CHEVROLET

Instructions for the
Operation and Care of

CHEVROLET TRUCKS

MASTER
SERIES CB
COMMERCIAL MODELS

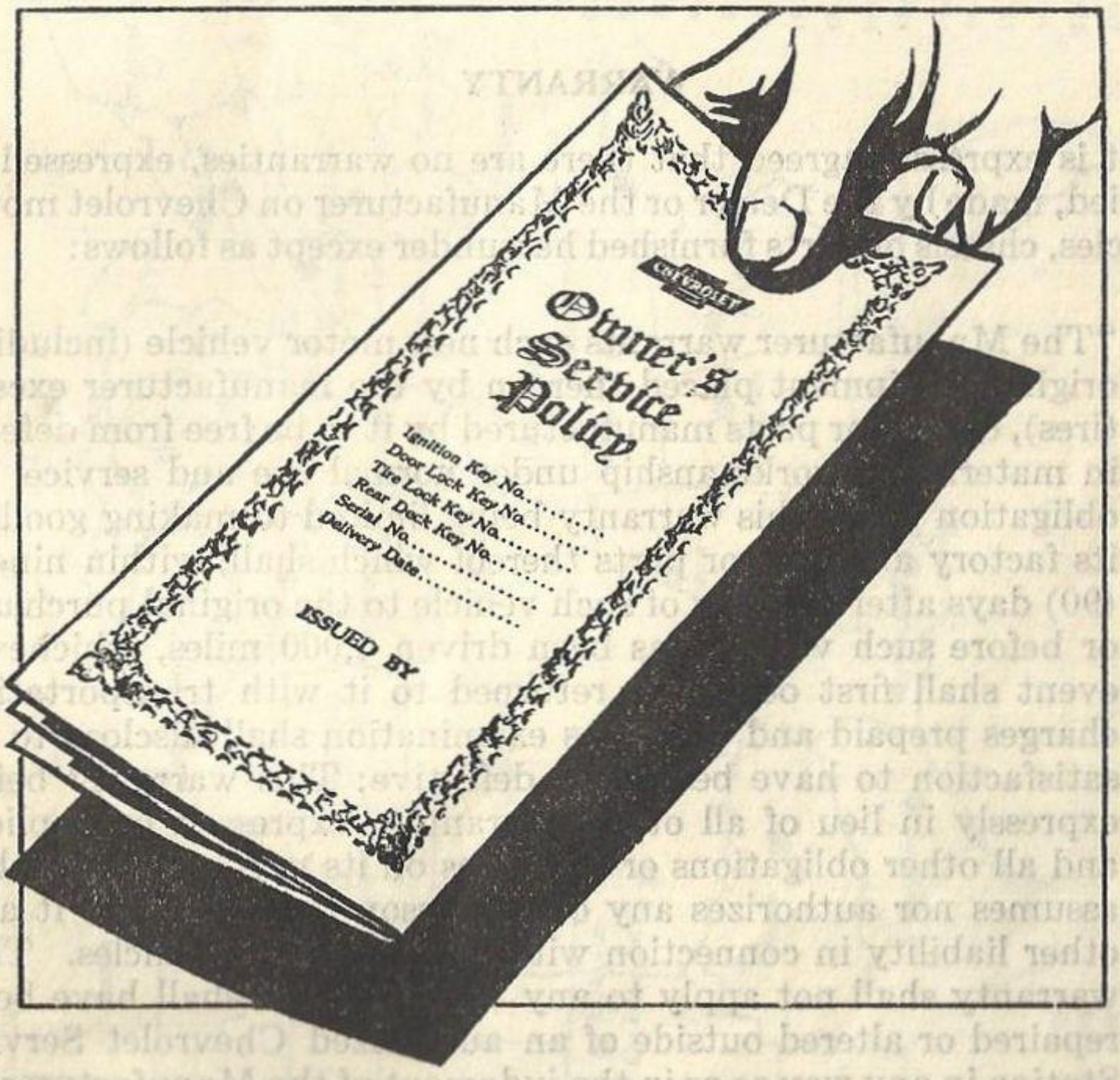
SERIES O
1½ TON TRUCKS

★

FOURTH EDITION

CHEVROLET MOTOR CO.
Division of General Motors Corporation
DETROIT, MICHIGAN

YOUR PROTECTION



ANY CHEVROLET OWNER

experiencing defective workmanship or material on a Chevrolet car under the terms of Chevrolet's Standard Warranty is invited to call on any authorized Chevrolet Dealer in the United States or Canada where the work will be done at no cost to him.

CHAPTER I

GENERAL INFORMATION

CHEVROLET STANDARD WARRANTY

WARRANTY

It is expressly agreed that there are no warranties, expressed or implied, made by the Dealer or the Manufacturer on Chevrolet motor vehicles, chassis or parts furnished hereunder except as follows:

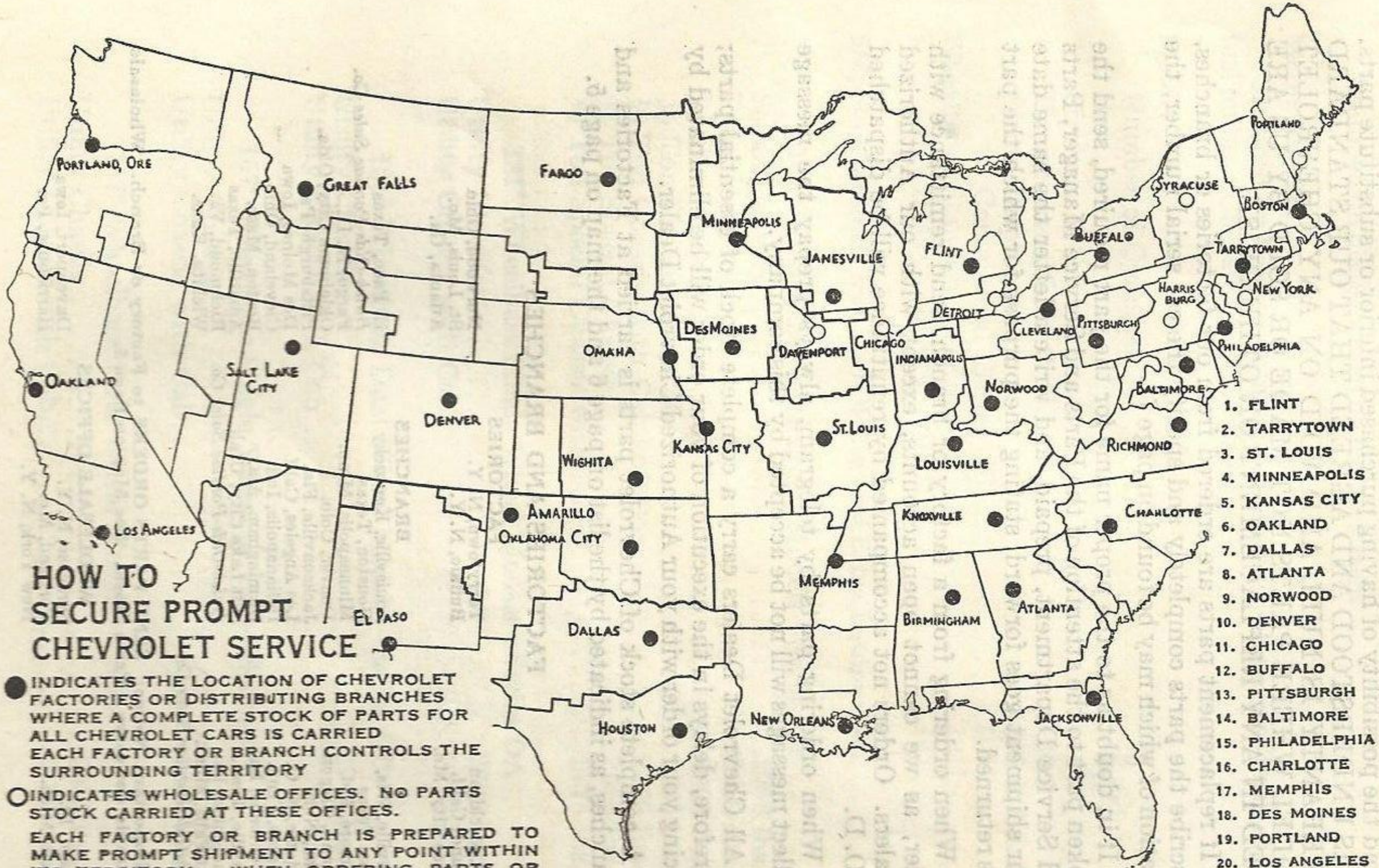
"The Manufacturer warrants each new motor vehicle (including original equipment placed thereon by the manufacturer except tires), chassis or parts manufactured by it to be free from defects in material or workmanship under normal use and service, its obligation under this warranty being limited to making good at its factory any part or parts thereof which shall, within ninety (90) days after delivery of such vehicle to the original purchaser or before such vehicle has been driven 4,000 miles, whichever event shall first occur, be returned to it with transportation charges prepaid and which its examination shall disclose to its satisfaction to have been thus defective; This warranty being expressly in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on its part, and it neither assumes nor authorizes any other person to assume for it any other liability in connection with the sale of its vehicles. This warranty shall not apply to any vehicle which shall have been repaired or altered outside of an authorized Chevrolet Service Station in any way so as in the judgment of the Manufacturer to affect its stability and reliability, nor which has been subject to misuse, negligence or accident."

The Dealer agrees to install any part or parts furnished under the Manufacturer's warranty on the motor vehicle without charge to the owner of such motor vehicle.

This warranty does not apply to second-hand cars or cars not mentioned above.

POLICY

The Dealer also agrees to promptly perform and fulfill all terms and conditions of the Owner Service Policy.



HOW TO SECURE PROMPT CHEVROLET SERVICE

● INDICATES THE LOCATION OF CHEVROLET FACTORIES OR DISTRIBUTING BRANCHES WHERE A COMPLETE STOCK OF PARTS FOR ALL CHEVROLET CARS IS CARRIED
EACH FACTORY OR BRANCH CONTROLS THE SURROUNDING TERRITORY

○ INDICATES WHOLESALE OFFICES. NO PARTS STOCK CARRIED AT THESE OFFICES.

EACH FACTORY OR BRANCH IS PREPARED TO MAKE PROMPT SHIPMENT TO ANY POINT WITHIN ITS TERRITORY. WHEN ORDERING PARTS OR CORRESPONDING REGARDING OUR CARS, PLEASE ADDRESS FACTORY OR BRANCH CONTROLLING TERRITORY IN WHICH YOU RESIDE

1. FLINT
2. TARRYTOWN
3. ST. LOUIS
4. MINNEAPOLIS
5. KANSAS CITY
6. OAKLAND
7. DALLAS
8. ATLANTA
9. NORWOOD
10. DENVER
11. CHICAGO
12. BUFFALO
13. PITTSBURGH
14. BALTIMORE
15. PHILADELPHIA
16. CHARLOTTE
17. MEMPHIS
18. DES MOINES
19. PORTLAND
20. LOS ANGELES
21. JANESVILLE
22. LOUISVILLE
23. OKLAHOMA CITY
24. NEW ORLEANS
25. INDIANAPOLIS
26. JACKSONVILLE
27. NEW YORK
28. CLEVELAND
29. OMAHA
30. HOUSTON
31. BIRMINGHAM
32. BOSTON
33. FARGO
34. SALT LAKE CITY
35. RICHMOND
36. GREAT FALLS
37. EL PASO
38. WICHITA
39. PORTLAND
40. DETROIT
41. KNOXVILLE
42. DAVENPORT
43. SYRACUSE
44. HARRISBURG

DIRECTIONS FOR ORDERING PARTS

Always use GENUINE CHEVROLET PARTS for replacement and order them from your Authorized Chevrolet Dealer, so as to avoid the possibility of having purchased inferior or substitute parts. IT IS UNDERSTOOD AND AGREED THAT OUR STANDARD WARRANTY IS NULL AND VOID ON ANY CHEVROLET MODEL WHERE PARTS NOT MADE OR SOLD BY US ARE USED IN ANY REPLACEMENT OR OTHERWISE.

If replacement parts are ordered from our factories or branches, describe the parts completely and specify the car serial number, the location of which may be found on page 7.

If in doubt as to the proper name for the part required, send the broken part to the attention of the Parts and Service Manager, Parts and Service Department, prepaid, and write a letter the same date your shipment goes forward, stating the purpose for which the part was returned.

When ordering from a factory or branch, send remittance with order, as we cannot open accounts, except with our Authorized Dealers. Orders not accompanied by remittance will be dispatched C. O. D.

When ordering parts by telegram, always prepay the message Collect messages will not be accepted by this company.

All Chevrolet Dealers carry a complete stock of essential parts; therefore, delays in the execution of your order will be eliminated by placing your order with your Authorized Chevrolet Dealer.

A complete stock of Chevrolet parts is carried at Factories and Branches, as indicated by the list on page 6 and the map on page 5.

FACTORIES AND BRANCHES

FACTORIES

Flint, Michigan
Oakland, Calif.
Kansas City, Mo.
Tarrytown, N. Y.
Buffalo, N. Y.
Norwood, Ohio
St. Louis, Mo.
Atlanta, Ga.

BRANCHES

Janesville, Wis.
Dallas, Texas
Baltimore, Md.
Portland, Oregon
Omaha, Neb.
Charlotte, N. C.
Memphis, Tenn.
New Orleans, La.
Knoxville, Tenn.
Philadelphia, Pa.
Great Falls, Mont.
Buick-Olds-Pontiac Sales Co.
Louisville, Kentucky
Houston, Texas
Minneapolis, Minn.
Denver, Colo.
Jacksonville, Fla.
Los Angeles, Calif.
Indianapolis, Ind.
Birmingham, Ala.
Salt Lake City, Utah
Buick-Olds-Pontiac Sales Co.
El Paso, Texas
Buick-Olds-Pontiac Sales Co.
Fargo, N. D.
Oklahoma City, Okla.
Pittsburgh, Pa.
Des Moines, Iowa
Cleveland, Ohio
Boston, Mass.
Amarillo, Texas
Richmond, Va.
Wichita, Kans.

Important Notice: SEND PARTS ORDERS to Factory or Branch. Wholesale Offices do not carry a Parts Stock. See Map on Page 5.

WHOLESALE OFFICES

Chicago, Ill.
Detroit, Mich.
Syracuse, N. Y.
Portland, Me.
New York, N. Y.
Davenport, Iowa
Harrisburg, Pa.

LICENSE AND INSURANCE DATA

Truck Serial Number:

Stamped on plate located on front of dash.

Motor Number:

Stamped on boss on right side of Cylinder block, just back of the fuel pump. (Check with Bill of Sale.)

Motor:

Number of Cylinders 6
Bore . . . . . $3\frac{5}{16}$″
Stroke . . . . . 4″
Horsepower (N. A. C. C.) 26.3
Piston Displacement . . . . . 206.8 Cu. In.

Wheelbase: Commercial (Series CB) . . . . . 109″
Standard (Series O) . . . . . 131″
Heavy Duty (Series O) . . . . . 157″

Shipping Weights, less Fuel, Water and Extra Equipment:

109″ Wheelbase Commercial Models—Series CB

Sedan Delivery . . . . . 2750 lbs.
Panel Delivery . . . . . 2750 lbs.
½ Ton Chassis . . . . . 1995 lbs.
½ Ton Chassis with Cab . . . . . 2345 lbs.
½ Ton Chassis, with Cab and Box . . . . . 2565 lbs.
½ Ton Special Chassis . . . . . 2025 lbs.
½ Ton Special Chassis with Panel . . . . . 2775 lbs.

131″ Wheelbase Single Wheel Models—Series OA

Utility Chassis . . . . . 2830 lbs.
Utility Chassis with Cab . . . . . 3175 lbs.

131″ Wheelbase Dual Wheel Models—Series OB

Utility Chassis . . . . . 2945 lbs.
Utility Chassis with Cab . . . . . 3295 lbs.

157″ Wheelbase Single Wheel Models—Series OC

Utility Chassis . . . . . 2920 lbs.
Utility Chassis with Cab . . . . . 3290 lbs.

157″ Wheelbase Dual Wheel Models—Series OD

Utility Chassis . . . . . 3055 lbs.
Utility Chassis with Cab . . . . . 3420 lbs.

Tire Sizes:

109″ Wheelbase, Front and Rear	5.25″ x 18″
131″ Wheelbase, Single Wheel, Front	30″ x 5″
131″ Wheelbase, Single Wheel, Rear (8 Ply)	32″ x 6″
131″ Wheelbase, Dual Wheel, Front and Rear	30″ x 5″
157″ Wheelbase, Single Wheel, Front	30″ x 5″
157″ Wheelbase, Single Wheel, Rear (10 Ply)	32″ x 6″
157″ Wheelbase, Dual Wheel, Front and Rear	30″ x 5″

GENERAL CAR DATA

Motor Adjustments:

Ignition Setting: With Spark fully advanced, distributor points to break when 10° mark on flywheel is opposite pointer on Clutch Housing.

Breaker Point Gap:	.018″
Spark Plug:	AC Type K-9
Spark Plug Gap:	.032″
Carburetor Adjustment:	Idle, ½ to 1 Turn Open
Valve Clearance:	
Intake (With Motor Hot)	.006″
Exhaust (With Motor Hot)	.008″

Brake Adjustment: See Page 31

Lubrication: See Page 53

Unit Capacities:

Motor Refill	5 qts.
Transmission (½ Ton Trucks)	2½ pts.
Transmission (1½ Ton Trucks)	6½ pts.
Rear Axle (½ Ton Trucks)	4 pts.
Rear Axle (1½ Ton Trucks)	7 pts.
Gasoline Tank (½ Ton Trucks)	14 gals.
Gasoline Tank (1½ Ton Trucks)	15 gals.
Cooling System (½ Ton Trucks)	10½ qts.
Cooling System (1½ Ton Trucks)	12 qts.

Rear Axle Gear Ratio: 5.43 to 1

Tire Pressure:

5.25″ x 18″ Fronts	35 lbs.
5.25″ x 18″ Rears	38 lbs.
30″ x 5.00″ Fronts	70 lbs.
30″ x 5.00″ Rears	80 lbs.
32″ x 6.00″ Rears	90 lbs.

CHAPTER II

OPERATION, CARE AND MAINTENANCE

The degree of success attained in the use of any truck, regardless of price or kind, is a direct result and in direct proportion to the thought and effort expended in caring for that truck. It therefore rests with the driver of the truck to do the things recommended by us, or to see that they are performed by an Authorized Chevrolet Dealer.

Like any piece of machinery, the truck requires a certain amount of care at specified intervals, especially during the first 1000 miles. If the truck is given this care, a maximum return on the investment in transportation may be expected, at the minimum cost per mile.

The "Caution" sticker pasted on the windshield should be followed closely. A new truck should not be driven faster than 30 miles per hour for the first 1000 miles. After 1000 miles the maximum speed should be increased not more than 5 miles per hour for each additional 100 miles of driving.

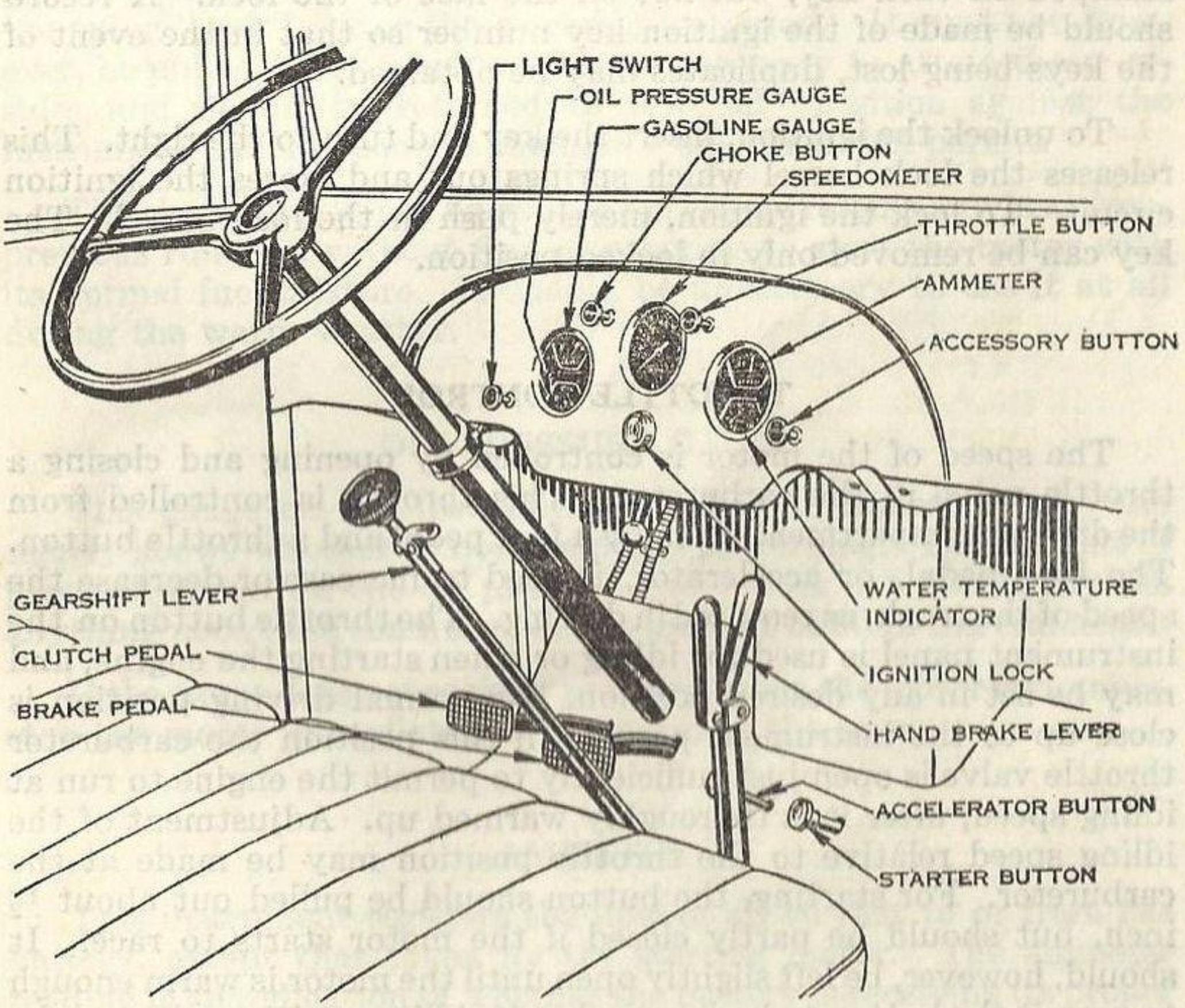


Fig. 1—Control Parts and Instruments

The service facilities of all Chevrolet Dealers are at your disposal. Each Chevrolet Service Station is equipped to serve you. This large service organization is for your convenience and safeguards your Chevrolet.

CONTROLS AND INSTRUMENTS

The first thing the driver of a new truck must do is to familiarize himself with the various controls provided for its proper handling of the truck. This does not apply to the beginner alone, as although there are many points of similarity between all trucks, there are also important differences; and it is not wise, regardless of previous experience, to drive a new truck before fully understanding what each control is for and how to use it. The following is a brief description of the levers, pedals, instruments and other devices used in the operation of the Chevrolet Six Cylinder Truck.

IGNITION LOCK

Two keys are supplied for the ignition lock. The lock number is stamped on each key, but not on the face of the lock. A record should be made of the ignition key number so that in the event of the keys being lost, duplicates may be obtained.

To unlock the ignition, insert the key and turn to the right. This releases the lock barrel which springs out and closes the ignition circuit. To lock the ignition, merely push in the lock barrel. The key can be removed only in locked position.

THROTTLE CONTROL

The speed of the motor is controlled by opening and closing a throttle valve in the carburetor. This throttle is controlled from the driving compartment, both by a foot pedal and a throttle button. The foot pedal, or accelerator, is used to increase or decrease the speed of the truck, as required in driving. The throttle button on the instrument panel is used for idling or when starting the engine, and may be set in any desired position. Its normal driving position is close up to the instrument panel. In this position the carburetor throttle valve is open just sufficiently to permit the engine to run at idling speed, after it is thoroughly warmed up. Adjustment of the idling speed relative to the throttle position may be made at the carburetor. For starting, the button should be pulled out about ½ inch, but should be partly closed if the motor starts to race. It should, however, be left slightly open until the motor is warm enough to permit the button to be returned to its idling position without the motor stalling.

SPARK CONTROL

The regulation of the spark timing is operated automatically by vacuum from the intake manifold. Additional control is secured by means of the octane selector on the distributor. With this adjusted to its proper setting, satisfactory performance from a knock standpoint can be obtained. When the cheapest fuel is used the selector is retarded and when better or Ethyl fuel is used the selector is advanced.

CHOKE CONTROL

When starting a cold motor, it is necessary to provide a fuel mixture richer in gasoline than is ordinarily required. The choke control button operates a device on the carburetor for enriching the fuel mixture being supplied to the motor.

The correct use of the choke is extremely important, as if improperly handled it may seriously affect the life of the motor by the thinning effect on the lubricating oil, of unburned gasoline leaking by the pistons.

The choke control must be pulled out far enough to provide a proper starting mixture, so that the motor will run evenly without "popping back" during the warming up period. It must not, however, be pulled out any further than is necessary to attain these results, and should be returned to it's "off" position against the instrument panel as soon as the motor operation will permit.

The choke should not be used if the engine retains any heat from previous running, without first attempting to start the motor with its normal fuel mixture. It should be unnecessary to use it at all during the warm weather.

OIL PRESSURE GAUGE

This gauge on the instrument panel is an indicator only and merely shows whether or not the pump is working. The amount of pressure shown on the oil pressure gauge does not necessarily tell anything about the condition, or the amount of oil in the crankcase.

If the gauge does not register pressure, when the motor is running, stop the motor immediately and determine the cause.

AMMETER

This instrument registers the flow of all current to or from the battery, except that taken by the starting motor. The ammeter reading is an indication of whether the battery is receiving its proper charging current from the generator.

LIGHTING CONTROL

The headlamps, parking lights, and tail lamp are controlled by a single switch which is operated by a button at the lower left-hand corner of the instrument group. When this button is pulled half-way out the parking lights and tail lamp are lighted. When it is pulled out all of the way the headlamps and tail lamp are lighted.

In addition to this switch control, the direction of the headlamp beam may be varied by pressure on the foot switch at the left of the toe board. For city driving the lighting switch should be pulled out all of the way and the foot switch should be in that position which throws the light nearest the car. To throw the light farther ahead for driving on the open road, depress the foot switch again.

HORN BUTTON

The horn button is located at the center of the steering wheel.

WATER TEMPERATURE INDICATOR

The water temperature indicator located on the instrument panel functions as a thermometer, indicating the temperature of the water in the cylinder head. A metal bulb containing a highly expansive gas is inserted in the cylinder head and is connected, by a small tube, to the indicating instrument which operates on the same principle as a pressure gauge, but indicating relative termperatures of the water by gradual movement of the pointer.

STARTING PEDAL

Pressure of this pedal engages the starter mechanism and starts the electric motor, which cranks the motor. Since the starting motor runs off the battery and draws considerable current, it should not be operated for more than 10 seconds at a time. Release the starter pedal immediately the engine starts and do not press it down a second time until the motor has come to a complete rest. Serious damage may be done to the starting motor and flywheel if this caution is not observed.

CLUTCH PEDAL

By means of this control the power required in putting the car in motion, may be gradually and smoothly transmitted to the rear wheels.

When the clutch pedal is in its normal position, the clutch is engaged and the motor is directly connected to the transmission. By depressing the pedal, the clutch is released and the motor disconnected from the transmission gears, permitting the shifting of the transmission gears.

GEAR SHIFT LEVER

By use of the gear shift lever, the transmission gears are correctly meshed to transmit power to the rear wheels in proper proportion to the work necessary under various driving conditions.

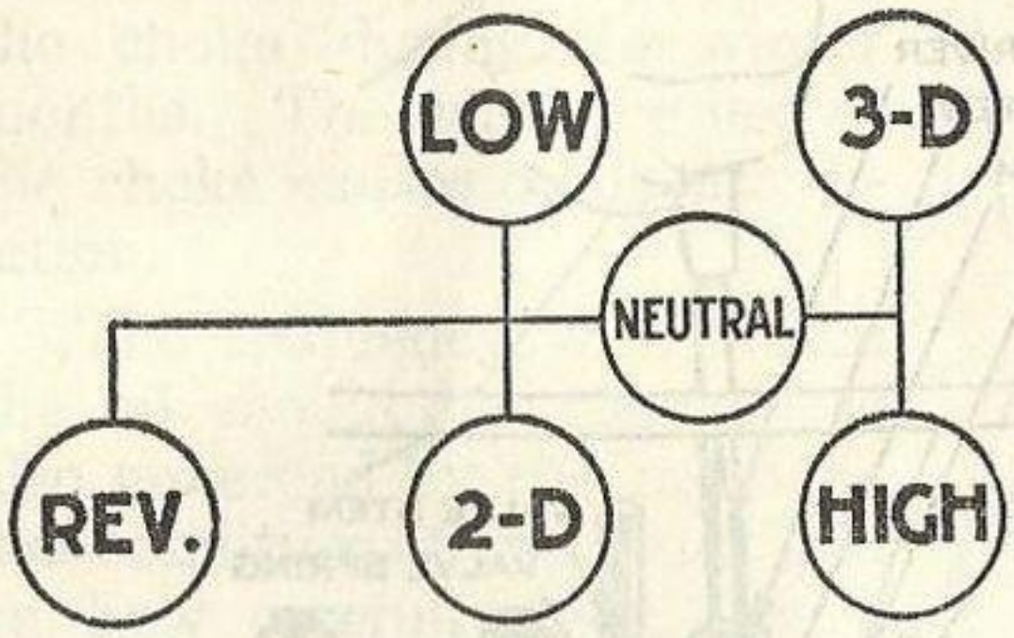


Fig. 2—Gear Shift Lever Positions 1½ Ton Truck

The lever positions corresponding to the different transmission gear ratios are shown in Fig. 2. There are four gears or speeds forward and one reverse. Of the forward gears, first or the low-low gear, provides the greatest amount of power with correspondingly low car speeds, and is therefore the correct gear for heavy pulls, as when getting the truck in motion, pulling up a very steep grade, or on the level through heavy sand or mud. Fourth or high gear provides the high speed driving range. Low or second and intermediate or third gears, as their names imply, provides the intermediate driving range.

In shifting into reverse position, it is first necessary to raise the finger lever on the right side of the gear shift lever.

There are three speeds forward and one reverse on the commercial models.

BRAKE PEDAL

Depressing this pedal applies the four-wheel service brakes used for controlling the momentum of the truck when stopping.

HAND BRAKE LEVER

The hand brake lever operates separate internal shoes in the rear drums and is used chiefly for parking. It is also conveniently used for holding the truck when getting under way on a steep up-grade.

MOTOR

The motor used in this Chevrolet model is a six cylinder, four cycle, valve-in-the-head type, having a combination of force feed and splash oiling system. The cylinder firing order is No. 1, No. 5, No. 3, No. 6, No. 2, No. 4.

Although all of the moving parts of the motor are protected from dust and grit by suitable covers, foreign substance may creep inside, if it is not cleaned occasionally. This slight inconvenience will be more than offset by the saving in repair bills at some later date.

ADJUSTING VALVES

The space between the rocker arm and the valve stem (Fig. 3) should be .006″ on the intake valves and .008″ on the exhaust valves.

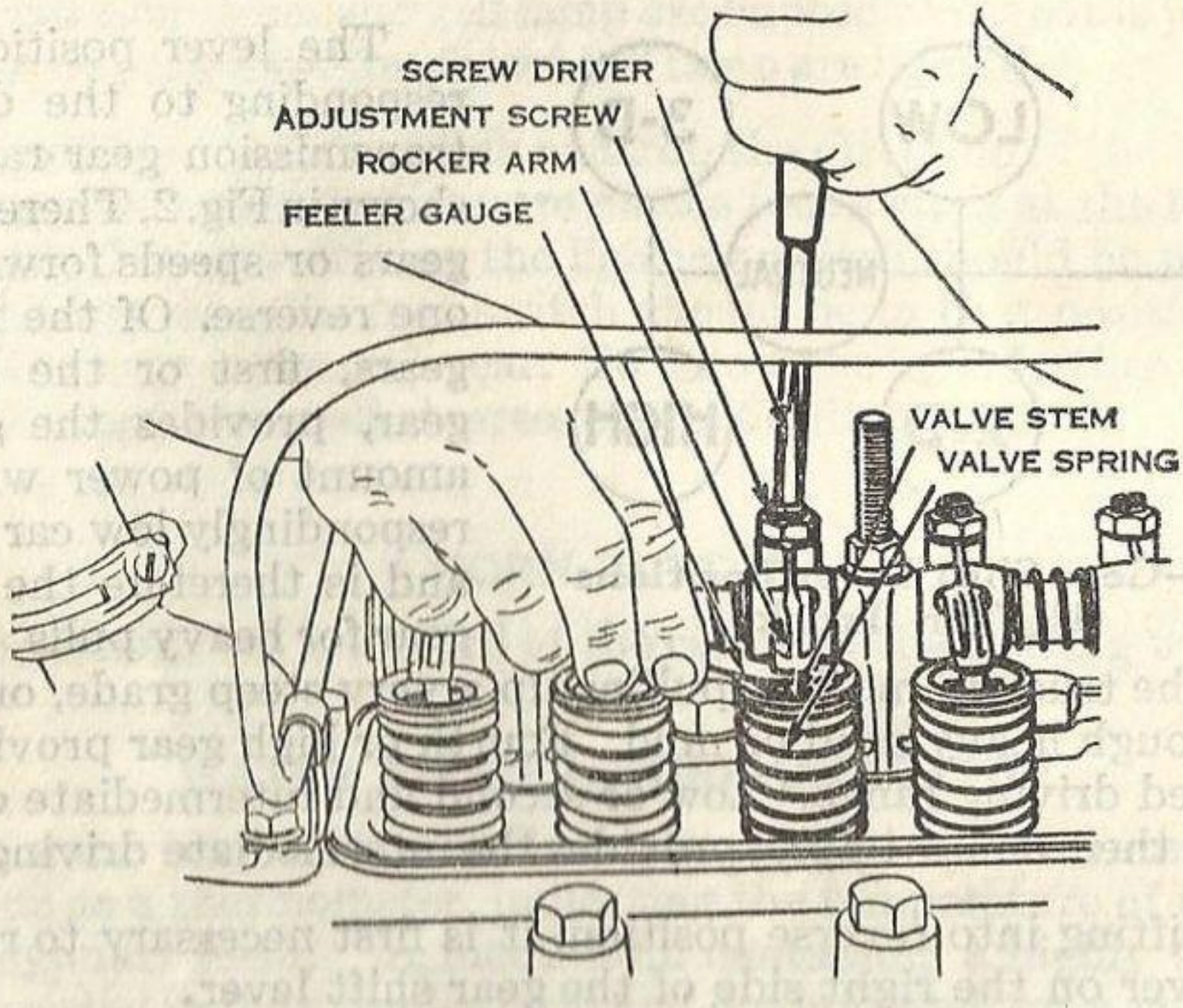


Fig. 3—Adjusting Valves

The adjustment should be made when the motor is hot, so that the valve stems and push rods will be expanded to the limit. If the space is greater than this, loosen the lock nut on the rocker arm adjusting screw and turn the screw slightly with a screw driver until the proper clearance is obtained; then tighten the lock nut so that the adjustment will not come loose. Check the clearance after the lock nut is tightened, to make sure that the adjustment is correct.

Caution: The necessity for valve adjustment will show itself first by excessive clicking of valve lifters, and second, by poor running of motor. It is not necessary to make alterations under any other conditions.

MOTOR LUBRICATION

Oil is carried in a reservoir located at the bottom of the crankcase and is filled through a filler tube on the left side of the motor, just back of the generator. (Fig. 4.)

Fill the oil reservoir to the proper level with the best oil obtainable. Good oil is cheaper than repair bills; therefore, observe this operation regularly and refill when examination proves the necessity. None but the best grades of medium or light oil should be used, as complete lubrication depends upon the oil being thoroughly atomized, so that the oil mist or vapor will reach all working parts of the motor.

CHANGE OIL IN CRANKCASE

A complete change of motor oil is required more frequently in winter than in summer, on account of the necessity of using the choke during the winter months. The excessive use of the choke causes crankcase dilution.

The frequency with which the oil should be changed is also governed by the mechanical condition of the truck and on how carefully you, as a driver, handle and care for it.

Fill the oil reservoir by removing the cap on the oil filler pipe on the left side of the motor. Five quarts of good motor oil of proper S. A. E. viscosity are required to refill the pan to the full mark on the oil gauge rod.

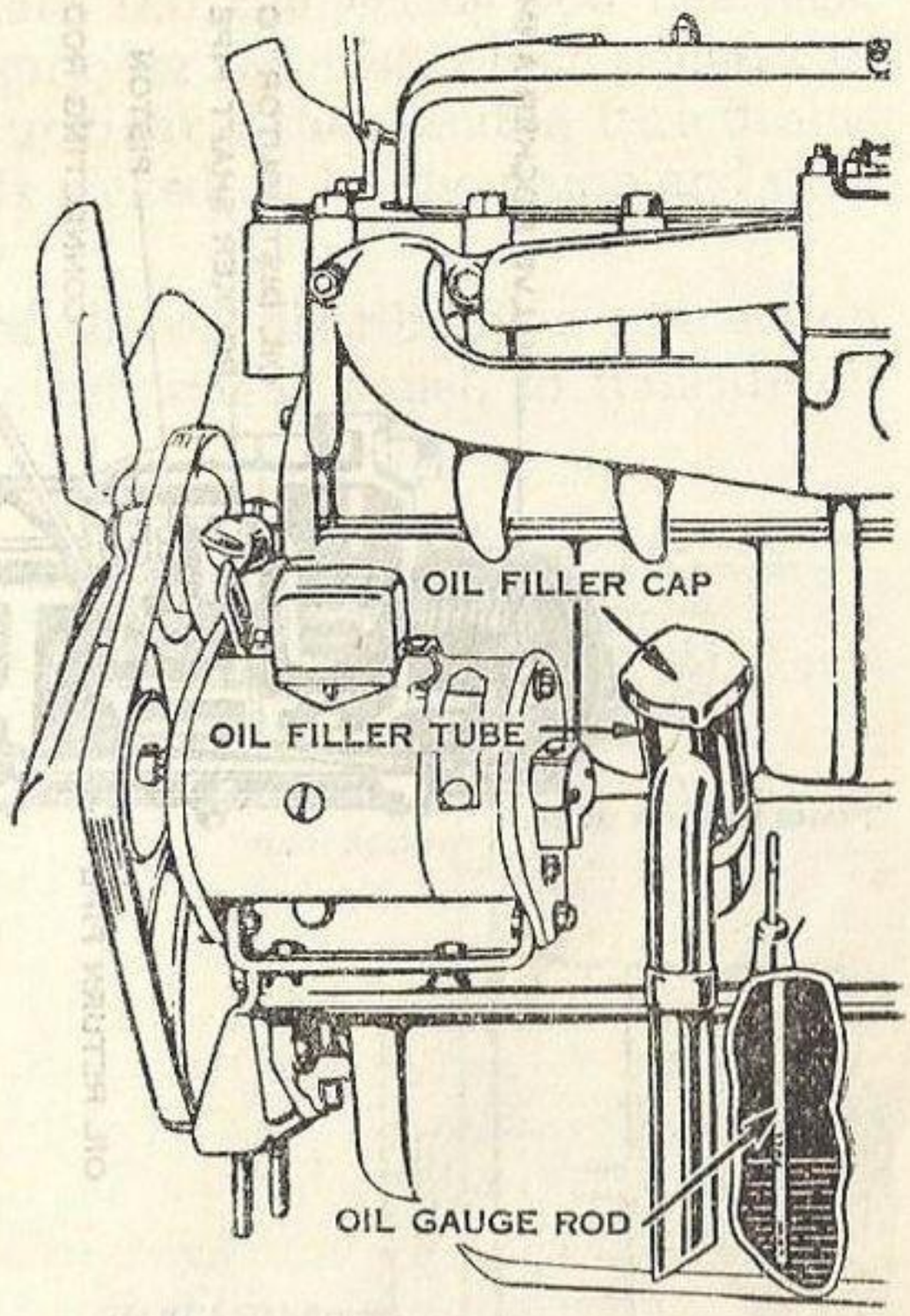


Fig. 4—Oil Gauge and Filler Pipe

See article on General Lubrication page 53 for complete specifications.

OILING SYSTEM

In the Chevrolet oiling system the vane type oil pump, Fig. 5, (driven indirectly by the camshaft), is placed inside the crankcase.

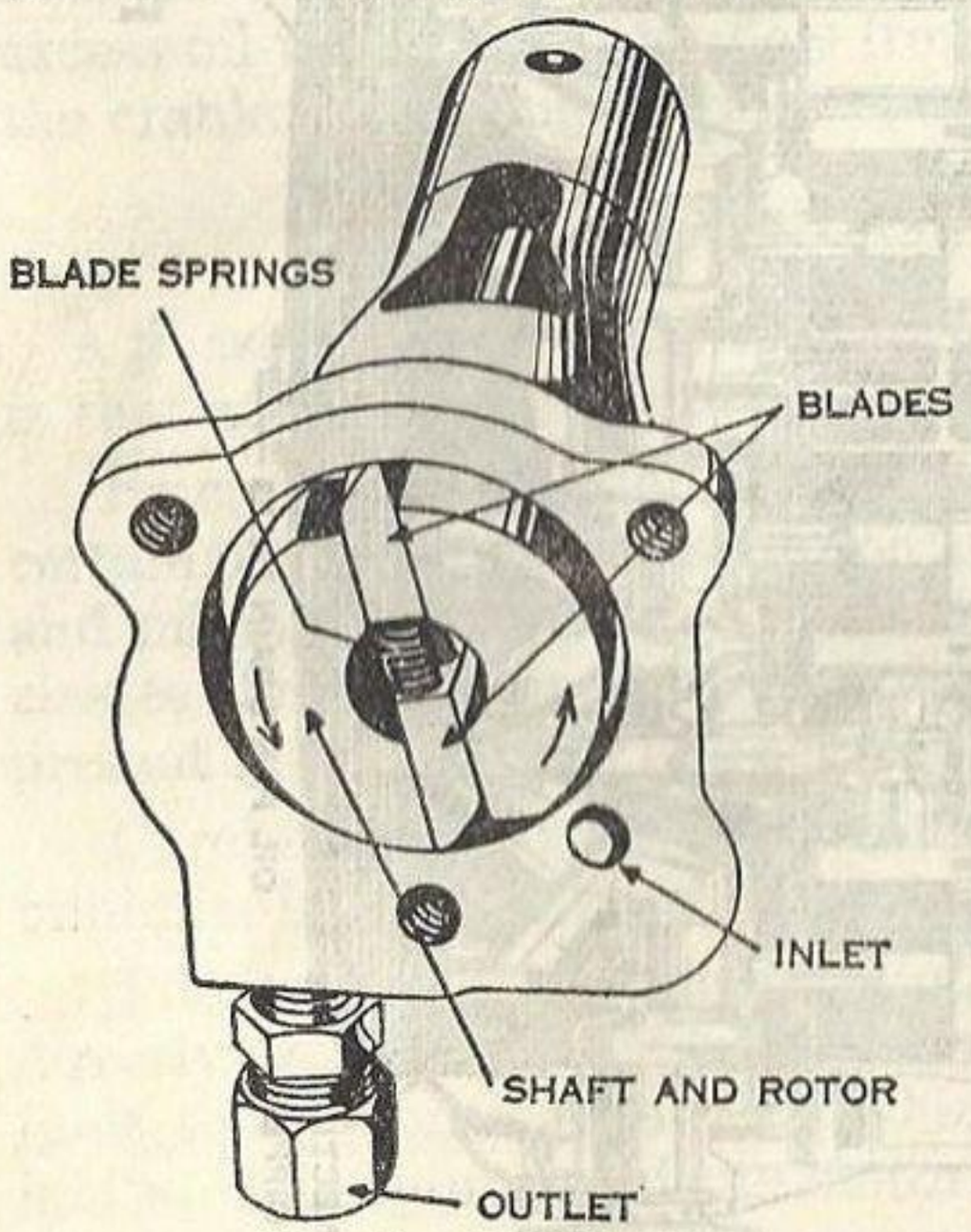


Fig. 5—Oil Pump

The oil pump sucks the oil, through a screen, from the bottom of the oil pan and delivers it, under pressure, to the center main and center camshaft bearings and through distributing pipes to the front and rear main and camshaft bearings. See Fig. 6.

The pump also delivers oil to the oil distributor, on the left side of the motor, where the flow is divided and passes through pipes to the oil troughs, located under each connecting rod bearing.

When the motor is operating, the oil dippers on the ends of the connecting rods lift the oil

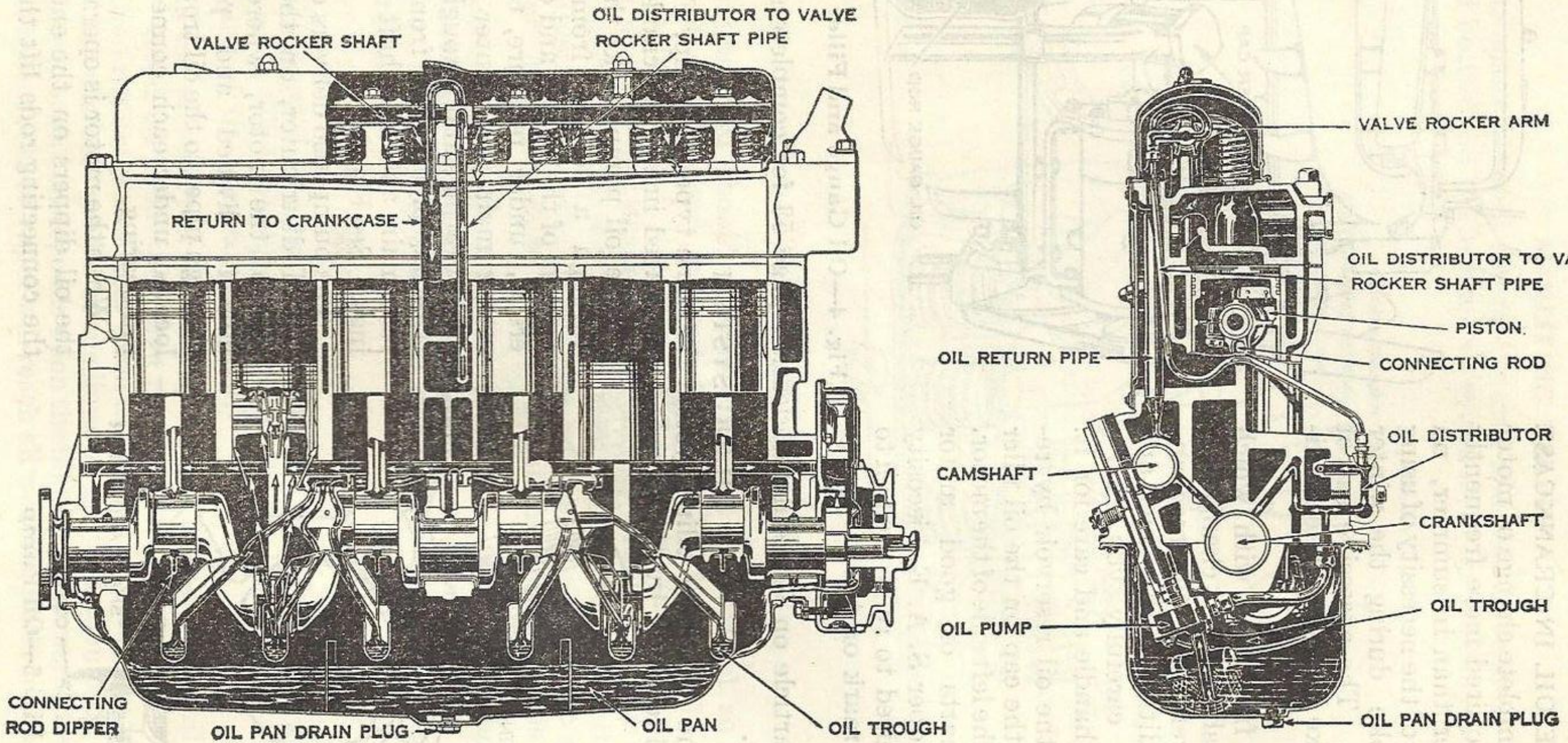


Fig. 6—Motor Oiling System

and a portion of it is forced up into the connecting rod bearings. The rest is broken up into a fine spray or oil mist, which penetrates to all moving parts of the motor, lubricates them and in turn drains back to the oil reservoir, where it is picked up by the pump and used again.

From the high pressure side of the oil distributor a connection leads to the pressure gauge on the instrument panel, to indicate oil pressure at this point.

LUBRICATION OF VALVE LIFTERS (TAPPETS)

From the low pressure side, of the oil distributor, a pipe carries oil into the hollow rocker arm shafts. Provision is made to feed just sufficient oil through a metering groove in the rocker arm bushing to properly lubricate the valve stems and upper end of the push rod.

A hole is drilled at the top of the rocker arm hub toward the push rod side, through which oil is fed to the push rod socket. The rapid action of the rocker arm adjusting screw in the oil-filled socket throws a mist of oil over all of the valve mechanism including the valve stems. The excess oil which may overflow from the rocker shafts is returned to the crankcase through a telescoping tube.

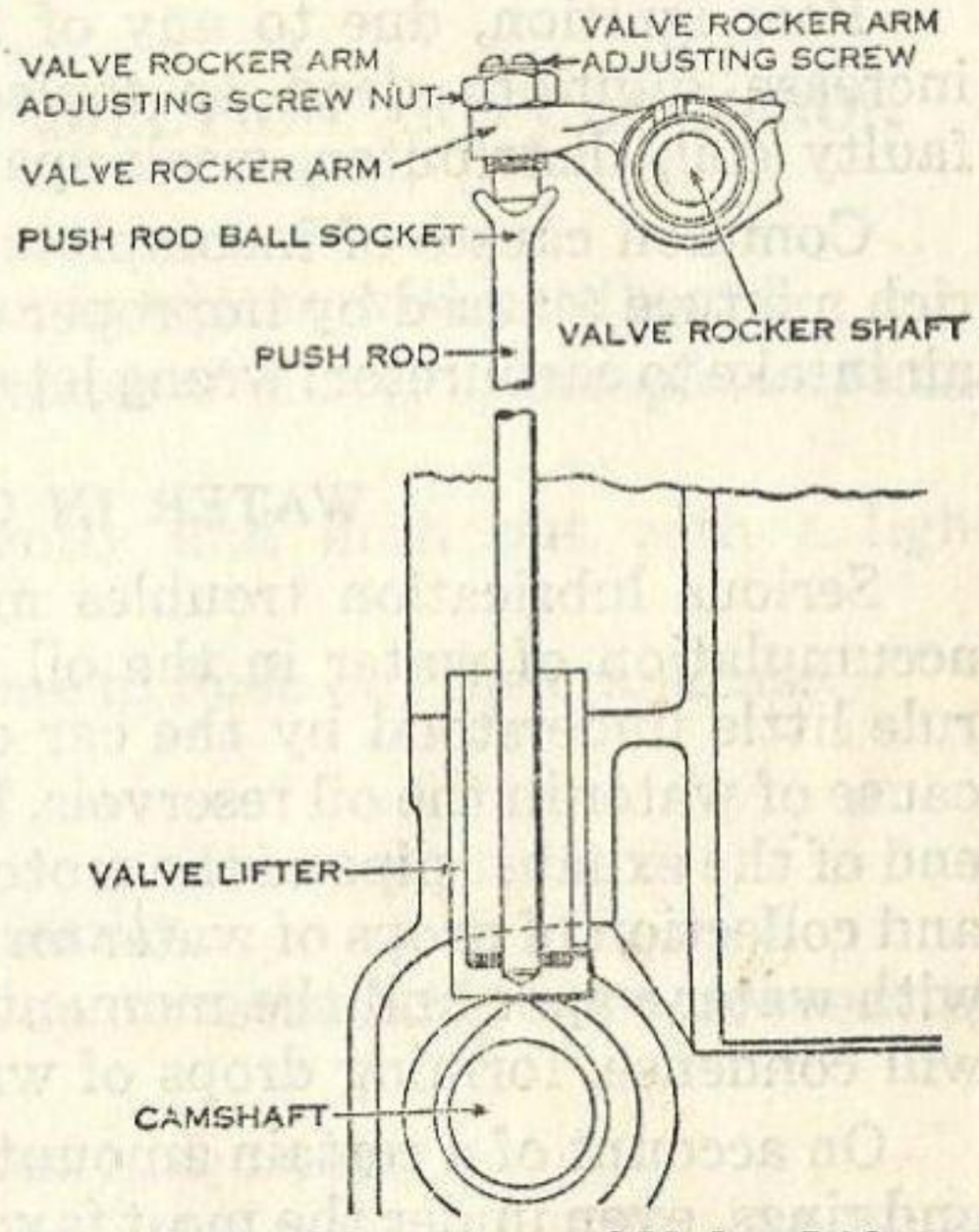


Fig. 7—Lubrication of Valve Lifters

CRANKCASE DILUTION

A phase of motor oil deterioration, probably the most serious of all, is that of crankcase dilution.

By crankcase dilution, we mean a thinning of the oil on account of certain portions of the gasoline or fuel leaking by the pistons and rings and mixing with the oil. This condition will be encountered in all classes of cars and motors, regardless of make or model. It is always present in a greater or less degree and must be combated continually.

Careful attention to a few comparatively simple precautions will minimize it and avert real damage.

The causes of crankcase dilution in most cases can be traced directly to the character of the fuel used. Practically all motor fuels today contain portions which are slow burning and hard to ignite. The thinning of the motor oil is due to unburned fuel vapor which forces or works its way past the pistons and rings and in

coming in contact with the cool walls in the crankcase, condenses and is mixed with the oil, thus reducing the "body" of the oil and impairing its lubricating qualities.

All motor oils are subject to this dilution.

MECHANICAL CAUSES OF DILUTION

Dilution may be caused by such faults, mechanically, as scored cylinders, poor ring fit, "sloppy" or loose pistons and faulty valves.

Poor ignition, due to any of the following conditions, will also increase dilution: dead or fouled spark plugs, incorrect timing, faulty coil, distributor, weak spark or leaky gaskets.

Common causes of incomplete combustion of the fuel are: overrich mixture (caused by improper carburetor adjustment); restricted air intake to carburetor; wrong jet or nozzle in carburetor; or air leaks.

WATER IN CRANKCASE

Serious lubrication troubles may result in cold weather by an accumulation of water in the oil reservoir. This condition is as a rule little understood by the car owner. To demonstrate the chief cause of water in the oil reservoir, hold a piece of cold metal near the end of the exhaust pipe of the motor and note the rapid condensation and collection of drops of water on it. The exhaust gases are charged with water vapor and the moment these gases strike a cold surface, will condense, forming drops of water.

On account of a certain amount of these gases passing the pistons and rings, even under the most favorable conditions, we will have the formation of water in the oil reservoir, in a greater or less degree, until the motor becomes warm. When the motor becomes thoroughly warm, the crankcase will no longer act as a condenser and all of these gases will pass out through the crankcase ventilator system.

Short runs in cold weather, such as city driving, will aggravate this condition.

CORROSION

Practically all present-day motor fuel contains small amounts of sulphur which, in the state in which it is found, are harmless; but this sulphur on burning, forms certain gases, a small portion of which is likely to leak past the pistons and rings and re-acting with water, when present in the crankcase, form very corrosive acids. The more sulphur in the fuel, the greater the danger from this type of corrosion. This is a condition which we cannot wholly avoid, but it may be reduced to a minimum by proper care of the motor.

As long as the gases and the internal walls of the crankcase are hot enough to keep water vapor from condensing, no harm will result; but when a motor is run in low temperatures, moisture will collect and unite with the gases formed by combustion; thus, acid

will be formed and is likely to cause serious etching or pitting. This etching, pitting or corrosion, when using fuel containing considerable sulphur, manifests itself in excessively rapid wear on piston pins, camshaft bearings and other moving parts of the motor, oftentimes causing the owner to blame the car manufacturer or the lubricating oil when in reality, the trouble may be traced back to the character of fuel used, or a condition of the motor, such as excessive blow-bys or improper carburetor adjustment.

PRECAUTIONS TO PREVENT DILUTION AND CORROSION

1—Use good fuel.

2—Cover lower portion of radiator in winter, with cardboard.

3—Use none but the very best grades of oil. (For complete specifications see Page 53.)

4—Drain the crankcase frequently and flush out with a light washing oil.

(Never use gasoline or kerosene to flush out the crankcase.)

Refill with a good grade of oil.

5—Use the choke sparingly.

6—Do not idle the motor unnecessarily.

7—Keep piston and ring fits up to standard, thus preventing blow-bys.

8—Keep valves ground and properly adjusted.

9—Be sure cylinder head gaskets and intake manifold gaskets do not leak.

10—Take your car to the Chevrolet Dealer for regular periodic inspection.

11—Test condition of oil, by withdrawing the oil gauge rod (Fig. 4).

POSSIBLE MOTOR TROUBLE

Failure to Start.

(1) Ignition not turned on.
(2) Gasoline supply exhausted.
(3) Fuel pump filter screen clogged.
(4) Choke button not pulled out far enough.
(5) Storage battery may be partially discharged and unable to supply enough current for both starting and ignition.
(6) Ignition coil on dash burned out.
(7) Distributor contact points badly burned or pitted, causing them to remain open.
(8) Spark plugs fouled.
(9) Throttle not open sufficient.

Motor Misses

(1) Insufficient supply of gasoline flowing to carburetor, on account of clogged line or dirty screen.
(2) Valve sticking.
(3) Loose electrical connections.
(4) Spark plug gaps incorrect—(.032″ correct).
(5) Spark plug porcelain broken.
(6) Valve spring weak or broken.
(7) Valves adjusted too close.
(8) Carburetor needle valve sticking.
(9) Carburetor needs adjusting.
(10) Throttle not open sufficient.

Motor Stops Suddenly.

(1) Gasoline exhausted.
(2) Gasoline line clogged or needle valve sticking.
(3) Ignition wires loose.

Motor Gets Hot.

(1) Oil circulation stopped or lines clogged.
(2) Low water supply in cooling system.
(3) Radiator clogged with lime deposit.
(4) Fan belt loose.
(5) Late or retarded spark.

CLUTCH

The clutch used on the Chevrolet car is a standard single plate dry disc type, consisting of a pressure plate assembly having nine pressure springs, three release levers and a clutch disc mounted on a drop-forged splined hub. See Fig. 9. The clutch disc is of the torque spring type with facings riveted to each side of it.

The clutch must be operated dry. A hole is located in the bottom of the clutch housing underpan to permit any small leakage of oil from the rear crankshaft bearing, clutch throwout bearing, or transmission to drain off.

The clutch fork is mounted on a swivel. The swivel is screwed in a shoulder stud in the clutch housing. By means of this mounting, alignment of the clutch release bearing is maintained because the bearing is free to find its own point of alignment without binding.

The release bearing is made of a carbon graphite composition shrunk into a trunnion collar mounted in the fork. This collar has an oil reservoir, which is back of the bearing, with an oiler on the top. This allows the throwout bearing collar to be filled with oil, which in turn seeps into the bearing.

To fill the clutch throwout bearing collar with oil remove the cover plate on the toe board and the inspection cover on the clutch housing. Driving conditions control the frequency of oiling this reservoir. It should be filled with S.A.E. 160 oil.

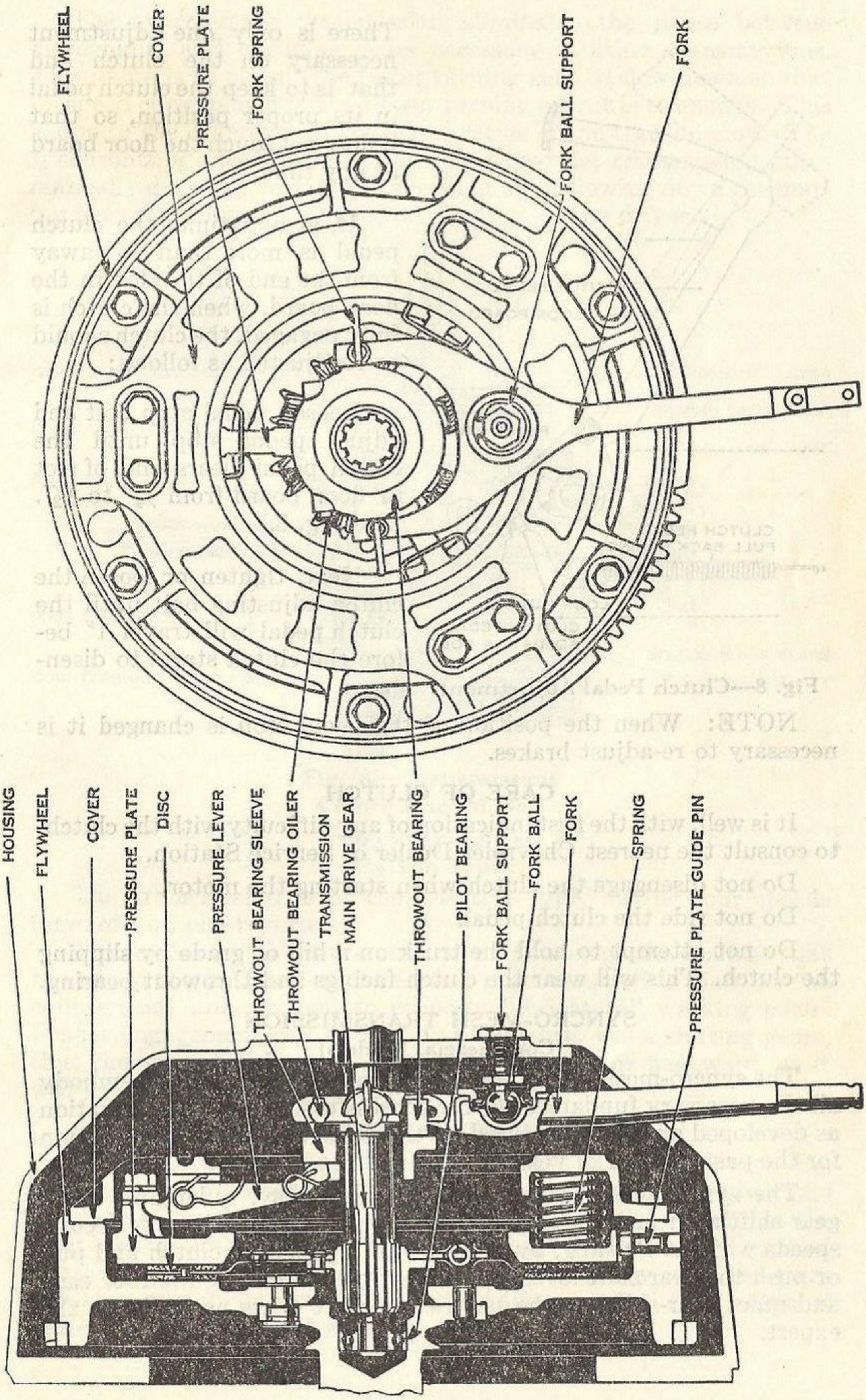

FLYWHEEL
COVER
PRESSURE PLATE
FORK SPRING
FORK BALL SUPPORT
FORK
HOUSING
FLYWHEEL
COVER
PRESSURE PLATE
DISC
PRESSURE LEVER
THROWOUT BEARING SLEEVE
THROWOUT BEARING OILER
TRANSMISSION
MAIN DRIVE GEAR
THROWOUT BEARING
PILOT BEARING
FORK BALL SUPPORT
FORK BALL
FORK
SPRING
PRESSURE PLATE GUIDE PIN

Fig. 9—Clutch

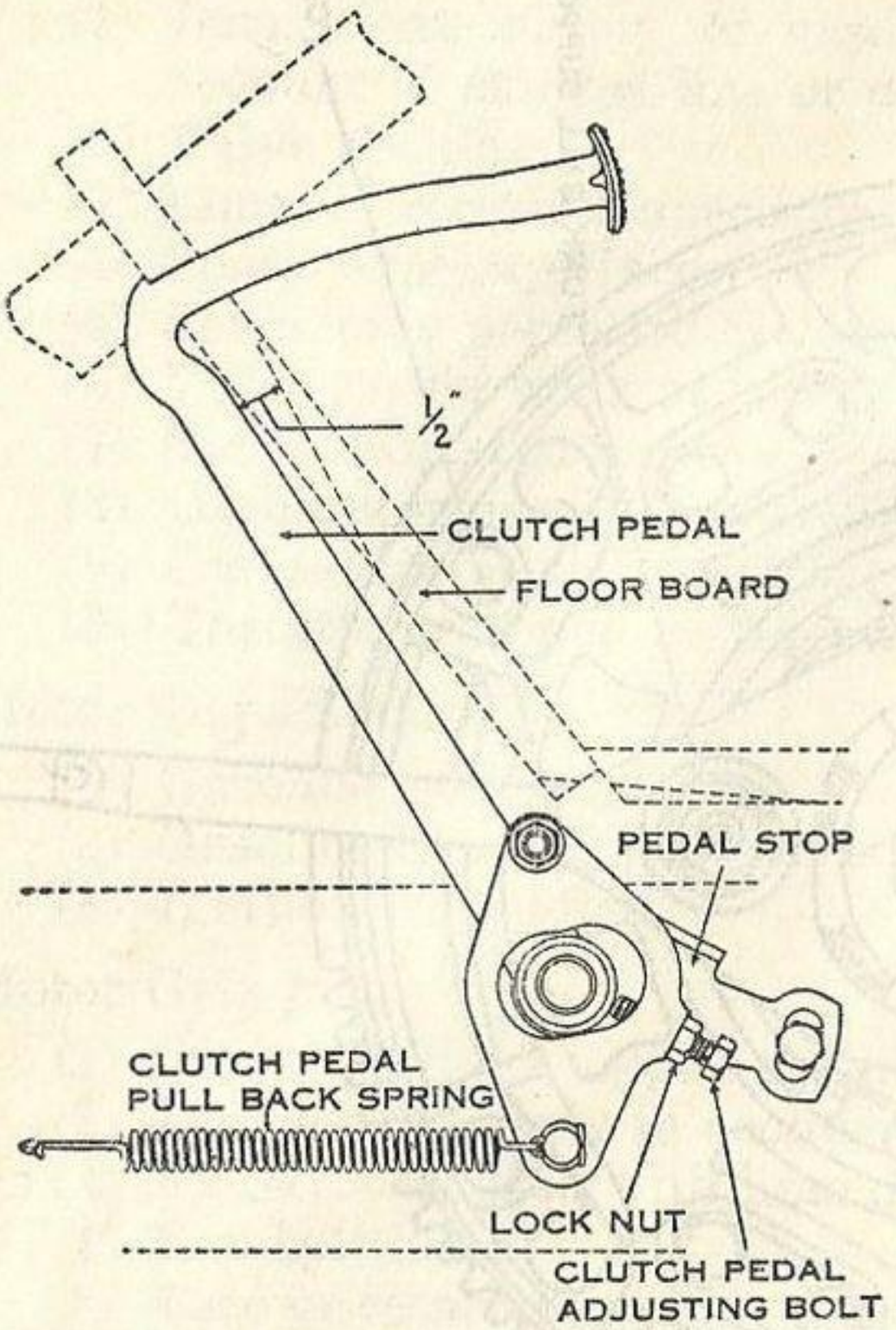


Fig. 8—Clutch Pedal Adjustment

There is only one adjustment necessary on the clutch and that is to keep the clutch pedal in its proper position, so that it does not touch the floor board at any time.

If, at any time, the clutch pedal is more than ½" away from the end of the slot in the floor board, when the clutch is fully engaged, the clutch should be readjusted as follows:

Loosen pedal stop bolt and adjust pedal stop until the clutch pedal clears end of slot in floor board from ¼" to ½". (See Fig. 8.)

Next, tighten or loosen the clutch adjusting bolt until the clutch pedal will travel 1" before the clutch starts to disengage.

NOTE: When the position of the pedal stop is changed it is necessary to re-adjust brakes.

CARE OF CLUTCH

It is well, with the first indication of any difficulty with the clutch, to consult the nearest Chevrolet Dealer or Service Station.

Do not disengage the clutch when starting the motor.

Do not ride the clutch pedal.

Do not attempt to hold the truck on a hill or grade by slipping the clutch. This will wear the clutch facings and throwout bearing.

SYNCRO-MESH TRANSMISSION
(Commercial Models)

The syncro-mesh transmission was designed and built to embody all the necessary fundamentals for successful syncro-mesh operation as developed and manufactured by the General Motors Corporation for the past number of years.

The syncro-mesh transmission provides easy, quiet and quick gear-shifting from first to second, second to high and high to second speeds without clashing, by merely pushing out the clutch and pull or push the gear shift lever. No expert training is required for easy and quiet gear-shifting, the novice can shift gears as easily as the expert.

The syncro-mesh transmission eliminates the pause between disengaging and engaging gears necessary in other transmissions. This pause is to permit the faster turning gear to slow down so that its speed corresponds to the slower turning gear it is to engage. This is due to the difference of the speed ratios in the transmission. The synchronizing mechanism in the new Chevrolet transmission automatically does this very thing, speeding up or slowing down the mating gear requiring no thought on the part of the driver.

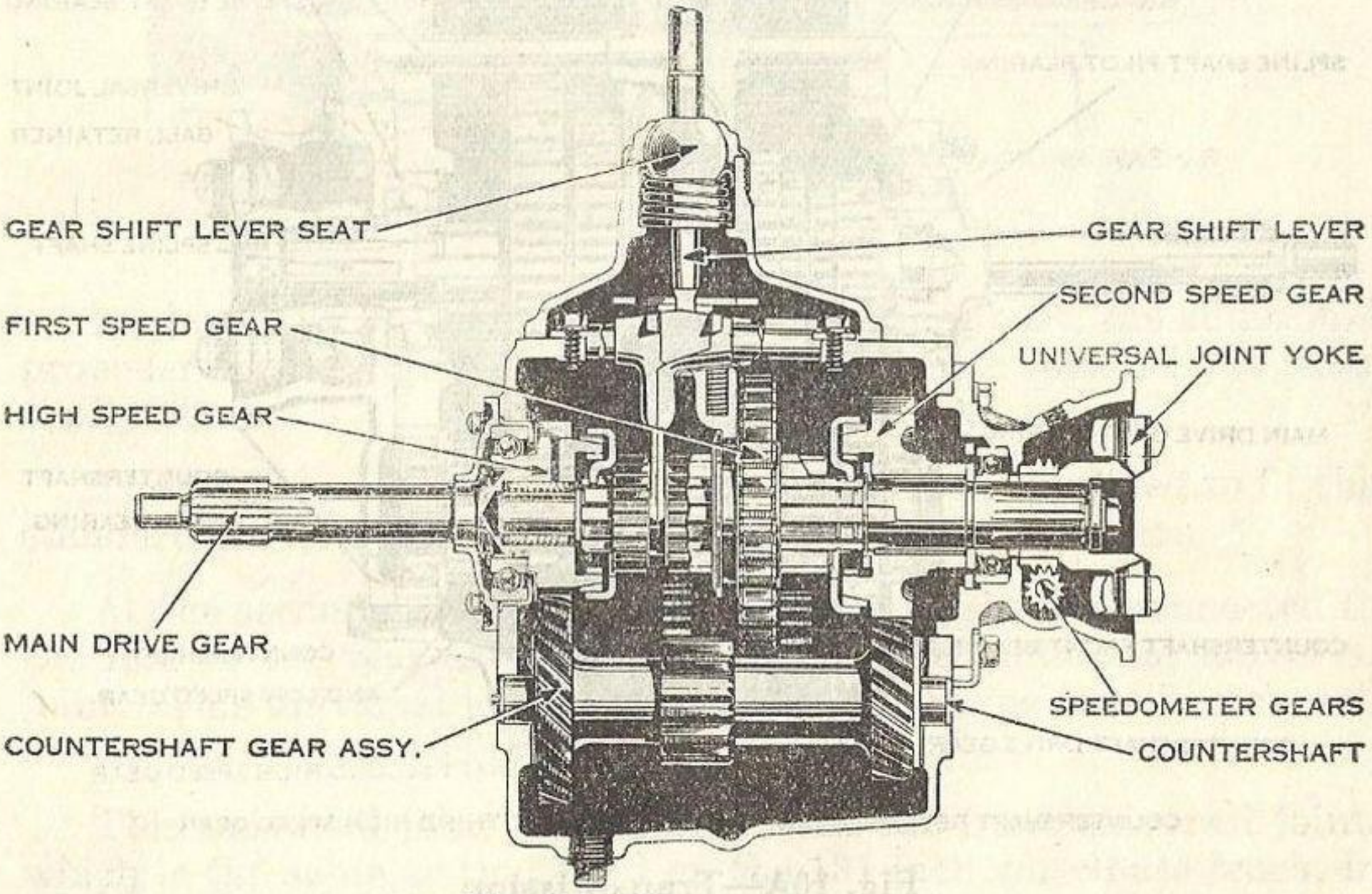


Fig. 10—Transmission
Commercial Models

TRANSMISSION
(1½ Ton Truck)

The transmission is of the selective type, having four speeds forward and one reverse.

The fundamental requirement is to first engage the gears so that the entire tooth "face" of the sliding gears mesh with those on the countershaft and, second, to properly lubricate all working parts. Proper engagement can be had by being sure, when shifting gears, that the gear shift lever travels as far forward, or backward, as it will go, before re-engaging the clutch.

LUBRICATION OF TRANSMISSION

To lubricate the transmission, fill every 1,000 miles with the lubricant recommended under transmission and rear axle lubricants on Page 57, so that the oil level stands even with the opening in the filler boss on the right side of the case. In cold weather we recommend the addition of a pint of light engine oil to the heavy oil in the transmission, which improves the lubricating qualities and makes it easier to shift gears and start the motor.

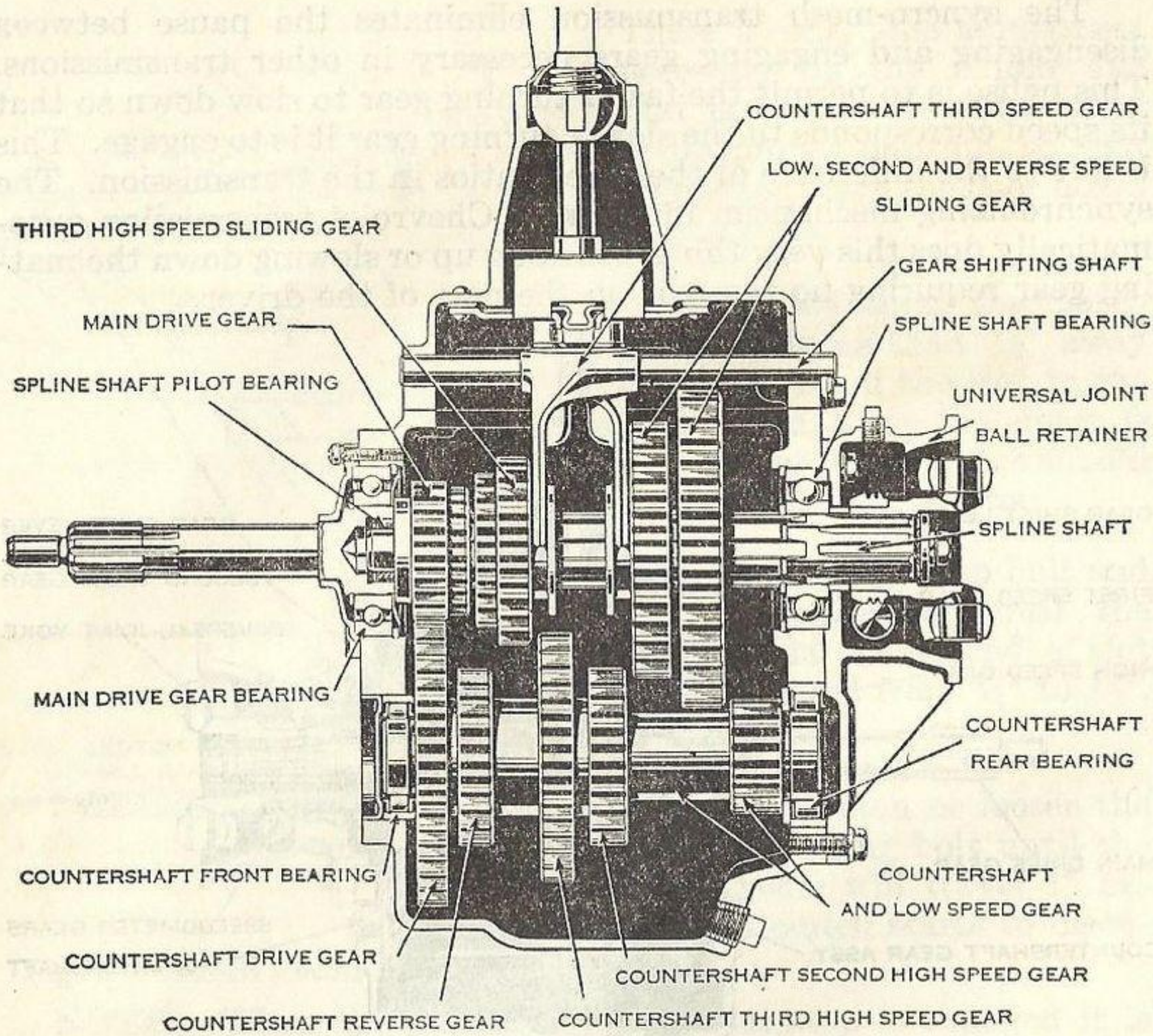


Fig. 10A—Transmission
1½ Ton Truck

Once every 2,000 miles it is a good plan to wash out the transmission with a light oil, to remove any chips of metal knocked off the gears, or other foreign substances, such as grit or dirt. To do this, remove the drain plug at the bottom of the transmission case and allow the oil to drain off, after which flush out the case thoroughly and refill with a heavy oil, such as specified in Fig. 36.

UNIVERSAL JOINT

Fig. 11 illustrates the universal joint used in the Chevrolet. It is directly connected to and receives its lubrication from the transmission. Additional lubrication facilities at this point are unnecessary. The speedometer is driven from a worm and drive gear mounted on the universal joint.

The pipe plug in the universal joint housing is for maufacturing purposes and is used to fill the universal joint at time of assembly.

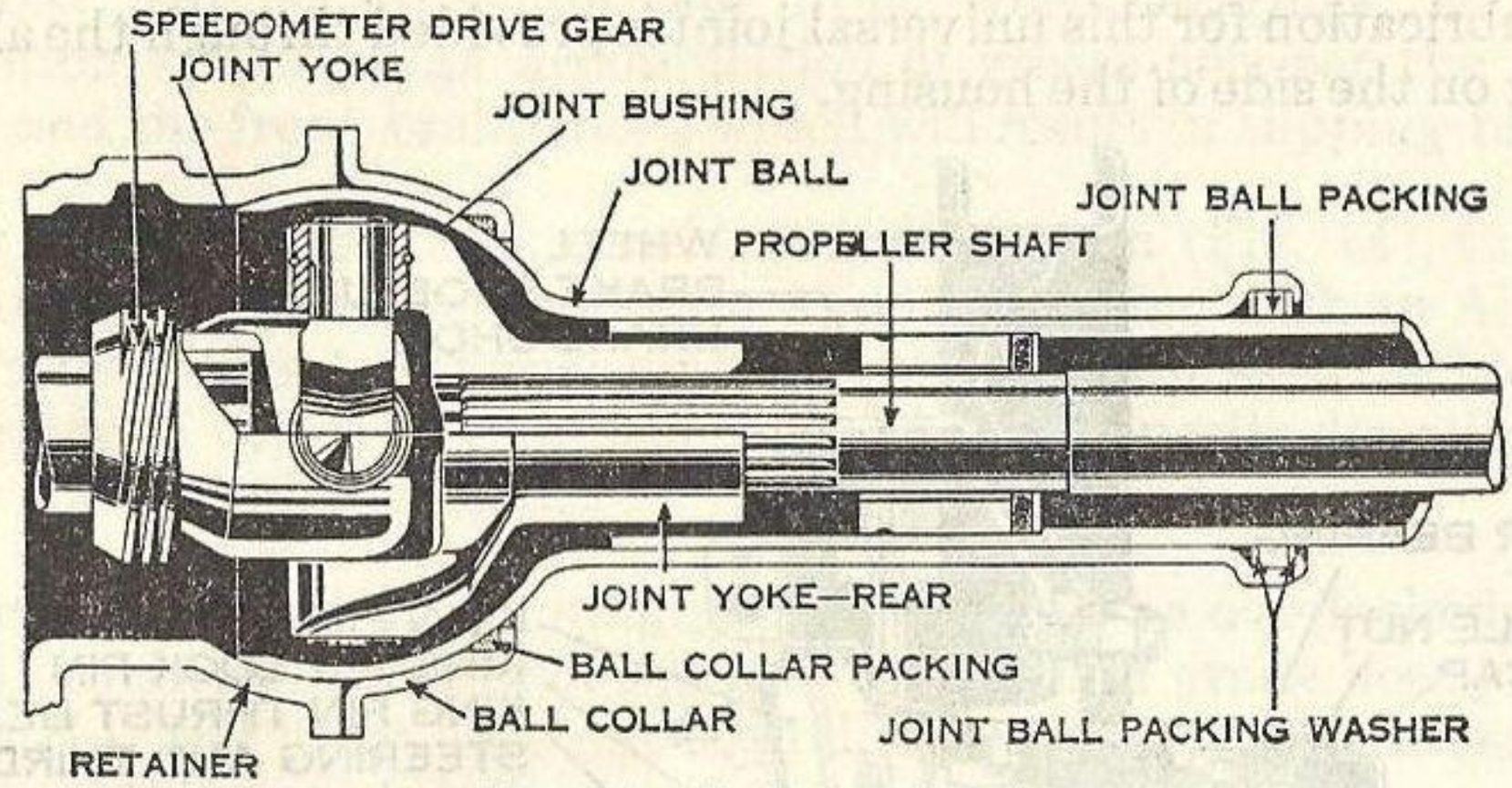


Fig. 11—Universal Joint

In the heavy duty truck with 157-inch wheelbase, the additional propeller shaft length is provided by a separate forward propeller shaft unit.

The front end of the propeller shaft extension is splined to fit the standard universal joint yoke on the rear of the transmission.

At the second cross member, the extension shaft is connected to the rear of the rear axle third member by an additional universal joint. This universal joint is enclosed in a housing that is mounted on the second cross member.

This universal joint yoke differs from the front universal joint, which is the same as that used on the 131-inch wheelbase truck, in that the front yoke runs in a ball bearing.

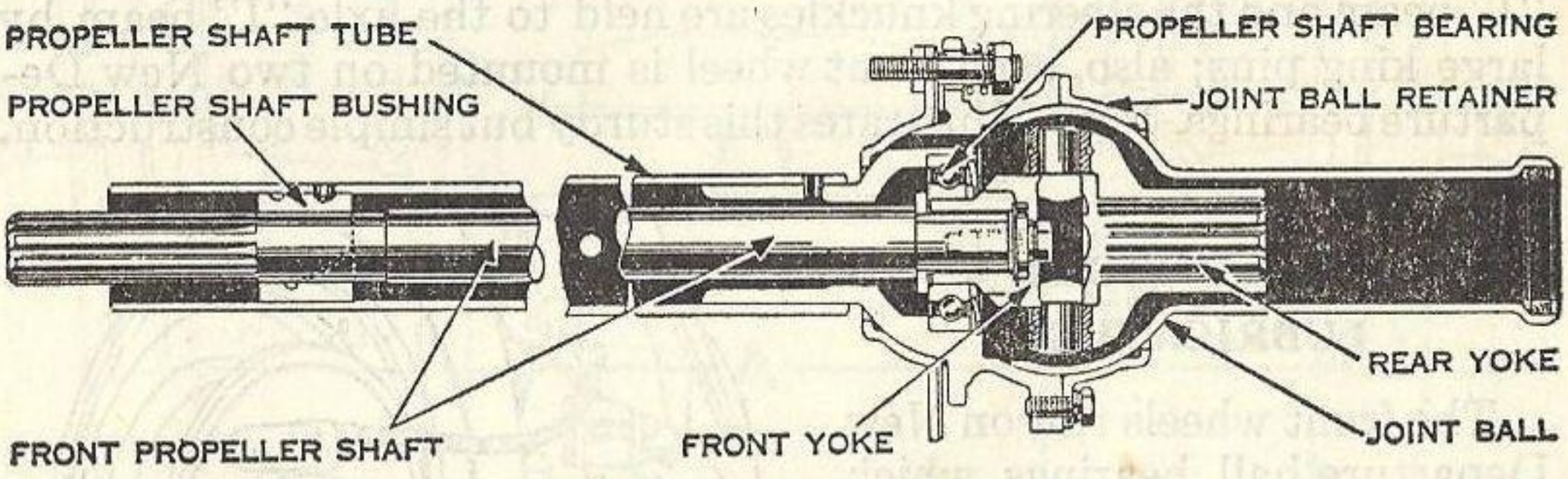


Fig. 12—Universal Joint
157″ Wheelbase

One pound of lubricant should be inserted into the rear universal joint chamber on 157″ wheelbase trucks and inspection made every 1,000 miles. Lubricant of a viscosity and not heavier than regular transmission lubricant should be used. Under no consideration should any of the so-called transmission lubricants of the fibrous type or grease be used.

Lubrication for this universal joint is provided through the alemite fitting on the side of the housing.

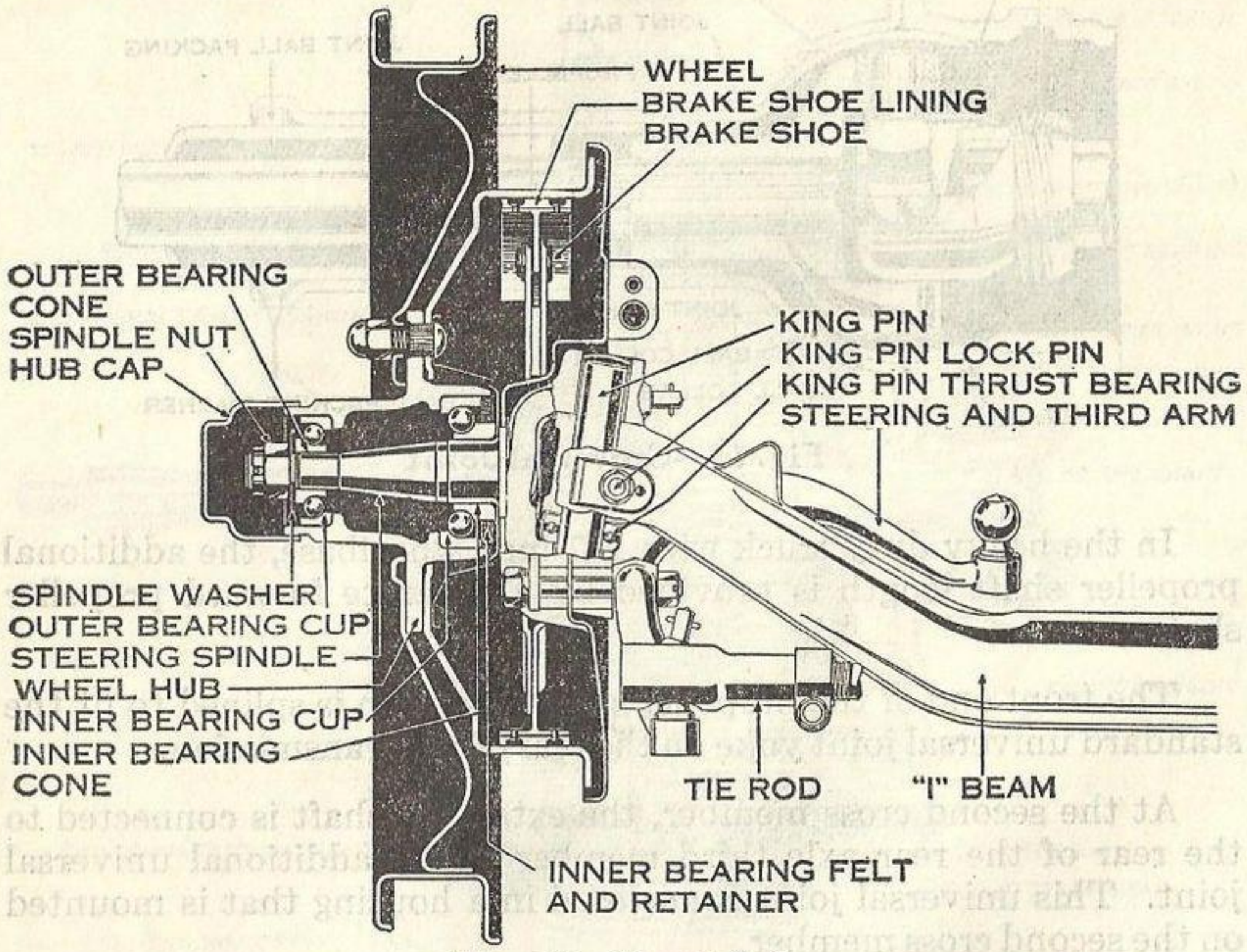


Fig. 13—Front Axle

FRONT AXLE

The front axle is so simple in construction that there is little which can be said concerning it, except that it has a very heavy drop forged "I" beam and the steering knuckles are held to the axle "I" beam by large king pins; also, each front wheel is mounted on two New Departure bearings. Fig 13 illustrates this sturdy but simple construction.

FRONT WHEEL LUBRICATION

The front wheels run on New Departure ball bearings which are lubricated by packing the bearings with soft cup grease. See Fig. 36. In mounting the front wheels, be careful to thoroughly pack the bearing assembly with grease. The best lubricant for front wheel bearings is a straight mineral grease entirely free from asbestos fibre or other foreign matter.

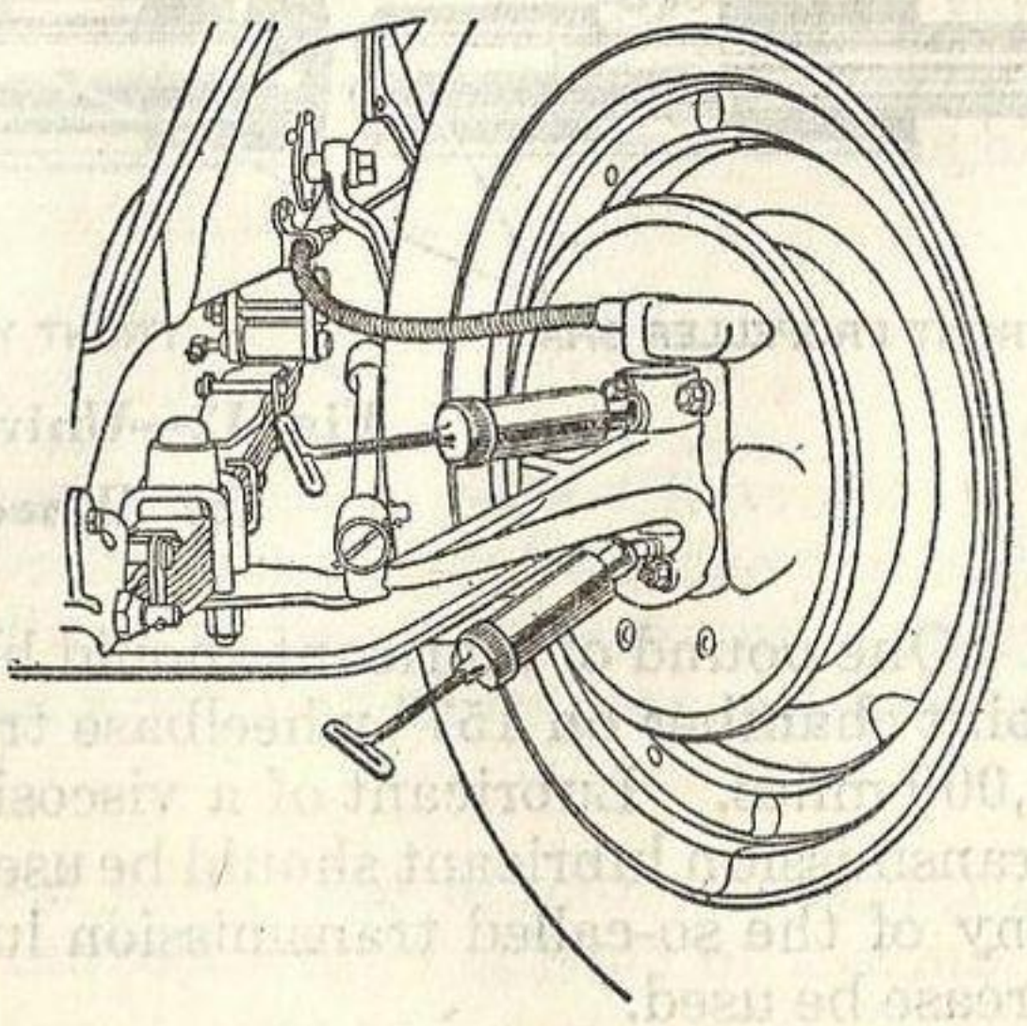


Fig. 14—Front Wheel Lubrication

CAUTION: Do not over-lubricate front wheel bearings, as over-lubrication will cause an accumulation of grease between the brake drums and the front brake shoes which will result in slipping brakes.

By cramping the front wheels, as indicated in (Fig. 14), the two Alemite fittings are accessible for easy lubrication with an Alemite Gun, from the front of the car. After lubricating the steering knuckle on one side of the car, cramp the wheels in the opposite direction and repeat the oiling operation.

The lubrication of the king pins should not be overlooked; they should be lubricated every 500 miles. Use a high grade heavy oil of S.A.E. No. 160 body. Do not use oil having graphite or other substances of this nature in it.

FRONT WHEEL ALIGNMENT

To make steering easy, it is required that the front wheels should "toe" in; that is, the distance between the inside faces of the wheel felloes, measured at the height of the wheel hubs, should be from $\frac{5}{64}$" to $\frac{1}{8}$" more at the rear than at the front. This causes the wheels to grip the road better and allows the car to hold its course without undue action on the steering mechanism, preventing undue tire wear.

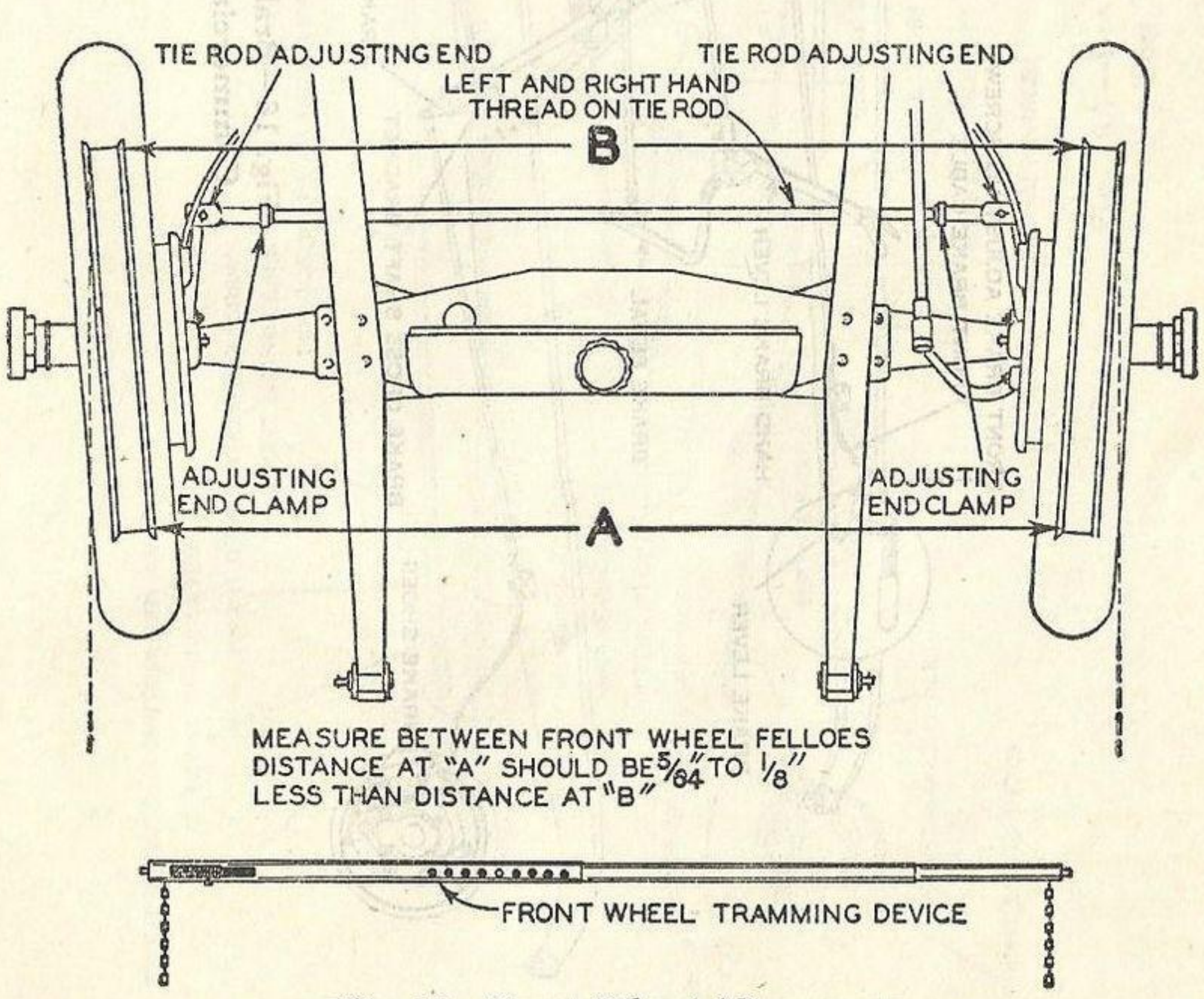


Fig. 15—Front Wheel Alignment

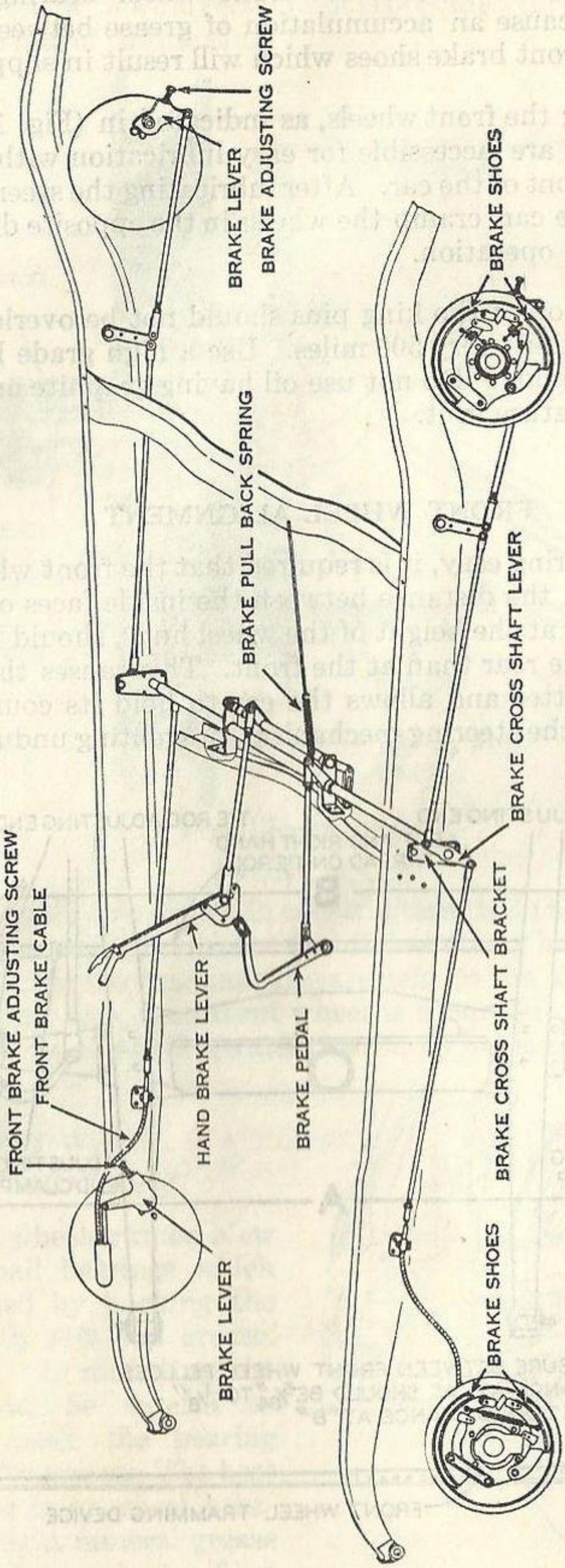


Fig. 16—Brake Linkage
Commercial Models

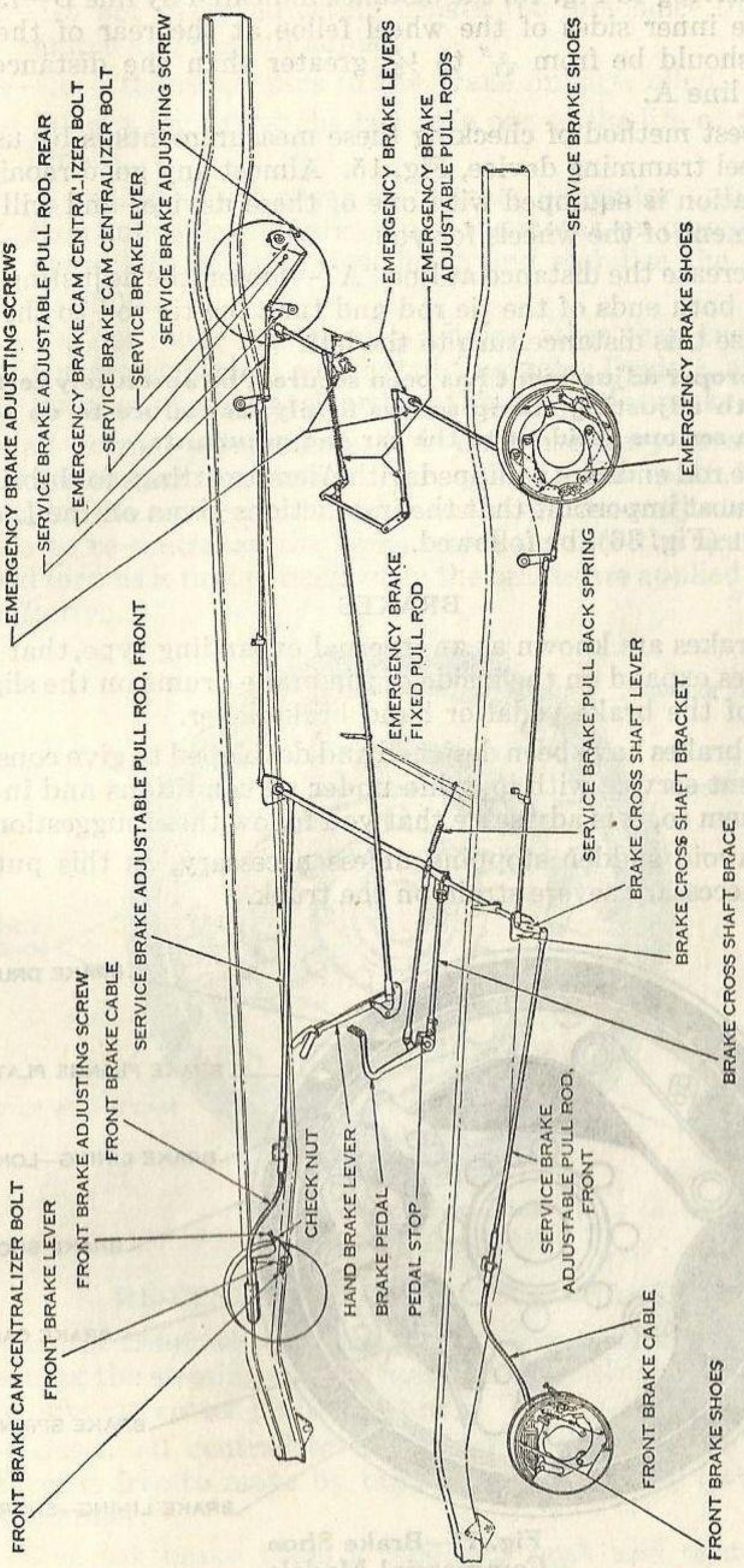


Fig. 16A—Brake Linkage
1½ Ton Truck

By referring to Fig. 15, the distance indicated by line B—i. e., between the inner sides of the wheel felloe at the rear of the front wheels—should be from $\frac{5}{64}$" to $\frac{1}{8}$" greater than the distance indicated by line A.

The best method of checking these measurements is by use of a front wheel tramming device, Fig. 15. Almost any good repair shop or tire station is equipped with one of these devices and will check the alignment of the wheels for you.

To decrease the distance at line "A"—loosen the adjusting clamp screws at both ends of the tie rod and turn the tie rod to the right. To increase this distance turn to the left.

After proper adjustment has been secured, be absolutely certain to fasten both adjusting clamp screws firmly, as failure to do so may result in a serious accident to the car and occupants.

The tie rod ends are equipped with Alemite fittings for lubrication and it is most important that the instructions given on the Lubrication Chart (Fig. 36), be followed.

BRAKES

The brakes are known as an internal expanding type, that is, the brake shoes expand on the inside of the brake drums on the slightest pressure of the brake pedal or hand brake lever.

These brakes have been designed and developed to give consistent and efficient service with long life under all conditions and in order to keep them so, it is advisable that you follow these suggestions:

1st—Avoid sudden stopping unless necessary, as this puts unnecessary severe strain on the truck.

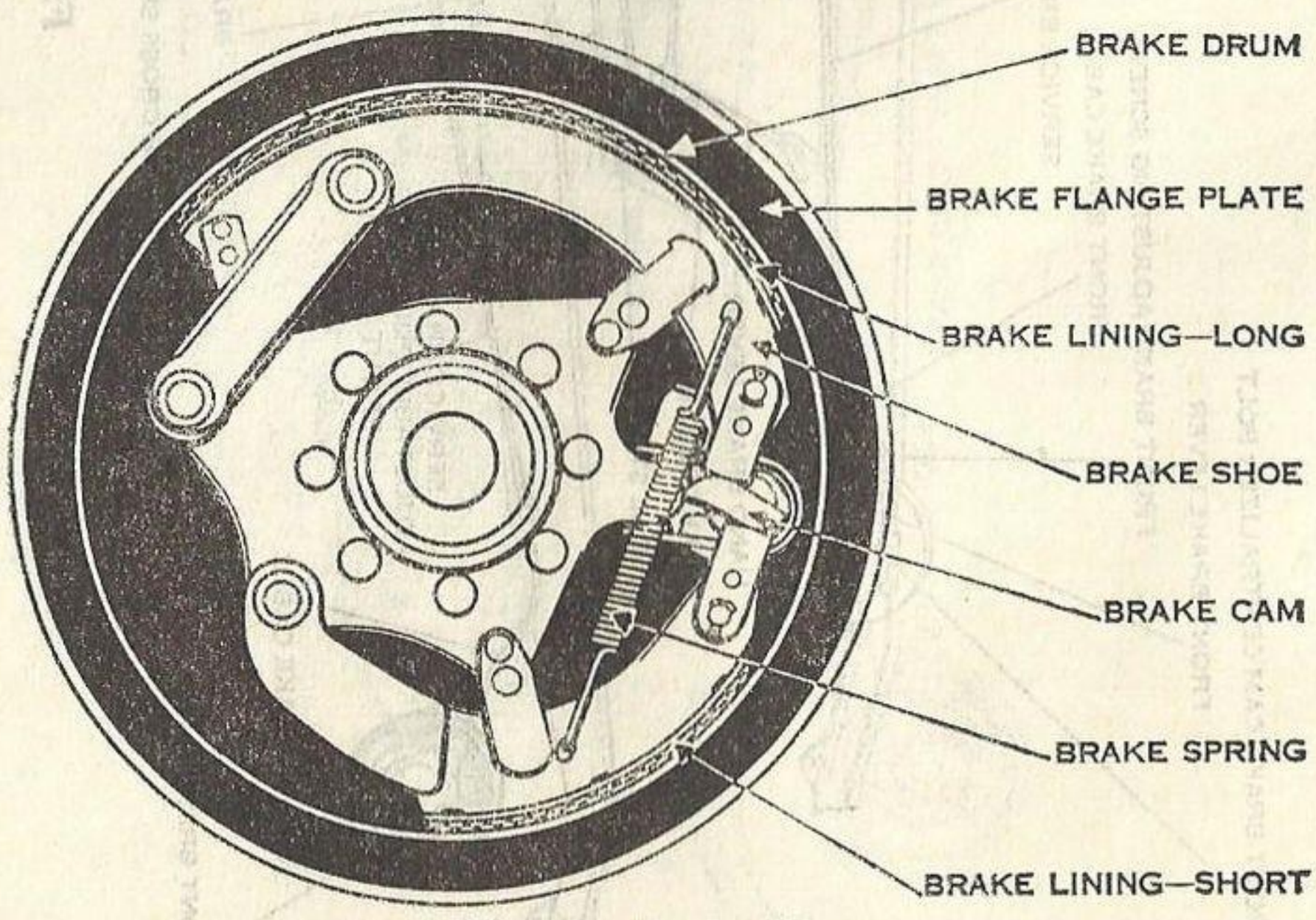


Fig. 17—Brake Shoe
Commercial Models

2nd—Do not delay adjusting brakes too long since they are so simple and easy to adjust.

3rd—Keep the clevis pins in the brake linkage, oiled.

4th—Do not try to get the last mile out of the life of the brake linings.

5th—A skillful driver never de-clutches his motor until the last moment as the compression of the motor, on closed throttle, materially helps to slow down and stabilize the car when stopping.

6th—Do not reline brakes with a lining other than the Genuine Chevrolet Lining, sold by all Chevrolet Dealers, as this has been especially developed for this particular brake.

For all normal adjustments, it is only necessary to adjust the brake shoes to compensate for wear. After 5,000 to 10,000 miles, according to the service that the brakes have been subjected to, it is desirable to re-centralize the cams which operate the brake shoes. The need for this is first noticed when the brakes are applied and they feel ineffective.

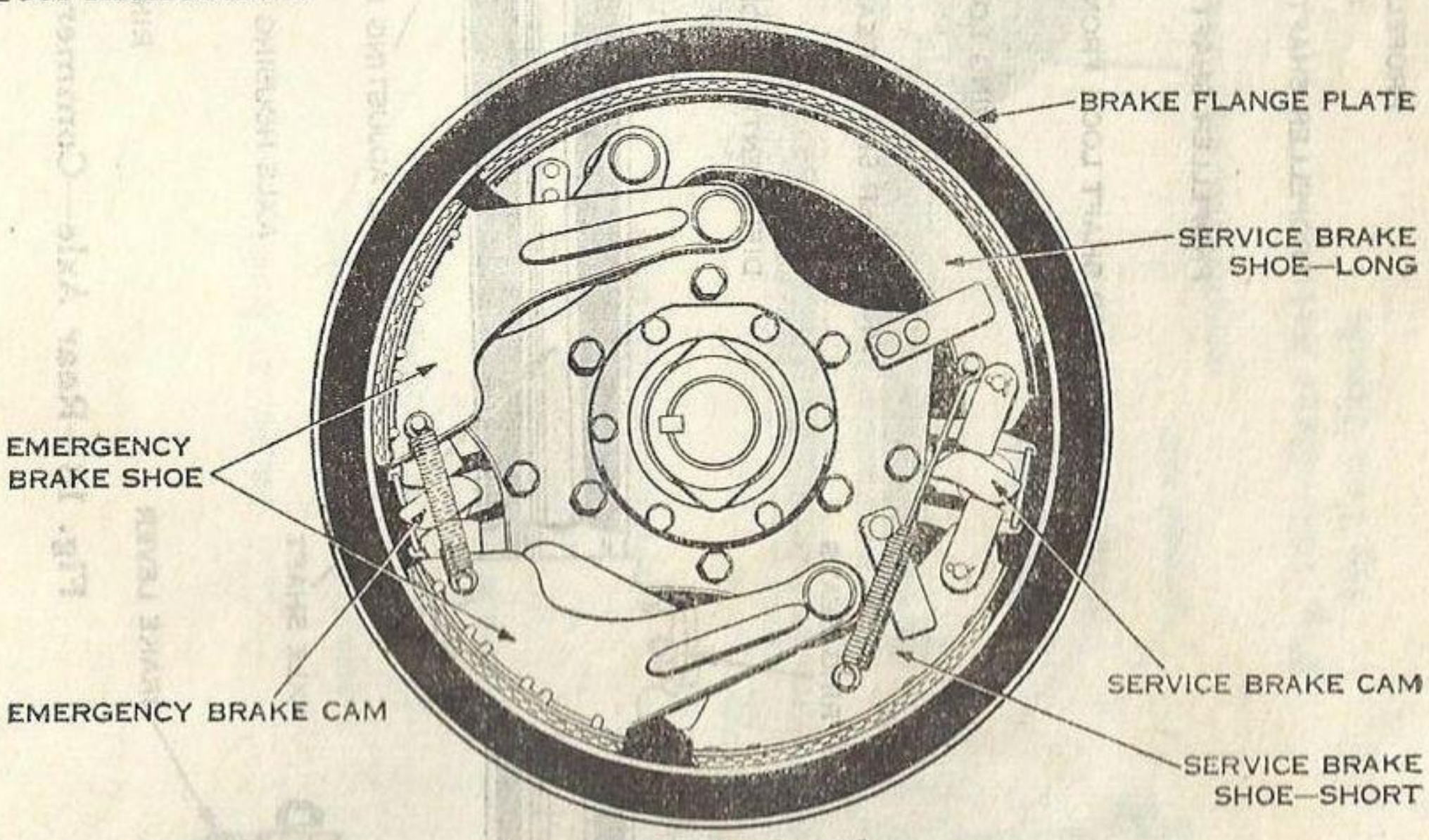


Fig. 17A—Brake Shoe
1½ Ton Truck

RE-CENTRALIZING SERVICE BRAKES

1—Adjust front wheel bearings to proper tension by tightening or loosening the steering spindle nut. CAUTION: Be sure that both spindle nuts are cotter-pinned securely.

2—Loosen **all** centralizer clamp bolts, making sure that the centralizer is free to move by tapping cam operating levers lightly with a hammer.

3—Give the brake pedal a moderate push and clamp up the centralizer bolts with pressure still on the pedal.

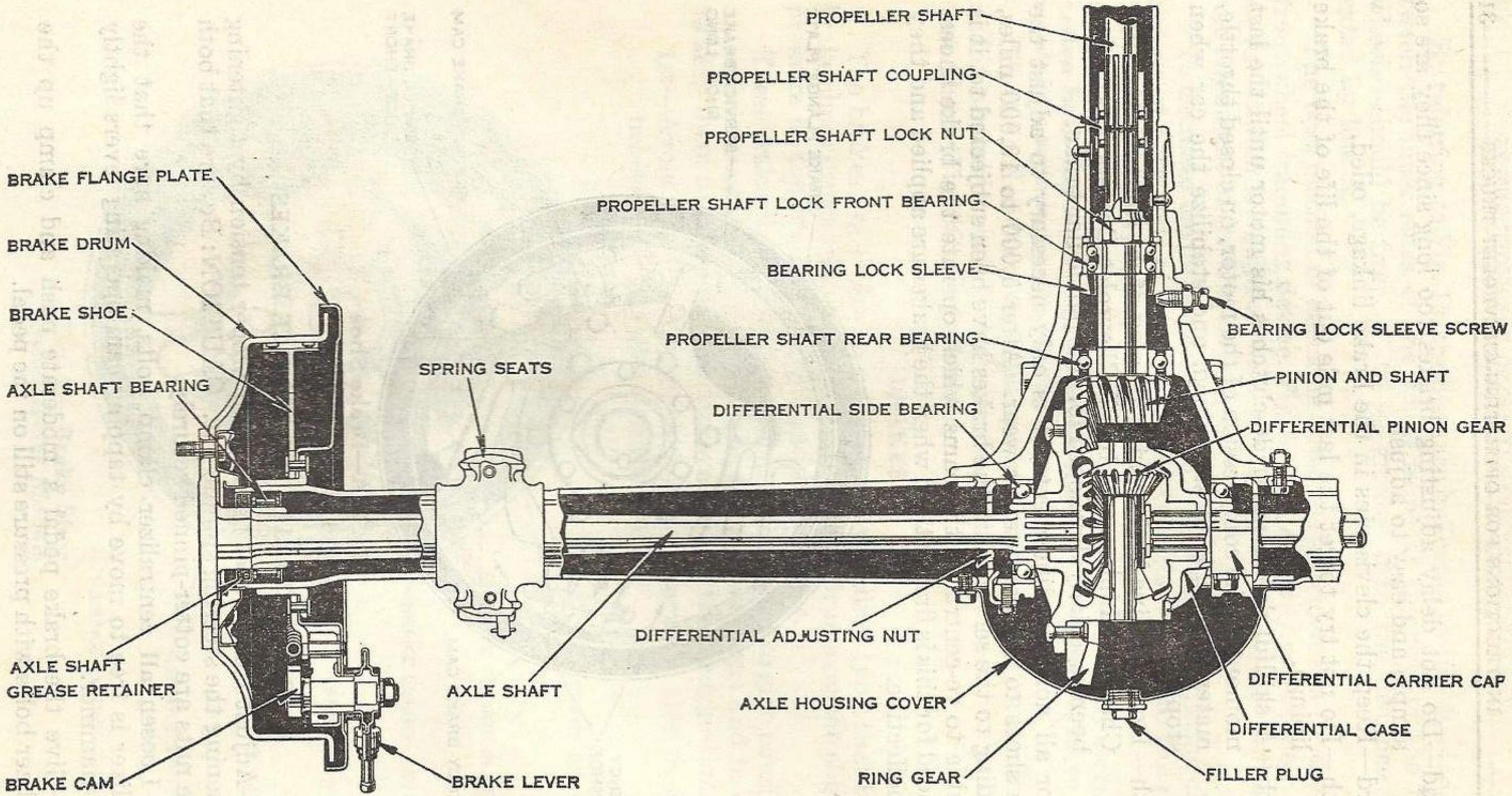


Fig. 18—Rear Axle—Commercial Models

ADJUSTING SERVICE BRAKES

1—Jack up all four wheels.

2—Loosen check nuts on the brake cam operating levers and turn the adjusting screws to the right until the brake shoes drag very lightly on the drums, then tighten the check nuts.

3—Try brakes for left and right braking power, slacking off on the side which pulls the harder, until all brakes are equal.

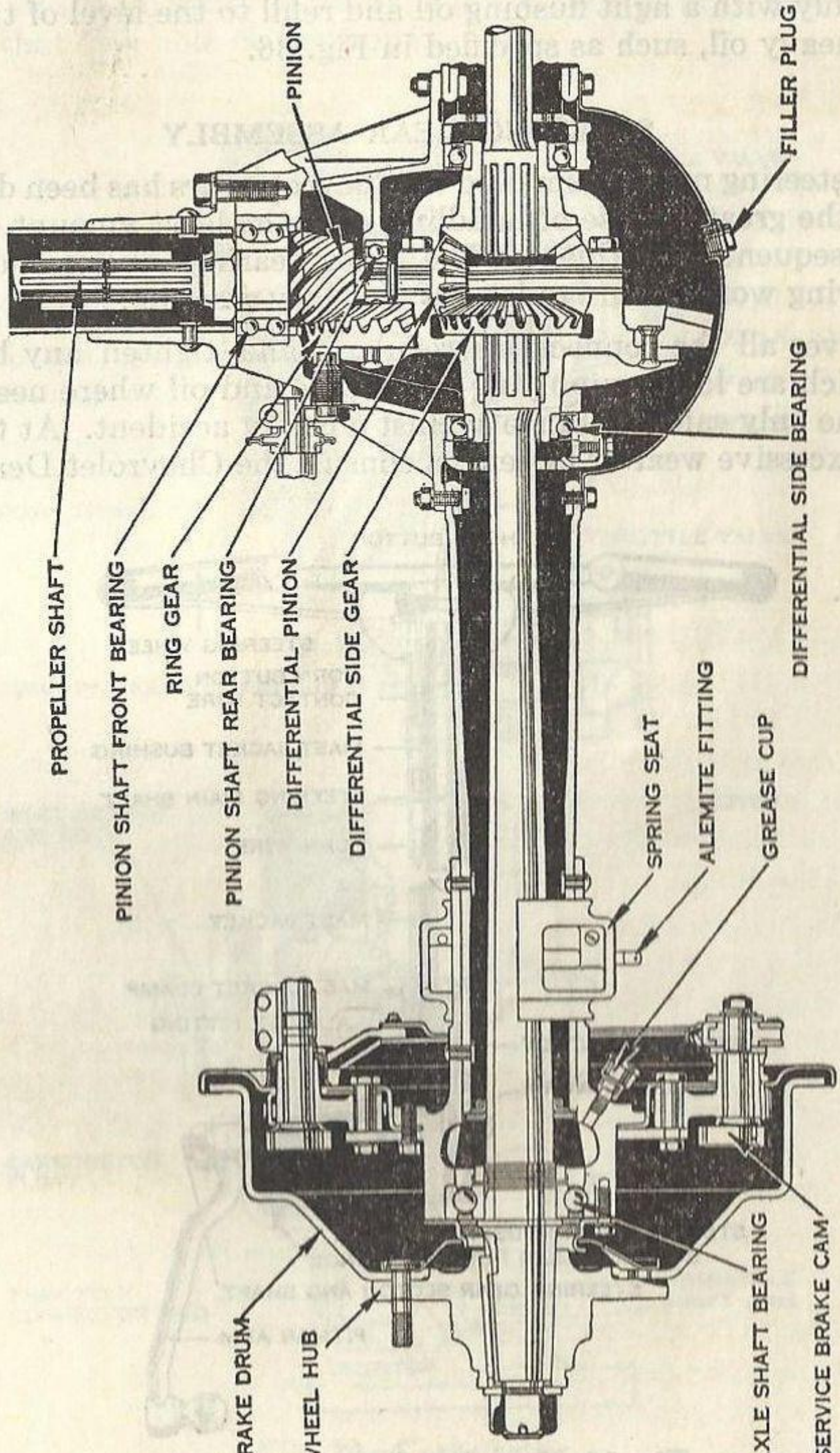


Fig. 18A—Rear Axle
1½ Ton Truck

REAR AXLE

The rear axle on the Chevrolet truck is of the semi-floating type. The axle shafts are supported on the outer ends by heavy duty ball bearings. A glance at the illustration Fig. 18, shows the construction and relative positions of the various units.

Every 2000 miles it is a good plan to wash out the rear axle, to remove any foreign substance, such as dirt or grit. To do this, remove the filler plug, at the rear, and drain the oil. Then flush out thoroughly with a light flushing oil and refill to the level of the plug, with a heavy oil, such as specified in Fig. 36.

STEERING GEAR ASSEMBLY

The steering mechanism used on Chevrolet cars has been designed to give the greatest ease of handling with the least amount of wear and consequent adjustment. The roller bearings above and below the steering worm insure quietness and easy steering.

Go over all the connections regularly and tighten any bolts or nuts which are loose, supplying the grease and oil where needed, as this is the only safe insurance against a costly accident. At the first sign of excessive wear or looseness, consult the Chevrolet Dealer.

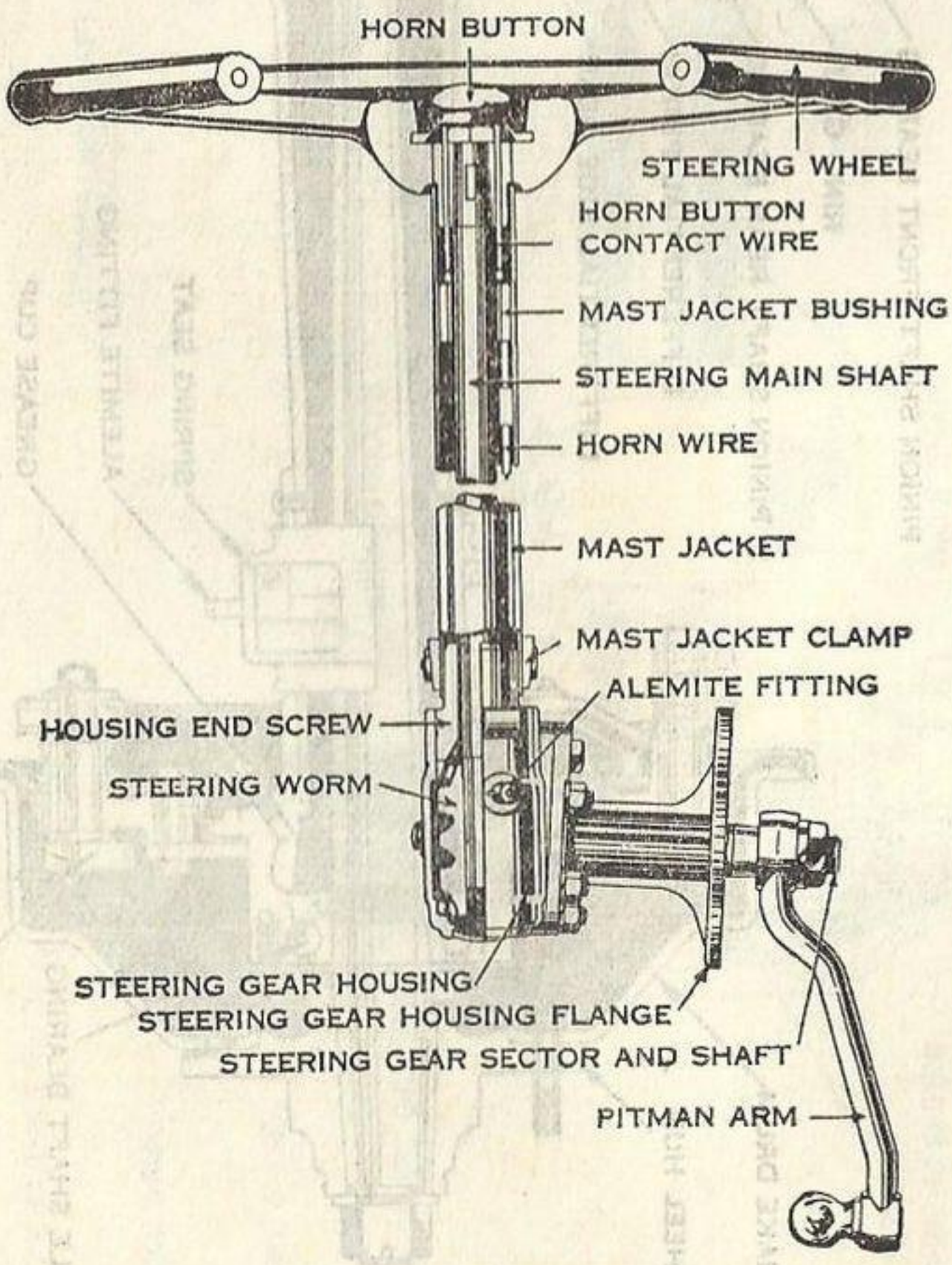


Fig. 19—Steering Gear Assembly

FUEL SYSTEM, INCLUDING GASOLINE TANK, CARBURETOR, CHOKE, FUEL PUMP AND AIR CLEANER

Gasoline sold at most filling stations is filtered. It is a good plan when filling the tank from any other source to strain the gasoline before placing it in the tank, in order to remove any sediment which might otherwise clog the filter screen in the fuel pump.

In order that the gasoline will flow properly to the carburetor, there is a small hole in the top of the filler cap on the tank, so that air can enter as the quantity of gasoline in the tank is decreased. It is essential that this hole be kept open.

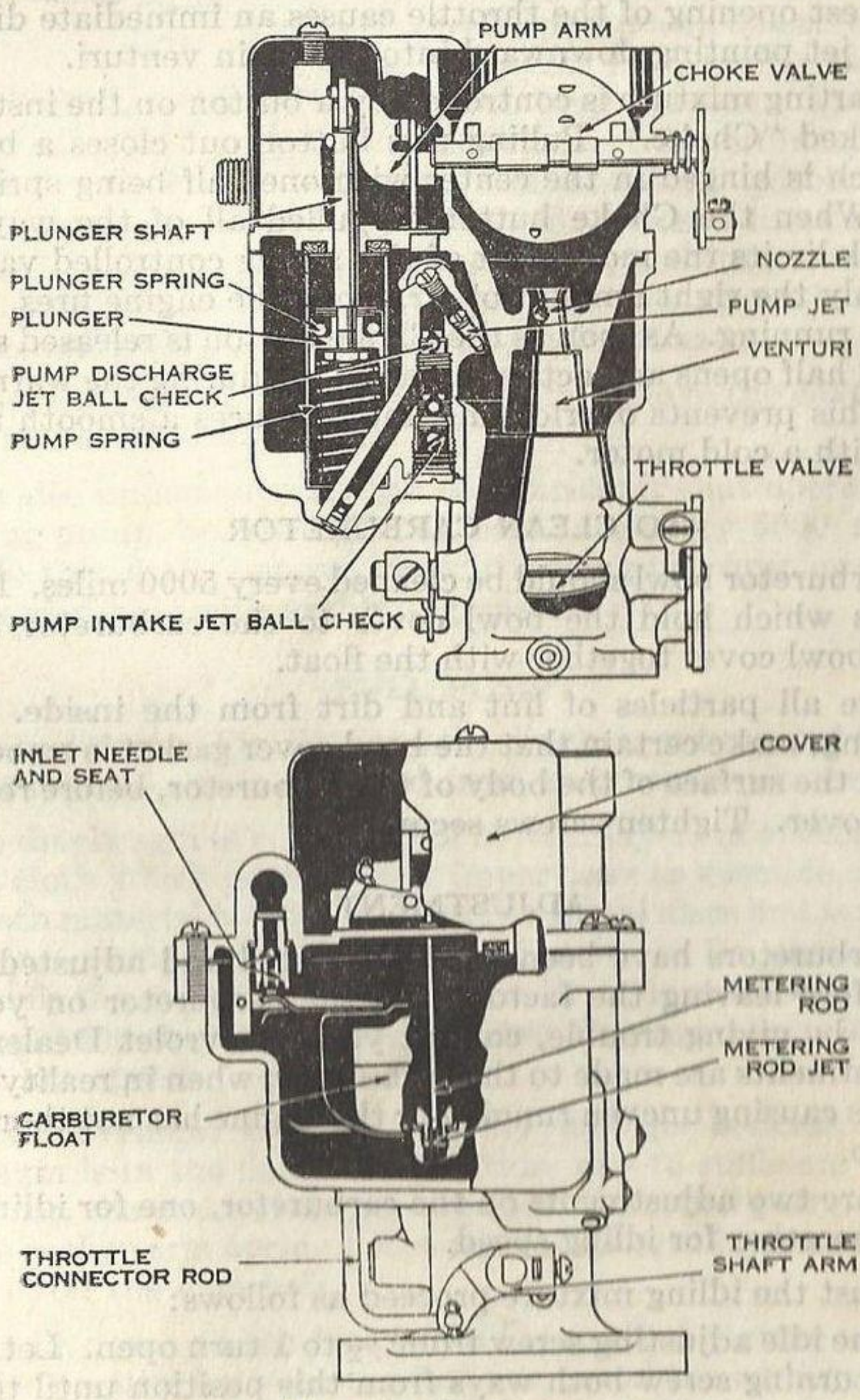


Fig. 20—Carburetor

CARBURETOR

The carburetor measures the fuel for the engine and automatically mixes it with the proper amount of air to form a highly combustible gas. The carburetor used on this model is known as the plain tube downdraft type. Adjustment of the idle adjustment screw is the only mixture adjustment on the carburetor.

Connected with the throttle and built into the carburetor is an accelerating pump. This consists of a cylinder, with a plunger containing an air bell and two gas check valves, one on the inlet and one on the outlet side. The upward movement of the plunger, when the throttle is closed, draws the fuel into the bottom of the cylinder. The slightest opening of the throttle causes an immediate discharge through a jet pointing downward into the main venturi.

The starting mixture is controlled by a button on the instrument panel marked "Choke." Pulling this button out closes a butterfly valve which is hinged in the center with one-half being spring controlled. When the Choke button is pulled all of the way out a trigger lock limits the movement of this spring controlled valve, admitting only the right amount of air, when the engine fires, to keep the engine running. As soon as the Choke button is released slightly, the hinged half opens and acts as an air valve during the warming up period. This prevents overloading and produces a smooth running mixture with a cold motor.

TO CLEAN CARBURETOR

The carburetor bowl should be cleaned every 5000 miles. Remove the screws which hold the bowl cover to the carburetor and remove the bowl cover together with the float.

Remove all particles of lint and dirt from the inside. When reassembling, make certain that the bowl cover gasket is smooth and in place on the surface of the body of the carburetor, before replacing the bowl cover. Tighten screws securely.

ADJUSTMENT

The carburetors have been carefully tested and adjusted to the engine, before leaving the factory. If the carburetor on your car appears to be giving trouble, consult your Chevrolet Dealer. Too often adjustments are made to the carburetor, when in reality, something else is causing uneven running or the engine has not thoroughly warmed up.

There are two adjustments on the carburetor, one for idling mixture and the other for idling speed.

To adjust the idling mixture proceed as follows:

Open the idle adjusting screw from ½ to 1 turn open. Let engine idle. Try turning screw both ways from this position until the best setting is made.

To adjust for idling speed proceed as follows:

With the hand throttle on the instrument panel closed, set the throttle lever stop screw so that the engine runs at approximately 350 revolutions per minute. If the engine runs too fast, back the screw out. If too slow, turn in until the proper speed is obtained. Best results in both performance and economy are obtained with the mixture set as lean as possible.

ACCELERATING PUMP

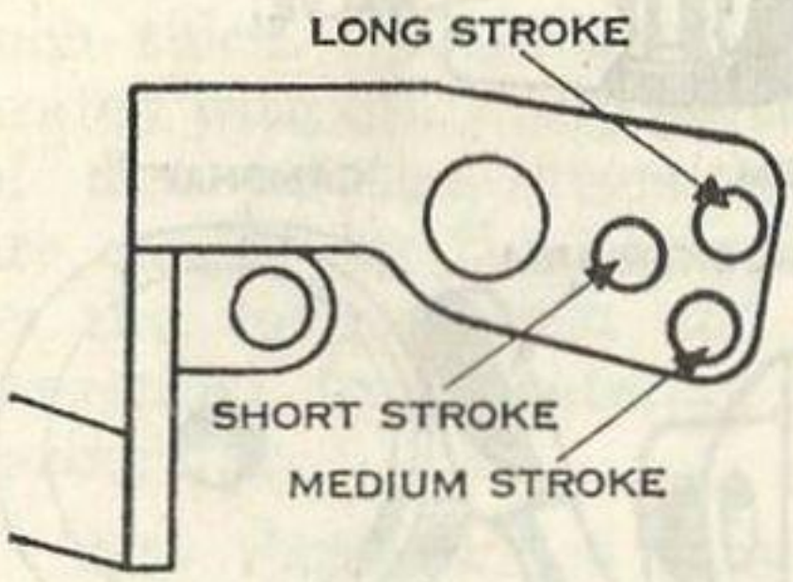


Fig. 20A
Accelerating Pump

An accelerating pump is required to insure positive, smooth acceleration. The Chevrolet pump arm has three holes for the connector link, giving short, medium and long strokes. The medium stroke is correct for ordinary temperatures and standard gasoline. Short stroke should be used in extremely hot climates, at high altitudes or with high test fuel. The long stroke is for use in extremely cold climates.

To set the pump arm it is necessary to remove the cover from the top of the accelerating pump.

It is also important that the counter-shaft that operates the accelerating pump, be lubricated at least once every 5000 miles. To lubricate this shaft, remove screw attaching the dust cover and fill the threaded hole with graphite grease.

FUEL PUMP

The fuel pump (Fig. 21) is of the diaphragm type and is attached to the crankcase and is operated from an eccentric on the camshaft.

The diaphragm is composed of several layers of specially treated flexible cloth which is absolutely impervious to gasoline and benzol. This cloth material is held between two metal discs and is pushed upward by a pump spring. This diaphragm, in its upward motion, almost fills the pump chamber so that, in its downward movement, a very high vacuum is obtained, thus assuring high pumping capacity, even at low speeds.

This movement is controlled by linkage because, when the diaphragm is in the depressed position, due to sufficient fuel in the carburetor, the up and down movement of the fuel pump link ceases and the rocker arm spring keeps the rocker arm in contact with the eccentric on the camshaft.

The air dome on the fuel pump is an added feature to eliminate air vapor pockets between the fuel pump and the carburetor, also to smooth out the impulses of the fuel pump and keep a constant pres-

sure of gas in the feed chamber in which an air pressure forms which is enough to keep sufficient fuel supply at the carburetor at all speeds. In other words, when the engine is running at high speed there is always enough gas at the carburetor to keep it from being drained.

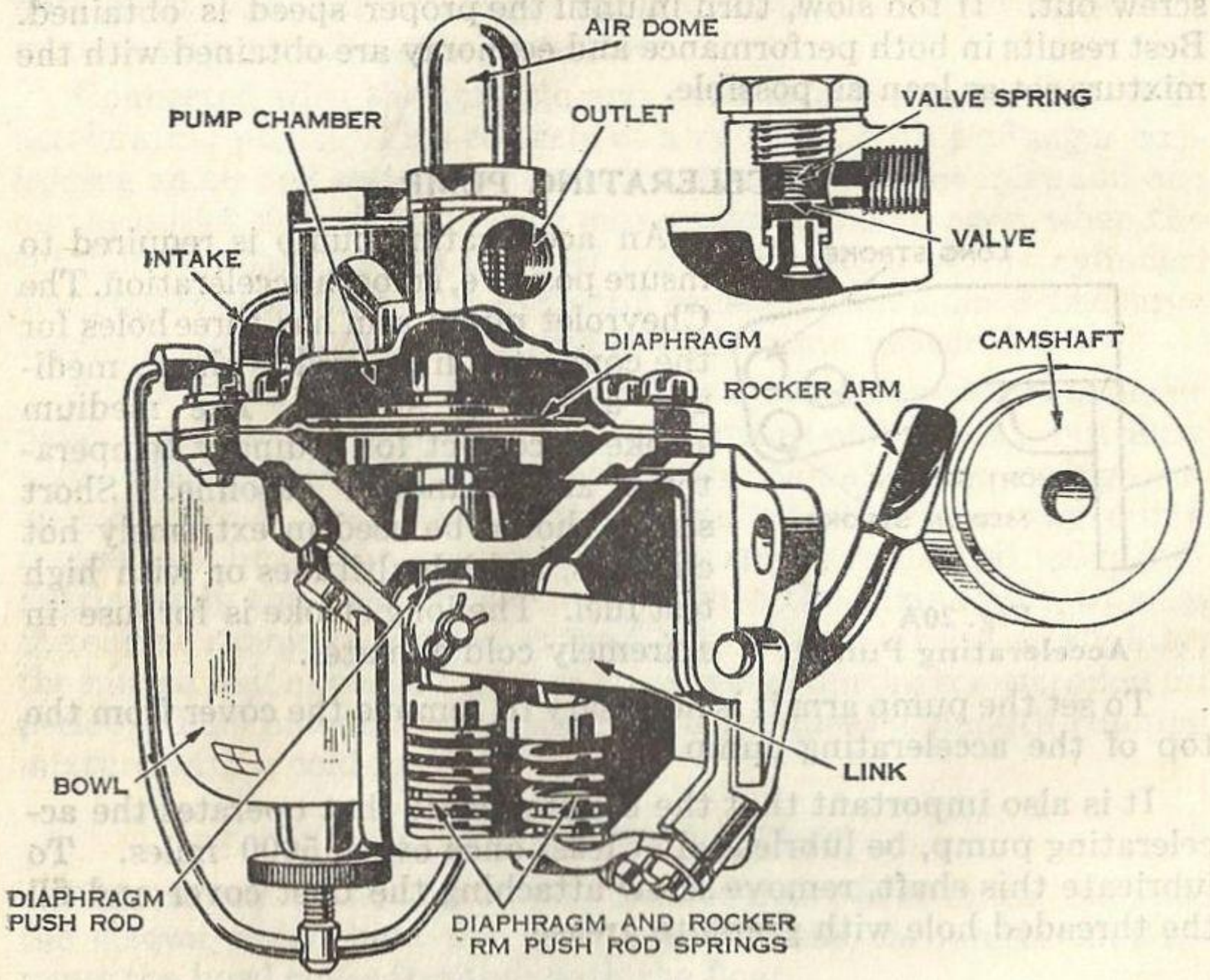


Fig. 21—Fuel Pump

Lack of fuel in the carburetor may be caused by the following conditions, which may be remedied without removing the fuel pump from the motor:

1st—All pipe fittings must be tight, to insure proper pump operation.

2nd—If the glass bowl becomes loose, tighten the retaining nut making certain that the cork gasket lies flat in its seat and is not broken.

3rd—If the filter screen becomes clogged with sediment, remove the glass bowl and clean the screen assembly, being sure that the cork gasket is properly seated when re-assembling the bowl.

4th—If the pump valves are dirty or warped, remove the valve plug and replace the valve, being absolutely sure that the stem of the valve plug is inside the coil spring and that the gasket is under the valve plug.

We recommend that all fuel pump troubles be taken up with your nearest Chevrolet Dealer, rather than to attempt the dis-assembling and repair of the pump.

It is not necessary to prime this fuel pump.

AIR CLEANER

The air cleaner is a combination air cleaner and flame arrester. All air, which enters the carburetor, must pass through a filter element, made of fine copper mesh, finely woven into a disc one inch thick. This unit is saturated with oil. Any particles of dirt in the incoming air are caught by the film of oil on the copper mesh and are prevented from entering the carburetor.

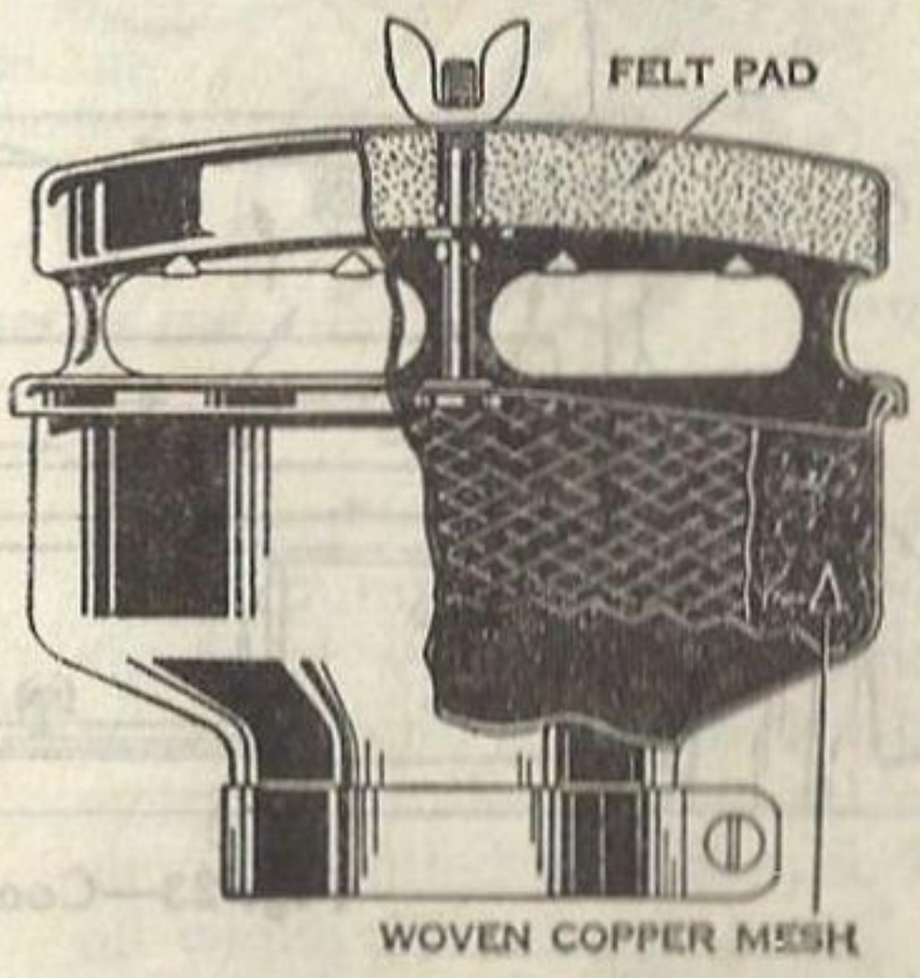


Fig. 22—Air Cleaner

Any flame which may be caused by a backfire through the carburetor is prevented from reaching the open air by this same copper mesh unit, which functions much as a miner's lamp, preventing ignition of oil on the engine parts and resulting fires.

Under ordinary conditions, where the car is driven on pavement and gravel roads, the air cleaner must be removed every 2,500 miles and the dirt that has collected on the copper mesh cleaned out. This is done by removing the air cleaner from the carburetor, then removing the top cover and felt pad and slushing that part of the air cleaner that contains the copper mesh in gasoline and then dipping it in motor oil.

Under extreme conditions, or when the car is driven on gravel and dirt roads all of the time, this must be done every 1,000 miles.

ETHYL GASOLINE

Our experience with Ethyl gasoline for the past few years indicates that it is a satisfactory fuel for use in Chevrolet cars.

GASOLINE GAUGE

This car is equipped with an electrically operated gasoline gauge which increases motoring convenience and safety, by placing accurate indication of the fuel supply directly before the motorist at all times when the ignition switch is on. The dial of the gauge is illuminated by a concealed bulb to facilitate night reading.

COOLING SYSTEM

The radiator at all times should be kept full of clean water. It is a good plan to form the habit of inspecting and filling the radiator before the car is taken from the garage. On long tours, especially when you have been traveling over hilly roads or those with a loose top surface, examine the water supply frequently. Consider, always, that the

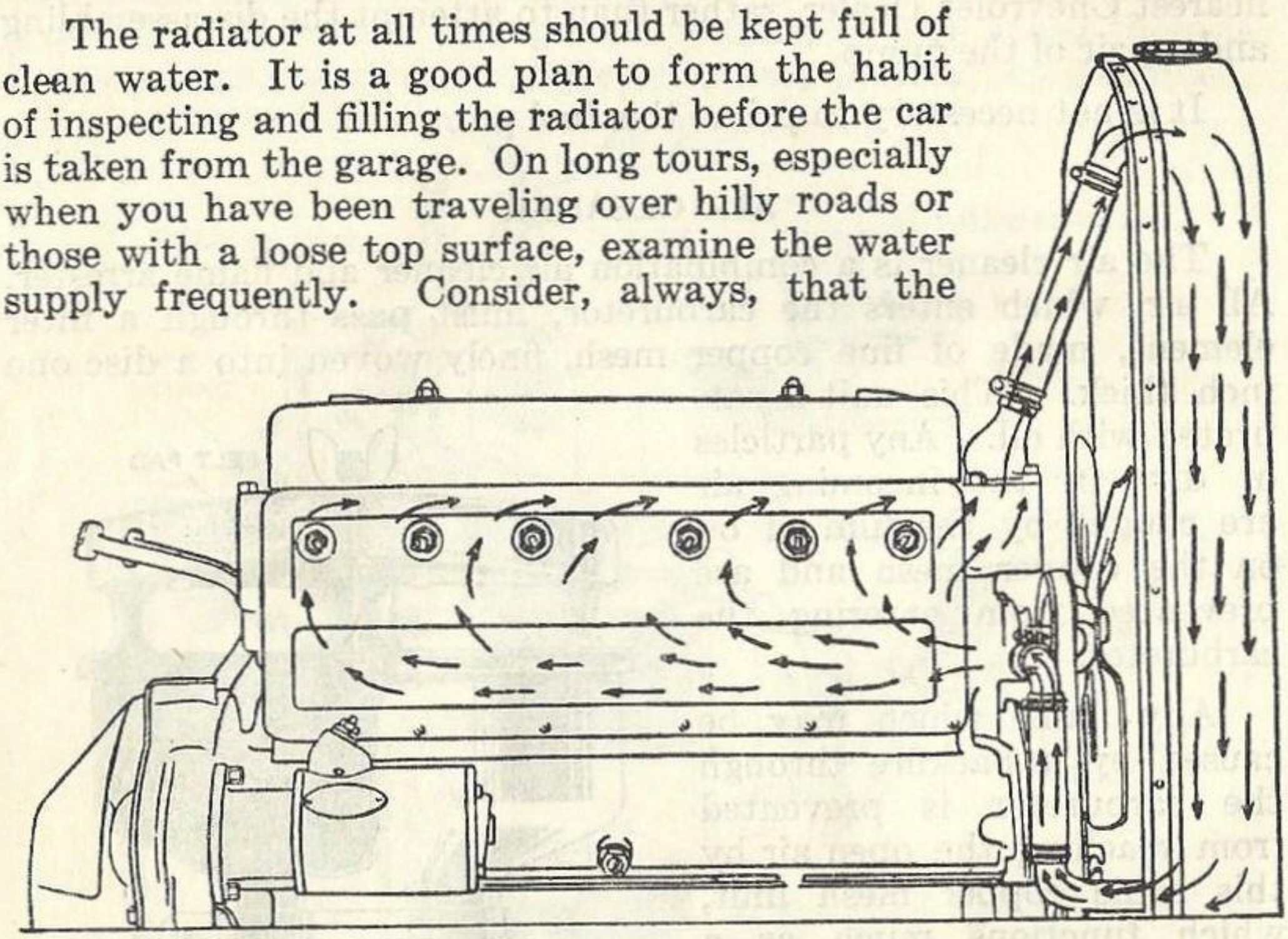


Fig. 23—Cooling System

proper amount of water is as important as your supply of gasoline and oil. It is well to examine the water supply every time a stop is made for oil or gasoline.

Always use clear water. If rain water can be had, use it, as less scale or deposit will result. The total capacity is 12 quarts.

Once a month it is a good plan to open the radiator drain cock, which is conveniently located on the right side at the bottom of the radiator, and let all the water and accumulated dirt run out. If the water is very dirty, flush the radiator with fresh water.

Never pour cold water into the radiator or cooling system while the motor is hot, as it will crack the cylinder head.

If a leak develops in the cooling system, have it repaired immediately by your Chevrolet Dealer or Service Station.

It is not a good plan to put anti-leak compounds, corn meal, bran or other similar substances in a radiator, to stop a leak. It fouls the tubes and decreases the efficiency of the radiator. Make a permanent repair as soon as a leak is discovered.

WATER PUMP

The water pump circulates the water in the cooling system and, by the adoption of balanced impeller blades, the life of the thrust washer is lengthened and the water pump efficiency maintained.

The water pump packing, which is called the pre-formed metallic type (Fig. 24), is assembled in the pump body in two halves, with a pressed steel spacer between them. The cavity in the spacer receives the grease from the grease cup and delivers it to both halves of the packing and the rear bushing. With this type of packing and spacer, the operation of tightening the packing nut against the packing is reduced to infrequent intervals.

When the packing nut has reached its limit of travel against the packing, new packings should be installed.

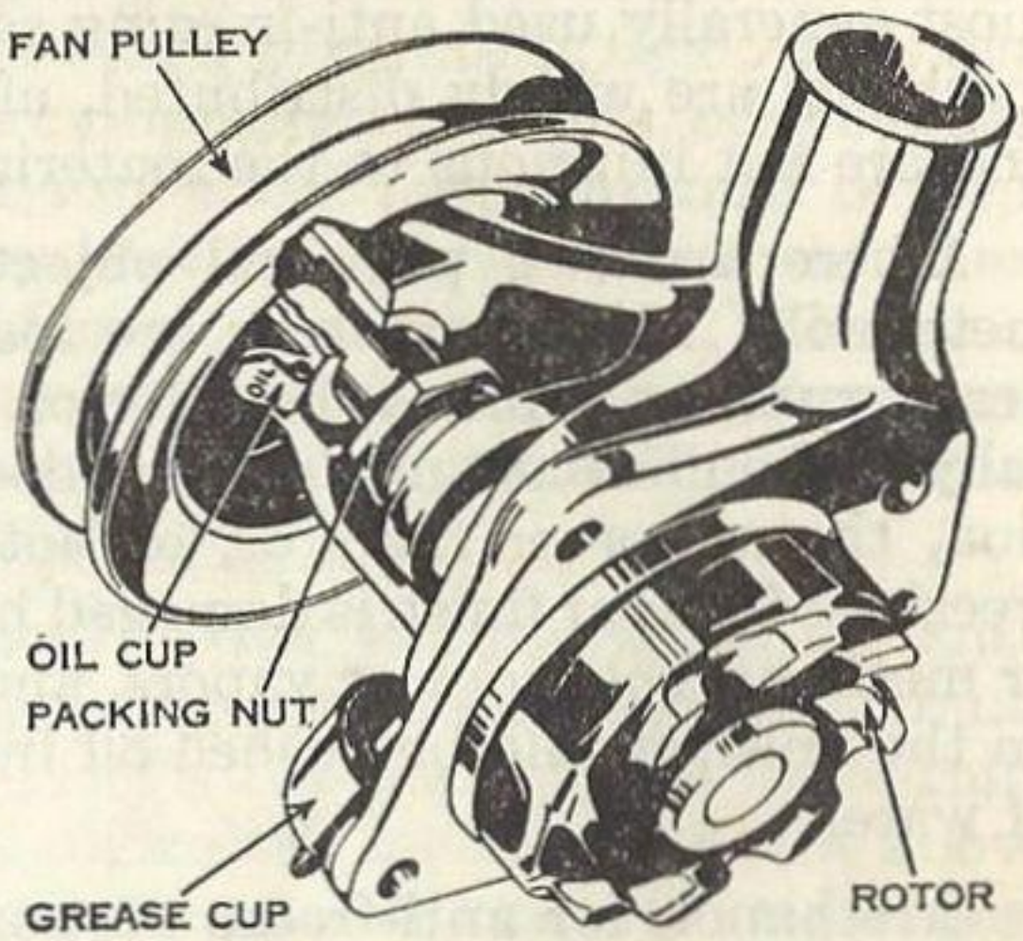


Fig. 24—Water Pump

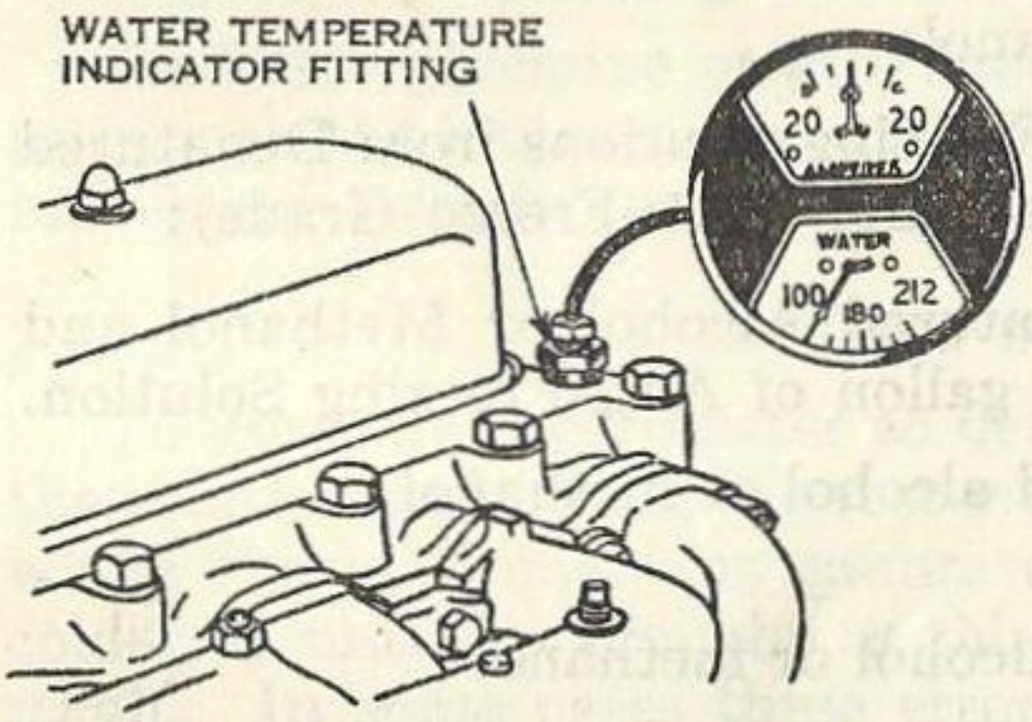


Fig. 25—Water Temperature Indicator

There is an oil cup, in the water pump body, just above the front water pump bushing, which should be lubricated every 500 miles. The oil cup should be filled with S.A.E. 160 oil which will allow the oil to soak into the bushing.

WATER TEMPERATURE INDICATOR

This temperature indicator (Fig. 25) functions as a thermometer, indicating the temperature of the water in the cylinder head. A metal bulb containing a highly expansive gas is inserted in the cylinder head and is connected by a small tube to the indicating instrument which operates on the same principle as a pressure gauge, but indicating relative temperatures of the water by gradual movement of the pointer.

ANTI-FREEZING SOLUTIONS

In selecting anti-freezing solutions for winter operation, the local conditions and the type of service must be considered. The following information is given to enable the individual owner to more intelligently select the anti-freezing solution best suited to meet his own conditions.

The available commercial materials for preparing anti-freezing solutions for automobile radiators are denatured alcohol, methanol (synthetic wood alcohol), distilled glycerine, and ethylene glycol.

DENATURED ALCOHOL AND METHANOL

Denatured alcohol and methanol solutions are, at present, the most generally used anti-freezing solutions. Denatured alcohol and methanol are widely distributed, afford protection against freezing, and are not injurious to the materials used in the cooling system.

There are two principal objections to denatured alcohol and methanol. These materials are lost by evaporation, especially on heavy runs, and unless the solution in the radiator is tested periodically and sufficient anti-freeze added to replace the loss by evaporation, the motor or radiator, or both, are likely to be damaged by freezing. The car finish is damaged by contact with denatured alcohol or methanol solutions or vapors, and any material accidently spilled on the finish should be flushed off immediately with a large quantity of water.

Methanol, for anti-freeze purposes, is sold in the United States in the correct concentration to give the same protection against freezing as denatured alcohol. The following table may be used for both denatured alcohol and methanol:

Directions for preparing Anti-Freezing solutions from Denatured Alcohol 94% (188° proof) and Methanol (Anti-Freeze Grade):

Freezing Point	Proportion of Denatured Alcohol or Methanol and water to make one gallon of Anti-Freezing Solution.
+10°F	2½ pints denatured alcohol or methanol 5½ pints water
0°F	3 pints denatured alcohol or methanol 5 pints water
—10°F	3½ pints denatured alcohol or methanol 4½ pints water
—20°F	4 pints denatured alcohol or methanol 4 pints water
—30°F	5 pints denatured alcohol or methanol 3 pints water

GLYCERINE AND ETHYLENE GLYCOL

Distilled glycerine and ethylene glycol solutions are, in first cost' more expensive than alcohol but, as they are not lost by evaporation' only water need be added to replace evaporation losses. Any solution lost mechanically, such as leakage, foaming, etc., must be replaced by additional new anti-freezing solution. These solutions, under ordinary conditions, are not injurious to the car finish.

The principal objections to glycerine and ethylene glycol are the tendency of these solutions to loosen the scale and iron rust which forms in the water passages of the cylinder block and head, and the

difficulty of securing and maintaining tight leakproof connections. It is absolutely necessary to thoroughly clean and flush the entire cooling system before glycerine or ethylene glycol is used. It is also necessary to tighten or replace the cylinder head gaskets, hose connections and pump packing. The cylinder head gaskets must be kept tight to prevent the solution from leaking into the crankcase where it might cause gumming and sticking of the moving parts. The pump packing must be kept tight to prevent air from being drawn into the cooling system, in order to avoid foaming and other difficulties which may result when air is present.

Ethylene glycol (Prestone) sold in the United States for anti-freezing purposes and radiator glycerine, produced under the formula approved by the Glycerine Producer's Association, are chemically treated to overcome the principal difficulties mentioned in the above paragraph, and under normal operating conditions with tight hose connections and cylinder head gaskets, should be satisfactory for use in the cooling system.

Radiator glycerine or ethylene glycol should be used in accordance with the instructions, and in proportions recommended by the anti-freeze manufacturer.

TESTING SOLUTIONS

In using the hydrometer to determine the temperature at which the solution will freeze, the test must be made at the temperature at which the hydrometer is calibrated. If the solution is warmer or colder, it must be brought to this temperature or large errors may result. In some cases these errors may be as large as 30 degrees Fahrenheit. Freezing point hydrometers are not interchangeable, a different float is required for denatured alcohol, methanol, glycerine and ethylene glycol.

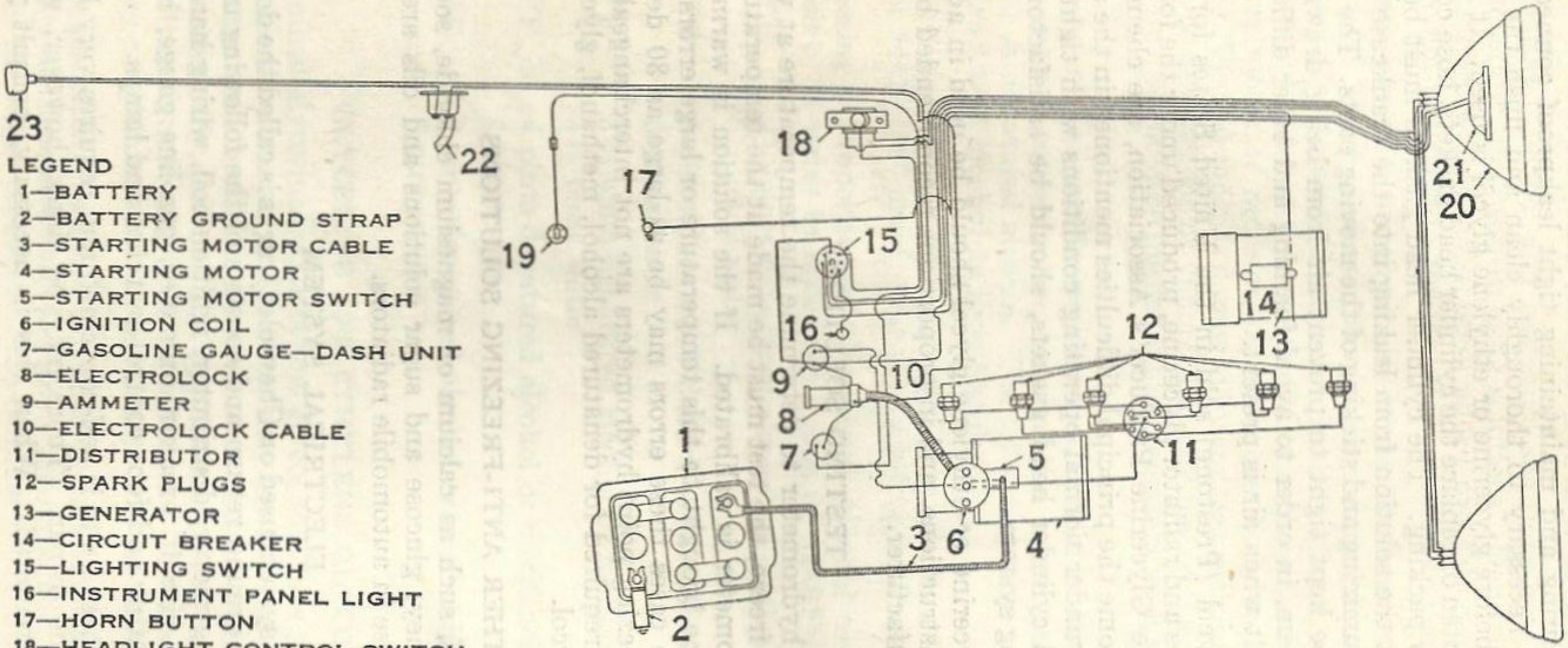
OTHER ANTI-FREEZING SOLUTIONS

Salt solutions, such as calcium or magnesium chloride, sodium silicate, etc., honey, glucose and sugar solutions and oils are not satisfactory for use in automobile radiators.

ELECTRICAL SYSTEM

The electrical system used on Chevrolet trucks is called the double unit system with ground return and consists of the following units: generator, starting motor, distributor, ignition coil, wiring harness, storage battery, circuit breaker, ammeter, gasoline gauge, horn, ignition lock, lighting and foot control switches and lamps.

Each one of these units is self-contained and requires very little attention from the owner. There may be times, however, when expert advice is required. When this is necessary, consult your Chevrolet Dealer.



LEGEND

1—BATTERY
2—BATTERY GROUND STRAP
3—STARTING MOTOR CABLE
4—STARTING MOTOR
5—STARTING MOTOR SWITCH
6—IGNITION COIL
7—GASOLINE GAUGE—DASH UNIT
8—ELECTROLOCK
9—AMMETER
10—ELECTROLOCK CABLE
11—DISTRIBUTOR
12—SPARK PLUGS
13—GENERATOR
14—CIRCUIT BREAKER
15—LIGHTING SWITCH
16—INSTRUMENT PANEL LIGHT
17—HORN BUTTON
18—HEADLIGHT CONTROL SWITCH
19—GASOLINE GAUGE—TANK UNIT
20—HEADLAMP
21—HORN
22—STOP LAMP SWITCH
23—TAIL AND STOP LAMP

Fig. 26—Lighting and Ignition Circuits

GENERATOR

The construction of the generator is as simple as such a piece of electrical equipment can be made and, beyond a few drops of oil every 500 miles, requires no special attention.

The generator and connections should be examined occasionally to see that all are tight. If trouble in the generator is suspected or if the ammeter does not show a proper charging rate at ten to twelve miles an hour, the car should be taken to the Chevrolet Dealer or Service Station for examination and possible necessary repair.

When cold weather arrives, we suggest that you call at your Chevrolet Dealer's Service Station and have the third brush on your generator advanced slightly, thus increasing the charging rate. This suggestion is made because of the fact that more current is required in cold weather driving than in summer driving.

STARTING MOTOR

The starting motor is mounted on the clutch housing, having a pinion which automatically engages the flywheel when the starter pedal is depressed.

As soon as the motor starts under its own power, the foot should be removed from the starter pedal and the starter pinion will automatically be disengaged from the flywheel.

STARTING MOTOR DOES NOT OPERATE

This is an infrequent source of difficulty but may be caused by any one of the following:

1st—Exhausted battery, due to excessive use of the starting motor or lights, and is the direct result of failure on the part of the owner, in not observing the rules set forth for the care of the battery (Fig. 35).

2nd—Broken or loose wires or connections, either at the battery or starting motor. Be absolutely sure that the connections at the battery and starting motor are secure. Examine all connections and wires carefully. See that all connections, including battery terminals, are clean and tight. Inspect the strap leading from negative post of the battery to the frame and see that this has a clean, firm contact with the frame of the car.

3rd—Corroded battery terminals, causing poor contact. Remove and thoroughly clean, then cover with vaseline or petroleum jelly.

4th—Starting switch making poor contact.

5th—Starting motor may be "short circuited."

6th—Starting motor brushes worn out or not making contact, or the commutator may need cleaning.

FAN AND GENERATOR BELT ADJUSTMENT

The fan and generator belt is so designed that very little adjustment is required.

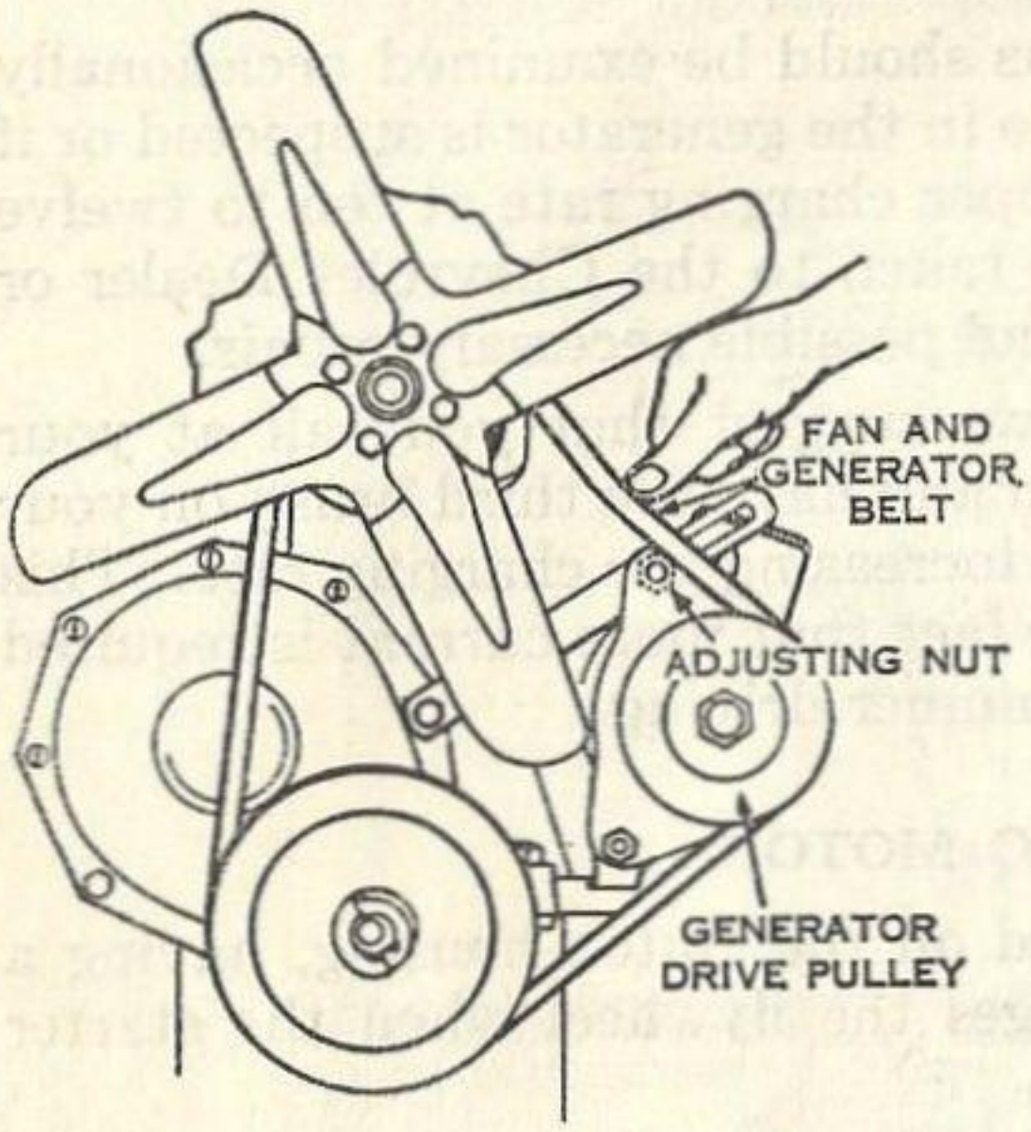


Fig. 27—Fan Belt Adjustment

The belt should not be tight, only having sufficient tension to keep it from being thrown off the pulleys when the motor is run at a high speed.

By referring to Fig. 27, the method of adjusting the belt will be made clear. All that is necessary to do when the belt needs adjustment is to loosen the clamp bolt and pull the generator outward and away from the motor, tightening clamp bolt securely.

TO REPLACE FAN AND GENERATOR BELT

Loosen generator adjusting nut (Fig. 27) and move generator toward the motor as far as it will go. Then place the belt over the pulleys; then pull the generator outward and away from the motor and tighten the adjusting nut. Do not run the motor with the fan and generator belt too tight. See that it has a small amount of "slack."

IGNITION

The motor derives its power from the explosion and expansion of compressed gas in the combustion chambers, the expansion driving the pistons down, which produces power.

These charges of gas are ignited by an electric spark made in the combustion chamber.

The ignition equipment used on Chevrolet trucks is designed to give an even, hot spark a tall times, regardless of motor speed. It is therefore possible to run your car at slow speeds with an even flow of power and also, to accelerate without stalling.

IGNITION TROUBLES

First of all, ascertain whether the trouble is in the distributor, the wiring or the spark plugs. In most cases it will be found in the external wiring or plugs, when one cylinder continually misfires.

Determine the location of the trouble by the process of elimination, testing each unit until the trouble has been located.

When the motor misfires regularly on one or more cylinders, it is probably caused by one or more dirty spark plugs. To locate the particular faulty plug, proceed as follows:

1st—Operate the motor at idling speed with retarded spark.

2nd—Grasp a screwdriver by its wooden handle holding the metal end against the spark plug terminal and at the same time touch the cylinder head, thus short circuiting the plug. Be careful to hold the screwdriver by the wooden handle, or a shock will result. Short circuiting a spark plug which is not working will not change the motor speed. On the other hand, it will cause the motor to slow down or stop, if the short circuit is established with a working plug. After the dirty or fouled plugs have thus been located, they should be cleaned and adjusted or replaced by new ones.

Be sure that the new plugs are of the correct type and size, as supplied with the car. When the plugs have been in use for approximately ten thousand miles, we recommend a complete new set.

SPARK PLUGS

The spark plugs in the Chevrolet motor have been designed and made expressly for this motor by the AC Spark Plug Company of Flint, Michigan.

Spark plugs will not deliver their maximum spark unless the sparking points are properly spaced and the spark gap of these plugs should be set at .032".

Cleaning the sparking points of AC plugs should be done with emery cloth.

The correct AC spark plug for Chevrolet trucks is AC, Type K-9, and can be had at all Chevrolet Service Stations.

To clean carbon from the porcelain, proceed in the following manner: Fill the lower part of the plug with alcohol, or any liquid metal polish, and allow to stand for a few seconds; take a piece of wire covered with one thickness of cloth and rub the carbon from the porcelain, so as not to affect the glaze; then wipe clean and dry thoroughly before replacing in the motor.

Spark plugs should be changed every 10,000 miles, as they deteriorate. New spark plugs mean quick starting, increased power, smoother running motor and less use of choke, resulting in more economical operation of the car.

SPARK PLUG WIRES

To determine if the spark plug wire is at fault, disconnect it from the spark plug and hold the end about ¼" from the plug. If no spark jumps across the gap with the motor running, examine the terminals and insulation. If no exterior damage can be found, replace the wire on the plug and, with the motor running, slip the wire out of

the socket on the distributor cap and hold it about ¼" away from the brass ring on the socket. If no spark is obtained, remove the distributor cap and examine the terminal point protruding from the inside of the cap. If it is found burned or blackened on the point, thoroughly clean and polish.

IGNITION LOCK

The ignition lock (Fig. 28), provides a means of locking the motor when it is not operating, by grounding and opening the ignition circuit. The ignition lock is mounted on the instrument panel and is connected to the coil by means of a heavy, armored cable. Connection is permanently made at the coil by means of an armored snap terminal.

Turning the switch key rotates the switch contact to the position in which it connects the coil to the distributor.

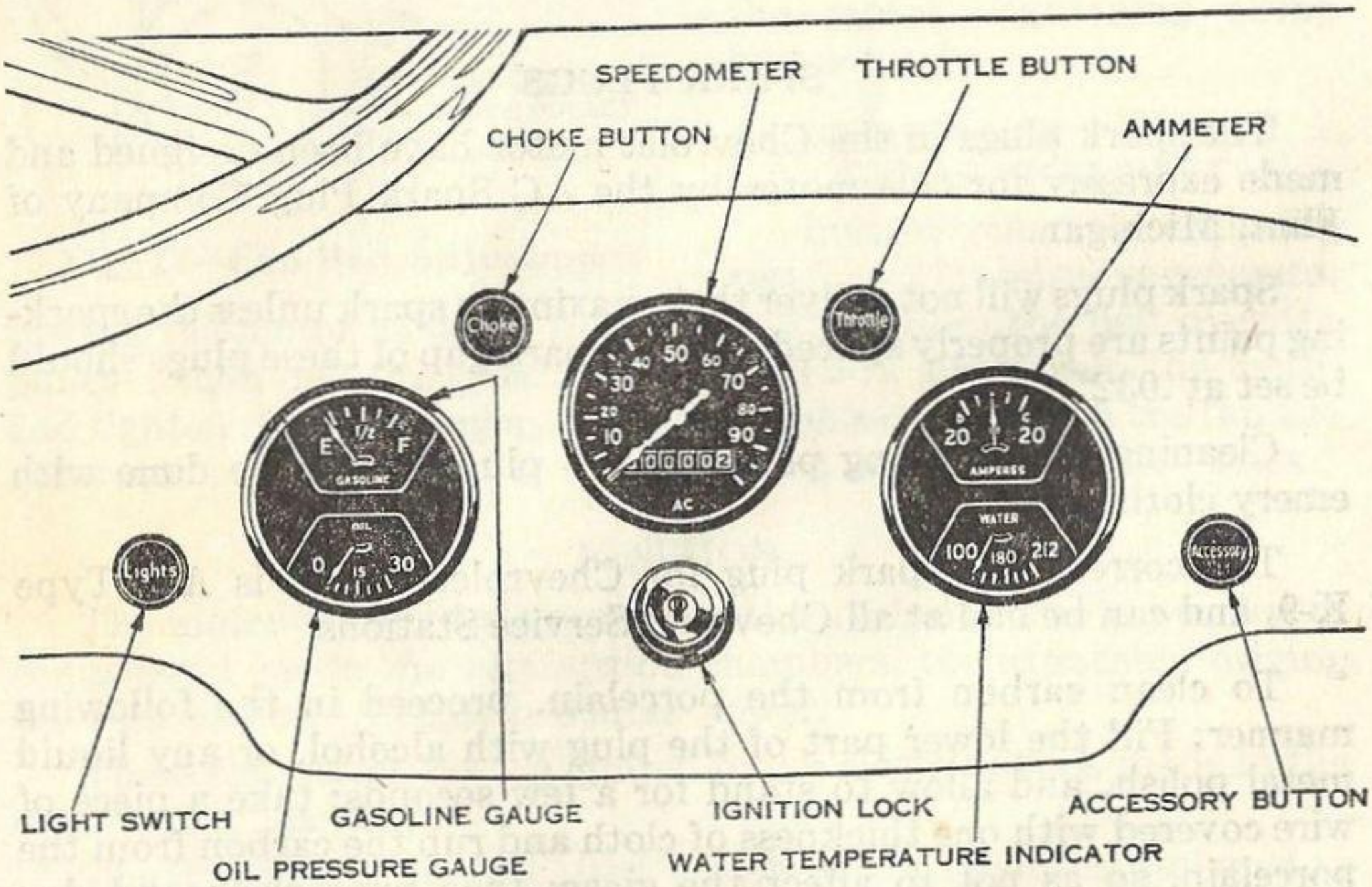


Fig. 28—Instrument Panel

DISTRIBUTOR

The distributor, is the automatic vacuum type, which means that the spark is operated automatically by vacuum from the intake manifold. The condenser is mounted in the unit, instead of in the coil.

The distributor requires no special attention, except turning down the grease cup one-quarter turn every five hundred miles and occasionally examining the spring contact point on the top of the distributor arm. This spring makes contact with the center point in the distributor head.

OCTANE SELECTOR

With the wide variety of motor fuels which are now available to motorists, it is necessary to provide a means by which the spark timing may be easily adjusted to suit the octane rating of the particular fuel being used.

With the octane selector adjusted to proper setting, satisfactory performance from a knock standpoint can be obtained when the cheapest fuel is used. Adjustment of the octane selector is effected by means of the large knurled nut and check nut. See Fig. 29. The selector is retarded when the cheapest fuel is used and advanced when better or Ethyl fuel is used.

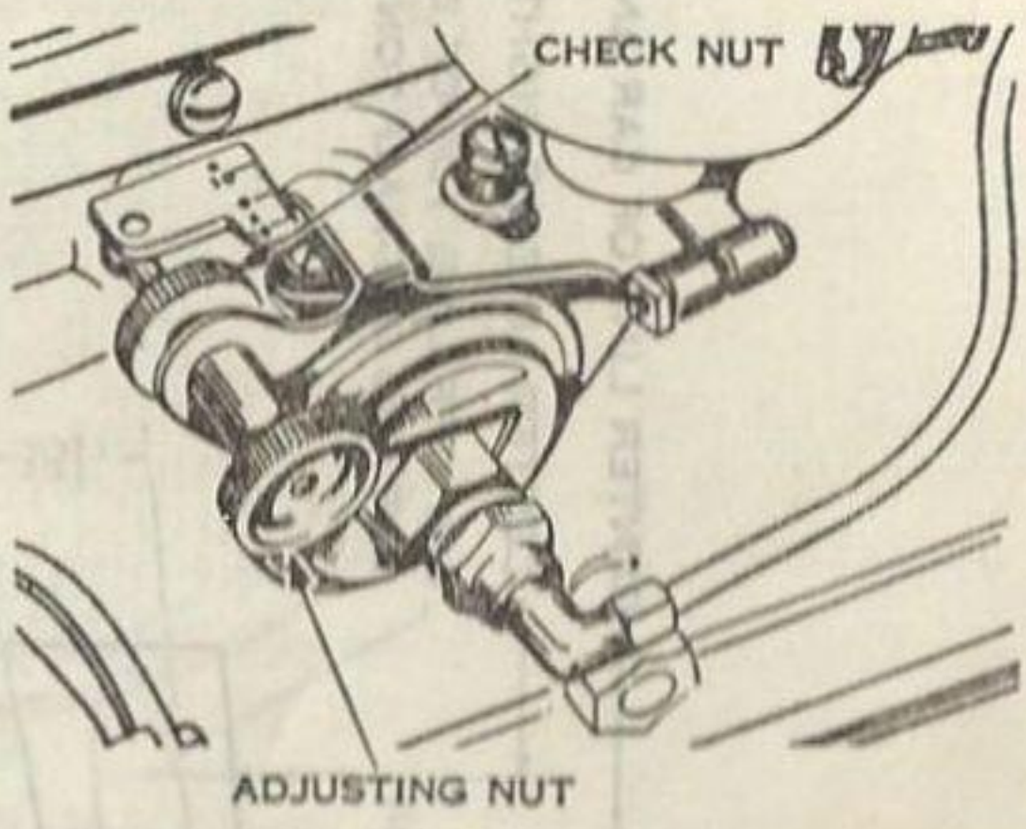


Fig. 29—Octane Selector

LIGHTING SYSTEM

The lighting system used is commonly called the single wire with ground return and includes headlamps, instrument panel light and tail light.

The lighting system is controlled from the lighting switch on the instrument panel.

HEADLAMPS

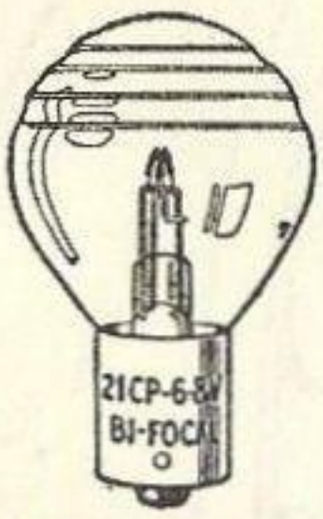


Fig. 30—Headlamp Bulb

The lamps used on Chevrolet trucks embody the depressible beam and fixed focus feature—i. e., the 21-candle power bulbs are provided with two separate filaments, one being on the exact center of the reflector and the other filament slightly above the center of the reflector. The candle power of each filament is the same; therefore, the deflection of the light beam from the upper filament to the lower does not affect the brightness of the beam.

The headlamps are properly aimed at the factory and re-aiming should not be necessary, unless the adjustment of the headlamp support bolt nut has been disturbed.

The operation of the depressible beam is affected by means of a foot switch located on the toe board riser, close to the clutch pedal,

Fig. 32 illustrates the headlamp with the bright and dim bulb, as well as the parking bulb and special lens.

The specially designed lens is made up of a series of prisms which effectively "bend" the beams of light, to obtain the desired light pattern. This lens is used in connection with a plain reflector.

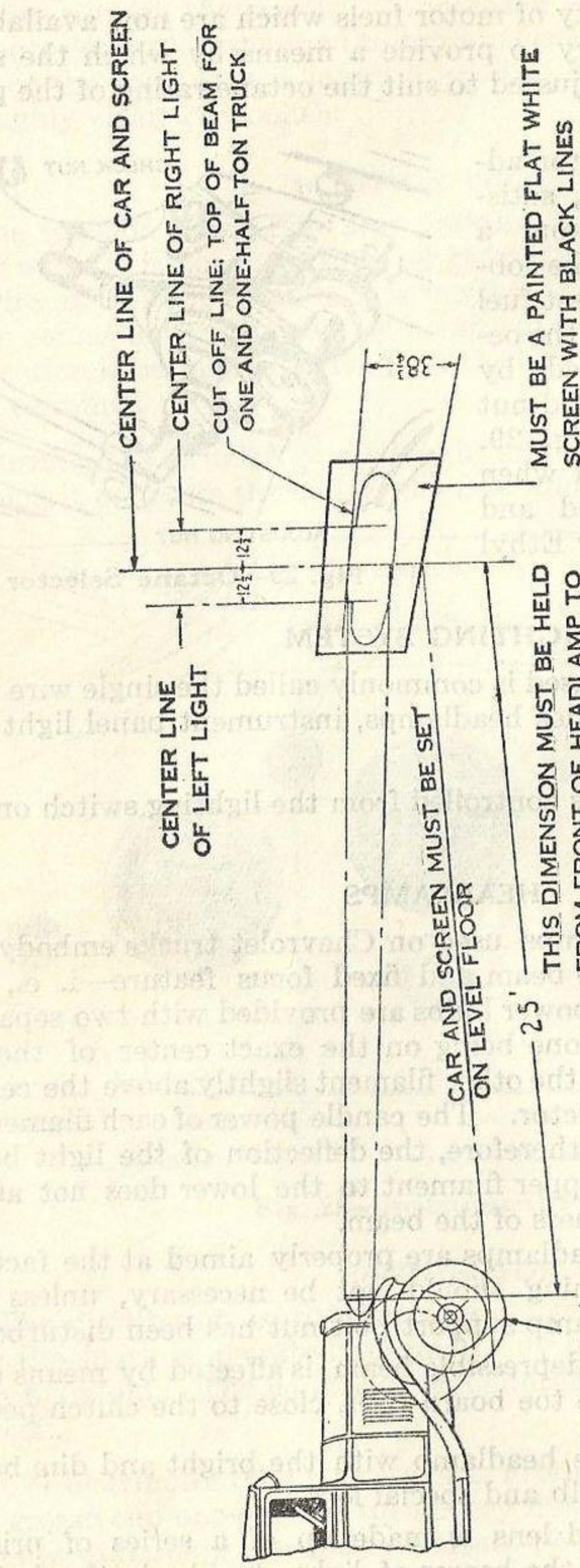


Fig. 31—Headlamp Aiming Chart

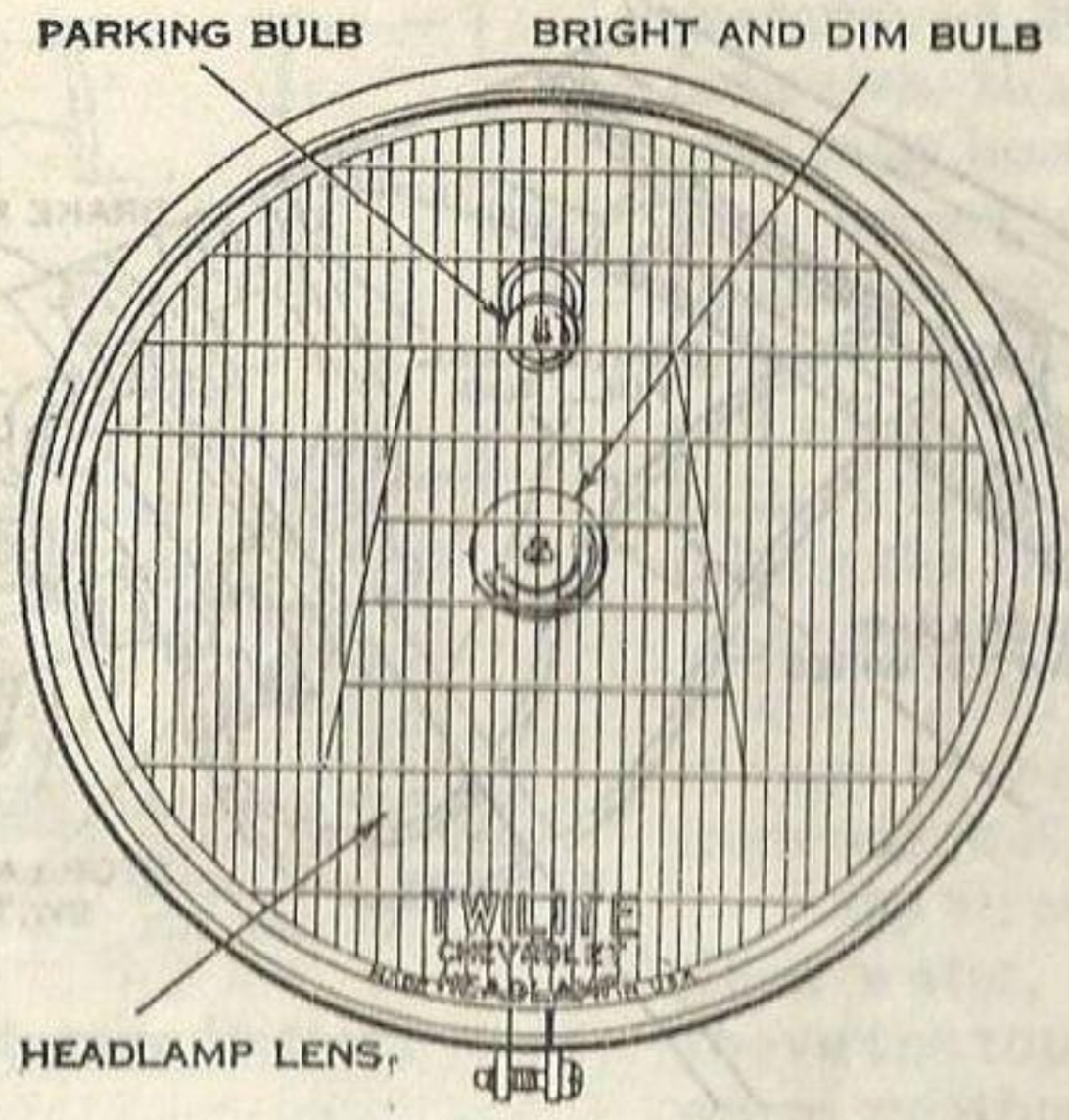


Fig. 32—Headlamp Lens

Proper headlamp adjustment may be obtained by following the instructions outlined in Fig. 31. The chart is self-explanatory and no further comments are necessary.

STOP AND TAIL LAMP

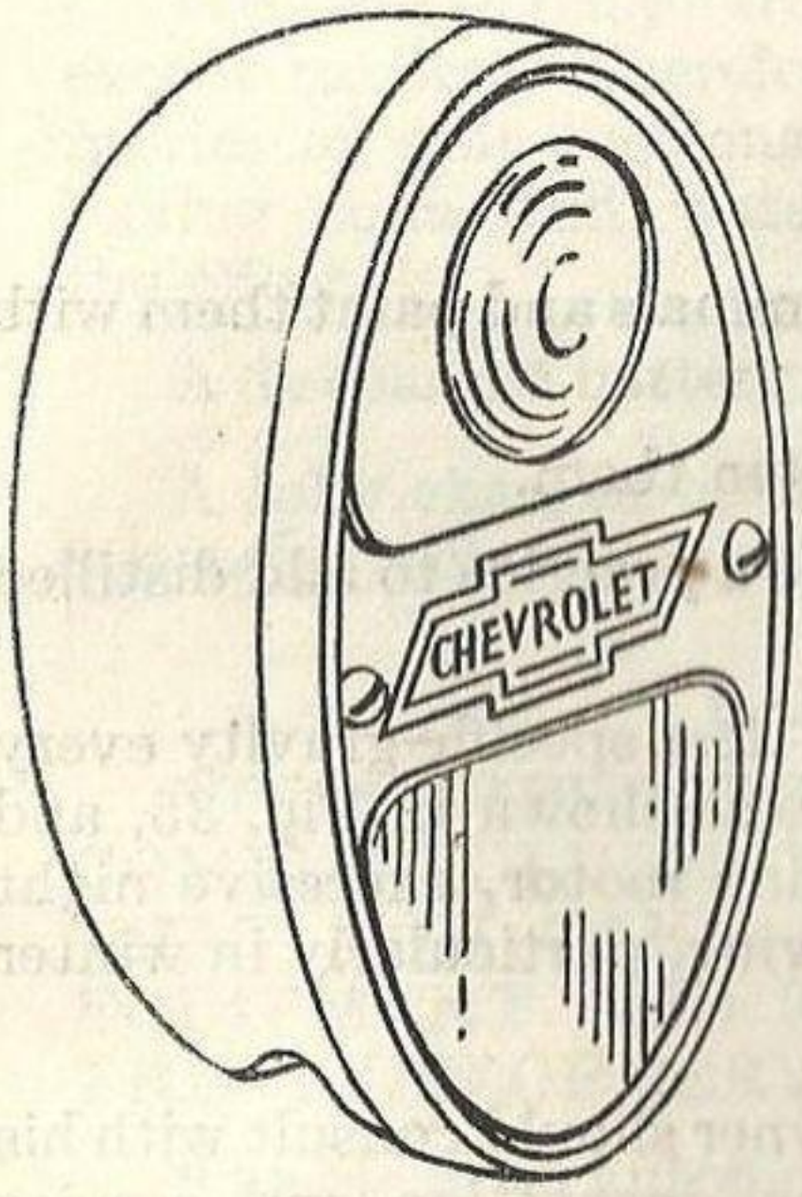


Fig. 33—Stop and Tail Lamp

All Chevrolet trucks are equipped with a combination stop and tail lamp, Fig. 33. The stop and tail lamp is built in a unit containing two bulbs. The stop lamp is a single contact six-volt, fifteen candle power bulb. While the tail lamp is a single contact six-volt, three candle power bulb.

When the tail lamp is on and the stop lamp is off, the upper part of the stop lamp is dark, but as soon as the brake pedal is pressed forward slightly, the upper part of the stop lamp is illuminated and remains bright until the brake pressure is released.

Refer to Fig. 34 for detail wiring diagram. Adjust switch operating lever on brake cross shaft, so that switch will make contact just as the brake begins to engage.

The stop lamp switch, Fig. 34, is entirely self contained and is serviced as a unit only. The switch operating lever which attaches to the brake cross shaft is sold separately.

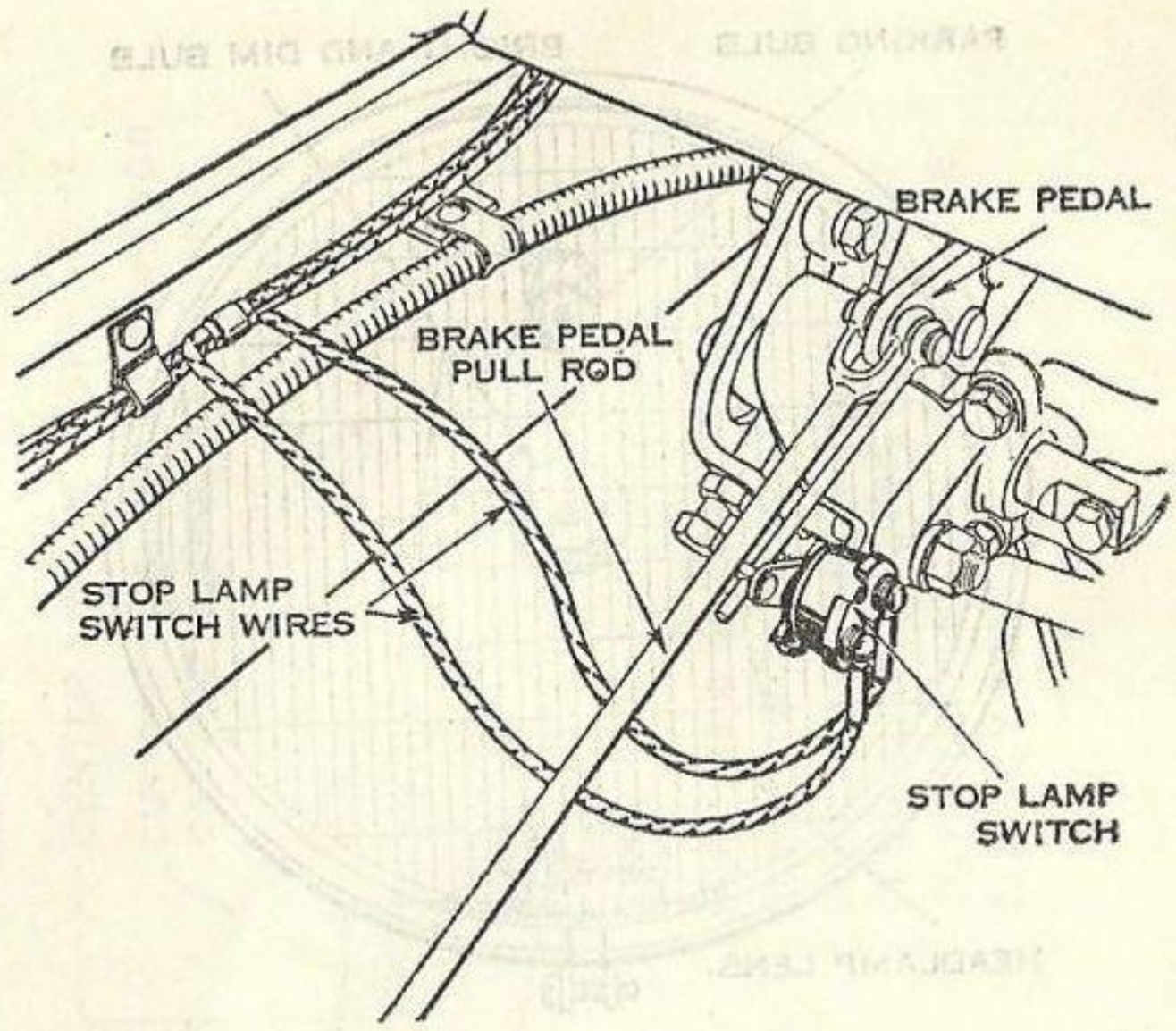


Fig. 34—Stop Lamp Switch

CARE OF BATTERY

The failure of a storage battery may be attributed to four causes:

1st—Corrosion at connections.

2nd—Loose connections.

3rd—Low water level in cells.

4th—Discharged battery condition.

Therefore, to

1st —Prevent corrosion—clean the terminals and paint them with vaseline.

2nd—Prevent loose connections—tighten them.

3rd —Prevent low water level—make it a practice to add distilled water at least every two weeks.

4th —Prevent a discharged condition—test specific gravity every two weeks with the hydrometer, as shown in Fig. 35, and avoid excessive use of the starting motor, excessive night driving and short, low speed driving, particularly in winter time.

When a new truck is purchased, the owner should consult with his Dealer regarding the battery registration, inspection and service plan

The specific gravity of a fully charged battery is between 1.275 and 1.300. If successive readings show lower values (for

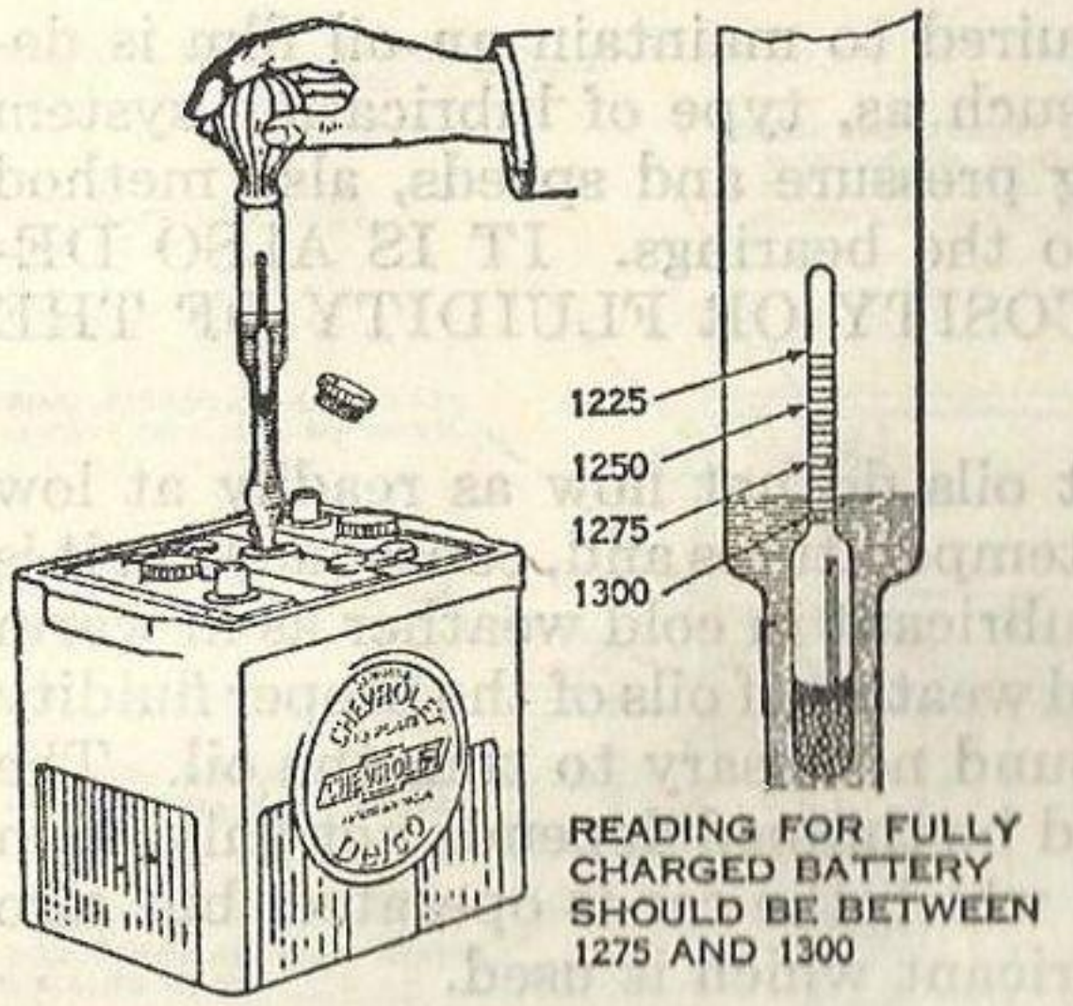


Fig. 35—Storage Battery

example—1.265 and 1.250) this indicates that the battery is gradually becoming discharged. The generator, in this case, should be readjusted to deliver more current. Serious injury will result to the battery if the battery is not kept charged. In taking the readings, care should be exercised to return the electrolyte from the hydrometer syringe to the same battery cell from which it was taken.

Keep all cells filled with distilled water, to a level of ½" above the top of the plates. In warm weather, it makes no difference when water is added but in freezing weather, it should be added just before using the car. The reason is that water will remain on top of the solution until it is mixed with it, by action of the battery. If not mixed with the solution, it would freeze almost as quickly as outside of the battery. Water will be required more frequently in summer than in winter. It is a good plan to add water at least once a week in summer and every two weeks in winter. When long daylight runs are made, water must be added still more frequently.

Electrolyte (sulphuric acid and water) attacks most all materials except rubber. Therefore, if this acid is accidentally spilled upon fabrics or seat cushions, ordinary household ammonia, or common baking soda and water, if applied immediately, will counteract the effect.

A discharged battery will freeze at a little below the freezing point.

A fully charged battery will not freeze, even at temperatures as low as 30° below zero; therefore, keep the battery fully charged.

GENERAL LUBRICATION

YOUR CHEVROLET DEALER IS EQUIPPED TO RENDER COMPLETE LUBRICATION SERVICE. WE RECOMMEND THAT YOU TAKE ADVANTAGE OF HIS SPECIALIZED EQUIPMENT AND TRAINED MEN WHEN IN NEED OF THIS TYPE OF SERVICE.

The life of an automobile is, to a great extent, dependent upon the rapidity at which moving parts become worn. The minimum wear can be obtained only through the use of correct lubricant properly applied. The determining factor of correct lubrication is the ability of the oil or lubricant used to maintain an unbroken oil film on the surfaces of the moving parts under all conditions of operation.

The correct grade of oil required to maintain an oil film is dependent upon various factors, such as, type of lubrication system used, bearing materials, bearing pressure and speeds, also method by which lubricant is carried to the bearings. IT IS ALSO DEPENDENT UPON THE VISCOSITY OR FLUIDITY OF THE OIL.

It is a well known fact that oils do not flow as readily at low temperatures as they do at high temperatures and, consequently, it is rarely possible to use the same lubricant in cold weather as in warm or hot weather. In extremely cold weather if oils of the proper fluidity cannot be obtained it will be found necessary to thin the oil. The amount that the lubricant should be thinned depends not only upon the atmospheric temperature at which the car is operated, but also upon the kind and grade of lubricant which is used.

OILS AND GREASES ARE MUCH CHEAPER THAN REPAIR BILLS AND SHOULD BE APPLIED REGULARLY IF YOU ARE TO SECURE A MAXIMUM OF USEFUL SERVICE FROM YOUR CAR. IT IS CONSEQUENTLY IMPORTANT THAT THE PROPER GRADE OF OIL, AS NOTED ON THE LUBRICATION CHART (FIG. 36) SHOULD BE USED.

MOTOR LUBRICATION

For proper engine lubrication, a well refined oil is essential. We do not recommend the use of so-called re-refined oils, as we find that unless extreme care is used in the refining process, they are wholly unsuitable for use in Chevrolet cars.

As a guide to the proper viscosity, or body, of oil for summer and winter conditions, which vary so greatly in different localities, the lubrication charts of the reputable oil companies should be consulted.

The viscosity of an oil is simply a measure of its body or thickness. The S. A. E. viscosity numbers are a system which enables a car owner to purchase oils which are classified according to their body and thickness so that the oils of the proper viscosity can be used under different conditions. The S. A. E. system classifies oils according to their viscosity but not according to any other property. The oil company supplying the oil is responsible for the quality of its product.

Increase in speed will result in the increase of oil consumption.

It is important that not over five (5) quarts of oil be used in a refilling of the crankcase.

For the first 500 miles

Under no circumstances should an oil having a body heavier than that of S. A. E. viscosity No. 20 and with a zero pour test be used in motors of new cars.

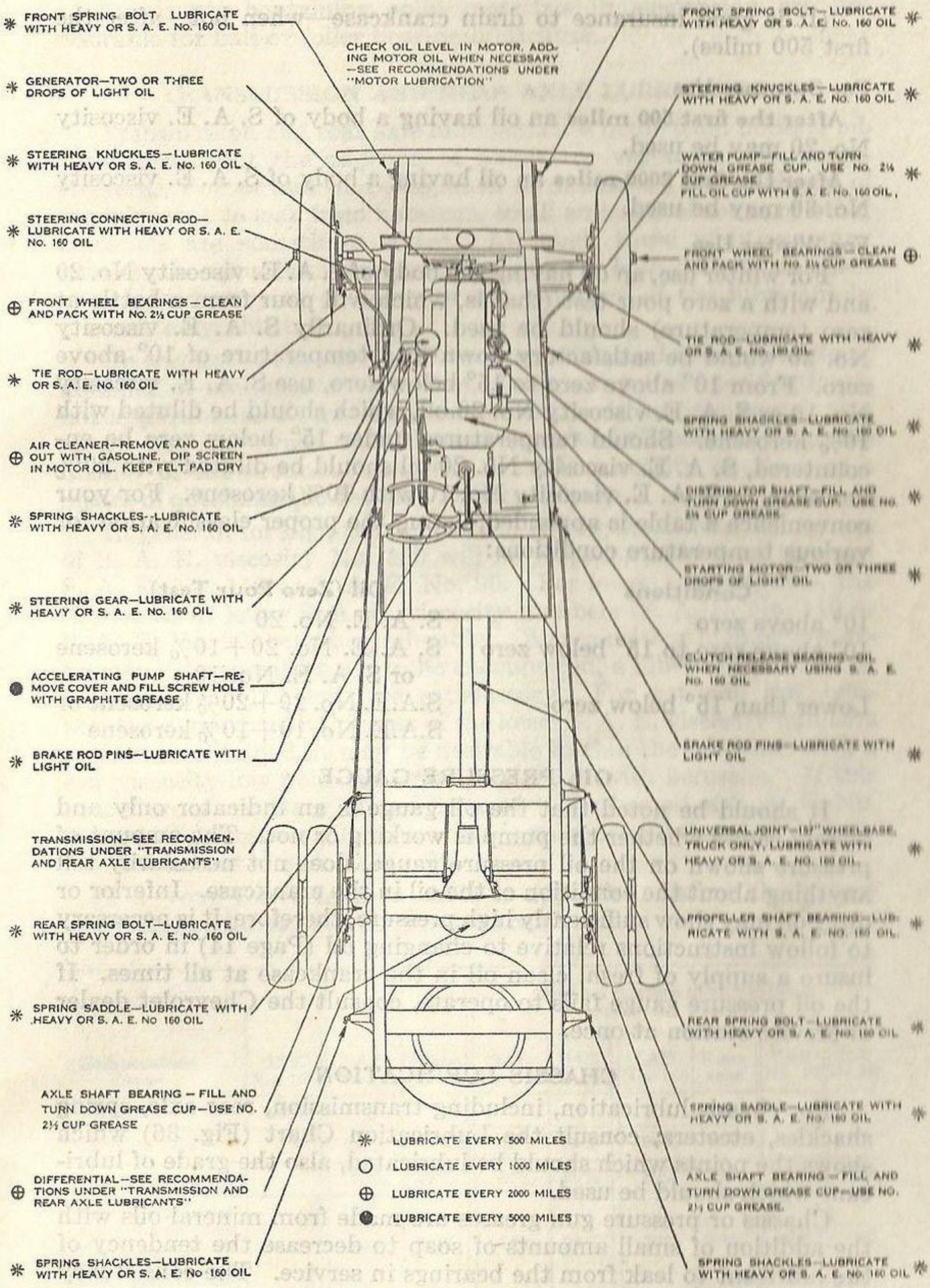


Fig. 36—Lubrication Chart

(It is good insurance to drain crankcase—when hot—after the first 500 miles).

For Summer Use

After the first 500 miles an oil having a body of S. A. E. viscosity No. 20 may be used.

After the first 2000 miles an oil having a body of S. A. E. viscosity No. 30 may be used.

For Winter Use

For winter use, an oil having the body of S. A. E. viscosity No. 20 and with a zero pour test (that is, which will pour from a bottle at zero temperature) should be used. Ordinarily S. A. E. viscosity No. 20 would be satisfactory down to a temperature of 10° above zero. From 10° above zero to 15° below zero, use S. A. E. viscosity No. 10 or S. A. E. viscosity No. 20 oil, which should be diluted with 10% kerosene. Should temperatures under 15° below zero be encountered, S. A. E. viscosity No. 20 oil should be diluted with 20% kerosene, or S. A. E. viscosity No. 10 with 10% kerosene. For your convenience a table is appended, listing the proper classification for various temperature conditions:

Conditions	Oil (Zero Pour Test)
10° above zero	S. A. E. No. 20
10° above zero to 15° below zero	S. A. E. No. 20+10% kerosene or S. A. E. No. 10
Lower than 15° below zero	S.A.E. No. 20+20% kerosene or S.A.E. No. 10+10% kerosene

OIL PRESSURE GAUGE

It should be noted that the oil gauge is an indicator only and merely shows whether the pump is working or not. The amount of pressure shown on the oil pressure gauge, does not necessarily tell anything about the condition of the oil in the crankcase. Inferior or dirty oil may show sufficiently high pressure; therefore, it is necessary to follow instructions relative to changing oil (Page 14) in order to insure a supply of fresh, clean oil in the crankcase at all times. If the oil pressure gauge fails to operate, consult the Chevrolet dealer or service station at once.

CHASSIS LUBRICATION

For chassis lubrication, including transmission, rear axle, spring shackles, etcetera, consult the Lubrication Chart (Fig. 36) which shows the points which should be lubricated, also the grade of lubricant which should be used.

Chassis or pressure gun greases are made from mineral oils with the addition of small amounts of soap to decrease the tendency of the lubricant to leak from the bearings in service. The consistency of these lubricants is regulated to permit satisfactory operation with the types of pressure guns found on the market.

Lubricants containing solid materials in suspension are undesirable for ball or roller bearing lubrication.

TRANSMISSION AND REAR AXLE LUBRICANTS

Transmission and rear axle lubricants are made from mineral oil, with or without the addition of animal or vegetable oils, soaps, etcetera. For certain purposes, such as decreasing the tendency of the lubricant to leak from housings, small amounts of soaps or other materials are sometimes added. Although these additions may increase the apparent viscosity of the oil, they have little or no effect on the load-carrying property or the tendency of the lubricant to prevent easy shifting.

On account of the varying climatic conditions, driving conditions, methods of manufacture, etcetera, a single detailed specification is not applicable to all transmission and rear axle lubricants and, as a result, the car owner must depend upon the oil company for the quality of the product, using the S. A. E. viscosity numbers as a means of obtaining the desired viscosity or body.

In general, for high temperature operating conditions, lubricants of S. A. E. viscosity No. 160 will be more suitable than those of S. A. E. No. 110 or S. A. E. No. 90. For lower temperatures, the lubricants of lower S. A. E. viscosity numbers (S. A. E. No. 110 or S. A. E. No. 90) may be preferable. Where neither high or low extremes of temperature are to be encountered, a lubricant of S. A. E. viscosity No. 110 may be satisfactory. For extreme low temperatures, or where lubricants of the lower S. A. E. viscosity numbers cannot be obtained, it may be desirable to thin the lubricant with a low viscosity low pour test crankcase oil, or with kerosene. If this procedure is necessary, the addition of 30% of an oil of S. A. E. No. 20, or 10% kerosene, will reduce the viscosity of a lubricant of S. A. E. No. 160 to that of S. A. E. No. 90.

For your convenience a table is appended, listing the proper classification for various temperature conditions:

Temperature Range	SAE No. 160	SAE No. 90	Kerosene	Optional mixture to approximate equivalent viscosity					
				SAE No. 160	SAE No. 20	SAE No. 160	Kerosene	SAE No. 90	SAE No. 20
*Above 32°F.	100%								
*32°F. to Zero		100%		65%	35%	90%	10%		
Below Zero		90%	10%	40%	60%	80%	20%	60%	40%
Extreme temperatures below zero when hard shifting of transmission gears is encountered.		80%	20%	10%	90%	70%	30%	25%	75%

*S. A. E. viscosity No. 160 lubricant should be used during summer months and S. A. E. No. 90 during winter. If during the winter, the temperature should rise above 40° F. for an extended period S. A. E. No. 110 should give satisfactory results.

If the attendant at the service station is not familiar with the S. A. E. classification of transmission and rear axle lubricants, the car owner can secure the desired information direct from the lubricant manufacturers, the Chevrolet Motor Company, or can select a lubricant of the correct grade by consulting one of the lubrication charts published by the oil companies.

LUBRICATION OF BRAKE LINKAGE

The brake linkage, or clevis pins, rods, etcetera, should be lubricated with a good grade of engine oil which will insure the correct operation of these units.

LUBRICATION OF SPRINGS

It may be desired to oil the springs. This can easily be done by brushing the sides of both front and rear springs with the oil drained from the crankcase.

MISCELLANEOUS DATA

ICE ON WINDSHIELD

If you are troubled with snow and ice sticking to the windshield, this condition may be remedied by rubbing a thin film of glycerine on the windshield glass.

TIRE PRESSURE

Examine the tires to see that they are not damaged or under inflated. 30″ x 5″ front tires should carry a pressure of 70 pounds. 30″ x 5″ rear tires should carry a pressure of 80 pounds. 32″ x 6″ rear tires should carry a pressure of 90 pounds.

This is very important, for the reason that if the deflection is too great—i. e., if the tires flatten out too much under load, due to under inflation—trouble is sure to follow.

A drop of even two or three pounds in pressure quickly affects tread wear. The edges of the tread are subjected to a scuffing or wiping action, which rapidly ruins the tread.

To secure best results from tires, they must be inflated to the above pressures and should be tested frequently, to insure that the pressure does not drop more than three pounds before they are again inflated.

SUMMARY

1—Lubrication

Check motor oil level and add a good grade of cylinder oil when necessary. Lubricate chassis at regular intervals, according to Lubricating Chart (Fig. 36).

2—Cooling System

Keep radiator and cooling system filled with clean water.

3—Storage Battery

Every two weeks, inspect storage battery and add distilled water, when necessary, to insure battery efficiency.

4—Do not "ride the clutch" by slightly depressing the clutch when driving. This practice will cause early renewal of clutch parts.

5—Do not step on starter pedal the second time, until motor has come to rest, as injury to flywheel and starter pinion may result.

6—Use low speed gear in transmission when starting, rather than second or intermediate, as by so doing early renewal of clutch and transmission parts will be eliminated. The low speed gear is installed for a purpose—let's use it.

7—Save your brakes by leaving the clutch pedal engaged when descending a hill. The motor compression will assist in the braking effect.

8—Consult your Authorized Chevrolet Dealer on your automobile problems—his mechanics are trained; his tools are standardized and approved; his methods are efficient; his labor rates are equitable; he uses Genuine Chevrolet Parts for replacement.

INDEX

CHAPTER I
GENERAL INFORMATION

CHAPTER II
OPERATION, CARE AND MAINTENANCE

MISCELLANEOUS DATA