refilling is required use only Factory Hypoid Lubricant as specified in paragraph 1-8.

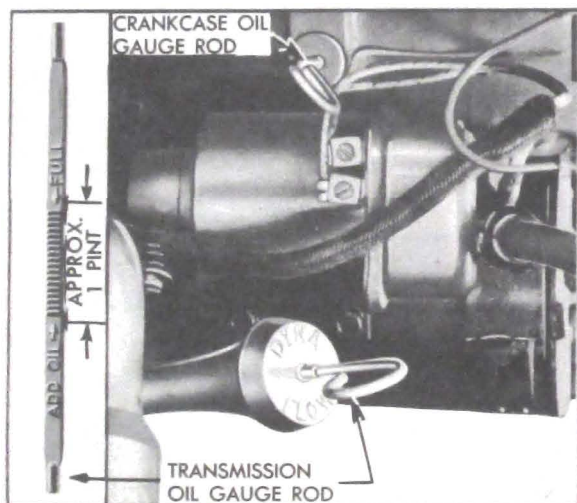


Figure 1-3—Dynaflo Oil Gauge Rod

5. **Dynaflo Transmission.** Check transmission oil level, *with transmission oil warm, transmission in Parking, and engine idling.* Remove gauge rod located under right side of hood (fig. 1-3), wipe dry with clean cloth then reinstall to full depth. Remove rod and note oil level.

If oil level is more than one inch below the "FULL" mark on gauge rod, add oil specified in paragraph 1-4 but do not fill above the "FULL" mark. Distance between the "FULL" and "ADD OIL" mark is one inch and represents approximately one pint.

6. **Cranking Motor (Starter).** Apply a few drops of engine oil to the link pins and fulcrum stud of shift yoke. WARNING: *Do not oil solenoid plunger.* See figure 1-4.

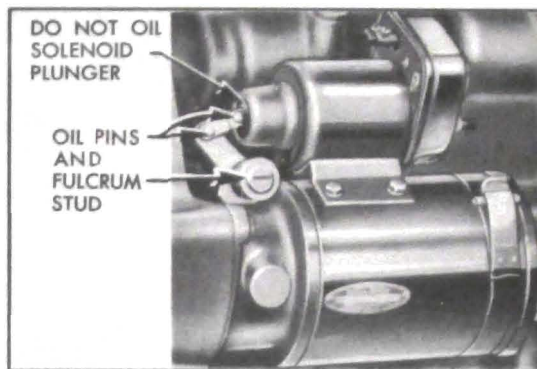


Figure 1-4—Cranking Motor

7. **Distributor.** Lubricate shaft with chassis lubricant through fitting on housing; the proper amount of lubricant is indicated by lubricant emerging from relief hole in front of distributor housing in a continuous unbroken stream. See figure 1-5.

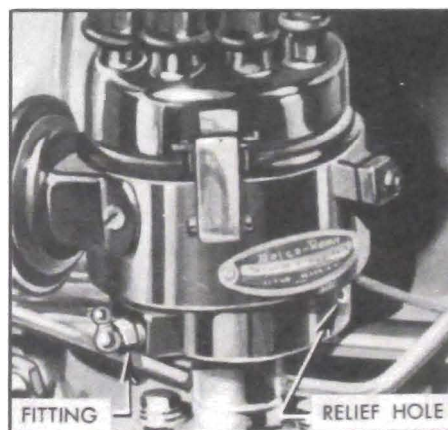


Figure 1-5—Distributor Shaft Lubrication

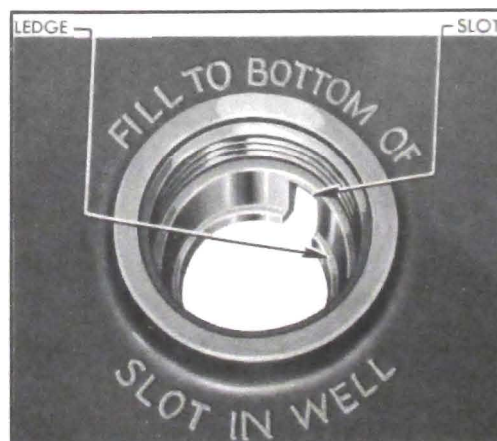


Figure 1-6—Battery Filler Well

8. **Battery.** Add distilled water to bring level to ledge at bottom of slot in well. See figure 1-6. WARNING: *Do not over fill.*

9. *Air Cleaner.* Normally serviced every 5000 miles. If car is operating in dusty territory, however, check conditions of air cleaner and clean it if dirty. See instructions in paragraph 1-2.

10. *Oil Filter.* Change original oil filter element at *first 1000 miles*. See instructions in paragraph 1-2.

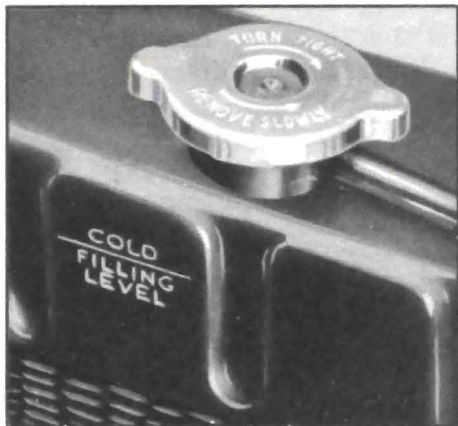


Figure 1-7—Radiator Filling Level—Cold

11. *Radiator.* Check coolant level when engine is cold and add water to line marked "Filling Level—Cold" stamped on rear side of head tank. See figure 1-7. **CAUTION:** *Radiator cap should not be removed when engine is hot because relieving the pressure may cause the cooling system to boil, with resultant loss of water or anti-freeze solution. Filling radiator when hot, or filling above level line may result in loss of water or anti-freeze solution through overflow pipe.*

12. *Generator and Fan Belt.* Place a few drops of engine oil in cups at both ends of generator. Avoid excessive oiling which may affect brushes and windings.

Inspect fan belt for cracks and for proper tension. See figure 2-35.

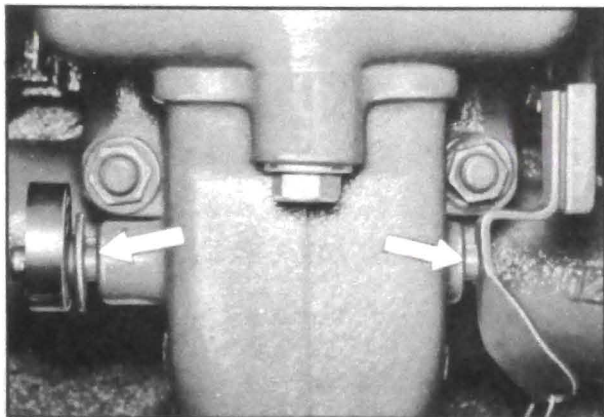


Figure 1-8—Points to Lubricate Manifold Valve Shaft

13. *Manifold Valve Shaft.* Place a few drops of graphited kerosene on shaft at each end and rotate shaft to work lubricant into bearings. See figure 1-8. If shaft is frozen, free up by tapping ends of shaft lightly with hammer.

14. *Throttle Control Linkage.* Place a few drops of engine oil at connections. If the accelerator equalizer shaft squeaks in the upper and lower brackets, work Lubriplate or chassis lubricant into the bearings and wipe off excess lubricant.

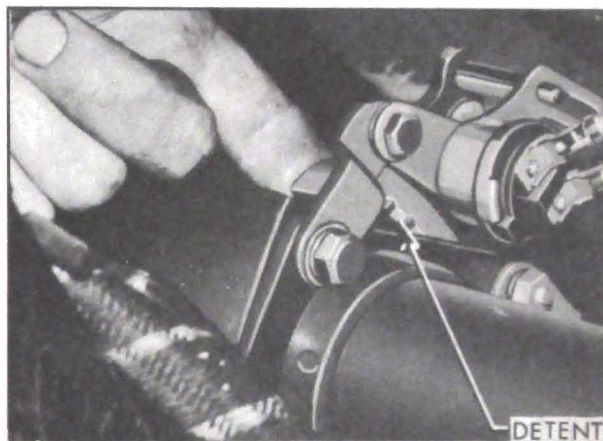


Figure 1-9—Dynaflow Transmission Control Detent

15. *Control Detent—Dynaflow Drive.* Apply a small amount of Lubriplate or chassis lubricant to notches of control detent at base of steering column. See figure 1-9.

16. *Brake Master Cylinder.* Thoroughly clean filler cap nut before removal to avoid getting dirt into reservoir. Add fluid as required to bring level to $\frac{1}{2}$ " to 1" below top of filler opening. Use G.M. or Delco Super No. 11 Hydraulic Brake Fluid. *Never use reclaimed fluid or any mineral oil.*

17. *Tires.* Inflate all tires according to tire temperature, as follows:

- 24 lbs. *Starting Pressure*—after car has been standing for 3 hours or driven less than one mile. *In temperatures below freezing, inflate tires 2 lbs. higher.*
- 26 lbs. *City Pressure*—after car has been driven 3 miles or more **BELOW** 40 MPH.
- 28 lbs. *Highway Pressure*—after car has been driven 3 miles or more **ABOVE** 40 MPH.

WARNING: *It is impossible to inflate tires*

correctly when *HOT*. Pressure normally increases as tires heat up when driving. Do not deflate tires to offset this increase in pressure.

b. Body Lubricare

1. *Hood Fastener Mechanism*. Use engine oil on fastener linkage on hood. Lightly coat hinge pilot pins and fastener hooks with Lubriplate or chassis lubricant.

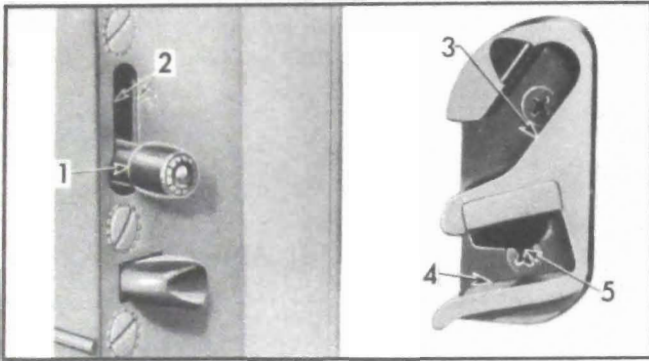


Figure 1-10—Door Lock and Striker

2. *Door Locks and Strikers*. Heavy bodied lubricants usually used on door locks tend to gum up and hinder free movement of the lift bolt type locks. Use only SAE 10 engine oil at points shown in figure 1-10: (1) between roller and bolt (2) edges of bolt slot in door (3) (4) bottom surfaces of both guide channels in striker (5) lower surface of wedge plate bumper. Apply light film and wipe off surplus oil.

3. *Door Checks and Hinges*. Apply one drop of light engine oil to front door check link pin. Sparingly coat lug on rear door check link with Lubriplate or chassis lubricant. No lubricant required on hinge pins.

4. *Dome Lamp Switches*. Coat end of switch plunger and contact point on door with G. M. Door-Ease Lubricant.

5. *Glove Box Door*. Apply a few drops of light engine oil to door hinge pins and wipe off surplus. Sparingly coat lock striker with G. M. Door-Ease Lubricant.

6. *Windshield Wiper Cables*. Wipe a few drops of light engine oil on cables where they pass over tensioner pulleys. **CAUTION: Windshield wiper blades must not be rotated by hand for any reason as this places an undue strain on cable fastenings.**

7. *Rear Compartment Lid Lock*. Lightly coat lock latch and striker with Lubriplate or chassis lubricant.

8. *Gas Tank Filler Door*. Apply a few drops of light engine oil or penetrating oil to hinge pins. Wipe off excess oil to prevent accumulation of dirt.

9. *Lock Cylinders*. If key operates roughly in any lock cylinder blow powdered graphite into key slot. **DO NOT USE OIL.**

c. Lubricare of Miscellaneous Rubber Parts

Rubber parts such as door weatherstrips, cowl ledge lacing, stabilizer bushings, etc., do not require Lubricare unless they are causing squeaks. If Lubricare becomes necessary, make certain that the lubricant used is not injurious to rubber. Where the lubricant can be spread on the rubber part use Lubriplate or white vaseline. Where a penetrating liquid lubricant is required use G. M. Ru Glyde (Group 8.786).

1-2 EVERY 5000 MILES—CHASSIS AND BODY

a. Chassis Lubricare

1. *Distributor*. Apply a few drops of light engine oil to felt wick in top of cam under the rotor. Put one drop of light oil on breaker arm pivot. Work a small amount of petroleum jelly into a cloth, then hold cloth on distributor cam while engine is being cranked. **CAUTION: An excessive amount of jelly will throw off when hot and insulate the contact points, causing ignition failure.**

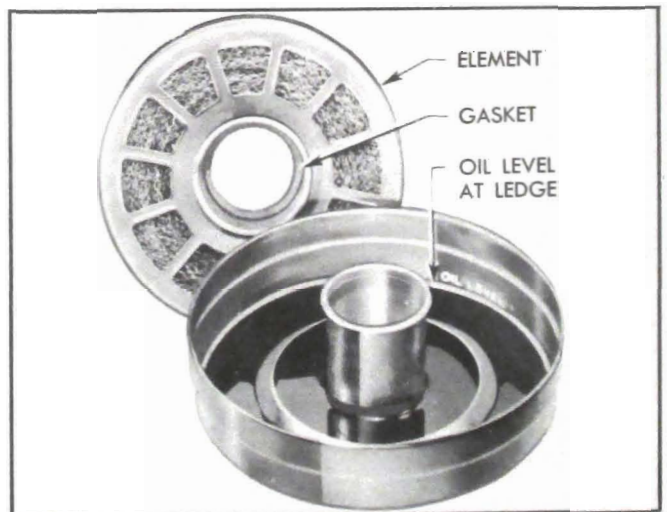


Figure 1-11—Air Cleaner Element and Sump

2. *Air Cleaner*. Every 5000 miles (more often under dusty operating conditions) remove and wash oil sump and cleaner element in a non-inflammable solvent. **DO NOT USE KEROSENE.** Wipe sump dry and allow element to

drain until dry. *Do not use air blast on cleaner element.*

Fill sump to point marked "OIL LEVEL," using one pint of SAE 50 engine oil. See figure 1-11. *Do not oil cleaner element because oil will drain down into sump and cause sump to be overfull.* Make sure that gasket in center of element is in good condition then install element and sump. Wipe all oil from outer surface of cleaner.

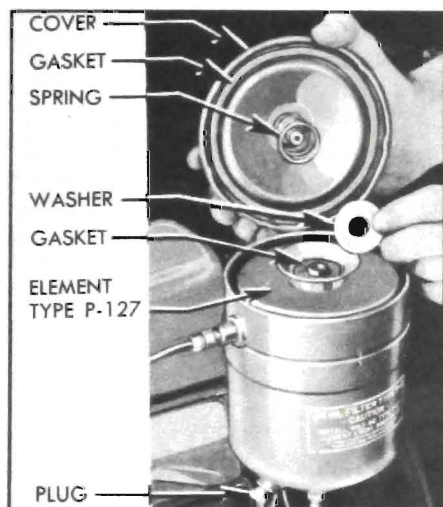


Figure 1-12—Changing Oil Filter Element

3. Oil Filter. Change original filter at first 1000 miles, the second element at first 5000 miles, then change element at each 5000 miles interval thereafter. Remove old element, remove drain plug, and thoroughly wipe out container with CLEAN cloths. Install drain plug, new element and new cover gasket. See figure 1-12. Use only Buick Oil Filter Replacement Element, Part No. 5572129 (AC Type P 127).

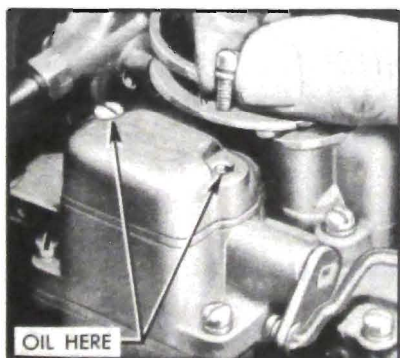


Figure 1-13—Countershaft Lubrication

4. Pump Operating Countershaft—Carter Carburetor Only. Remove the 2 dust cover attaching screws, apply several drops of engine oil in screw holes above the countershaft, and install screws. See figure 1-13.

5. Steering Gear. Clean surrounding area then remove filler plug to check oil level. Maintain level at filler opening, preferably using Saginaw All-Season Steering Gear Lubricant, which is marketed through United Motors Service. Multi-Purpose Gear Lubricant as specified for rear axle may be used when adding a small amount but should not be used when complete refilling is required. Do not use pressure when filling because lubricants may be forced up into steering column.

The steering gear is filled at the factory with all-season steering gear lubricant and seasonal or periodic change of lubricant is unnecessary.

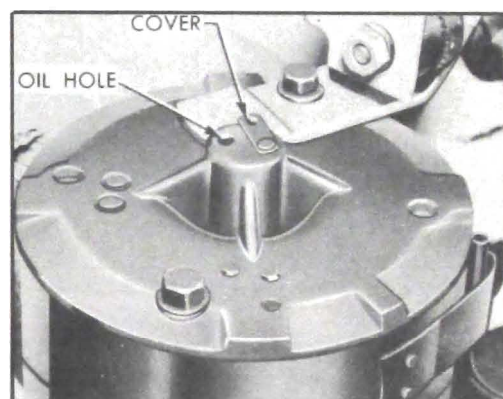


Figure 1-14—Power Unit Motor Oil Hole

b. Body—Hydro-Lectric Power Unit Motor

Swing the oil hole cover aside on upper end of motor and lubricate upper bearing with a few drops of engine oil. See figure 1-14.

1-3 EVERY 10,000 MILES—CHASSIS

1. Front Wheel Bearings. Inspect, repack, and adjust front wheel bearings as described in paragraph 6-14.

Inspect Brake Linings and Drums while front wheels are off. If linings are thin or drums are beginning to score, the car owner should be notified.

2. Shock Absorbers. Check fluid level as described in paragraph 6-23.

1-4 EVERY 15,000 MILES—DYNAFLOW TRANSMISSION

At 15,000 mile intervals the oil pan and torque converter should be completely drained and re-filled with fresh oil. Transmission **MUST NOT BE FLUSHED** when oil is changed.

a. Approved Oils for Dynaflow Transmission

The following oils are approved for Dynaflow Drive and no other fluid should be used.

1. Special Buick Oil for Dynaflow Drive, available through Buick Parts Warehouses under Group 4.101.

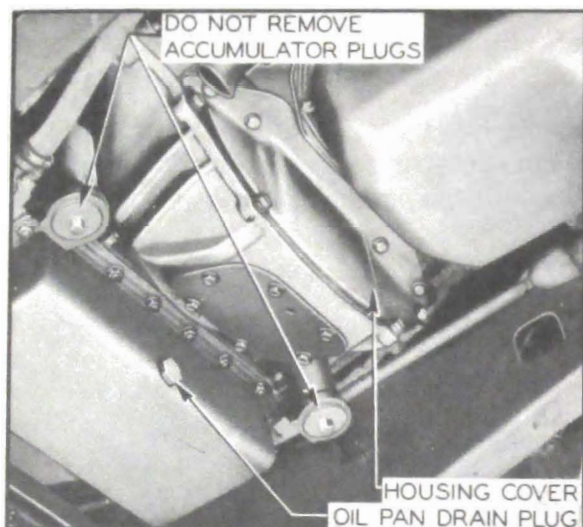


Figure 1-15—Bell Housing Cover and Oil Pan

2. Automatic Transmission Fluid, Type A, available through petroleum suppliers. This fluid must have an AQ-ATF number embossed in lid of the can for identification.

b. Draining and Refilling Dynaflow Transmission

1. Warm up transmission, then remove bell housing cover. See figure 1-15.
2. Loosen one converter drain plug, through opening in flywheel, then turn flywheel until opposite drain plug is straight down and remove this plug to allow converter to drain completely. See figure 1-16.
3. Remove drain plug and allow oil pan to drain completely. *Do not remove accumulator plugs.* See figure 1-15.
4. Install and tighten all drain plugs and install bell housing cover.
5. Put 3 quarts of specified oil (subpar. a) in transmission. With engine idling and transmission in Parking (P) complete the refilling to bring oil level to $1\frac{3}{4}$ " below "FULL" mark on gauge rod. When transmission is warmed up, the oil level should then be at "FULL" mark on gauge rod.

The Series 40-50 transmission requires

approximately $8\frac{1}{2}$ quarts total and the Series 70 transmission requires approximately 10 quarts total. A completely dry transmission requires an additional $1\frac{3}{4}$ pints.

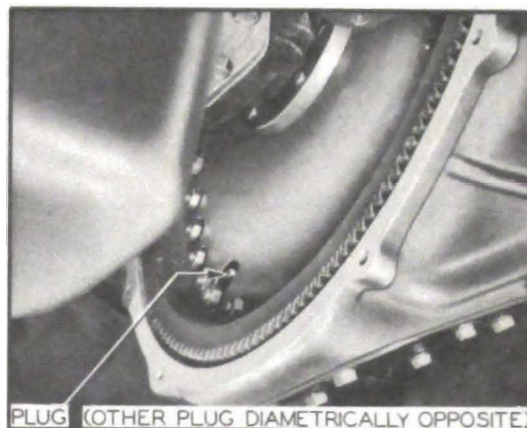


Figure 1-16—Converter Drain Plugs

1-5 ONCE A YEAR—HYDRO-LECTRIC POWER SYSTEM

1. Each Fall all windows should be lowered, the seat moved back and the reservoir on the power unit removed, cleaned out with Declene or alcohol and then refilled with G. M. or Delco Super No. 11 Brake Fluid. Brake fluid heavier than No. 11 should not be used in extremely cold climates as it will cause sluggish operation of the Hydro-Lectric system.

CAUTION: *Before installing reservoir, make certain that reservoir gasket is in good condition and properly installed. When reservoir is installed make certain that it makes full contact with gasket all around. Any leakage of dirt or water into reservoir will cause serious damage in Hydro-Lectric System.*

2. Each Spring the folding top power cylinder piston rods should be lubricated with a few drops of castor oil or brake fluid. *Do not use mineral oil.*

1-6 NON-PERIODIC LUBRICARE INFORMATION

The Lubricare information in this paragraph is not required for general maintenance of the car but is given here to provide complete information on Lubricare.

Since these lubrication procedures are used during repair operations they are placed in the repair sections of the manual where they may be found by reference to the indicated paragraphs.

a. Clutch Internal Lubricare

Lubrication of internal working parts of the clutch is usually required only at time clutch is assembled and installed; however, if lubrication becomes necessary to eliminate squeaks or correct excessive pedal pressure, follow instructions given in paragraph 4-4.

b. Brake Lubricare

Lubrication of all metal contact points at wheel brake assemblies is normally performed during the major brake adjustment (par. 8-15) or may be performed whenever a brake drum is removed.

Lubrication of parking brake cables is also performed during the major brake adjustment; however, operation under conditions where mud and water are frequently encountered may require more frequent lubrication. See paragraph 8-14.

c. Rear Wheel Bearing Lubricare

Rear wheel bearings need not be lubricated more often than 20,000 miles. Whenever rear brakes are relined, or axle shafts are removed for other work, it is advisable to inspect rear wheel bearings and oil seals. Replace seals if leaking or worn. Fill rear wheel bearings and space between oil seals with wheel bearing lubricant. Coat leather edges of seals with lubricant before installation of axle shaft.

d. Speedometer Cable Lubricare

The speedometer cable is factory lubricated with special all-season grease and normally requires no further service unless it becomes noisy. In extremely hot climates or where considerable dirt and water are encountered, however, it may be necessary to lubricate the cable at intervals of approximately 20,000 miles or every two years. See paragraph 10-68.

e. Sunshade Lubricare

If the sunshade rod turns hard in the support as sunshade is moved up and down, remove retainer screw, pull rod from support and apply G. M. Door-Ease Lubricant. *Do not use oil, which may soil body trim.* Install rod in support and adjust retainer screw to proper tension.

1-7 ENGINE OIL RECOMMENDATIONS**a. Choice of Oil**

1. *Regular Type Motor Oil.* This term designates motor oil generally suitable for use in internal combustion engines under *moderate operating conditions*. This type of oil is satisfactory for engines having adjustable lash valve mechanism, but not for engines having hydraulic valve lifters.

2. *Premium Type Motor Oil.* This term designates motor oil having the oxidation stability and bearing corrosion preventive properties necessary to make it generally suitable for use in internal combustion engines where operating conditions are more severe than regular duty.

Under normal driving conditions where the engine is required to develop greater power for a greater percentage of the time the *Premium Type Motor Oils* are recommended. *This type of oil should always be used in engines equipped with hydraulic valve lifters.*

It is imperative that the same brand of oil be used at all times.

b. SAE Viscosity Numbers for Oils

SAE viscosity numbers indicate the body or fluidity of the oil. They are the index for light or heavy bodied oil for use in cold or hot operating conditions respectively.

Anticipated Temperature (Lowest at which cold engine start will be required) *Use SAE Grade*
 Not lower than 32°F 20-W
 Not lower than plus 10°F . . 10-W
 Not lower than minus 10°F 10-W
 Below minus 10°F 5-W if available or
 10-W plus 10%
 kerosene

c. Break-In Oils and Other Compounds

"Break-In" oils or compounds are not necessary in Buick engines. Some break-in oils contain additives which are not compatible with motor oils that would later be used in the engine. For this reason, break-in oils should not be used in either the engine oil or gasoline under any circumstances unless the supplier can furnish satisfactory proof that the compound does not contain harmful ingredients.

d. When to Change Engine Oil

Under normal driving conditions when the

car is operated at stabilized temperatures most of the time, such as on long trips, and there is reasonable freedom from dust or other contaminating conditions, draining and filling with fresh oil every 2000 to 3000 miles is recommended.

Under light driving conditions when frequent starts and stops do not let the engine oil reach a stabilized temperature, particularly in cold weather, it is necessary to change oil more frequently to compensate for dilution and sludge formation. It is necessary to change oil more frequently when the car is habitually operated on dusty roads. Bad dilution or dust conditions may require draining and refilling as often as every 500 miles.

It is necessary to change engine oil whenever it becomes contaminated with harmful materials. The following conditions cause contamination of engine oil and shorten its useful life:

1. *Short runs with a cold engine*, particularly in extremely cold weather, increase "dilution" and water condensation in crankcase.

2. *Hard driving* causes oil to oxidize more rapidly. When fresh oil is added, oxidized oil will deposit "granular carbon" and "varnish" on internal engine parts.

3. *Dusty roads or dust storms* cause contamination of engine oil even though the crankcase is protected by filters.

e. Crankcase Flushing

Flushing the crankcase with oils or solutions other than a good winter grade (10-W) engine oil is not recommended. Use 3 quarts of 10-W oil (4 qts. if oil filter is drained) and idle the engine at 1000 RPM (equivalent to 20 MPH) until the oil is hot, then drain immediately and fill with correct seasonal grade of engine oil.

1-8 REAR AXLE LUBRICANT RECOMMENDATIONS

a. Lubricant Recommendations

Buick rear axles are filled at the factory with a special hypoid gear lubricant. It is not necessary to drain the original lubricant at any time except when it has become contaminated, or when draining is required for inspection of parts or for repairs.

Under no circumstances should the factory lubricant be drained from the rear axle to be

replaced with any other type of lubricant.

In all cases of complete refilling of rear axle only Factory Hypoid Gear Lubricant is recommended. This is the same lubricant as furnished with Buick replacement ring and pinion gear sets. It may be obtained from any Buick Parts Warehouse under Group 5.535.

When adding lubricant to bring it to proper level Factory Hypoid Gear Lubricant is preferred; however, Multi-Purpose Gear Lubricant conforming to and approved under U. S. Army Specification 2-105 B may be used.

Where temperatures are normally above zero, with only occasional drops below zero, use SAE 90 lubricant. Where continuous temperatures of zero or below are anticipated, SAE 80 lubricant should be used.

b. Draining, Flushing and Refilling Rear Axle

If rear axle lubricant has become contaminated, the rear axle should be drained, flushed, and refilled with new lubricant as follows:

1. With rear axle jacked up so that wheels are clear of the floor, clean bottom of body, rear end of chassis and the rear axle housing to remove loose dirt which might get into rear axle when housing cover is removed. **DO NOT TAKE CHANCES ON GETTING ABRASIVE SUBSTANCES INTO AXLE HOUSING OR BEARINGS.**

2. Drain rear axle housing by removing lower cover bolts, then reinstall bolts.

3. Thoroughly flush rear axle housing with SAE-10-W or flushing oil. *Do not use water, steam, gasoline, kerosene, alcohol or other cleaning fluids for flushing.* When flushing, put transmission in high gear and run axle slowly for one or two minutes. **CAUTION: Do not suddenly accelerate or "gun" engine and do not exceed a speed of 25 MPH.**

4. Drain housing, remove cover and wipe out housing with clean cloths. Install housing cover, using a new gasket and coating bolt threads with white lead to avoid oil leaks. Align filler plug with first bolt hole to right of lower center bolt hole in housing. This change from straight position increases oil level to 4 pints.

5. Refill rear axle housing to filler plug opening with Factory Hypoid Gear Lubricant.