

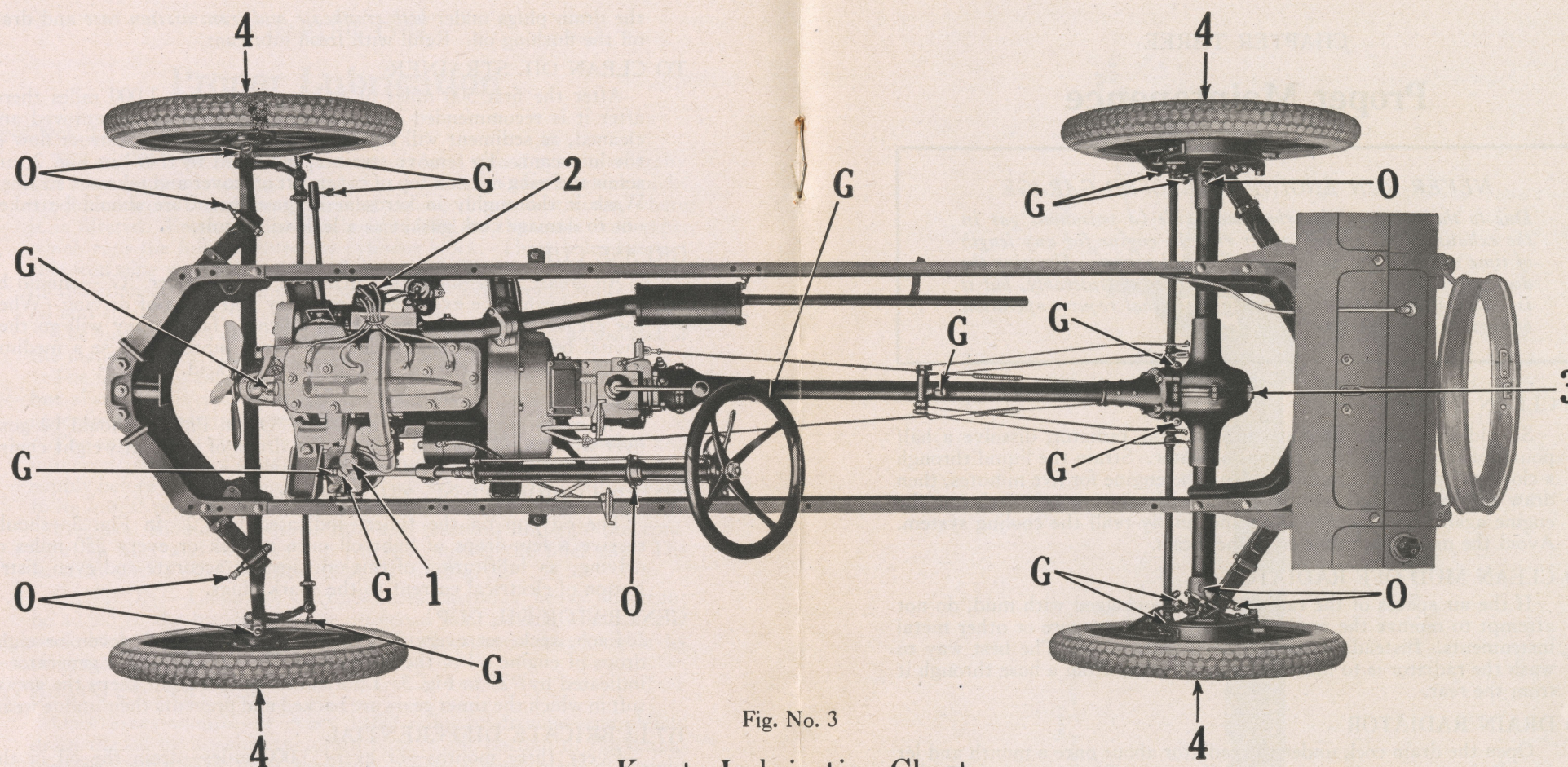


Fig. No. 3

Key to Lubrication Chart

O—Lubricate with medium weight engine oil every day or 100 miles of driving—prevents excessive wear at these points.

G—Turn down grease cups every week or 250 miles of driving—prevents these moving parts from sticking and wearing excessively. Satisfactory steering and braking depend to a great extent on this attention.

1—Fill engine with fresh oil every month or 1,000 miles of driving—prevents scored pistons and

cylinders, burned bearings and other damage that will necessitate costly repairs.

2—Oil generator and timer every week or 250 miles of driving—prevents wear of bearings and gears at rear end of generator.

3—Change lubricant in differential every three months or 3,000 miles of driving—prevents wear of differential gears and bearings.

4—Repack wheel bearings once a season with plenty of grease—prevents excessive wear of wheel bearings.

NOTE—During the winter months (November 1st-April 1st), fill engine with fresh oil every 500 miles of driving

CHAPTER THREE

Proper Maintenance**NEVER RUN ENGINE IN CLOSED GARAGE**

Due to the presence of carbon monoxide (a poisonous gas in the exhaust of the engine) never run the engine for any length of time while the car is in a small closed garage. Opening the doors and windows will lessen the danger considerably, but it is safest, if adjustments are being made that require operation of engine, to run the car out of doors.

TO CLEAN RADIATOR

Should it become necessary to clean the radiator, dissolve a half pound of lye in about five gallons of water. Strain the liquid through a cloth and put in the radiator. Run the engine for five minutes, then draw off the cleaning mixture. Fill with clean water and run the engine again; remove the liquid and finally refill the cooling system. Avoid the use of more powerful chemicals.

TO CLEAN MUD OFF RADIATOR

If the air spaces of the radiator become clogged with mud, do not attempt to remove the mud with a screw driver, wire or other metal instruments. Instead, soften the mud with water. The best way to wash the radiator is to flush a stream of water from a hose through it from the rear.

TO DRAIN RADIATOR

Open the drain cock under the radiator about once a month and let out all the water and accumulated dirt. An effective way of cleaning is to remove the drain cock and to keep on filling the radiator while the water continues flowing out below; when the water begins to look clear replace the drain cock, close same and fill to the top. The capacity of the cooling system is 3 gallons.

FAN BELT ADJUSTMENT

Occasionally it will be found necessary to take up the slack in the fan belt. This can be done by loosening the lock nut controlling the adjusting screw on the fan arm and adjusting this screw until the slack has been taken up. Then tighten the lock nut.

TO ADJUST CARBURETOR

Changes in carburetor adjustment should only be made for the varying seasons, as a slightly leaner mixture of gasoline with air is

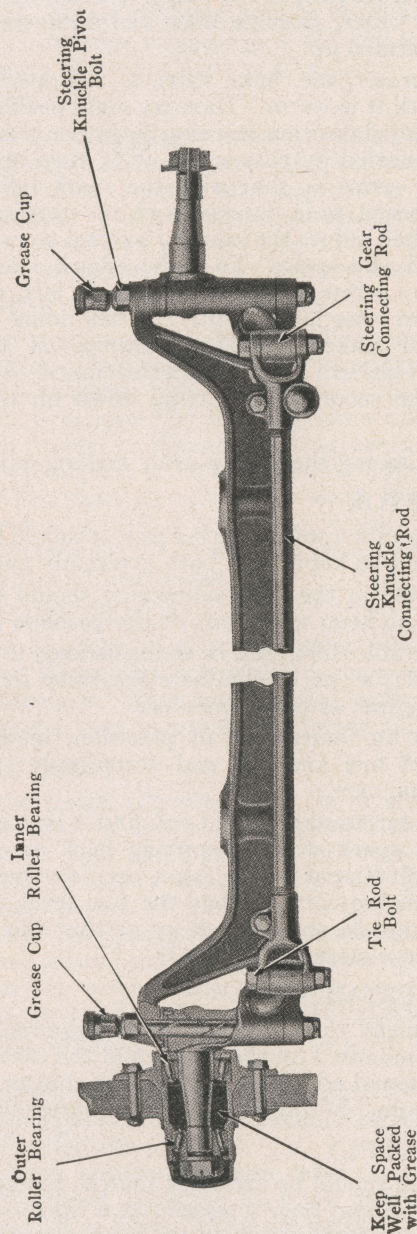


FIG. 4—FRONT AXLE

required for summer than for winter driving in temperate regions. Before adjusting carburetor, spark plugs, ignition system and valves should be in good order, gasoline lines and strainers free and clean and engine well warmed up.

To adjust carburetor, set choke valve in full open position—after running engine until it is warm. Then set main needle adjustment at $2\frac{1}{2}$ turns from a closed position (turning clockwise closes adjustment), and also set the knurled by-pass screw at $\frac{3}{4}$ turn open. Adjust the main needle valve screw so that with the spark fully retarded, the throttle can be opened wide quickly with no spitting back through the carburetor. Then adjust the knurled by-pass screw to give correct mixture at desired idle speed. To make engine idle slower, loosen throttle stop clamp screw on throttle lever to left, thus permitting throttle butterfly to close more tightly. When doing this, it is sometimes necessary to make a slight adjustment of knurled by-pass adjusting screw. This will give best performance. A slight increase in economy can be secured by cutting down on the main needle adjustment.

NOTE:—Avoid racing the engine while making adjustments.

CARE OF CARBURETOR

To secure best results from the carburetor, it should be given regular attention. It should be kept clean both externally and internally.

The screen located in the inlet connection should be cleaned, and every effort made to keep water out of the gasoline and carburetor.

There is considerable difference in the resistance to flow of various fuels on the market, so as to eliminate necessity for adjustment of carburetor, use one fuel as far as possible.

A carburetor is an instrument of precision, metering extremely small quantities of fuel and air, and accordingly should be given expert attention and care.

When adjusting carburetor, should you find it impossible to accelerate with retarded spark without spitting back in carburetor even with wide open adjustment of the main needle valve it indicates, if valves and ignition are correct, that the fuel level is low, that the cross holes in the nozzle are stopped up or that the restriction hole from float chamber is stopped up.

AIR SHUTTER ADJUSTMENT

Another adjustment that is occasionally required is that of the sliding air shutter mounted on the air horn of the carburetor. In cold weather it will be found advisable to close this shutter, insuring warm air for the gas mixture. In warm seasons this shutter should be opened.

GASOLINE TANK SUPPLY

When filling, care should be exercised that no foreign matter enters the gasoline tank. About once a season, at a time when the gasoline supply is low, it is advisable to clean the mesh strainer in the bottom of the fuel tank in the rear of the car. To clean the strainer, unscrew

the drain plug in the bottom of the tank; the strainer is attached to the plug. Wash the strainer with kerosene or gasoline and replace.

Frequently inspect the vent hole in the filling cap to see that it is not clogged, otherwise vacuum tank will fail to work.

The capacity of gasoline tank is 10 gallons.

VACUUM TANK

Failure of gasoline supply may be traced to dirty or improperly operating valves in vacuum tank. If gasoline supply fails after filling gasoline tank, close throttle, turn engine over with starter which will fill vacuum tank. Vacuum tank can also be filled by removing the small pipe plug on top and pouring in sufficient fuel. Occasionally clean mesh strainer assembled in gasoline line from supply tank.

CARE OF TIMER CONTACT POINTS

The timer contact points should be kept smooth and clean, as dirt will cause them to become pitted and burned. They can be kept clean with a small tungsten point file. Should they be replaced, contact points should be adjusted by the small screw which holds the stationary contact point in place. When making adjustment be sure that the fibre block is at the highest point of cam. With block in place, loosen the lock screw and turn contact screw until the opening between the contact surfaces is .018 of an inch in width. The timer assembly is exposed by removing the distributor cover, which is held in place by spring clamps, and distributor disc.

TO CLEAN SPARK PLUGS

An excess of oil or oil of poor quality will short circuit the spark plug points. When this occurs clean them with an old toothbrush dipped in kerosene. When badly fouled, soak the plugs over night in kerosene. Spark plug points should be set .025 of an inch apart.

TO ADJUST CLUTCH

Should the clutch slip when it is let in after the engine has been started, it is likely that the clutch pedal is striking the under side of the toe-board. This fault can be corrected by adjusting the two clutch adjusting screws indicated by "15" in Fig. 2. Remove the steel plate at the top of the clutch housing and turn the fly-wheel so that one of the screws is within reach, and loosen it. Then turn the fly-wheel around and loosen the other screw; depress the clutch pedal; push the screws in a clockwise direction and tighten both screws. To prevent fly-wheel from turning when loosening or tightening adjusting screws, put gear shift lever in high and set emergency brake.

Proper clutch adjustment is determined by the clearance between the pedal and toe-board. There should be $\frac{1}{2}$ inch clearance at this point to allow for wear.

If the clutch adjusting screws reach the end of the cover slots because of repeated adjustments, screw them out and set them back into the next set of holes, which are exposed, thus doubling the range of adjustment.