

GROUP 1

LUBRICARE AND BEARING SERVICE

SECTIONS IN GROUP 1

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SECTION 1-A

PERIODIC LUBRICARE INSTRUCTIONS

The Lubricare Instructions in this section are arranged in accordance with the mileage and time intervals which will insure proper lubrication protection to all working parts of the car. See figure 1-2.

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SERVICE BULLETIN REFERENCE

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1-1 EVERY 1000 MILES—CHASSIS

1. *Engine.* Check engine oil level. 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 1-1.

Add oil, or change oil if mileage or operating conditions indicate the need for change, as specified under "Changing Engine Oil" (par. 1-7). An over-supply of oil must not be added.

Change original oil filter element at first 2000 miles. See paragraph 1-3, item 4.

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. 1-2) :

- Lower Control Arms, inner and outer ends
- Support Upper Pivot Pins
- Steering Knuckle Bushings

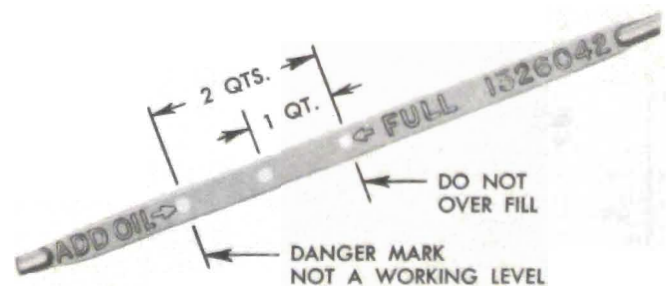
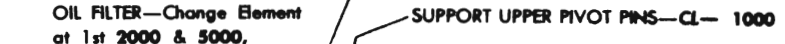
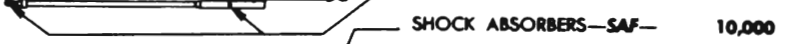
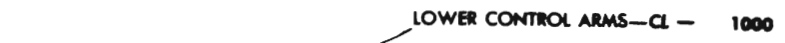


Figure 1-1—Markings on Oil Gauge Rod

CAPACITIES	SERIES	
	40-50	70
Cooling System		
With Heater—Qts. 1 1/4 (*1 1/4)	18	
Without Heater		
—Qts.	13 (*14)	16 1/4
	*Ser. 50 with Dynaflo Drive	
Crankcase—Refill		
—Qts.	5 1/2 (*7)	7 (*8 1/2)
	**With Dry Oil Filter	
Gas Tank—Gallons	19	19
Rear Axle—Pts.	4	4
Steering Gear		
—Ounces	13	17
Syncro-Mesh Transmission—Pts.	1 3/4	2 1/2
Dynaflo Transmission—Qts.	9	11



OIL FILTER—Change Element at 1st 2000 & 5000, Then Every 5000

- GENERATOR BEARINGS (2)—EO— 1000
- HEAVY DUTY AIR CLEANER—Wash Element & Reservoir, Renew Oil in Reservoir. Do Not Oil Element —EO, 1 Pt. SAE 50 — 5000
- MANIFOLD VALVE SHAFT—Free Up —GK — 1000
- CARTER CARB. PUMP C'SHAFT—EO—5000
- STEERING GEAR—SGL—Twice/YR.
- TRANSMISSION SHIFT IDLER LEVER PIN —CL — 1000
- HYDRO-LECTRIC PUMP MOTOR BEARING —EO— 5000
- BRAKE MASTER CYLINDER—Maintain Level 1/2" to 1" Below Top of Filler Opening —HBF — 1000
- CLUTCH & BRAKE PEDALS—CL— 1000
- CLUTCH RELEASE EQUALIZER—CL — 1000
- CLUTCH LINKAGE—EO—

- STEERING KNUCKLE BUSHINGS —CL — 1000
- FRONT WHEEL BEARINGS—WBL—10,000
- BATTERY—Add Pure Water as Required Do not Over-Fill 1000
- DISTRIBUTOR SHAFT—CL— 1000
- DISTRIBUTOR CAM BEARING WICK, CONTACT ARM PIVOT, BREAKER PLATE BEARINGS —EO-10W — 5000
- DISTRIBUTOR CAM—Apply with Cloth —PJ— 5000
- ENGINE—CHECK OIL LEVEL— 1000
- CRANKING MOTOR LINKAGE—Do Not Oil Plunger—EO — 1000
- SYNCRO-MESH TRANSMISSION—Maintain at Filler Opening—Flushing & Seasonal Changes Not Recommended —GL — 1000
- DYNAFLOW TRANSMISSION—Check & Maintain Level—DD— 1000
- DRAIN & REFILL—DD— 10,000
- REAR WHEEL BEARINGS—WBL—When Relining Brakes

LUBRICANTS	
CL	= Chassis Lubricant
DD	= Special Buick Oil for Dynaflo Drive
EO	= Engine Oil
GL	= Mild-Type E. P. Gear Lubricant
GK	= Graphite & Kerosene
HBF	= Hydraulic Brake Fluid—Delco Super No. 9
MGL	= Hypoid Gear Lubricant (2-10 5B)
PJ	= Petroleum Jelly
SAF	= Shock Absorber Fluid—Delco
SGL	= Steering Gear Lubricant
WBL	= Wheel Bearing Lubricant

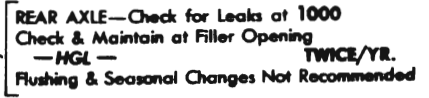
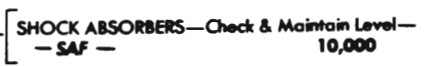
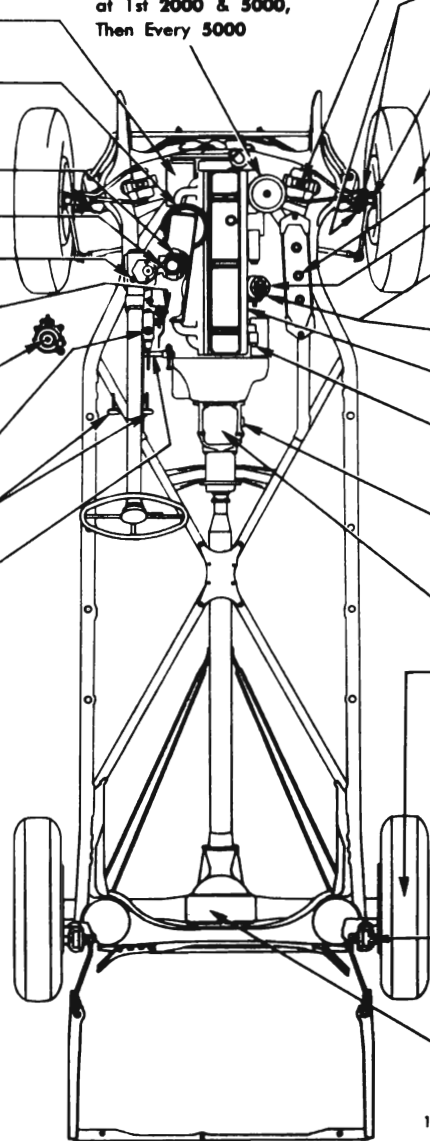


Figure 1-2—Chassis Lubricare Chart—1948 and 1949, All Series.

Tie Rod Ends, inner and outer
Transmission Shift Idler Lever Pin
Clutch Release Equalizer
Clutch and Brake Pedals

3a. *Synchro-Mesh Transmission.* Check oil level. Level should be maintained at filler plug opening. Add SAE 90 Mild-Type E.P. (extreme pressure) Gear Lubricant for temperature not lower than 10°F. below zero. For temperatures lower than 10°F. below zero, add SAE 80 Mild-Type E.P. Gear Lubricant. NOTE: *Draining and flushing transmission is not necessary at any time unless the lubricant has become contaminated.*

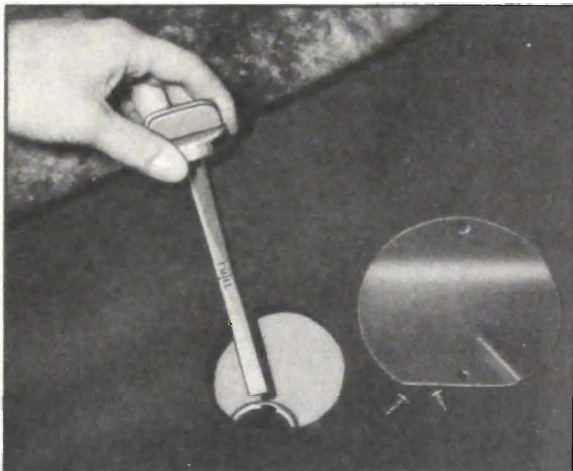


Figure 1-3—Dynaflow Transmission Oil Level

3b. *Dynaflow Transmission.* Remove cover from floor pan under right side of front floor mat, remove and wipe off oil gauge rod. See figure 1-3. Check oil level with engine idling in neutral, and with transmission oil warm. Add Special Buick Oil for Dynaflow Drive to bring level to "Full" mark on gauge rod.

4. *Rear Axle.* Inspect rear axle for leakage at gasket joints and rear wheel bearing oil seals. If transmission oil level was low, transmission lubricant may have leaked back to overfill rear axle housing. If transmission was overfull, rear axle lubricant may have leaked into transmission. If there is no evidence of oil leakage it is not necessary to check rear axle lubricant level each time the chassis is lubricated. See paragraph 1-5 and 1-9.

5. *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.

6. *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 distribu-

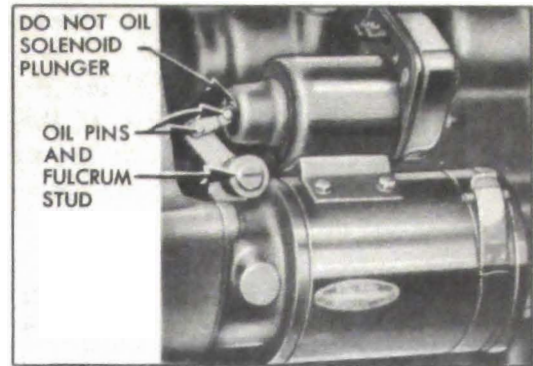


Figure 1-4—Cranking Motor

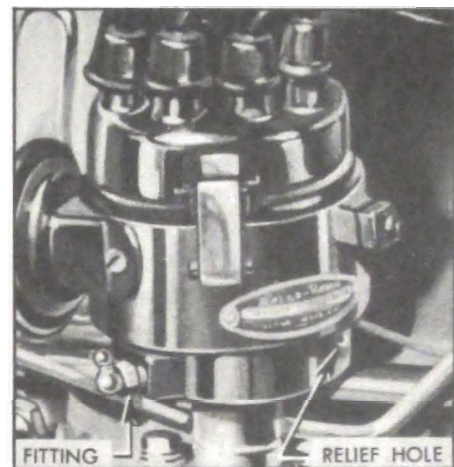


Figure 1-5—Distributor Shaft Lubrication

tor housing in a continuous unbroken stream. See figure 1-5.

7. *Battery.* Add distilled water to bring level to ledge at bottom of slot in well on battery having filler well shown in figure 1-6. With other type filler wells add water to 1/4" above separators. WARNING: *Do not over fill.*

8. *Generator.* Place a few drops of engine

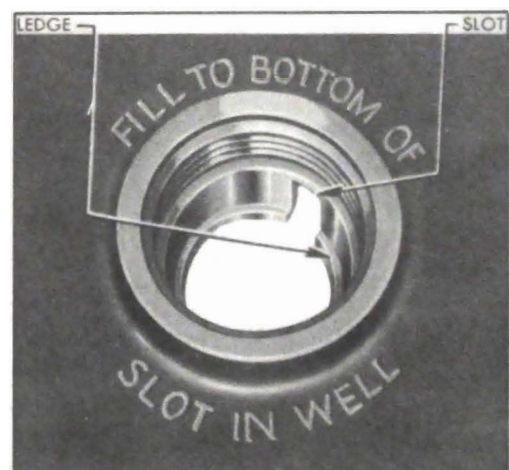


Figure 1-6—Battery Filler Well

oil in cups at both ends of generator. Avoid excessive oiling which may affect brushes and windings.

9. *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 into the bearings and wipe off excess lubricant.

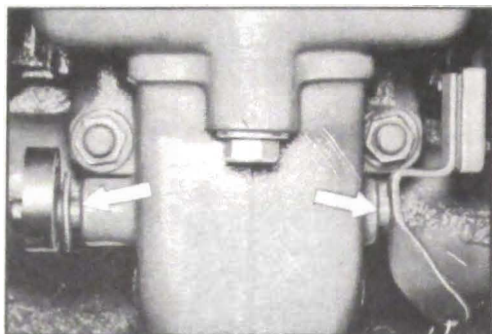


Figure 1-7—Manifold Valve Shaft

10. *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 1-7. If shaft is frozen, free up by tapping ends of shaft lightly with hammer.

11. *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 under "Every 5000 Miles—Chassis" (par. 1-3).

12. *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. 9 Hydraulic Brake Fluid. If No. 9 is not available, G. M. or Delco Super No. 11 may be used, but No. 9 is

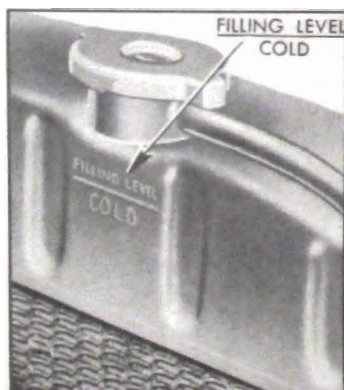


Figure 1-8—Radiator Filling Level

preferred. *Never use reclaimed fluid or any mineral oil.*

13. *Radiator.* Check coolant level when engine is cold and add water to line marked "Filling Level-Cold" stamped approximately $1\frac{1}{4}$ " below top of head tank. See figure 1-8. **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.*

14. *Tires.* Inflate all tires to pressures show below. In temperatures below freezing inflate tires 2 lbs. higher. **WARNING:** *It is not possible to inflate tires correctly when HOT.*

Series	When Tires Are	When Tires Are
	Cold	Warm
40	26 lbs.	29 lbs.
50	24 lbs.	27 lbs.
70 except 1948 Model 79	22 lbs.	25 lbs.
1948 Model 79	26 lbs.	29 lbs.

1-2 EVERY 1000 MILES—BODY

1. *Hood Fastener Mechanism.* Use engine oil on fastener linkage on hood of 1948 models, or on pilots and release mechanism of hood hinges on 1949 Series 50-70. Lightly coat pilot pins and fastener hooks with Lubriplate.

2. *Door Lock Bolts and Strikers.* Sparingly coat curved side of bolts and bearing surfaces of strikers with G.M. Door-Ease Lubricant. Use light engine oil on flat side of bolts and on safety catches in strikers.

3. *Door Dovetail Bumpers and Wedge Plates.* Apply G.M. Door-Ease Lubricant to the composition shoes and surfaces of wedge plates. If bumper shoes appear dry, remove the casing caps and brush cup grease on both sides and top surface of upper sliding shoe and on the sides only of lower stationary shoe. Reinstall casing caps.

4. *Door Checks and Hinges.* Use light engine oil on check link hinge pin. On 1948 Models, lubricate check link bumper with graphited light engine oil by opening door and placing nozzle of oil can through hole through which check link travels; lubricate door hold-open shoes with graphite grease. No lubricant required on hinge pins.

5. *Dome Lamp Switch.* Lubricate end of switch plunger and contact point on door hinge pillar with G.M. Door-Ease Lubricant.

6. *Glove Box Door.* Apply a few drops of light engine oil to glove box hinges. Sparingly coat lock striker with G.M. Door-Ease Lubricant.

7. *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.*

8. *Lock Cylinders.* Blow powdered graphite into key slot. *Do not use oil.*

9. *Rear Compartment Lid Lock Mechanism.* Coat moving surfaces sparingly with Lubriplate or cup grease. Wipe off any surplus lubricant.

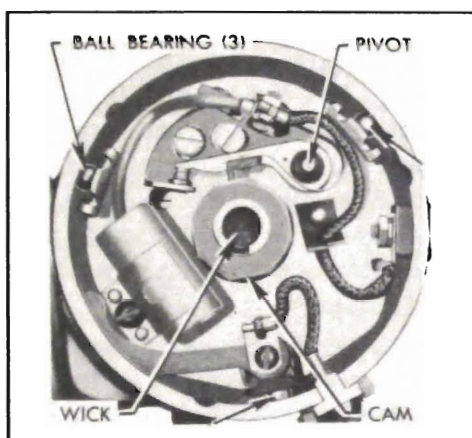


Figure 1-9—Distributor Lubrication—1948 Model Shown

1-3 EVERY 5000 MILES— CHASSIS AND BODY

1. *Distributor.* Remove distributor cap and rotor. Apply a few drops of light engine oil to felt wick in top of cam. Put 1 drop of oil on breaker arm pivot. *On 1948 models, put 1 drop of light engine oil on each breaker plate ball bearing—don't over-oil.* 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.* See figure 1-9.

2. *Air Cleaner.* Every 5000 Miles (more often under dusty operating conditions) disassemble air cleaner and wash cleaner element and oil sump with a non-inflammable solvent. **DO NOT USE KEROSENE.** Wipe sump dry and allow cleaner element to drain until dry. *Do not use air blast on cleaner element.*

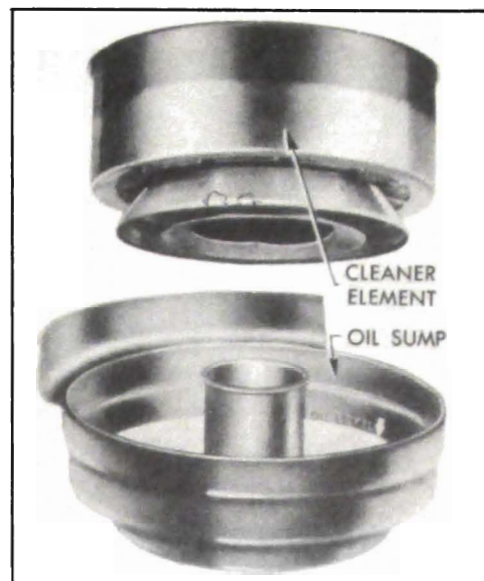


Figure 1-10—Air Cleaner Parts

Fill sump to indicated level with one pint SAE 50 engine oil and assemble air cleaner. See figure 1-10. *Do not oil the cleaner element because oil will drain back into the sump and cause sump to be overfull.*

3. *Pump Operating Countershaft—Carter Carburetor Only.* Remove the 2 dust cover attaching screws and apply several drops of engine oil in screw holes above the countershaft. See figure 1-11. Install screws.



Figure 1-11—Countershaft Lubrication

4. *Oil Filter.* Change original oil filter element at first 2000 miles, the second element at first 5000 miles, then change element at each 5000 miles thereafter. Remove old element and wipe container out thoroughly with clean cloths; drain plug may be removed to aid cleaning. See figure 1-12. Use new cover gasket when installing new element. **NOTE:** *Elements used in 1948 and 1949 filters are not interchangeable. Each filter bears a label which gives the AC number of filter element that must be used for replacement.*

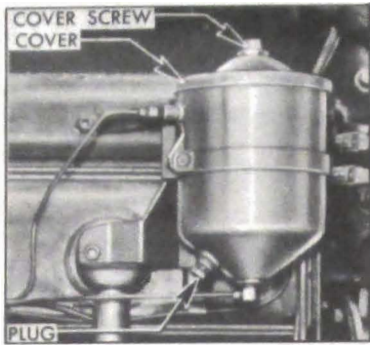


Figure 1-12—Oil Filter

5. *Hydro-Lectric Power Unit Motor (When Installed)*. Swing the oil hole cover aside on upper end of motor and lubricate upper bearing with a few drops of engine oil. See figure 1-13.

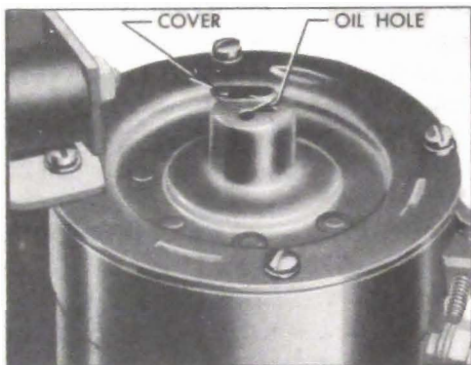


Figure 1-13—Power Unit Motor

1-4 EVERY 10,000 MILES—CHASSIS

1. *Front Wheel Bearings*. Wipe old grease out of hub and wash bearings. Work approximately one tablespoon of wheel bearing lubricant into each ball bearing. The oil seal packings should be examined for wear or leaking and replaced if necessary.

Bearing Adjustment. Take up spindle nut with 10" wrench until bearings are preloaded at least 1 hex, then rotate wheel 1 revolution to make sure bearings are seated. Back off spindle nut until bearings are loose. Tighten nut until all bearing looseness is just removed, then line up nut to nearest cotter hole and install cotter pin. Do not mistake loose king pin bushings, etc., for wheel bearing looseness. **CAUTION: Bearing preload must not exceed 1/12 turn of nut.**

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*. Thoroughly clean off all dirt from top of shock absorbers, front and rear, to avoid getting dirt into absorbers when filler plugs are removed.

(a) *Front Shock Absorbers*. Remove filler plugs and add fluid until it overflows, using only G.M. or Delco Shock Absorber Fluid. Install plugs *loosely* to exclude dirt and bounce front of car up and down by front bumper to force out any air in cylinders. Repeat addition of fluid and bouncing of car until no more fluid can be added, then install filler plugs *securely*.

(b) *Rear Shock Absorbers*. Remove filler plugs and add G.M. or Delco Shock Absorber Fluid until level is 23/32" to 1/2" below filler openings. Install plugs *loosely* to exclude dirt and bounce car up and down by rear bumper to force out any air in cylinders. Add additional fluid, if necessary, and adjust fluid level to 23/32" to 1/2" below filler openings, then install filler plugs *securely*. Correct level in rear absorbers may be conveniently obtained by use of Shock Absorber Gun K.M.O. 1026 and Adapter J 1611. The gun is used to fill absorber and the adapter is placed on gun nozzle to suck out surplus fluid.

(c) *Air Space*. Shock absorbers require some air space for expansion of fluid when hot, otherwise fluid may be forced out. Air space is built into front absorbers, *but must be provided in rear absorbers* by leaving fluid level at specified distance below filler opening.

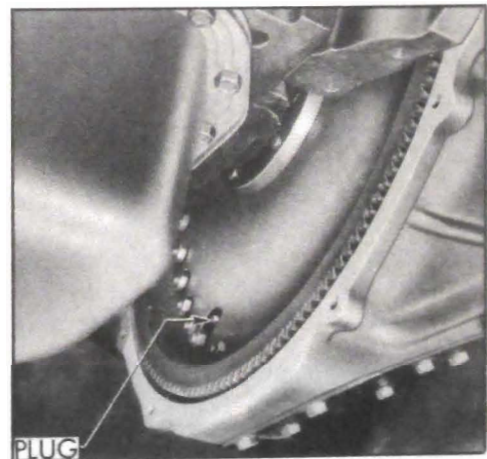


Figure 1-14—Dynaflow Converter Drain Plugs

3. *Dynaflow Transmission*. Drain and refill. Before draining warm up transmission. Remove oil pan drain plug. Remove bell housing cover and *both* converter drain plugs. See

figure 1-14. After complete draining of pan and converter, install all parts.

Put in 3 quarts of Special Buick Oil for Dynaflo Drive and with engine idling in neutral, complete the refilling with 8 quarts of oil (total 11 qts.), on *Series 70*, or with 6 quarts (total 9 qts.), on *1949 Series 50*. After filling, idle engine for a few minutes and then check to make certain level is at "Full" mark on oil gauge rod.

1-5 TWICE A YEAR—CHASSIS

1. *Rear Axle*. Check lubricant level twice a year, preferably in the Spring and Fall. When checking lubricant level, clean around filler plug before removal and use care to avoid introducing dirt and abrasive material into the lubricant. If level is low, fill axle housing to filler plug opening with approved lubricant as specified in paragraph 1-9.

2. *Steering Gear*. Check level of lubricant in housing. Add lubricant specified below to level of filler opening. Do not use pressure fitting in filler opening, as this will force lubricant up the steering column.

If lubricant level is very low, check for excessive leakage at pitman shaft seal in lower end of housing.

The steering gear is filled at the factory with a special all-season gear lubricant. Seasonal change of lubricant is unnecessary.

When necessary to add lubricant or to fill a steering gear that has been rebuilt, use "Saginaw All-Season Steering Gear Lubricant". This

lubricant is marketed through United Motors Service in 5, 10 and 25 pound containers.

If "Saginaw All-Season Steering Gear Lubricant" is not available, "All Purpose" Gear Lubricant of the following specifications may be used when adding a small amount of lubricant, but should not be used to fill a rebuilt steering gear: (a) In temperature zones which stay above 10°F. use SAE 90. (b) In temperature zones which are likely to drop below 10°F. use SAE 80.

1-6 ONCE A YEAR—HYDRO-LECTRIC POWER SYSTEM

1. *Hydro-Lectric System (When Installed)*. 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. 9 or 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.*

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.*