You Can't Beat a

NASH

FOR 1938

OWNER'S MANUAL

SERIES — 3880

NASH AMBASSADOR EIGHT

SERIES — 3820

NASH AMBASSADOR SIX

SERIES — 3810

NASH-LAFAYETTE SIX

NOTE: IN THIS BOOK WHERE REFERENCE IS MADE TO "3880" IT COVERS THE AMBASSADOR EIGHT SERIES. REFERENCE TO "3820" COVERS AMBASSADOR SIX. REFERENCE TO "3810" COVERS NASH-LAFAYETTE SIX

To the Owner of this Car

WE ARE pleased that your judgment of motor car value led to the purchase of one of our products. You will find the car simply and substantially constructed. Your purchase will be justified by the many miles of economical service and pleasure you will receive.

In preparing this Manual for you we have made a conscientious effort to handle the subject in a manner that will enable you to understand thoroughly the construction of your car and the simple maintenance necessary to obtain the results you expect. We cannot urge you too strongly, in your own interests, to follow with exactness the directions given in this book on the care of the car.

Visit Authorized Nash Service Stations for all maintenance and repair service. Their mechanics are factory trained and understand well the construction, lubrication and adjustment of the car.

Authorized Nash Service Stations everywhere are prepared to render quick, courteous service to the Nash owner away from home. They will appreciate your call on them for any information or service you may need while you are touring.

We share your pride in the car and covet for you, as you become more familiar with the car and the service it will give, a continuance of this high regard both for the car and for its makers.

NASH MOTORS
(DIVISION OF NASH-KELVINATOR CORP.)
KENOSHA, WIS., U. S. A.

Warranty

"THE manufacturer warrants that each new motor vehicle (including original equipment placed thereon by the manufacturer, except tires), chassis or part manufactured by it is free from defects in material or workmanship under normal use or service, its obligations under the warranty being limited to making good at its factories any part or parts thereof which shall within ninety days after delivery of the vehicle to the original purchaser, or before such vehicle has been driven 4,000 miles, whichever event shall first occur, be returned to its factories with transportation charges prepaid, and which are determined by the manufacturer to have been defective in material or workmanship, or will put such parts in condition as good as new without charge.

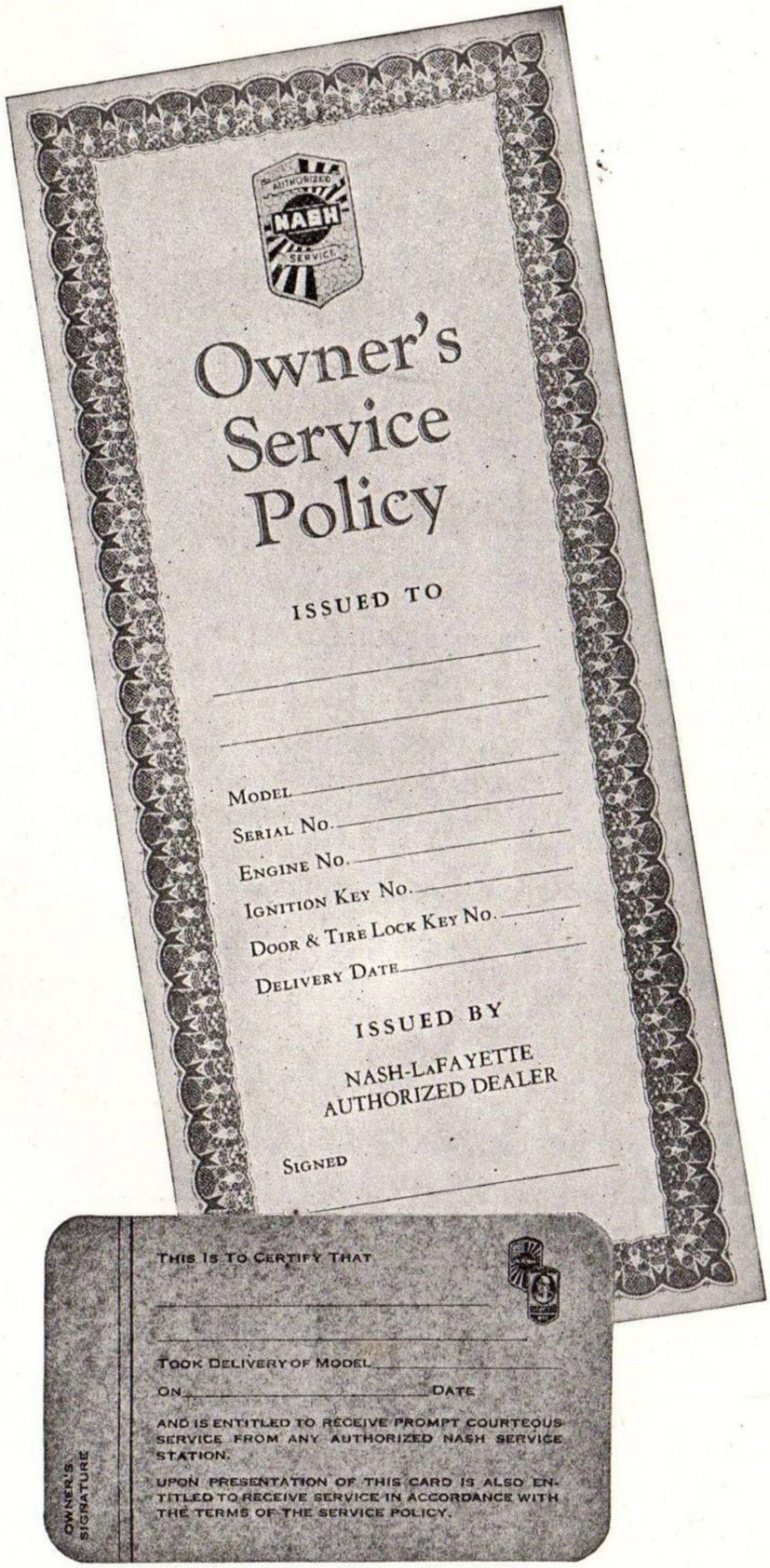
"This warranty being expressly in lieu of all warranties, expressed or implied, and of all other obligations or liabilities on the part of the manufacturer, and the manufacturer neither assumes nor authorizes any person to assume for it any liability in connection with Nash motor vehicles, or the sale thereof, or any other matter.

"This warranty shall not apply to any Nash vehicle which shall have been altered or repaired outside of an authorized Nash service station in any way that in the judgment of the manufacturer would affect its stability or reliability or which has been subject to misuse, neglect, or accident."

The manufacturer reserves the right to make changes in design or add any improvements on motor vehicles and chasses at any time without incurring any obligation to install same on motor vehicles and chasses previously purchased.

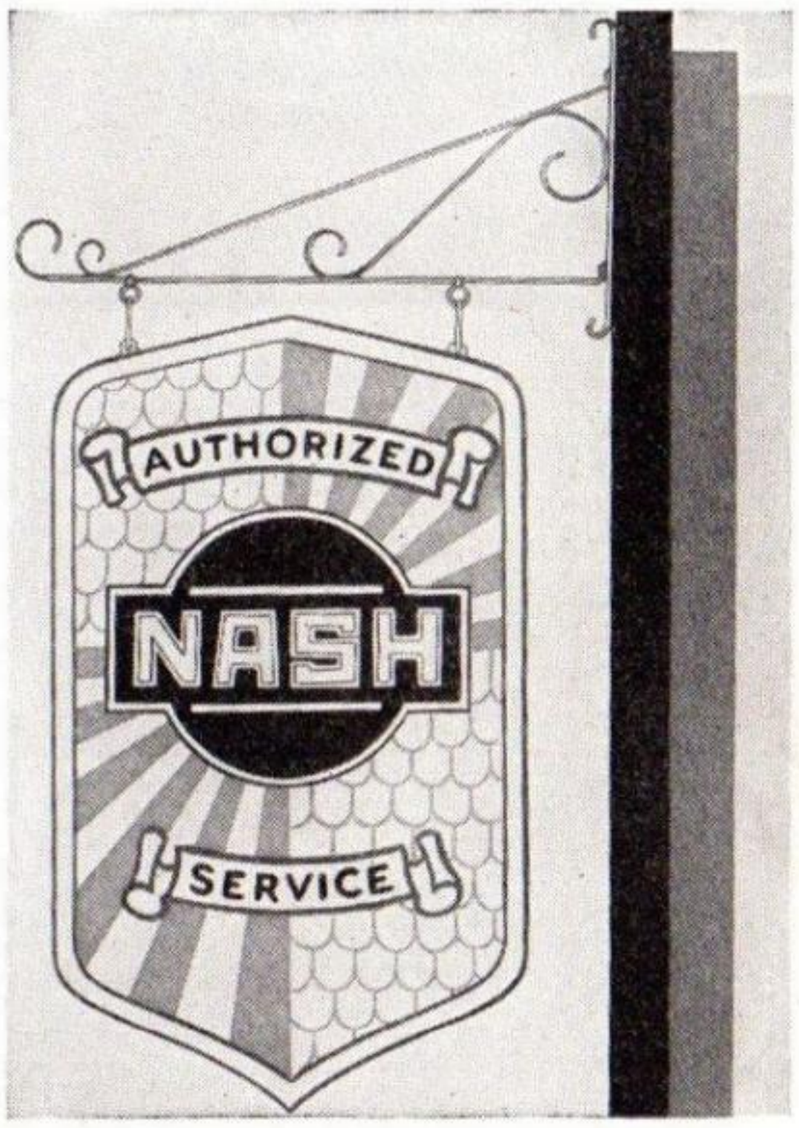
NASH MOTORS
(DIVISION OF NASH-KELVINATOR)
KENOSHA, WISCONSIN

YOUR DEALER WILL FILL IN AND SUPPLY YOU WITH THESE IMPORTANT PAPERS



A Message from Your Dealer—

YOUR car is new. Its purchase will not go unnoticed by other concerns. You will be solicited for all kinds of services and supplies for which you may or may not have need.



It is not so with us. Here you will be asked to buy only those items of maintenance, the purchase of which represents an ultimate saving of money or an actual restoration of the original fine performance of the car.

Our interest in the satisfactory economical future service your car gives transcends by far any momentary profit we might make from the sale of unnecessary and ill-advised repairs or parts. We know that our ultimate success depends upon the good-will of our owners.

Our Service Department is maintained for your convenience and economy. We are at your command.

We receive frequent confidential letters and bulletins from the factory that are of essential assistance in Nash service and maintenance. This information is available only to Nash Authorized Service Stations. Genuine Nash parts are always used.

It is our desire to carry out to the full the terms of the Nash Motors Co. Warranty and Service Policy, and to continue to render excellent service to you for the full length of time you drive the car. We appreciate your business and know that with your co-operation to the extent of calling on us regularly for inspections and maintenance we can make our relations mutually satisfactory and advantageous.

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Specifications and License Data Following for Cars in U. S. A.

	Model 3880	Model 3820	Model 3810
Wheel Base	125″	121″	117″
Tire	16″x7.00	16″x6.25	16″x6.00
Engine Cyl. Bore	3 1/8″	3 3/8″	3 3/8″
Engine Stroke	4 1/4″	4 3/8″	4 3/8″
Piston Displacement	260.8	234	234
S.A.E. Horse Power	31.25	27.34	27.34
Firing Order	1-6-2-5-8-3-7-4	1-5-3-6-2-4	1-5-3-6-2-4

Capacity Charts

	Model 3880	Model 3820	Model 3810
Gasoline Tank	20 gals.	20 gals.	20 gals.
Cooling Capacity	17 qts.	16 qts.	20 qts.
Transmission Lubricant— Regular	3 1/2 lbs.	3 1/2 lbs.	3 1/2 lbs.
Transmission Lubricant— with Overdrive	6 lbs.	6 lbs.	6 lbs.
Rear Axle Lubricant	6 lbs.	4 lbs	4 lbs.
Crank Case Oil	7 qts.	7 qts.	6 qts.

Adjustments

	Model 3880	Model 3820	Model 3810
Tire Pressure, Front	26 lbs.	27 lbs.	28 lbs.
Tire Pressure, Rear	26 lbs.	27 lbs.	28 lbs.
Valve Tappet Clearance	Intake .015″ Exhaust .015″	Intake .015″ Exhaust .015″	Intake .015″ Exhaust .015″
Distributor Point Clearance	.020″	.020″	.020″
Spark Plug Clearance	.025″	.025″	.025″

CLUTCH PEDAL—Not less than 1/2″ free movement and not more than 1 1/2″.

NOTE—For above information with British Imperial and Metric measurements see Page 8.

For Export Cars Only

Specifications and License Data In British Imperial Measurements and Metric Measurements

	Model 3880		Model 3820		Model 3810	
	Br. Imp.	Metric	Br. Imp.	Metric	Br. Imp.	Metric
Wheel Base	125"	3.18 M	121"	3.07 M	117"	2.97 M
Tire Size	16"x7.00	406x178 M.M.	16"x6.25	406x159 M.M.	16"x6.00	406x152 M.M.
Engine Cyl. Bore	3 1/8"	79 M.M.	3 3/8"	85 M.M.	3 3/8"	85 M.M.
Engine Stroke	4 1/4"	108 M.M.	4 3/8"	111 M.M.	4 3/8"	111 M.M.
Piston Displacement	260.8 cu. in.	4.27 L.	234 cu. in.	3.8 L.	234 cu. in.	3.8 L.
Firing Order	1-6-2-5-8-3 7-4		1-5-3-6-2-4		1-5-3-6-2-4	

Capacity Charts

Petrol Tank	16 2/3 Gal.	75 L.	16 2/3 Gal.	75 L.	16 2/3 Gal.	75 L.
Cooling System	14 Qts.	16 L.	13 Qts.	15 L.	16 2/3 Qts.	19 L.
Transmission Lubricant, Regular	3 1/2 Lbs.	1.6 Kgs.	3 1/2 Lbs.	1.6 Kgs.	3 1/2 Lbs.	1.6 Kgs.
Transmission Lubricant, with Overdrive	6 Lbs.	2.7 Kgs.	6 Lbs.	2.7 Kgs.	6 Lbs.	2.7 Kgs.
Rear Axle Lubricant	6 Lbs.	2.7 Kgs.	4 Lbs.	1.8 Kgs.	4 Lbs.	1.8 Kgs.
Crank Case Oil	6 Qts.	6.6 L.	6 Qts.	6.6 L.	5 Qts.	5.7 L.

Adjustments

Tire Pressure, Front	26 Lbs.	1.8 Atmos.	27 Lbs.	1.9 Atmos.	28 Lbs.	2.0 Atmos.
Tire Pressure, Rear	26 Lbs.	1.8 Atmos.	27 Lbs.	1.9 Atmos.	28 Lbs.	2.0 Atmos.
Valve Tappet Clearance { Intake	.015"	.381 M.M.	.015"	.381 M.M.	.015"	.381 M.M.
Valve Tappet Clearance { Exhaust	.015"	.381 M.M.	.015"	.381 M.M.	.015"	.381 M.M.
Distributor Point Clearance	.020"	.508 M.M.	.020"	.508 M.M.	.020"	.508 M.M.
Spark Plug Clearance	.025"	.635 M.M.	.025"	.635 M.M.	.025"	.635 M.M.

Precautions During the First 1500 Miles

To protect the investment in your car, care should be exercised in the first 1,500 miles of operation.

Failure to follow the simple but fundamental rules concerning the working of any new machinery may result in permanent injury.

Avoid racing the engine. Avoid unnecessary speed in low and second gear.

Nash-built engines are constructed with minimum friction at all points and special running-in oil is not needed or recommended. To assure the running-in of bearings and other parts of the car do not exceed 35 miles per hour for the first 250 miles. Speeds can then be increased as follows:

Up to 500 miles—do not exceed 45 miles per hour.

Up to 1,000 miles—do not exceed 55 miles per hour.

Do not run with wide open throttle and at top speed until at least 2,500 miles are on the car.

In all of the above recommendations, it should be noted that the speeds specified should only be attained after the engine has been thoroughly warmed up by driving at lower speeds for at least fifteen minutes.

Inspect water daily or, on long trips, at every filling of gasoline.

Inspect engine oil daily or, on long trips, at every filling of gasoline.

At end of 500 miles have free inspection rendered by dealer.

On your new car change engine oil after first 500 miles of operation.

At end of 1,500 miles have second free inspection and adjustment rendered by dealer.

Within five days after purchase of car have the storage battery registered by car dealer with the authorized battery service station. This will make the storage battery guarantee effective.

Fill storage battery with distilled water every two weeks.

Driving Information

The operation of the clutch, transmission shifting, brakes and steering follows conventional practice.

The starter is engaged by fully depressing the clutch pedal. Caution should be used to not fully depress the clutch pedal after engine is running.

Always use hand throttle when starting engine.

NOTE: Never pump the accelerator pedal to start engine as flooding will result and difficulty will be experienced in starting. Should this be encountered, pull hand throttle to full "out" position, and leave choke in "off" position, crank engine for a few seconds and engine will start.

The use of choke is important. In cold weather pull choke out to full "out" position and when engine starts, return choke about halfway in, until engine warms up and then return to full "in" position.

In starting cold motor in warm weather, pull choke out about half way to start. In warm weather with hot engine do not use choke.

A little practice with the choke operation will enable you to start the motor easily under all conditions.

CAUTION: Regardless of age of car, never drive at high speed until the engine is warmed up, but drive it at moderate speeds for at least ten minutes in summer and twenty minutes in winter.

In cold weather always allow engine to run idle for at least three minutes before moving car.

Engine Oil Pressures

The correct oil pressure with the engine operating at normal temperature, and with the correct viscosity of oil is from 25 to 35 pounds on the oil pressure gauge on the dash.

If at any time the gauge indicates no oil pressure the engine should immediately be stopped. If there is plenty of oil in the crankcase, the oiling system should be checked by a competent mechanic before starting, to prevent the possibility of serious damage.

HEADLIGHTS: Headlights incorporate two beams—the upper beam for country or clear road driving and a lower beam for city driving or when passing approaching cars. Parking lights are also incorporated in the headlights.

LIGHT CONTROL: The lights are controlled by the switch button marked "L" on the dash.

Pull out switch to first position to light parking lights which are located in headlight. This also lights the rear lights. Pull out to second position to light headlights.

Dimmer lights for passing approaching cars are operated by pressing down with the foot on the dimmer switch which is located on floor board to left of clutch pedal.

It is not necessary to hold down the switch as switch remains in dimmer position until it is again pressed down.

NOTE: A red beam indicator is provided in the instrument panel, above the speedometer dial. This indicator beam is illuminated only when driving on the upper or clear road beam.

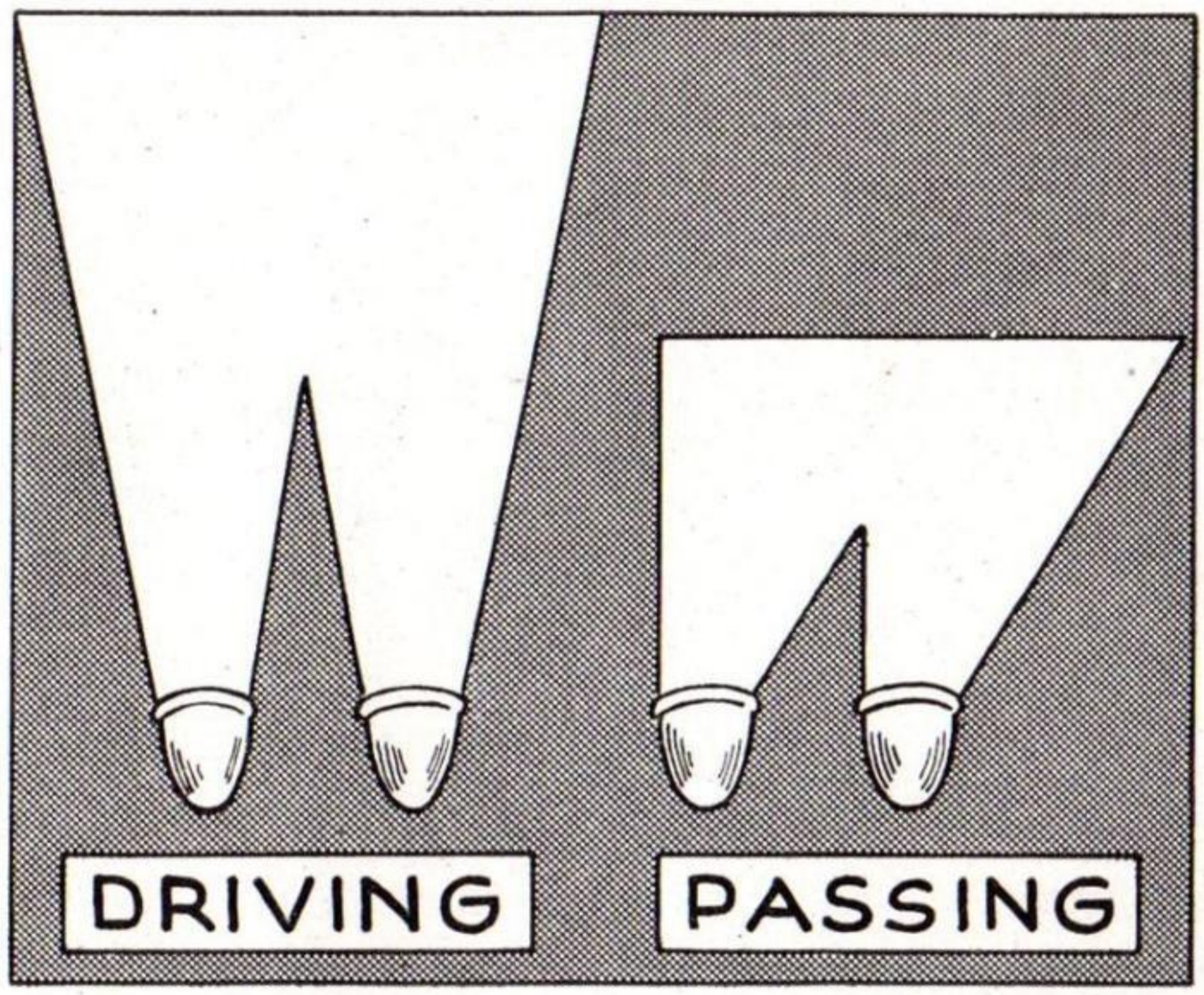


Figure 1

Note That Passing Beam, Drops Slightly and Shifts to Right. Red Indicator on Dash on, When Country Driving.

MAINTENANCE OF LIGHTING EQUIPMENT: Good lighting is essential to night driving and Nash has provided this in the new dual beam lighting system. Lighting equipment requires very little maintenance, but that little is important. Many states and territories are now requiring periodical inspection of lighting equipment, especially as applied to correct aiming or aligning of the beams and in the interests of safety, we urge your full cooperation with the authorities. Nash main headlight bulbs are of the prefocused type, both beam lights being incorporated in one bulb, and any adjustments necessary to the aiming of the beams, is caused by misalignment of the headlights. Nash service stations and other official light testing stations have screens and other equipment to correctly aim the beams and we suggest that you allow them to make tests at regular intervals as often headlights may be misaligned by slight collisions or other causes unknown to you.

The aiming of the beam, is accomplished by:

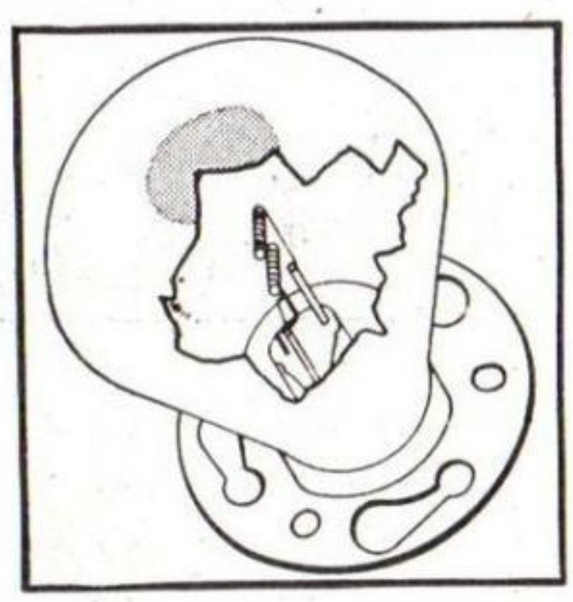
1. For vertical adjustment, loosen mounting bolts and shift lights by tapping with hand to desired position and then tighten bolts.
2. For horizontal adjustment, open hood and locate reflector tilting screw, this will be found just ahead of front mounting bolt. Screw in or out to tilt reflector to correct aim position.

REPLACEMENT OF BULBS: After a period of time, headlight bulbs, like those in your home, will lose their efficiency in candle power and should be replaced. The need for replacement will be apparent in the road lighting or from a blackened appearance of the bulbs.

To replace bulb, remove screw at bottom of light and remove rim and lens as an assembly. To replace lens, first remove rim and lens as an assembly and then remove snap rings, that hold lens. Use a fine pointed screw driver.

Lamp Bulb Specifications

	C.P.	Base	Voltage
Head	32-32	Flange Type	6-8
Prefocused, flange base type.			
Parking	3	S.C.	6-8
Rear Stop	1 bulb 3-21	D.C.D.F.	6-8
Dash	3	S.C.	6-8
Dome	6	S.C.	6-8
License Plate	3	S.C.	6-8



YOUR OWN CHECK-UP OF HEADLIGHTS: While it is suggested that you occasionally have your headlights tested at your Nash service station or an official testing station where they have the necessary screen equipment to make inspections or corrections to conform to local authority requirements, some owners may want to make it a practice to check in a simple way the headlight alignment.

If this is desired, we suggest that your car be placed on a level surface with the headlights aimed toward and 25 feet from a garage door or other reasonably light colored vertical surface. On the garage door or wall lay out a diagram as shown in figure No. 2.

The lighting switch should then be placed in the "country driving position." With headlights properly aimed, the "country driving beam" should appear as shown in Figure No. 3.

With headlights correctly aimed, the "passing or city driving beam" will be automatically correct as shown in Fig. 4.

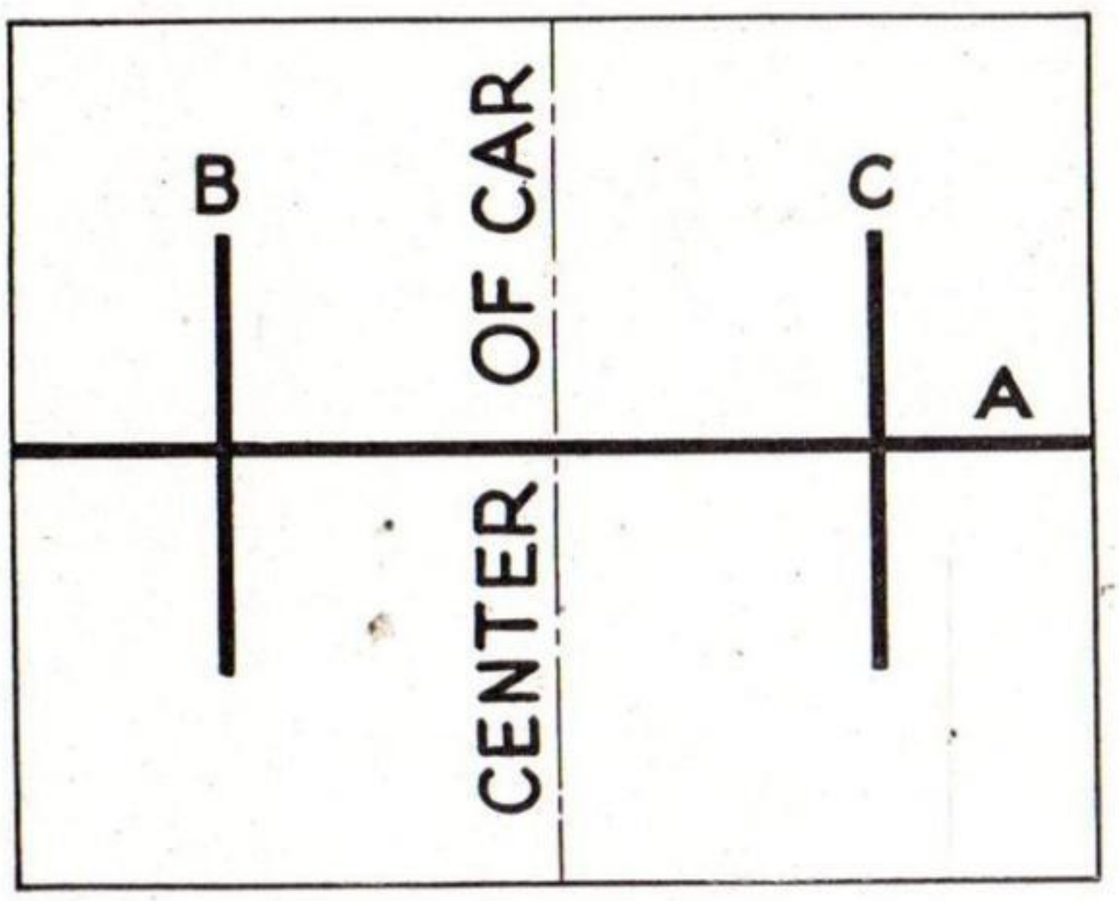


Figure 2

A—Horizontal Center Line of Headlights
B—Vertical Center Line of Left Headlight
C—Vertical Center Line of Right Headlight

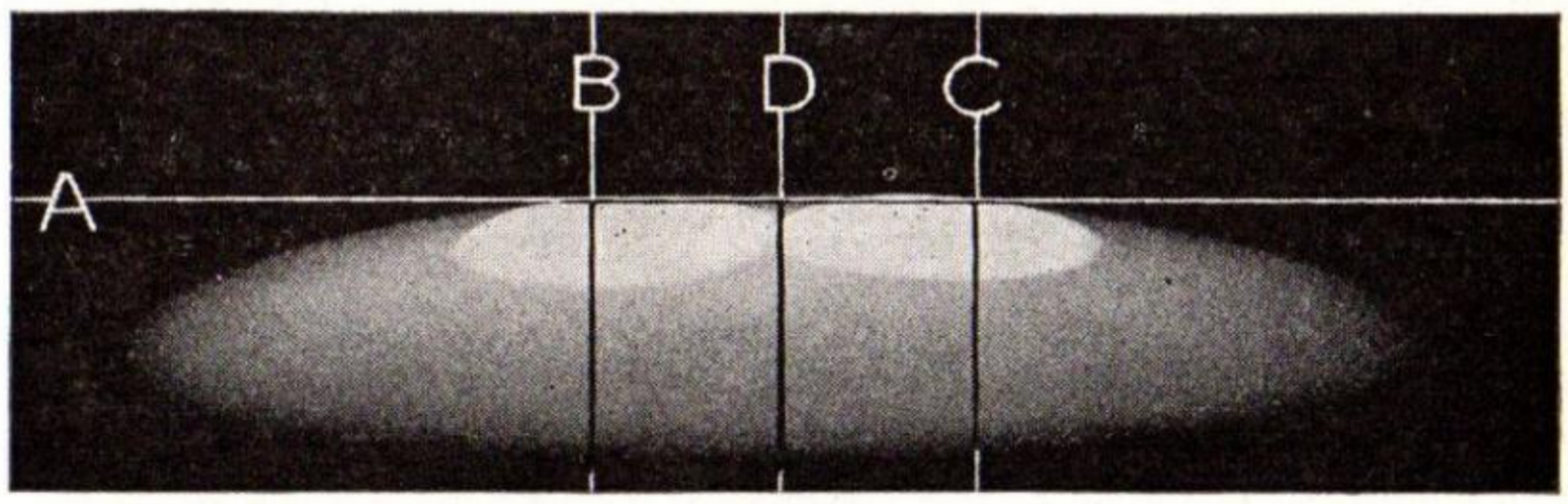


Figure 3

Country Driving Beam
A—Horizontal Center Line of Headlights
B—Vertical Center Line of Left Headlight
C—Vertical Center Line of Right Headlight
D—Center Line of Car

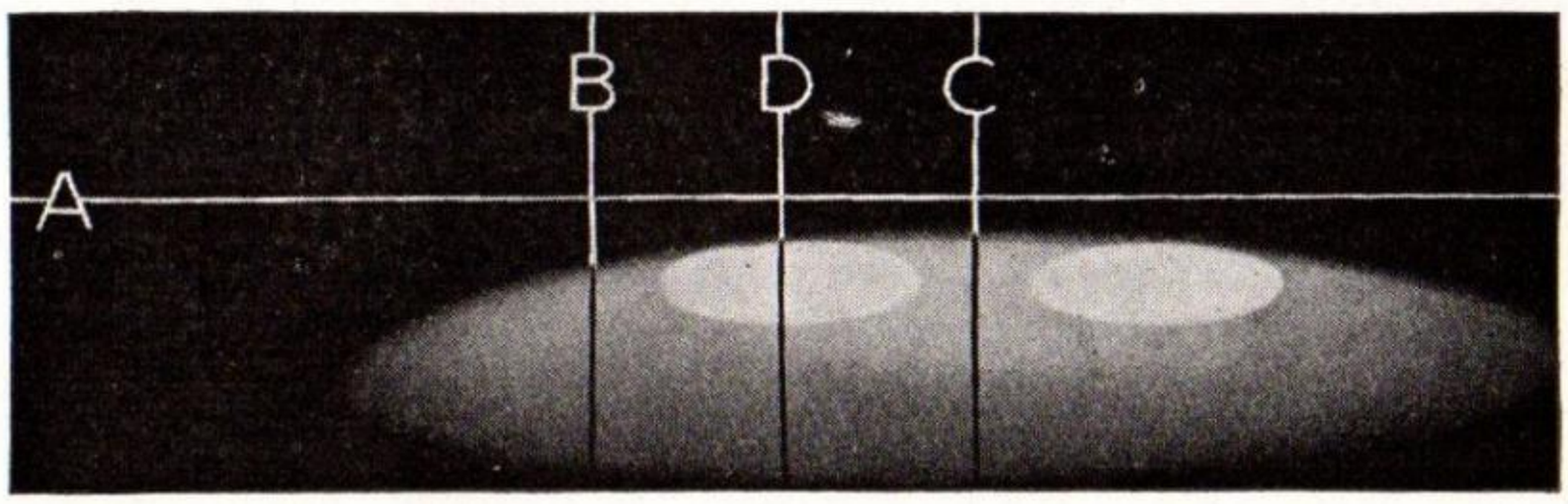


Figure 4
Passing or City Lighting Beam

VACUUM SHIFT TRANSMISSION: If your car is equipped with the automatic vacuum shift, the shift lever will be found in the center of the dash panel. Operation of this is very similar to the conventional shift. You simply shift in the regular way, the difference being that no pressure by hand is required as the vacuum mechanism does the work. Operation of the clutch pedal is the same as conventional shift.

NOTE: As the operation of the vacuum shift depends on vacuum created by operation of the engine, it is not possible to shift gears by the vacuum shift without the engine running. However, if for any reason, the battery should be discharged, and it is desired to start the engine by placing the car in high gear and having the car pushed, it is a very simple matter to make a manual shift into high gear.

Simply raise the hood on the right side and there will be found a rod, connecting the lever on the transmission case, and the vacuum control cylinder on the side of the engine. Pushing this rod to the rear will place the car in high gear.

CRUISING GEAR OPERATION: On cars equipped with cruising gear, the control button will be found below the instrument panel, slightly to the right of the center.

The cruising gear unit makes possible a 33° reduction of engine speed in relation to propeller shaft speeds, at car speeds of 40 to 45 miles per hour and up.

TO PLACE CRUISING GEAR IN OPERATION: The control button below the instrument panel is pushed "IN" or forward. This shift can be made at any speed or when the car is standing idle and it is NOT NECESSARY to release the clutch. When the car attains a speed of from 40 to 45 miles per hour, a momentary, or few seconds release of the accelerator pedal automatically permits the engagement of the cruising gear unit. The cruising gear will remain in operation until the car speed reduces to approximately 35 miles per hour, and to again place the unit in cruising gear operation, it is only necessary to increase the speed to 40 to 45 miles per hour and momentarily release the accelerator pedal, provided, of course, that the control button position has not been changed.

FOR CONVENTIONAL DRIVE: For conventional drive operation the control button is moved "OUT" or to the rear. In moving this button to the "OUT" position, **this must only be done** when the car speed is **below 35 miles** per hour or when the car is standing still.

With the car operating on the road, below 35 miles per hour the accelerator pedal should be pressed sufficiently so that the engine is driving the car, or in other words so that the car is not free-wheeling.

In making this shift, we caution you to be sure that the car is operating below 35 miles per hour, then press on the accelerator so that the engine drives the car; release the clutch and pull back the control button. Just at the moment of the shift being completed the accelerator should be released slightly to complete the shift.

In making any of the shifts do not exert any undue pressure; all that is necessary is a gentle but rapid shift for any engagement.

No Rol

If your car is equipped with the accessory known as "No Rol," the device that provides for greater ease of car control in starting on hills, see page 59.

Recommendations After 1500 Miles

Each Day .....Inspect oil level, or on long trips, with every filling of gasoline tank. Inspect level of water in radiator.

Each Week .....Check tires to recommended pressure.

Every Two Weeks .....Test battery and add distilled water as needed.

Every Six Months .....Flush cooling system and treat with one package of an anti-rust and corrosion prevention chemical—we recommend PH-7 which can be obtained from Nash dealers.

Every 1000 Miles .....Lubricate entire chassis.

Change engine oil.

Have dealer's service station make free inspection of car.

Every 2000 Miles.....Re-oil air cleaner on carburetor. See page 29.

Every 5000 Miles .....Flush transmission and rear axle and refill with new lubricant.

Adjust fan belt.

Clean gas strainer.

Tighten chassis and body bolts.

Tune engine as described under "Engine adjustment."

Every 10000 to 12000 Miles Renew spark plugs.

Renew oil cleaner—If so equipped, every 10,000 miles.

Refill shock absorbers.

CAUTION: Use only special fluid.

A CAUTION PLATE: On the left front corner post of the body and visible when the door is open is for your information and convenience. On it you may note in pencil the speedometer reading and date of the various services performed at definite intervals of either time or mileage.

For Economical Operation

— Some Suggestions —

1. Depress foot accelerator easily and in proportion to speed required.

2. Avoid rapid acceleration in second gear. Acceleration over 20 to 30 M.P.H. accomplishes very little in fast "pick up" but does use an excessive amount of gasoline.

3. Coast toward a red traffic light, or when coming to a stop, with throttle closed.

4. Under-inflated tires will cause unnecessary tire wear and the "drag" produced will affect gasoline economy.

5. Avoid unnecessary idling of engine when car is not in motion.

6. A properly tuned engine is always the most economical—tune engine every 5000 miles.

7. Use correct grade of oil for seasons, see page 23.

8. Keep cooling system full, and use Nash radiator compound in system every 6 months. A clean cooling system saves gas and oil and protects working parts of engine.

9. Drive at moderate speeds over rough roads to lessen strains on tires and all other parts of car.

10. Have your car inspected at regular intervals.

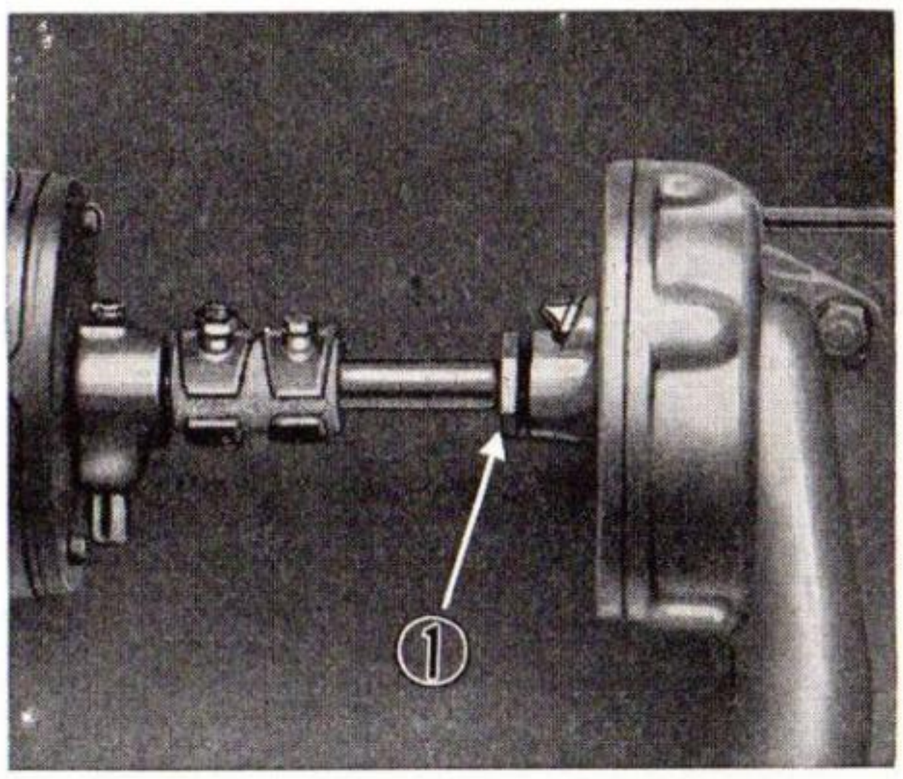


Fig. 5
Water Pump
All Series

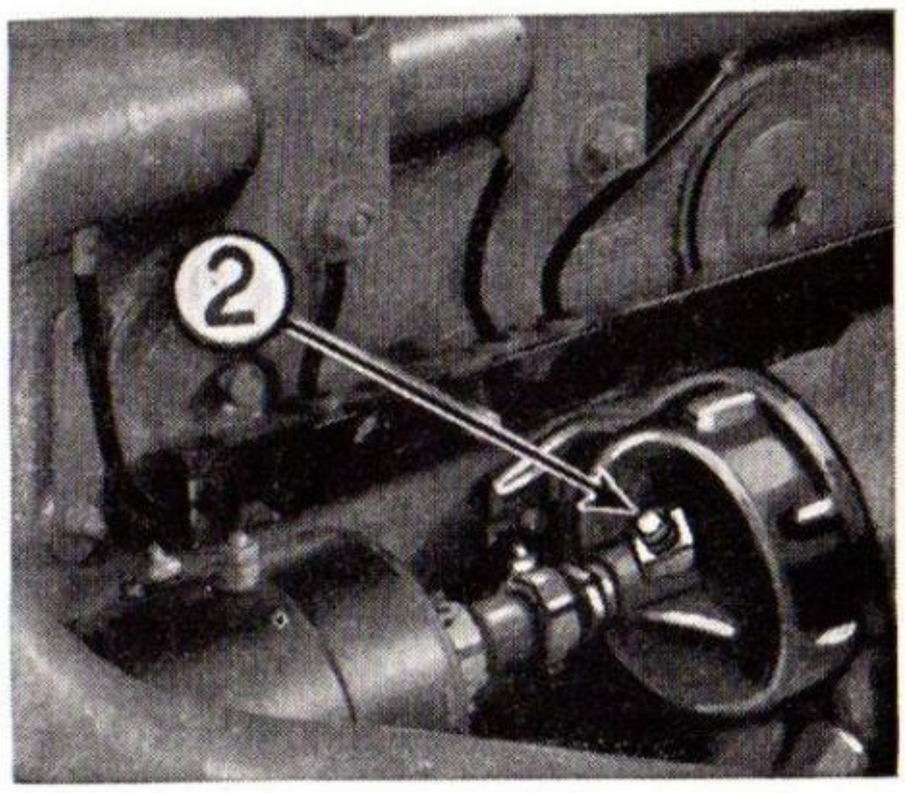


Fig. 6
Water Pump Lubrication
All Series

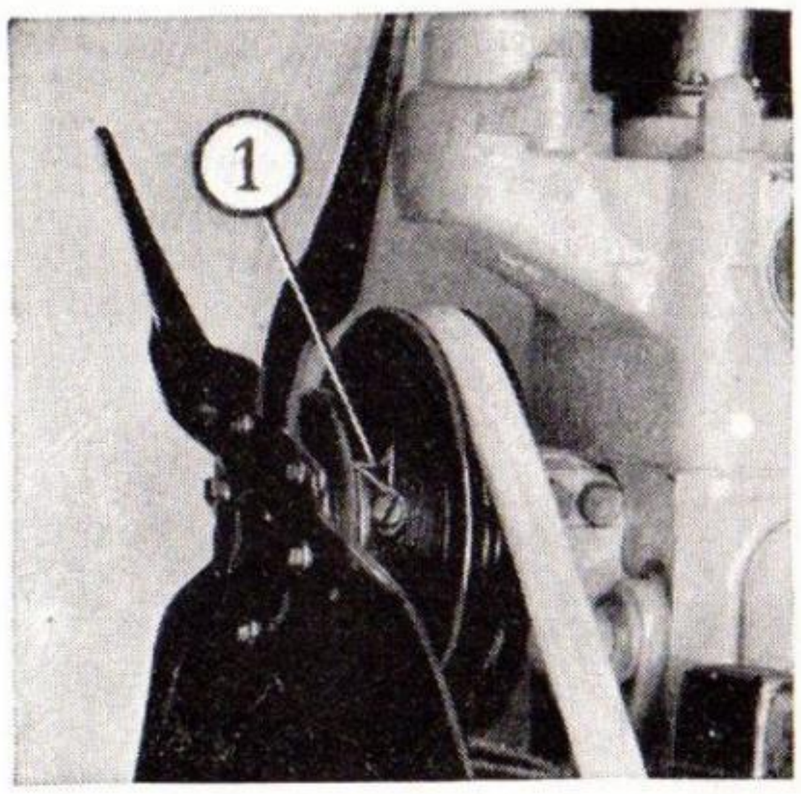


Fig. 7
Fan Lubrication

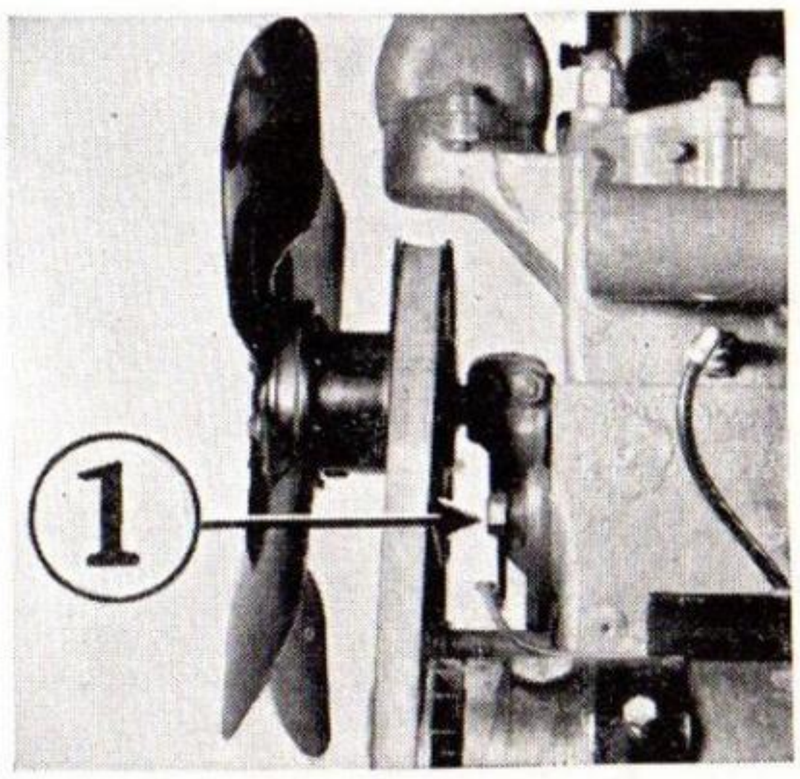


Fig. 8
Fan Adjustment

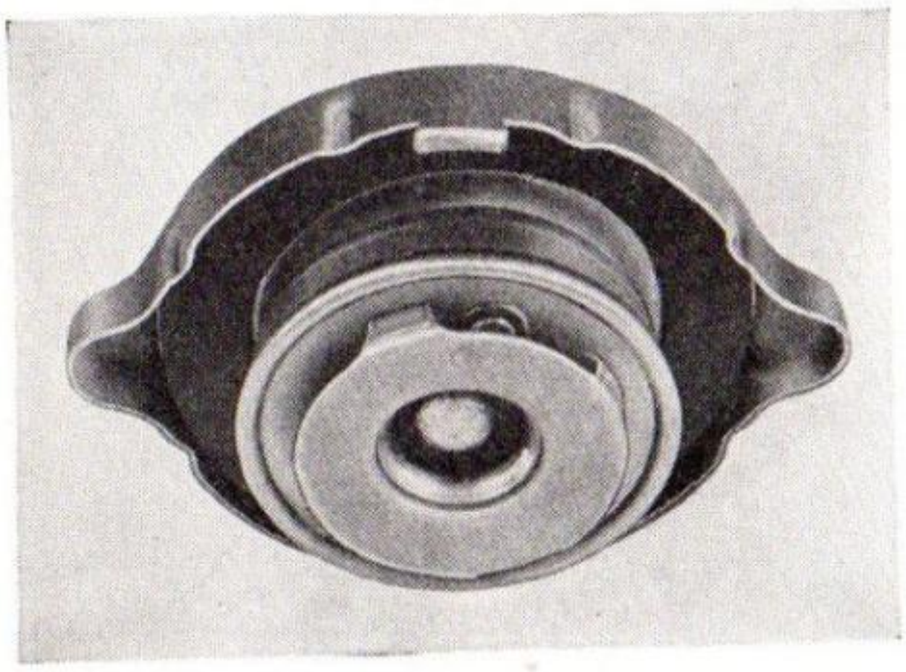


Fig. 9
Radiator Cap

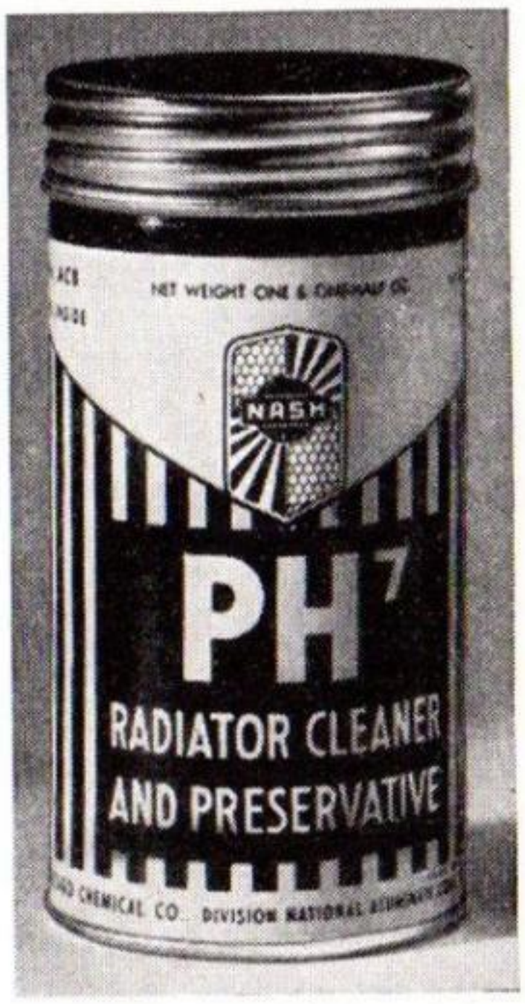


Fig. 10
Radiator Compound

FAN BELT ADJUSTMENT—Fig. 8: The fan belt is in need of adjustment if it can be depressed more than one and one-half inches by pressing lightly on it midway between generator and fan. Loosen cap screws (1) on Fig. 8, holding fan bracket to engine. Move bracket upward until fan belt can be depressed about one inch by finger and then tighten cap screws.

FAN LUBRICATION—Fig. 7—Lubrication Code "B": Use Motor Oil. Do not permit the use of non-fluid or thick lubricants in the fan. The oil circulating pump which is built into the fan will not circulate an oil, less fluid than motor oil. Remove filler plug (1) Fig. 7. Slowly inject oil from an oil can until it drops from the bottom of shaft at rear, and replace filler plug. Lubricate every 1000 miles.

ANTI-FREEZE SOLUTIONS: At the first indication of freezing weather, the cooling system should be drained and flushed out and filled with a reliable non-freezing solution. Denatured Alcohol, and Ethylene Glycol (Prestone), used with water in the proper proportions make good anti-freeze solutions. Consult the chart on page 21 for the proper proportions for various temperatures.

THERMOSTAT: The thermostat located in the outlet from the cylinder head is for the purpose of preventing water circulation through the radiator until the engine reaches a normal operating temperature.

During the warm-up period water is held in the cylinder block until the water reaches a temperature of 150° to 160°, at which time the thermostat automatically opens and allows circulation through the radiator. There are no repairs or adjustments on the thermostat, if it fails to operate it should be replaced.

The Thermostat also serves to control the correct flow of water through the system, and cars should not be operated with the Thermostat removed irrespective of climatic conditions.

WATER TEMPERATURE GAUGE: The approximate temperature of the water in the cylinder block is indicated by a temperature gauge on the dash instrument panel.

CAUTION: Do not allow cold water to be poured in the radiator when the engine is very hot or the water extremely cold, as cracking of the water jackets or other damage may result. Allow the engine to cool off before adding water.

Anti-Freeze Solutions

For protection in cold weather the following anti-freeze solutions and the proportions to use are suggested:

Model — 3880

Cooling Capacity 17 qts.	For protection down to 0° F. Add	For protection down to — 10° F. Add	For protection down to — 20° F. Add
Alcohol	7 qts.	8½ qts.	10 qts.
Ethylene Glycol (Prestone)	6 qts.	7½ qts.	8 qts.

Model — 3820

Cooling Capacity 16 qts.	For protection down to 0° F. Add	For protection down to — 10° F. Add	For protection down to — 20° F. Add
Alcohol	7 qts.	8 qts.	9½ qts.
Ethylene Glycol (Prestone)	6 qts.	7½ qts.	8 qts.

Model — 3810

Cooling Capacity 20 qts.	For protection down to 0° F. Add	For protection down to — 10° F. Add	For protection down to — 20° F. Add
Alcohol	8 qts.	10 qts.	11½ qts.
Ethylene Glycol (Prestone)	7 qts.	8 qts.	9 qts.

Temperatures given are approximately the freezing point of the solution. Precaution should be taken in the use of alcohol solutions that they are not splashed on the car finish as they will damage it.

Tests should be made with reliable hydrometers at temperatures at which the hydrometer is calibrated. Freezing point hydrometers for the various solutions mentioned above are not interchangeable as different floats are required.

Engine Oil

YOUR NEW CAR: It is not necessary or advisable to use special "running in" oils on your new car. Use a good brand of oil of the viscosity suitable to season as outlined below.

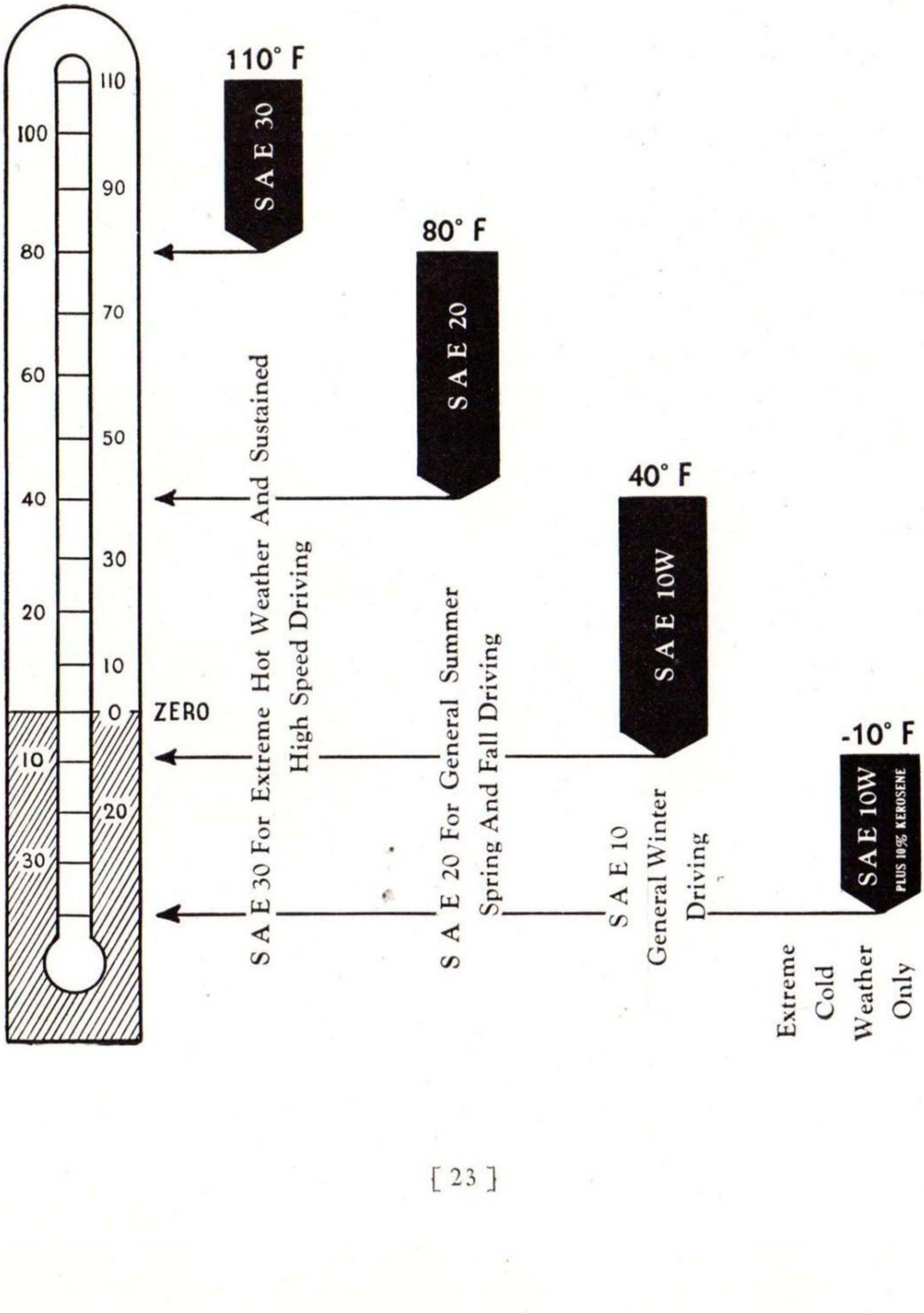
WHEN TO CHANGE OIL: Varying atmosphere and driving conditions, enter into the matter as to when oil should be changed. It is, however, recommended that on a new car, the oil be drained and new put in after 500 miles of operation. After that time, in general, the oil should be changed every 1,000 to 1,500 miles, the interval depending upon the severity of driving conditions. Cars driven at sustained high speeds in hot weather, should be drained every 1,000 miles and this recommendation applies to cars driven on dusty roads.

OIL RECOMMENDATIONS: It is important to select oils of recognized merit, bearing the label of reputable oil makers. Practically all oil companies are now using the S.A.E. number system, which classifies the oil in terms of viscosity or fluidity. Oils with the lower numbers are lighter and flow more readily than the higher numbers. The chart on page 23 shows the grade best suited for your car at the temperatures indicated. With a little study this chart will be found to be a very simple method of determining the grade of oil to use for the various temperatures. Always select oils as close to the chart according to the temperatures likely to be encountered.

OIL BATH AIR CLEANERS ON CARBURETORS: If the car is to be driven on dusty roads or in territories where dust storms are encountered, we suggest that you consult with your dealer, so that if the car was not equipped with the special oil bath air cleaner, that arrangements be made for the installation. This is supplied at a slight charge and is important in dusty territories.

Selection of Engine Oil

1. Determine the lowest expected weather temperature, during period that oil will be in engine.
2. Locate on thermometer below, lowest temperature expected, and choose oil within the range shown.



Oil Capacities and Checking Oil Levels

LUBRICATION CODE "C"—3880 SERIES—OIL CAPACITY, 7 QUARTS: A gauge is provided on left side of engine—Fig. 11. Each ¼" below the full level on the gauge indicates a consumption of about one quart —readings on this series should be taken when engine is running. Keep oil to full level.

3820 SERIES—OIL CAPACITY—7 QTS.: To check quantity of oil, stop engine, withdraw blade—Fig. 12, wipe off oil from blade, reinsert blade and again withdraw. Each quarter of inch below "full" indicates consumption of about one quart. Keep oil to full level.

3810 SERIES—OIL CAPACITY—6 QUARTS: To check quantity of oil, stop engine, withdraw blade—Fig. 12, wipe off oil from blade, reinsert blade and again withdraw. Each quarter of inch below "full" indicates consumption of about one quart. Keep oil to full level.

NOTE: Make it a practice to check the oil level each day, or at every filling of the gasoline tank. You will of course not require oil at each check, but following a definite time will mean that it is not overlooked.

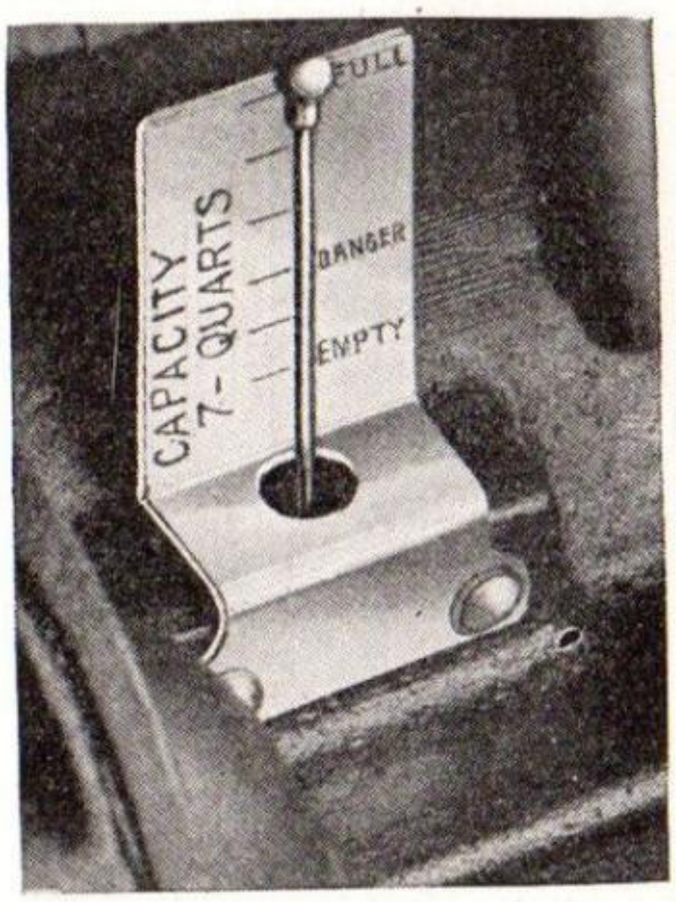


Fig. 11
3880

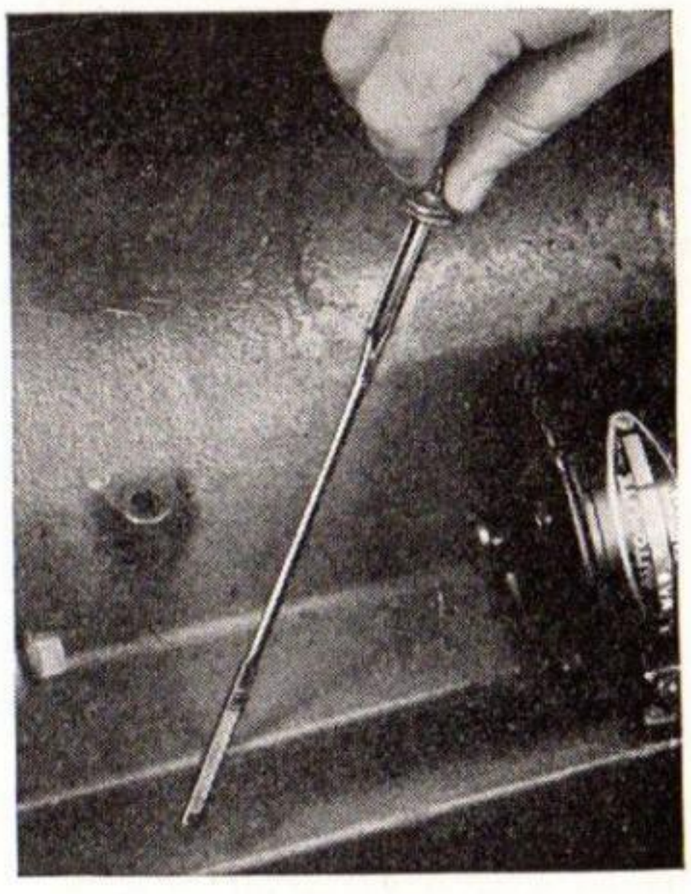


Fig. 12
3820 and 3810

Lubrication

Regular and systematic lubrication of your car, using the proper material, in the right quantities, is the most vital part in the maintenance of your car.

In this book has been outlined the complete procedure of this important operation.

We cannot urge too strongly, the fact that your best interests are served and your investment protected, by starting the operation of your new car with a definite plan in mind for regular lubrication.

Make it a habit to record your lubrications on the plate provided on the left front door, and also on the record provided on page 60 of this book. Have lubrication performed regularly as outlined in the Nash procedure, and have this important operation performed by Authorized Nash Dealers.

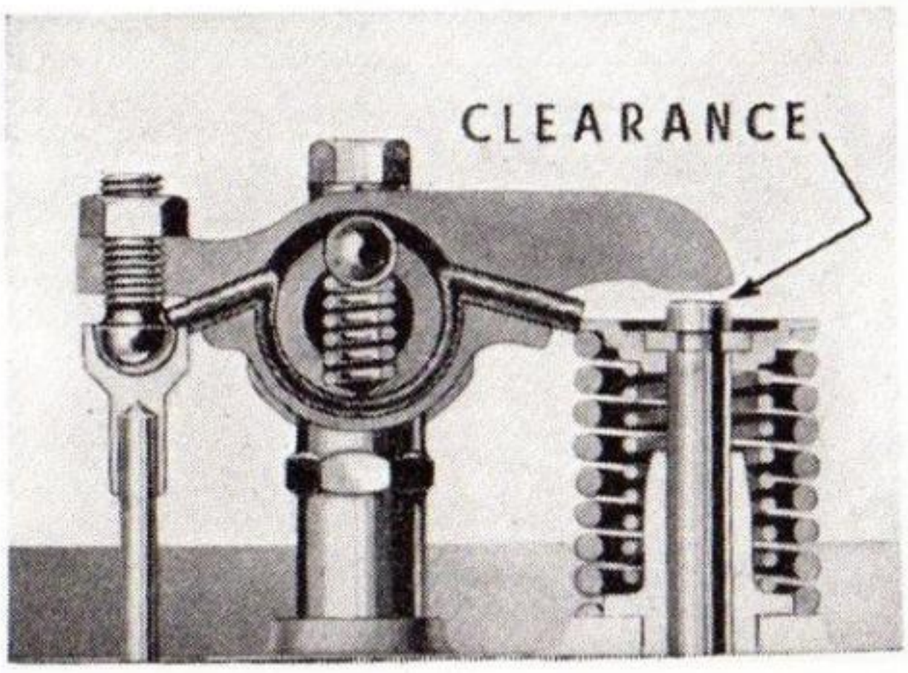


Fig. 13
3880-3820 Valve Adjustment

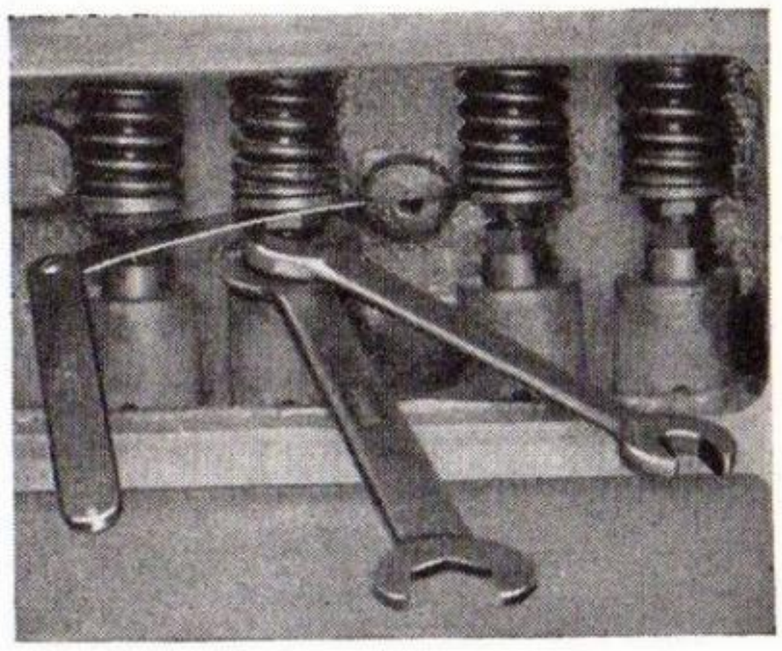


Fig. 14
3810 Valve Adjustment

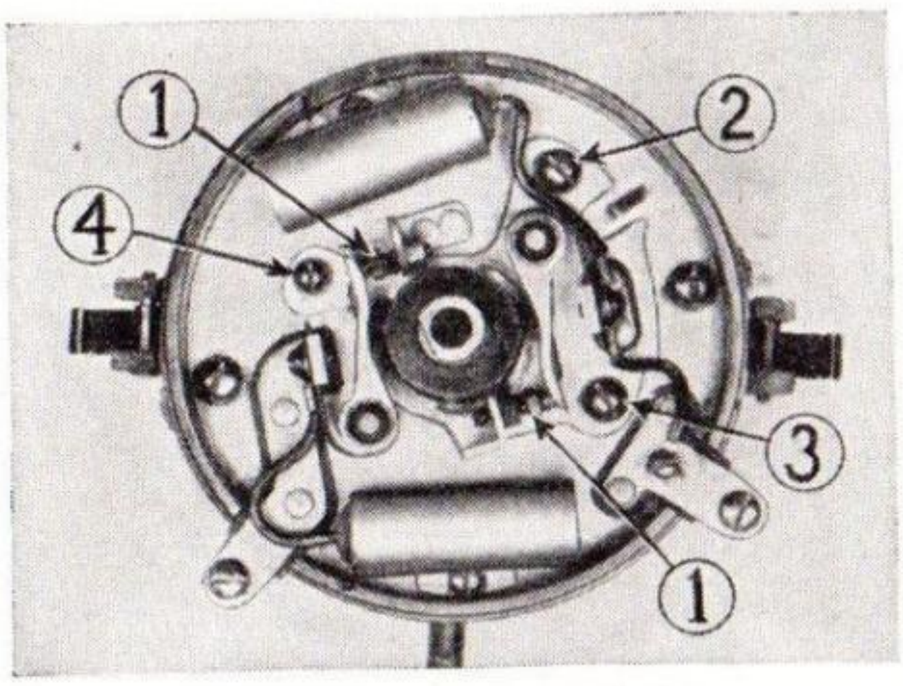


Fig. 15
3880-3820 Distributor Points

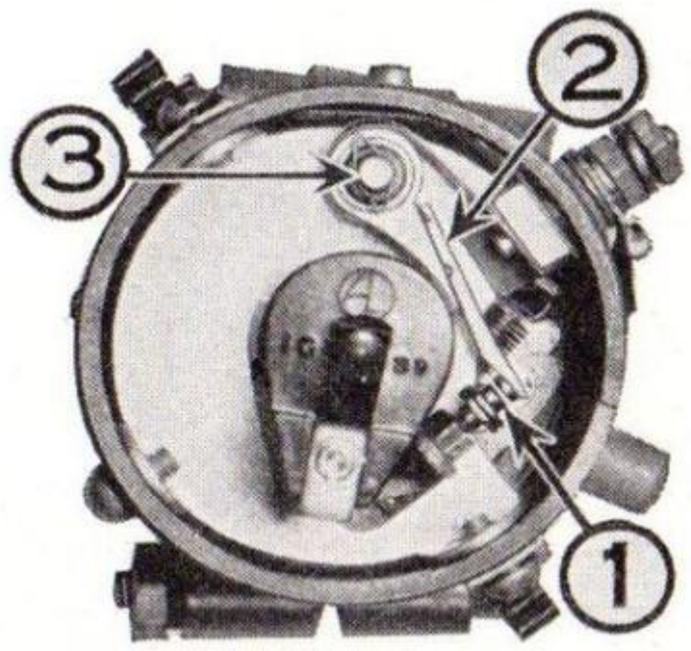


Fig. 16
3810 Distributor Points

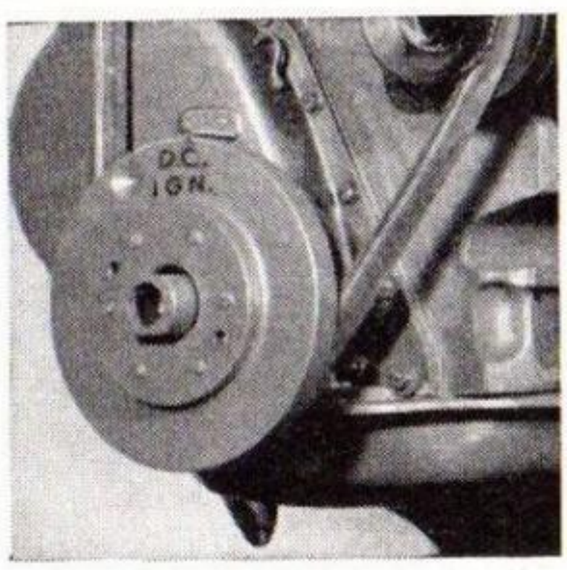


Fig. 17
Timing Engine

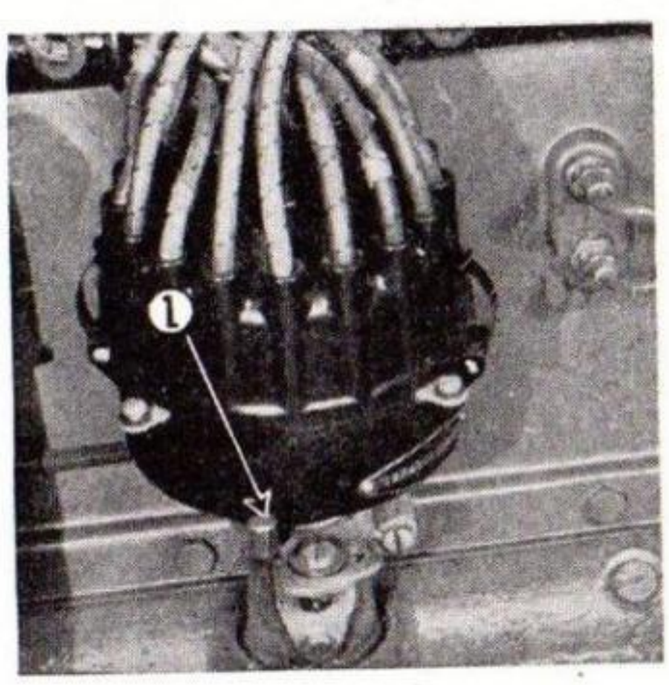


Fig. 18
3880-3820
Distributor Lubrication

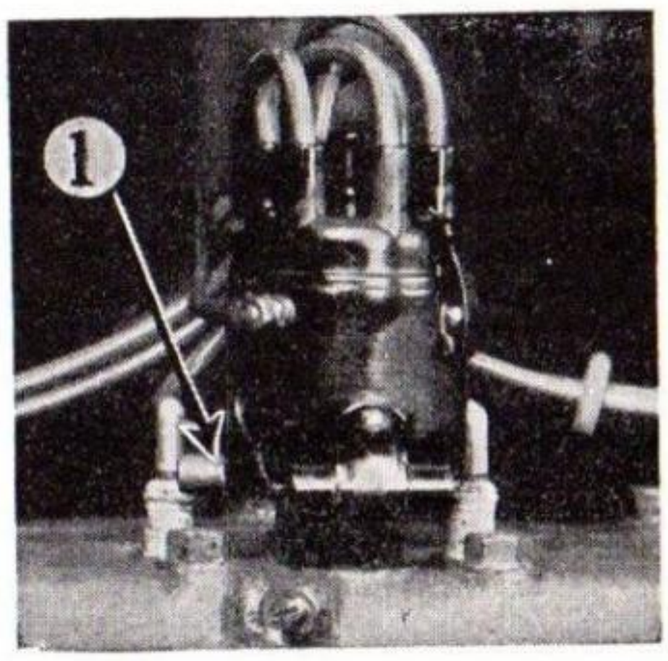


Fig. 19
3810 Distributor Lubrication

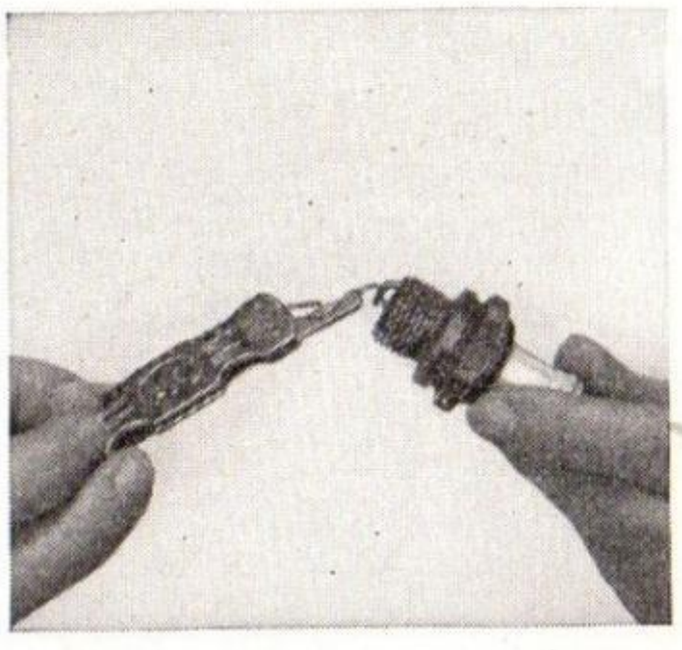


Fig. 20
Setting Spark Plugs

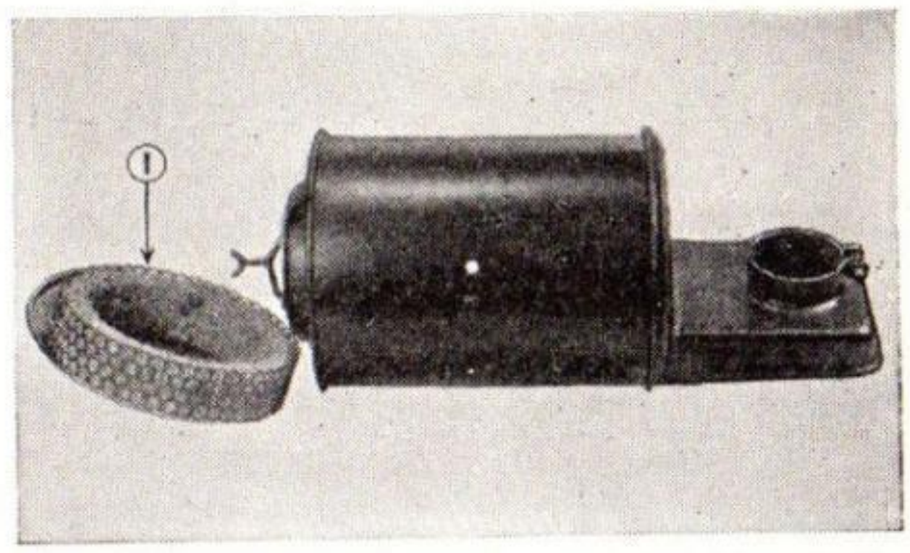


Fig. 21
Air Cleaner—Regular

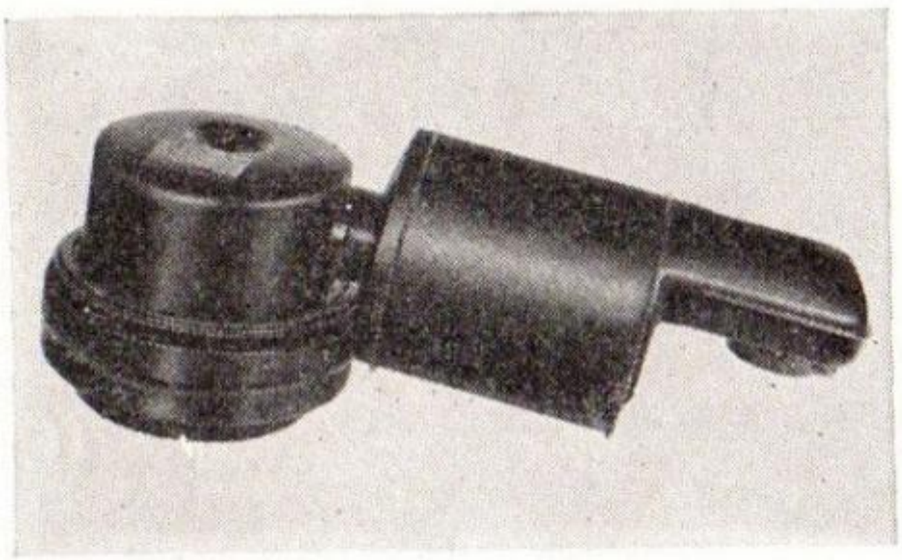


Fig. 22
Air Cleaner—Oil Bath Type

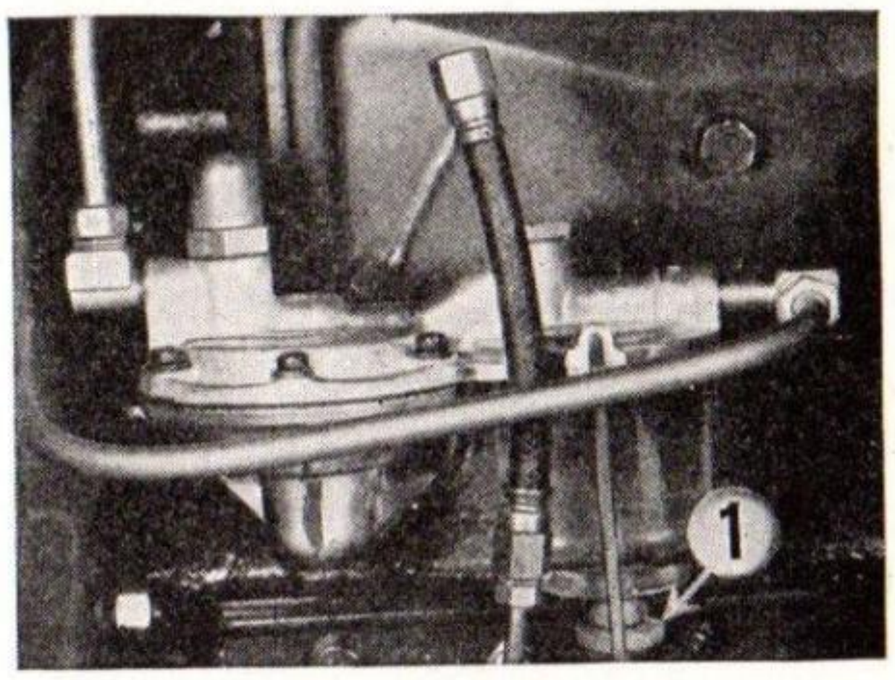


Fig. 23
Fuel Pump

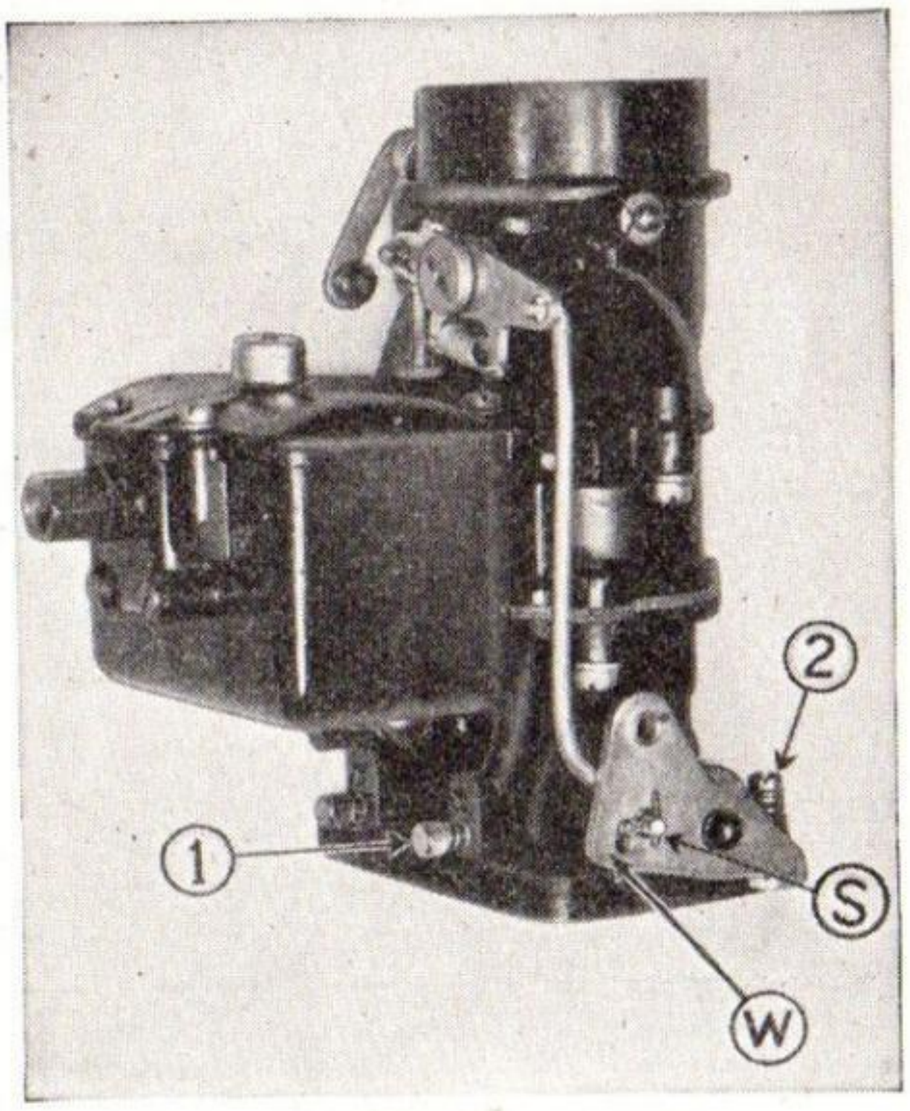


Fig. 24
Stromberg Carburetor
3880

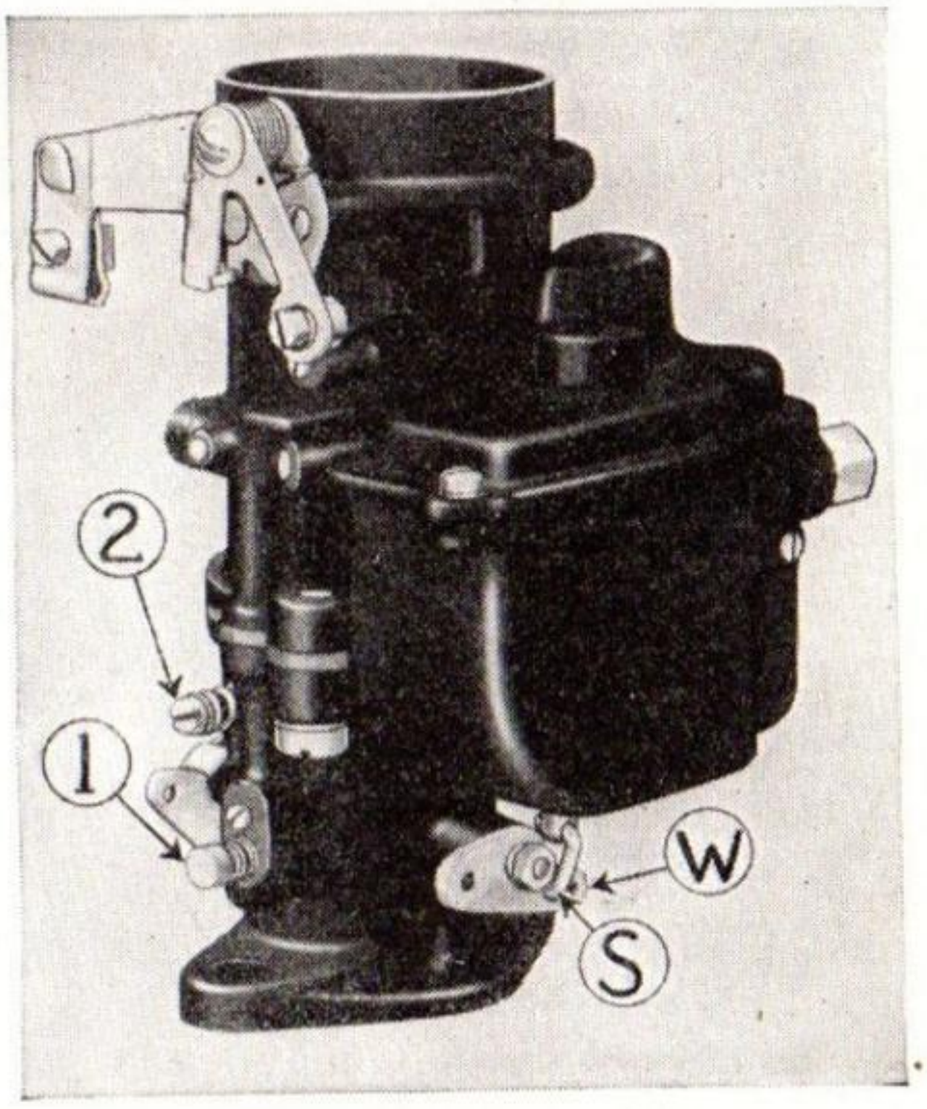


Fig. 25
Stromberg Carburetor
3810

DISTRIBUTOR POINTS—3810—Fig. 16: If points show signs of pits or burns, remove points and level off, by polishing on stone.

To adjust points, turn motor until points (1) are opened to widest gap and then adjust gap with screw point so gap is .020″. Use feeler gauge.

Place small piece of vaseline between contact fibre arm and cam. Place one drop of oil on pivot arm (3). Lubricate felt at top of distributor shaft with a few drops of oil.

IGNITION TIMING—3810—Fig. 17: Correct timing is important and should be carefully checked. To adjust turn motor until I.G.N. mark on front vibration dampener is directly under pointer.

Loosen set screw at base of distributor and shift distributor so points are just ready to open (Distributor shaft turns clockwise). Tighten set screw and lock with lock nut. For accuracy we recommend the use of Nash timing lights.

DISTRIBUTOR LUBRICATION—Figs. 18 and 19—Lubrication Code "D": Lubricate every 1000 miles with a few drops of oil in oil cup (1).

SPARK PLUGS—Fig. 20: Spark plug gaps should be set at .025″, except in cases of radio equipped cars and if suppressors are used on spark plugs it may be necessary to set at .030″.

Set plugs with wire gauge as this is more accurate than flat gauge. To adjust, bend electrode attached to steel shell. Never bend center wire.

When necessary to clean plugs we recommend they be cleaned with a quartz blast cleaner. Nash dealers make a very small charge for this service.

AIR CLEANER—REGULAR—Fig. 21: Every 2000 miles, or more frequently if operated under dusty conditions, remove filter element (1) on Fig. 21 and wash in gasoline. Allow filter to dry and then re-oil with engine oil. Drain off excess oil and reassemble.

NOTE: If car is to be driven in extremely dusty territory we suggest you consult with your dealer regarding the installation of an oil bath type cleaner.

HEAVY DUTY OIL BATH AIR CLEANER—Fig. 22: Remove filter element, and wash off in gasoline every 5000 miles or more frequently if necessary. Clean out oil base and refil to level indicated on outside. This will require approximately one pint of oil. Use SAE-50 in summer and SAE-20 in winter. Drain off filter element and reassemble.

Stromberg Carburetor — 3880 — Fig. 24

IDLE ADJUSTMENT: Two adjustments (No. 1) for idle engine speed. Adjust with engine at normal operating temperature. Screw in or out on both idle screws (1) a little at a time until motor idles smoothly. Screwing in gives a "leaner" mixture; screwing out gives a "richer" mixture.

MOTOR SPEED: Motor speed with throttle closed controlled by stop screw (2). Do not set for slower than 7 miles per hour car speed in high gear. If cruising gear is used continuously and the motor is inclined to stall when coasting it may be necessary to set the throttle stop screw so the motor will idle slightly faster, possibly to nine miles per hour car speed.

ACCELERATING PUMP: Two adjustments—S and W on arm of throttle.

Set rod in "S" hole in warm weather and "W" hole in winter.

If carburetor pops back or engine hesitates on rapid acceleration set in "W" hole.

If engine seems sluggish and slow to get away set in "S" hole.

While the "S" and "W" holes are not marked on the throttle lever they are so designated for easy reference.

Stromberg Carburetor — 3810 — Fig. 25

IDLE ADJUSTMENT: One adjustment (No. 1) for idle engine speed. Adjust with engine at normal operating temperature. Screw in or out on idle screw (1) a little at a time until motor idles smoothly. Screwing in gives a "leaner" mixture; screwing out gives a "richer" mixture.

MOTOR SPEED: Motor speed with throttle closed controlled by stop screw (2). Do not set for slower than 7 miles per hour car speed in high gear. If cruising gear is used continuously and the motor is inclined to stall when coasting it may be necessary to set the throttle stop screw so the motor will idle slightly faster, possibly to nine miles per hour car speed.

ACCELERATING PUMP: Two Adjustments—S and W on arm of throttle.

Set rod in "S" hole in warm weather and "W" hole in winter.

If carburetor pops back or engine hesitates on rapid acceleration set in "W" hole.

If engine seems sluggish and slow to get away set in "S" hole.

While the "S" and "W" holes are not marked on the throttle lever they are so designated for easy reference.

FUEL PUMP—Fig. 23: The fuel pump is provided with a strainer bowl, to prevent dirt from the gas tank reaching the carburetor. The strainer bowl should be removed at intervals, by loosening screw (1) Fig. 23, and the bowl cleaned out. In replacing, tighten screw securely, and be sure that gasket is in position.

Marvel Carburetor — Nash 3820

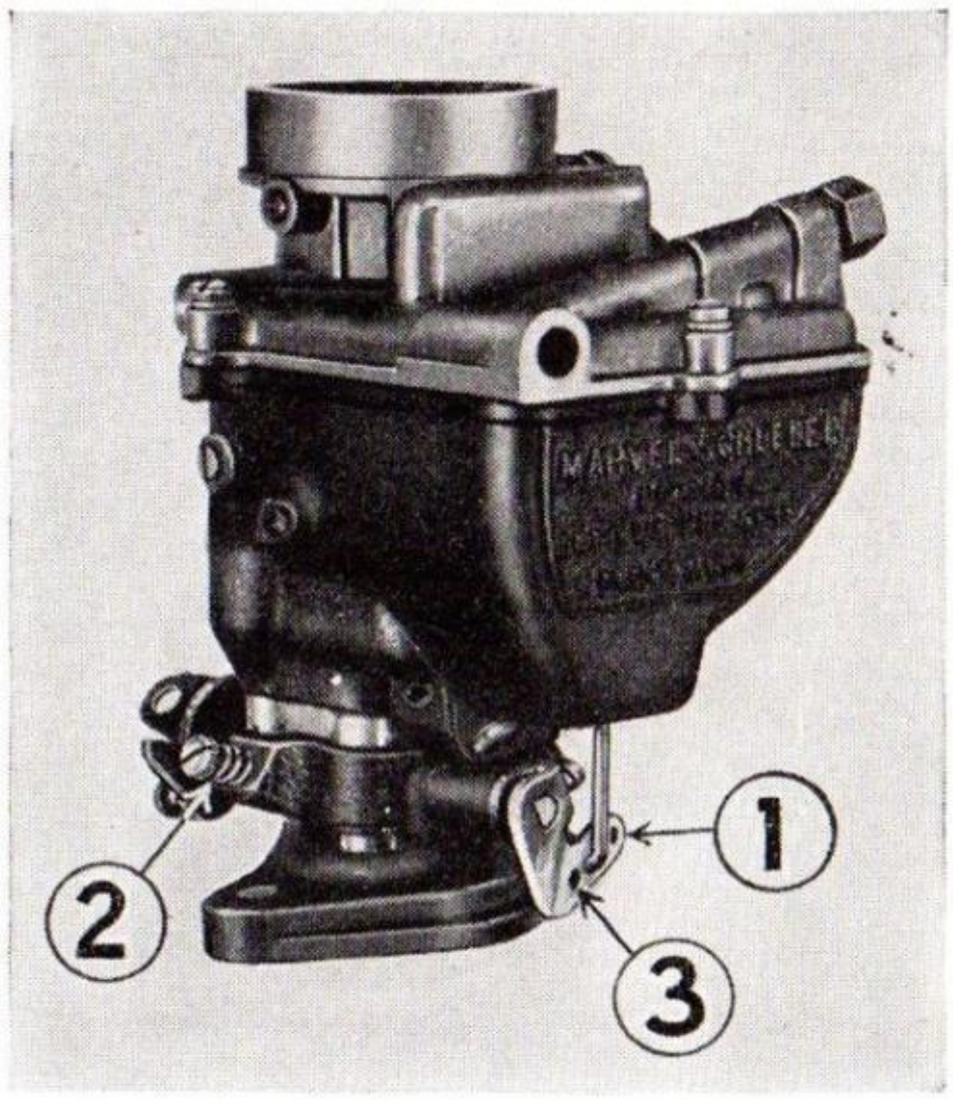


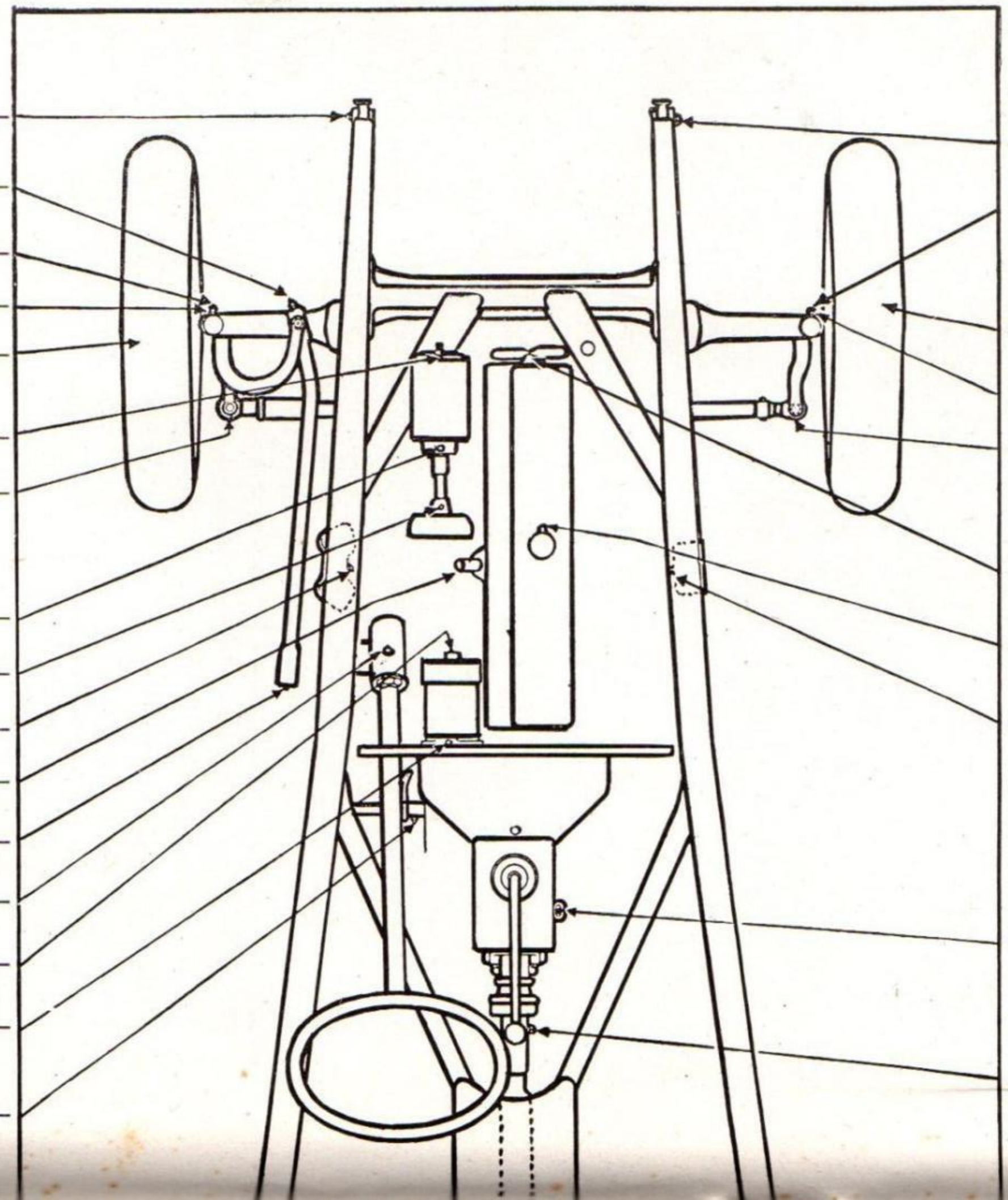
Fig. 26

ADJUSTMENT—Marvel Carburetor: If after checking all other points on engine, you find it necessary to adjust carburetor proceed as follows: With engine warmed up set throttle stop screw so that engine idles at a speed equivalent to 5 to 7 miles per hour on level road. Idle adjusting needle (No. 2 Fig. 26) controls the idle mixture. Turn needle (No. 2 Fig. 26) out slowly until engine "rolls" from richness, then turn needle in slowly until engine "lags" or runs irregularly from leanness. This step will give an idea of the idle adjustment range, and mixtures. Turn needle out slowly to the richest mixture that will not cause the engine to "roll" or run unevenly. **This adjustment will in most cases give a slower idle speed than a slightly leaner adjustment with the same throttle stop screw setting, but will give the smoothest road operation. A change in idle mixure will change the idle speed, and it may be necessary to re-adjust idle speed with throttle stop screw to the desired point.**

PUMP STROKE SETTING—Marvel Carburetor: This is a seasonal adjustment with No. 1 hole (No. 1 Fig. 26) giving the shortest stroke or least amount of accelerating fuel, and No. 3 hole (No. 3 Fig. 26) giving the longest stroke or maximum amount of accelerating fuel. For cars operating in moderate climates hole No. 2 is recommended; however for extremely hot weather, or for high test foreign fuels, hole No. 1 may be necessary to prevent heaviness or slowness on acceleration, and for extremely cold weather with low grade fuels, a setting giving more fuel may be required to give best performance. The setting is designed adjustable to meet all ranges of temperature and fuel conditions encountered in service.

LUBRICATION CHART

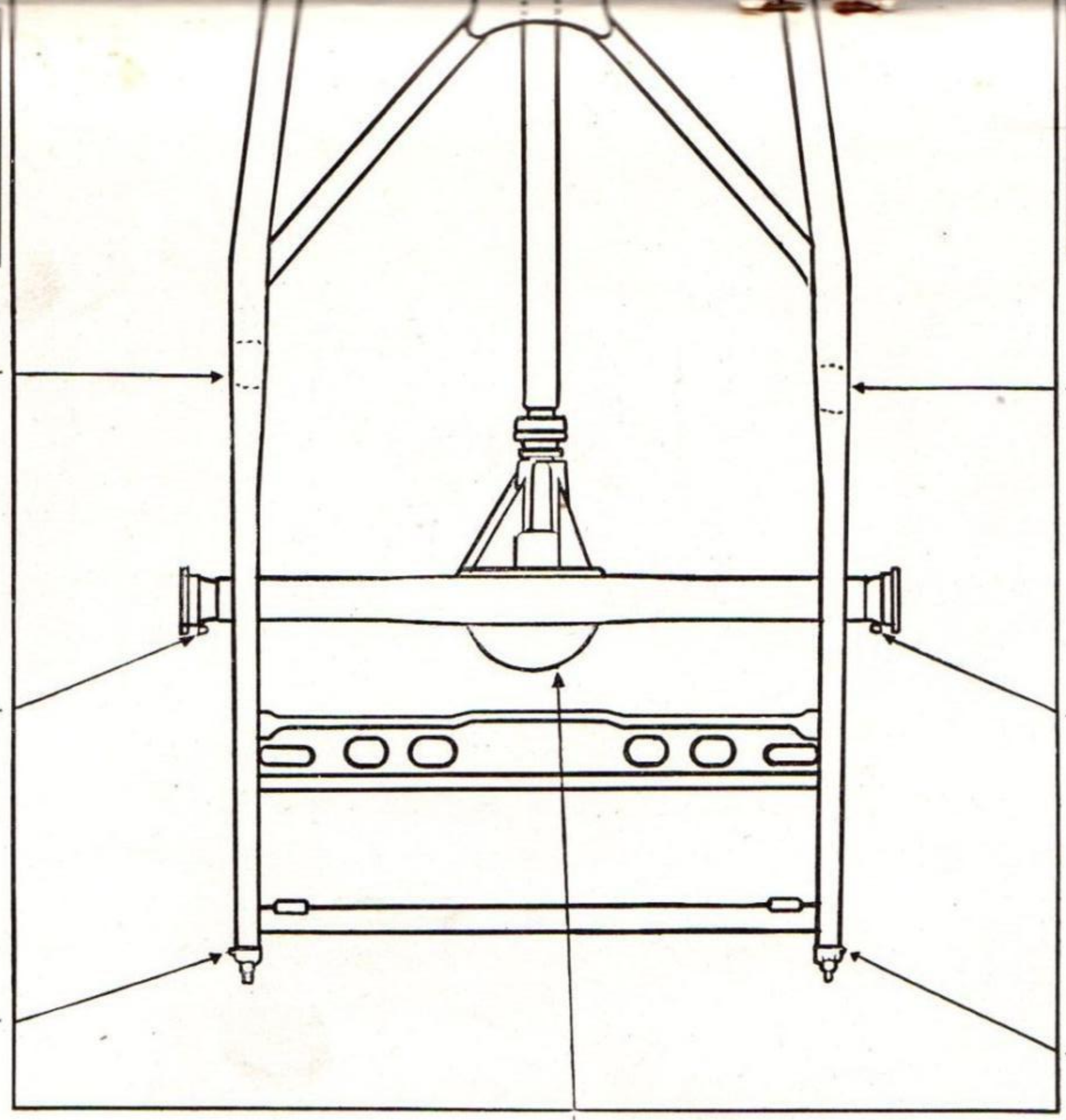
LUBRICANT	MILEAGE	PAGE NO.	CODE
A	1000	45	T
A	1000	43	R
Upper B	1000	43	P
Lower A	1000	43	P
F	5000	41	L
B	1000	35	F
A	1000	43	R
B	1000	35	F
D	2000	19	A
A	1000	45	U
B	1000	24	B
A	1000	43	R
C	1000	43	S
B	1000	35	E
B	1000	35	E
A	1000	39	H



LUBRICANT	MILEAGE	PAGE NO.	CODE
A	1000	45	T
Upper B	1000	43	P
F	5000	41	L
Lower A	1000	43	P
A	1000	43	R
B	1000	20	B
B	1000	29	D
A	1000	45	T
E	1000	39	G
A	3000	41	M

ENGINE OIL CAPACITY	
3880	7 Qts.
3820	7 Qts.
3810	6 Qts.

TRANSMISSION	
Regular	3½ Lbs.
With Cruising Gear	6 Lbs.



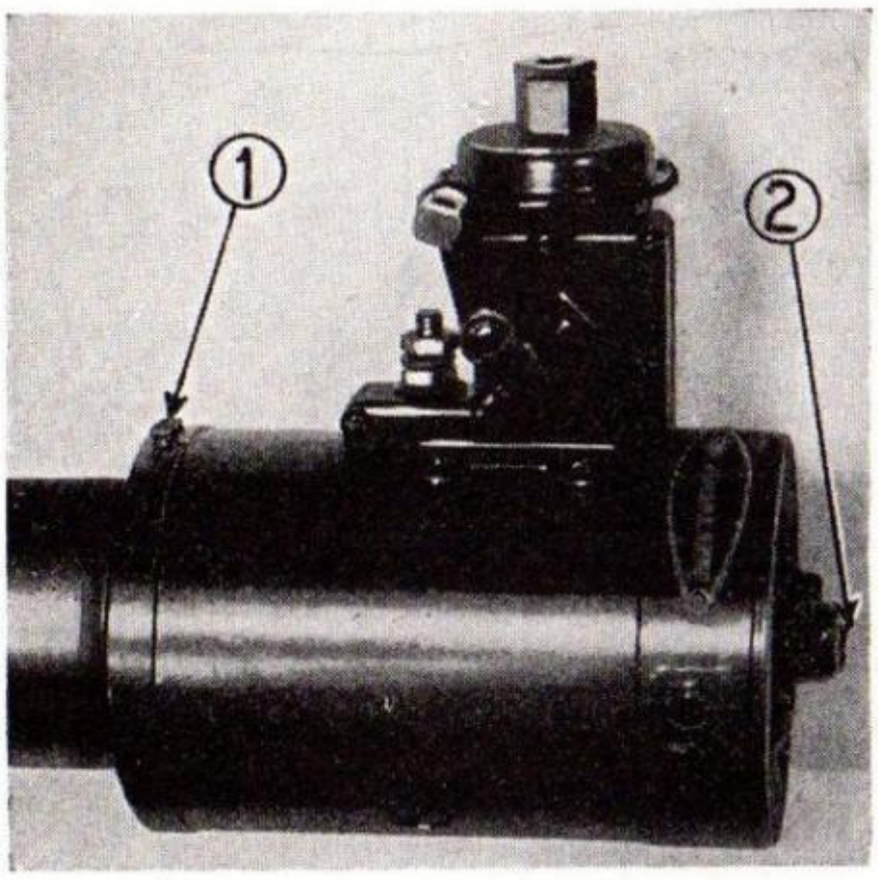
REAR AXLE	
3880	6 Lbs.
3820-3810	4 Lbs.

FIRST LETTER
Type of Lubricant

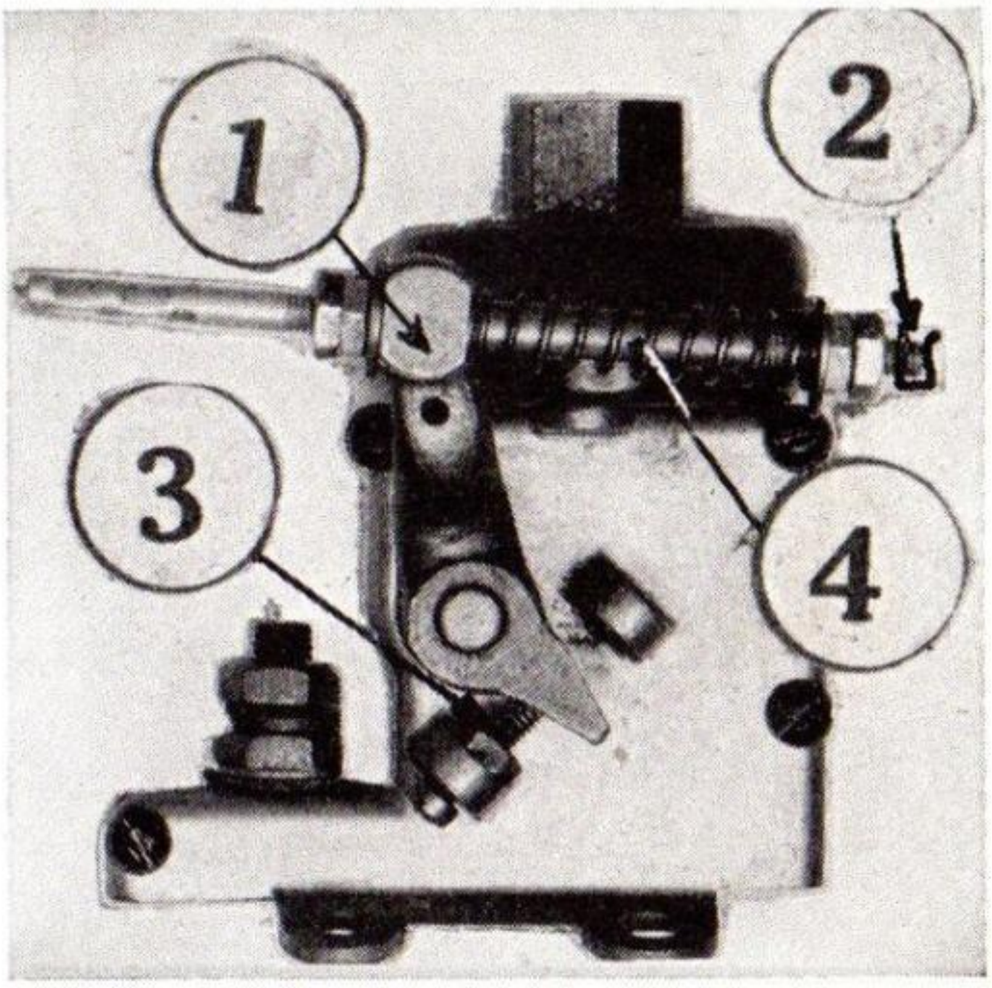
A—Chassis Lubricant
B—Motor Oil
C—Steering Gear Oil
D—Water-Pump Lubricant
E—Nash Approved Lubricant
F—Wheel Bearing Lubricant

Mileage Shows Intervals of Lubrication

Page No. and Code:
See Page No. Shown for Special Information on Specific Point to be Lubricated.

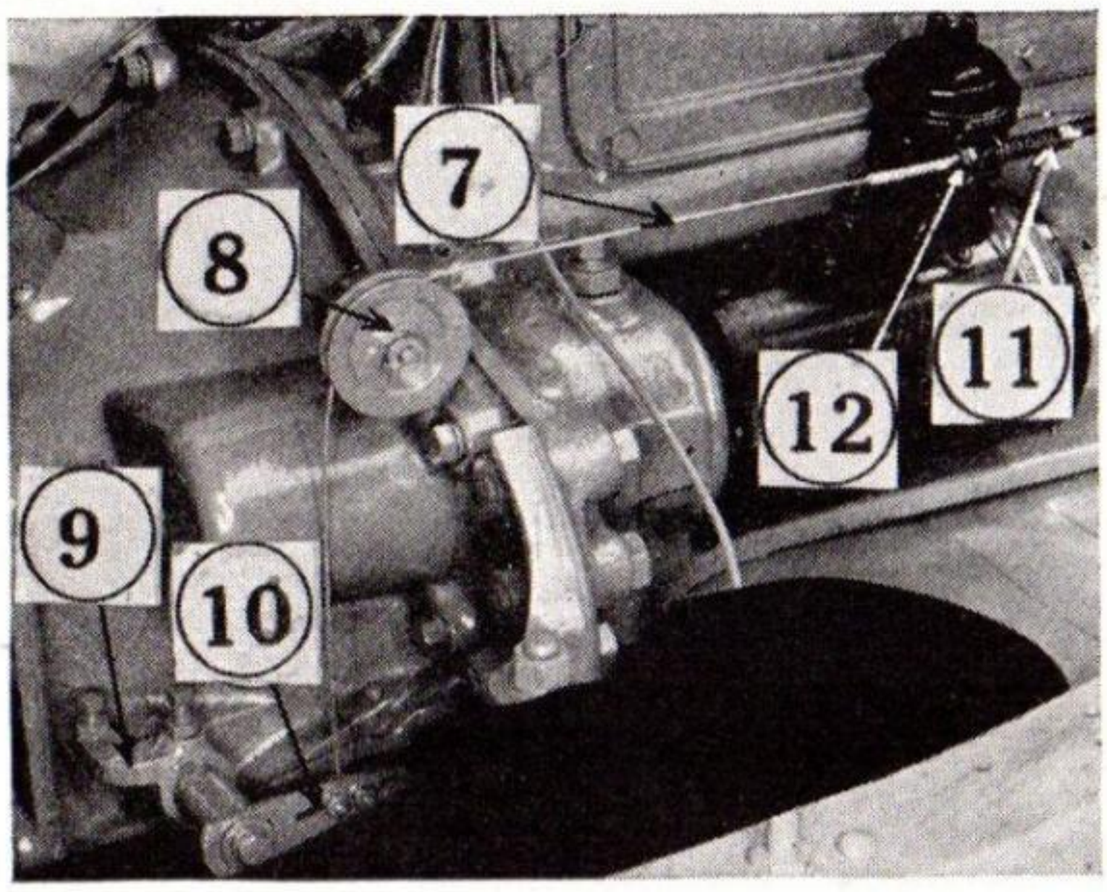


Starter
Nash 8
Fig. 27



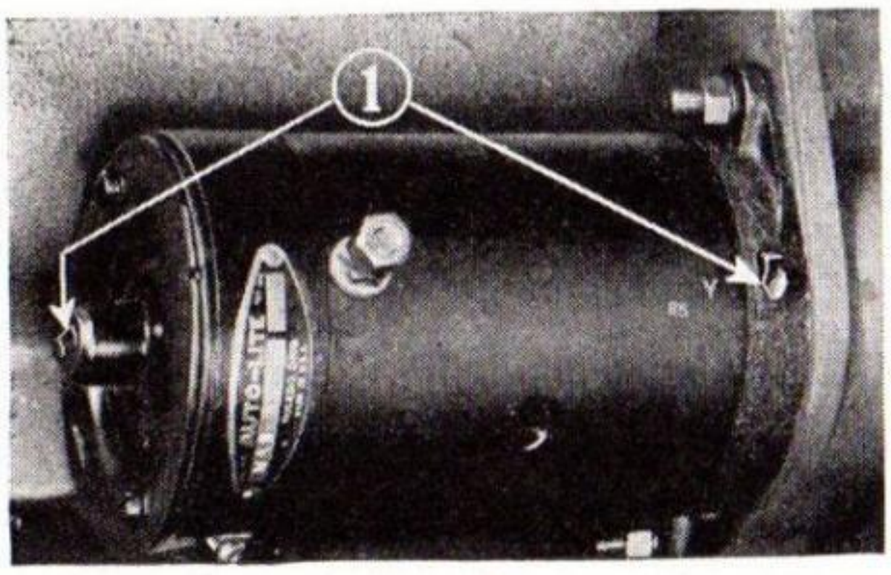
Starter Switch
Nash 8
Fig. 28

1—Switch Lever
2—Lock Wire
3—Lever Adj.
4—Switch Spring

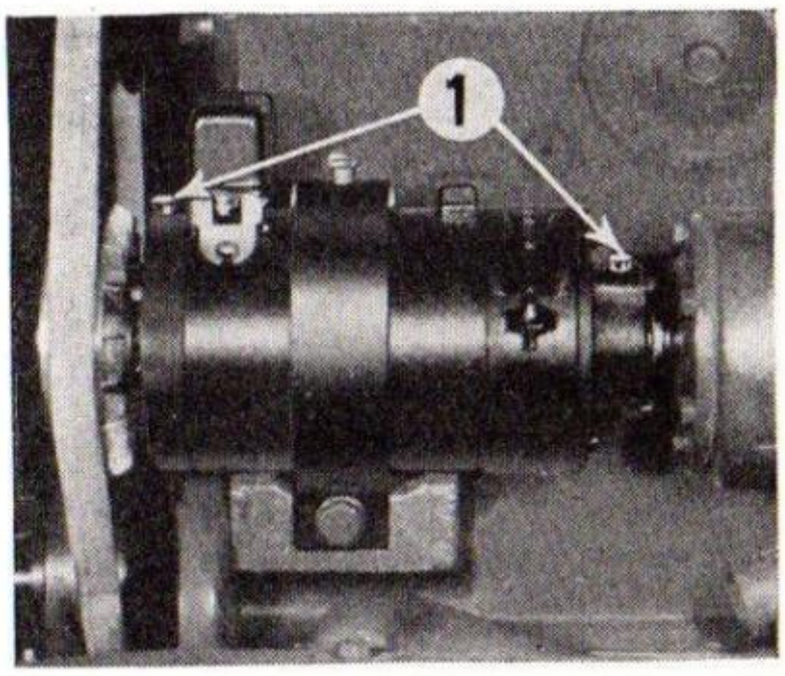


Starter Control
Nash 8
Fig. 29

7—Cable
8—Pulley
9—Clutch Shaft Lever. (Must have clearance)
10—Lever on Clutch Shaft
12—Spring Adjusting Nuts



Starter
Fig. 30



Generator
Fig. 31

CHARGING RATE—3820-3810 Regular Generator: Charging rates should be adjusted to driving and seasonable driving conditions. The maximum adjustment on the generator on the Model 3820 and 3810 is 21 amperes, this adjustment being made by means of a third brush regulator. The adjustment should be made while the generator is hot and tests should be made at the generator.

CHARGING RATE—3820-3810 Special Generator: If your model 3820 or 3810 is equipped with the special shunt wound generator, for carrying the extra loads, if equipped with radio and other electrical accessories, the charging rate and instructions are the same as described below for the model 3880.

GENERATOR—3880: On the Nash Eight, and as special equipment on 3820 and 3810 a shunt wound generator is used, having a maximum output of 28 amperes.

The maximum output is controlled by a separate unit located on the frame and known as a voltage regulator. With this type of control the voltage regulator holds the voltage control, and the amount of charge which the battery receives varies according to the state of the battery. Therefore, if the ammeter shows a considerable variation in reading on one day, compared to another day at the same speed, it is not an indication of generator trouble, but that the generator and regulator are functioning correctly. As the extra current is required by switching on the various electrical units, the generator output increases to take care of the loads up to the limit of the generator capacity.

Repairs or adjustments should only be made at an authorized service station.

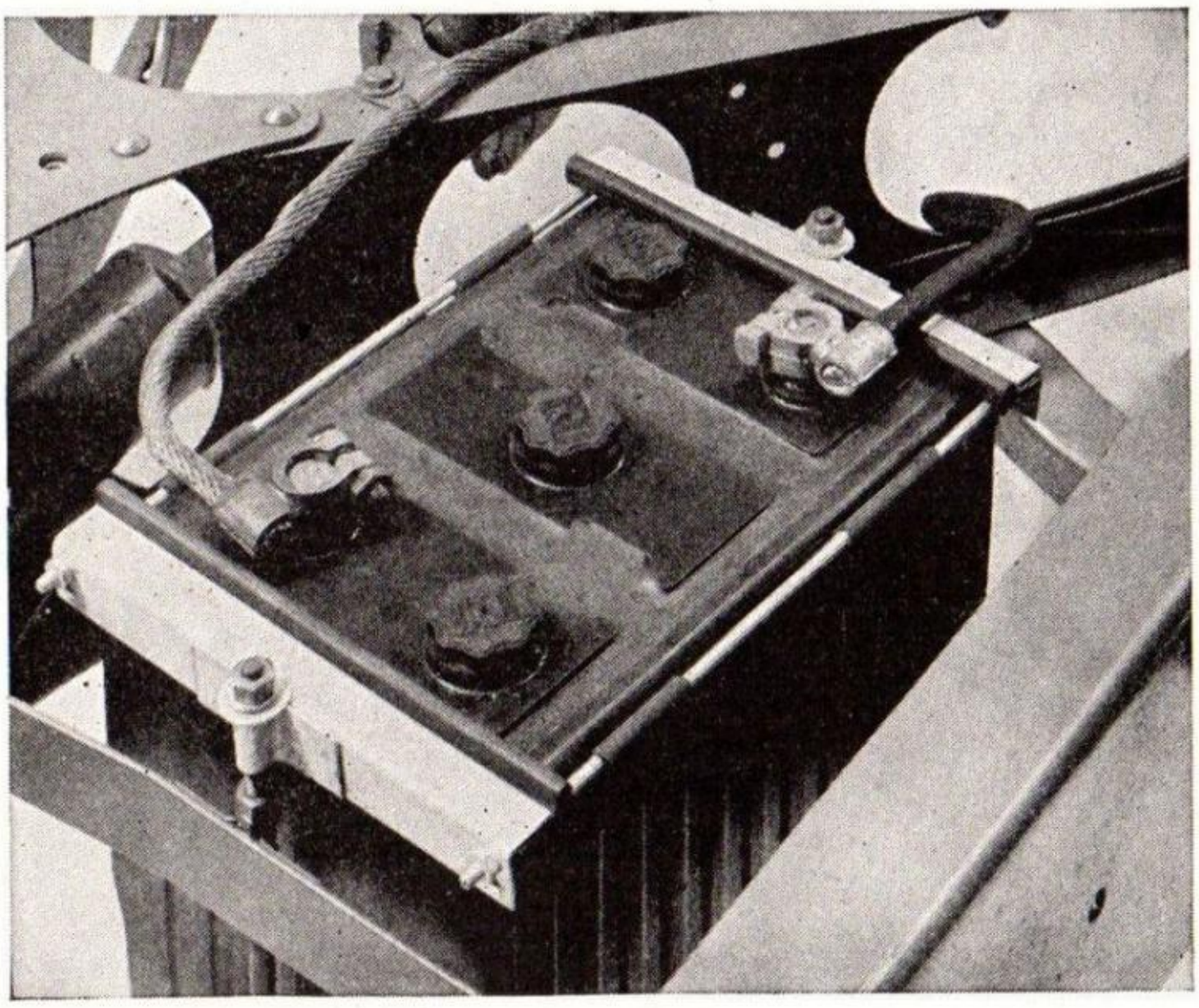
CARE OF BATTERY: The battery requires very little attention, but that little is important. Neglect of a few simple fundamentals is the principal cause of battery failure or short life. Only distilled water should be added to the battery, at intervals that will assure the plates being covered at all times. Usually this means distilled water should be added once a week in hot weather and every two weeks in colder weather.

In filling battery see that the plugs are kept tight and the top of battery is kept clean and dry.

Occasionally inspect the ground cable from the battery to the frame, as looseness at this point is a major cause of burning out light bulbs and pitting of distributor points. This is also essential if car is equipped with a generator voltage regulator.

Hydrometer readings should be made at intervals and this inspection will be made by any Nash service station. A battery to be in good condition should register a hydrometer reading of not less than 1.250 in climates where freezing occurs, or 1.180 in climates not subject to freezing.

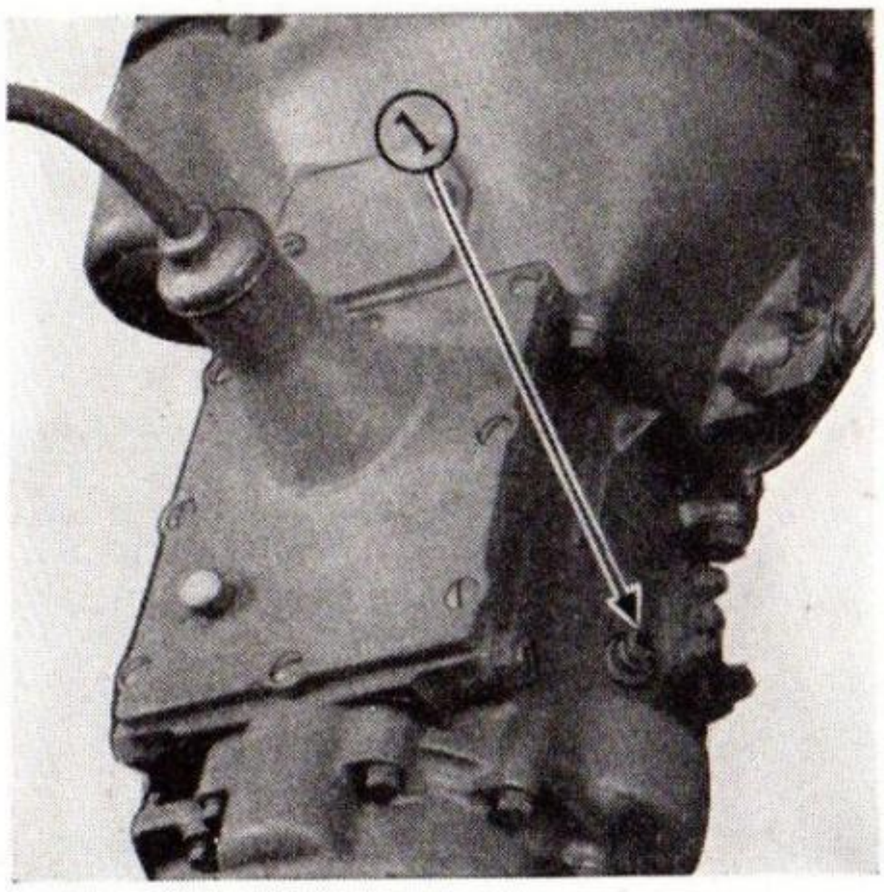
Do not add acid to the battery, for except in cases of broken jars or deterioration of the sealing compound loss of acid will not occur, and should acid be required it indicates that other repairs are necessary. Owners are cautioned against the use of any so-called quick electrolytes.



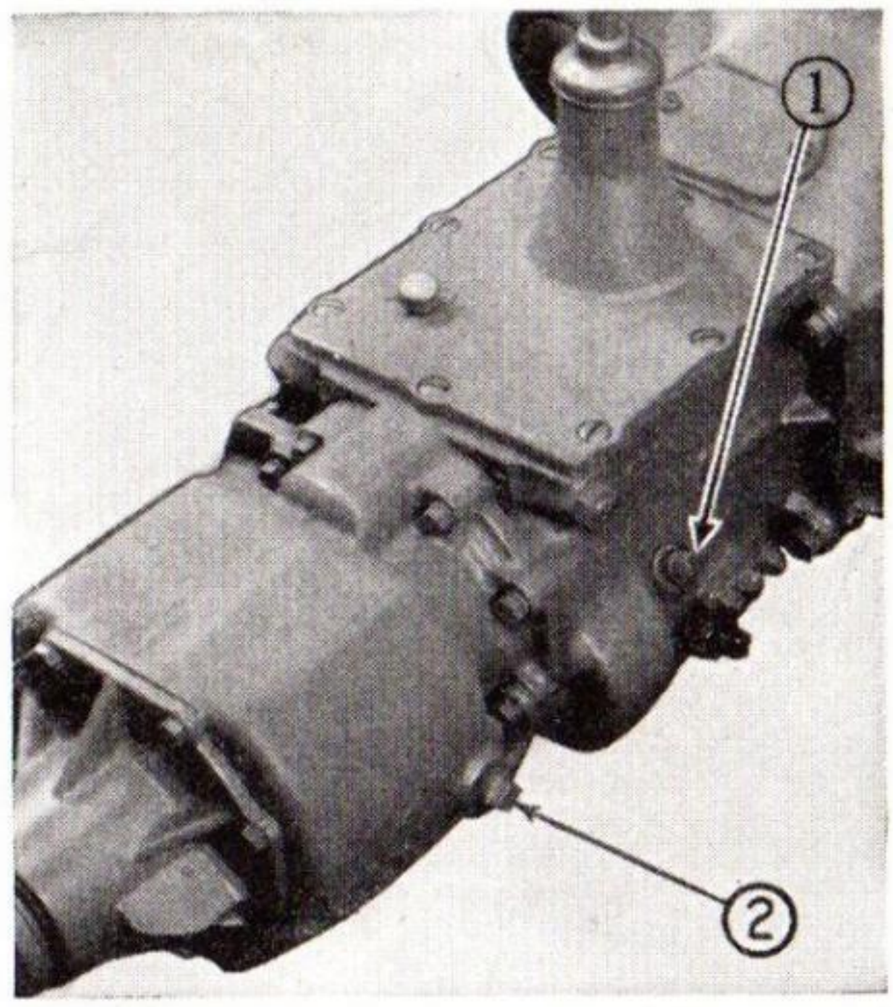
Have you registered the battery on your new car, this should be done within five days from date of delivery to make the warranty effective.

Fill battery every two weeks with distilled water in winter, every week in hot weather.

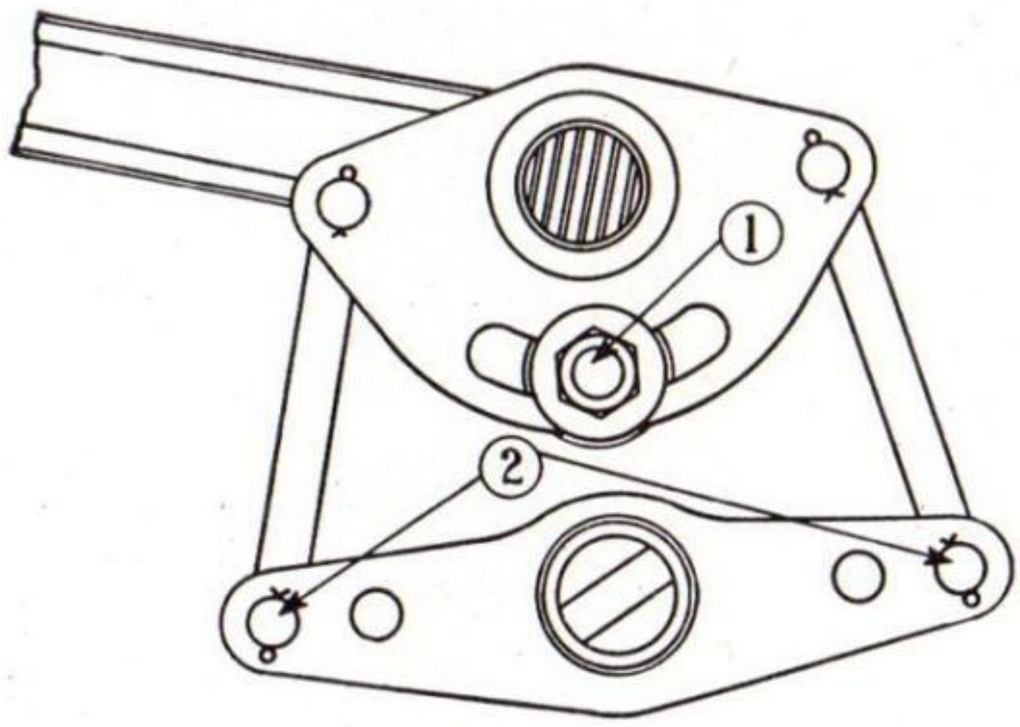
Keep battery terminals clean and tight.



Transmission
Fig. 32



Transmission and Cruising Gear
Two Unit Type
Fig. 33



Clutch Adjustment
Fig. 34

Lubrication of Transmissions is important.

Use only lubricant as described on page 39.

TRANSMISSION LUBRICATION—Code G—Conventional transmission, Fig. 32: Remove plug 1, fig. 32, every one thousand miles, examine quantity and condition of oil. Fill to level of plug. The selection of the correct lubricant is important. All Nash transmissions should be lubricated with No. 70 SAE heavy motor oil in hot weather and No. 50 SAE low cold test motor oil in cold weather. Do not use EP lubricants or transmission oils. The transmission case should be drained and flushed every five thousand miles and refilled with fresh lubricant. Drain from plug hole in bottom of transmission and fill to level of plug tube. The capacity of the transmission—3½ lbs.

TRANSMISSION WITH CRUISING GEAR—Fig. 33: Both the transmission and Cruising Gear should be lubricated with SAE-70 heavy motor oil in hot weather and SAE-50 low cold test motor oil in cold weather. Do not use EP or transmission oils. Remove plugs 1 and 2, fig. 33, every one thousand miles and fill to level of plugs. Every five thousand miles drain and flush both units and fill to level of plugs with fresh lubricant. The capacity of transmission and Cruising Gear unit is 6 lbs.

CRUISING GEAR ADJUSTMENTS: Cruising gears are adjusted at the factory to come into operation at approximately driving speeds of 42 miles per hour. Adjustments are provided to allow the operation at higher or lower speeds if desired, but it is not recommended that the gear be adjusted to lower than 35 miles per hour. Adjustments on this unit should only be attempted at Nash service stations.

CLUTCH ADJUSTMENT—Fig. 34: Clutch pedal should be adjusted if less than ½" or more than 1½" free movement is evident. To adjust, loosen adjusting bolt (1) Fig. 34 and adjust in slot. Do not drive car if no free movement of clutch is evident as this will cause clutch to slip.

Lubricate two points on clutch and brake pedal shaft with heavy oil every 1000 miles—**Lubrication Code "H".**

REAR AXLE LUBRICATION—Code J—Fig. 35: Use only Nash Approved lubricants in the rear axle, SAE-90 EP. Your Nash dealer has information regarding brands which have been approved.

DANGER—Do not permit the use of hypoid EP oils in Nash axles or other unapproved lubricants in Nash axles. Remove plug 1 on fig. 35, examine level and condition of lubricant every one thousand miles. Bring up to level. **CAUTION**—Use the same type and grade of lubricant at all times, as a mixture of chemically dissimilar lubricants may result in serious damage to gears and bearings. Every five thousand miles flush rear axle and fill with new lubricant. The capacity of the rear axle is 6 lbs. in Nash 3880 and 4 lbs. in Nash 3810 and 3820.

CAUTION—For many years on older model cars, it has been the practice to use the same lubricant in the transmission and rear axle, and this was quite satisfactory. However on your present day Nash car, it is important to follow the recommendations on both units as outlined above. Should you find it necessary to have the car lubricated at any place other than a Nash station, you should call particular attention to this.

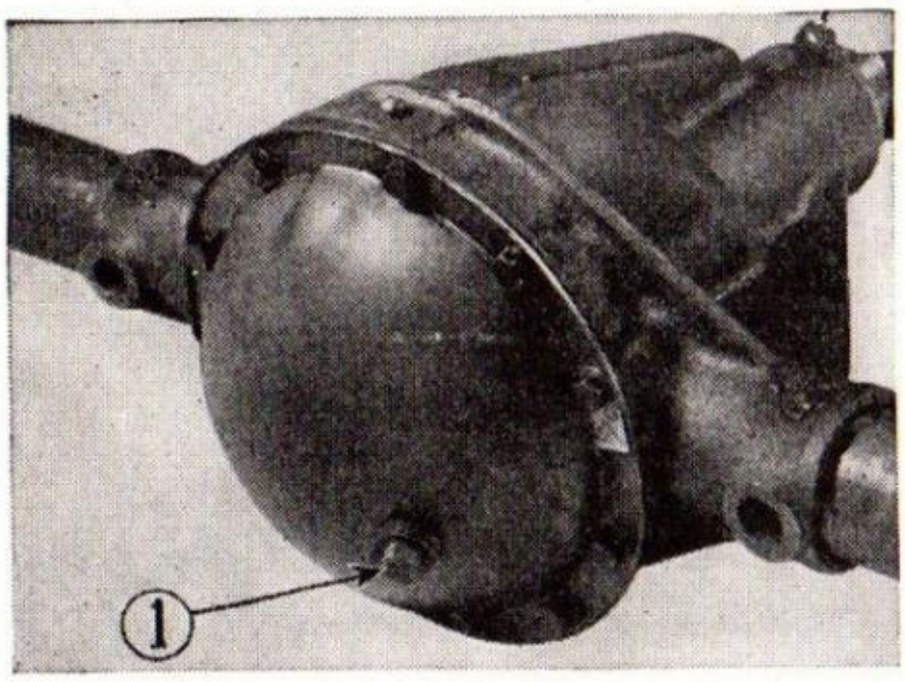


Fig. 35
Rear Axle

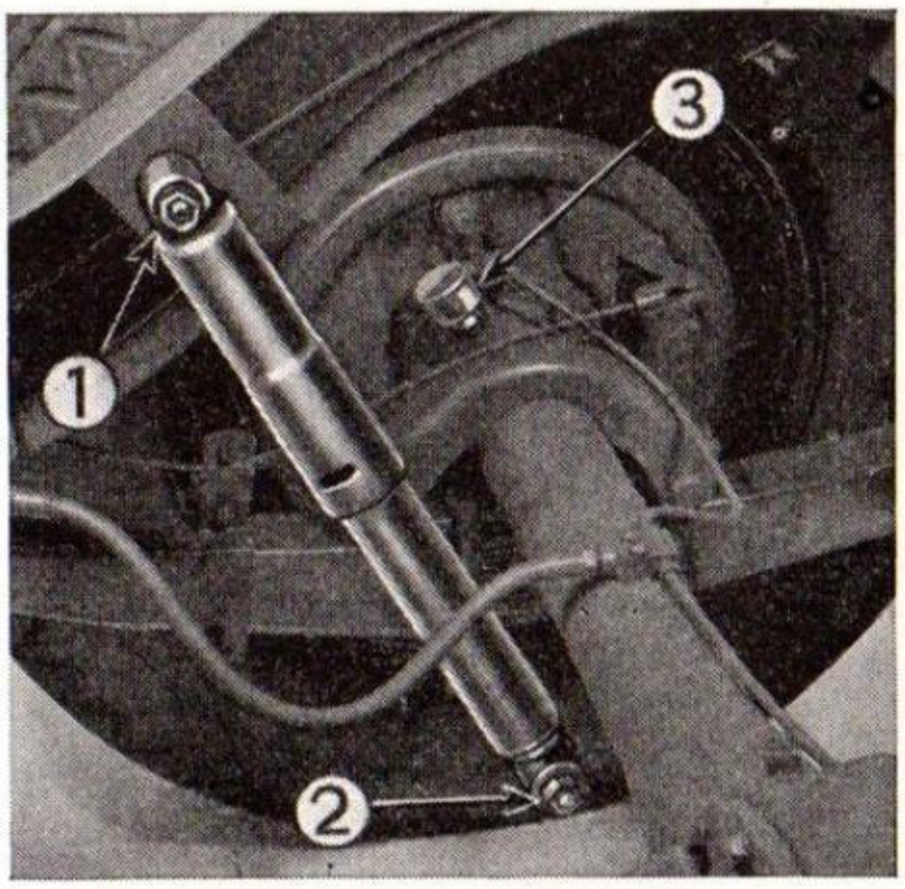


Fig. 36
Rear Wheel Bearings

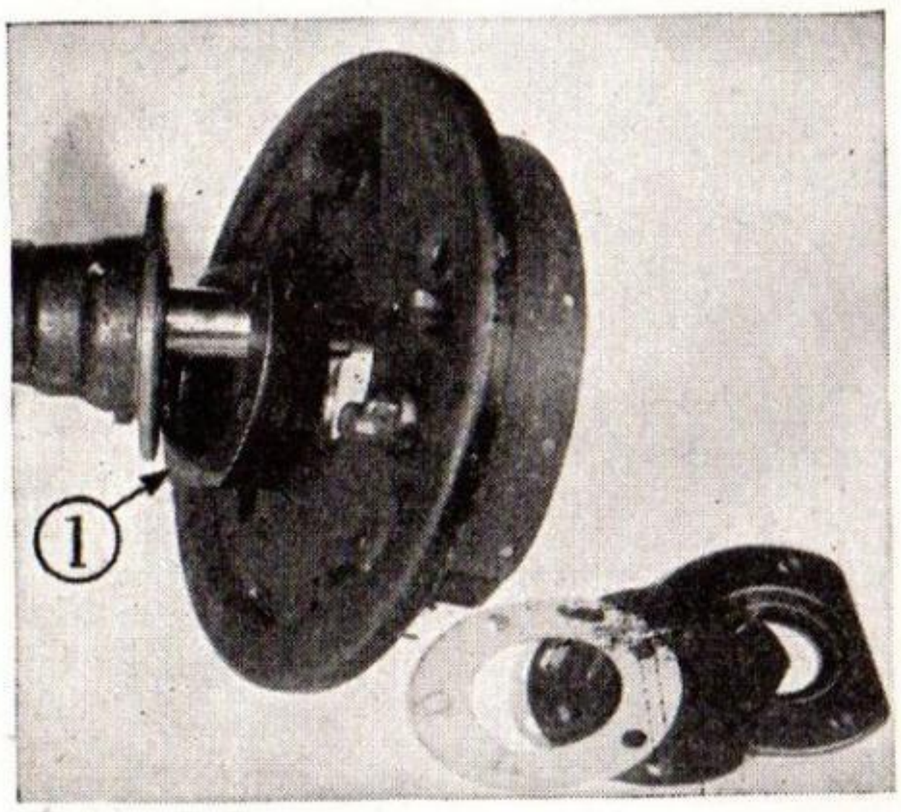


Fig. 37
Rear Wheel Bearings

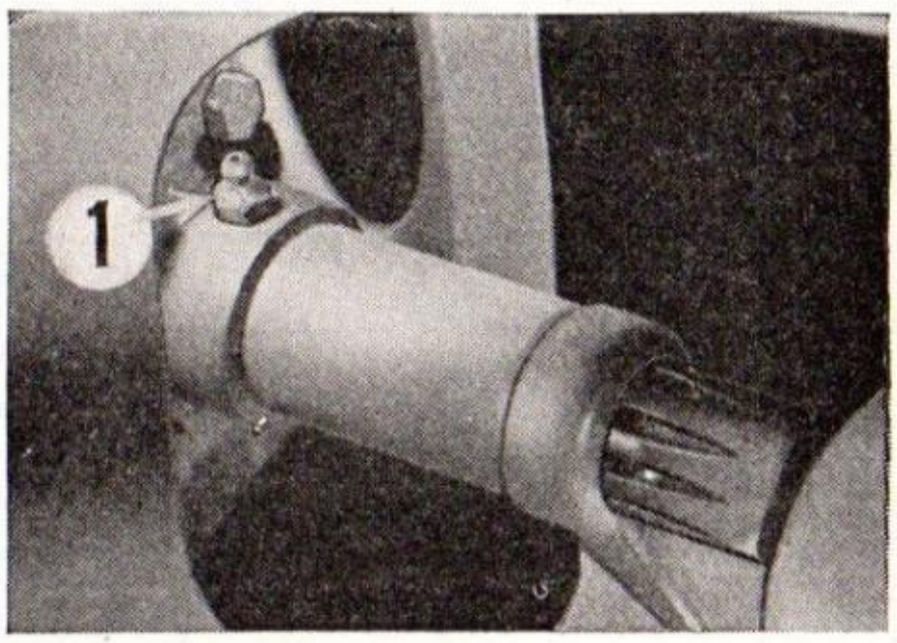


Fig. 38
Universal Joint

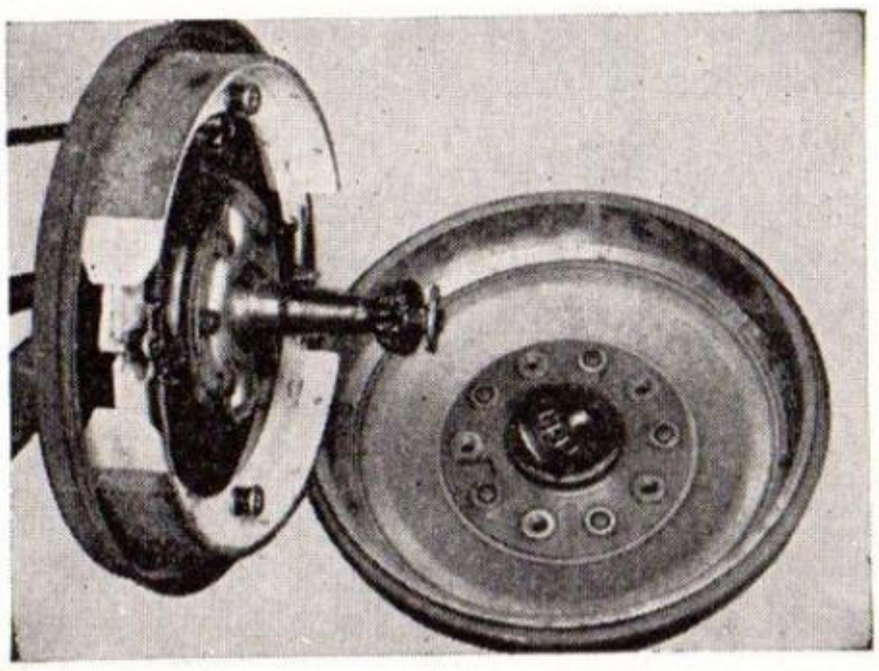


Fig. 39
Front Wheel Bearings

REAR WHEEL BEARING LUBRICATION—LUBRICATION CODE "K"—Fig. 36: Use wheel bearing lubricant. (Do not use light cup grease). Fill grease cup 3 fig. 36 and screw down. Lubricate every 5000 miles—CAUTION—The use of incorrect lubricant may result in surplus being forced through retainers to the brake linings.

REAR WHEEL BEARING ADJUSTMENT—Fig. 37: The correct adjustment is when .003″ to .006″ end play exists in axle shafts. To adjust—jack up both rear wheels, remove hub cap, and axle shaft nut. Pull off wheel.

Remove screws holding brake support plate to axle tube. Remove shims (1) fig. 37 until .003″ to .006″ end play exists in axle shafts. End play in both axle shafts is removed from either side.

The removal of wheels is facilitated by use of special wheel pullers and as accuracy in determining the end play is necessary by use of dial gauges we recommend that these adjustments be made at Nash service stations.

In making the above adjustments it is advisable to check condition of grease retainers, and if they are to be replaced the retainers should be soaked in oil and thoroughly softened before being installed.

FRONT WHEEL BEARING LUBRICATION—LUBRICATION CODE "L"—Fig. 39: Front wheel bearings should be repacked with wheel bearing lubricant every 5000 miles. (Do not use light cup grease).

Both bearings should be removed and cleaned and replaced. Do not place lubricant in hub cap as this serves no lubrication purpose and if too much is put in, the surplus may get on the brake linings.

FRONT WHEEL BEARING ADJUSTMENT: Jack up front wheels. Grasp tire at top and bottom and shake to disclose any looseness of bearings.

Remove wheel cap by snapping off at wheel with a screw driver.

Remove inner hub cap by tapping on it with a hammer.

Remove cotter pin from spindle nut.

Tighten nut just enough to remove bearing looseness. Rotate wheel while tightening nut, and replace cotter pin.

Front wheels must be absolutely free but with no looseness in bearings.

UNIVERSAL JOINTS—LUBRICATION CODE "M"—Fig. 38: The universal joints are of the needle bearing type and are packed with lubricant at the factory. As the lubricant is sealed in they will require no lubrication for a long period of time. It is recommended that the joints be disassembled and lubricated at approximately 12,000 miles of operation. Use vaseline or light cup grease.

The spline shaft on the front joint should be lubricated with chassis lubricant every 3,000 miles. Lubricate at fitting 1, Fig. 38.

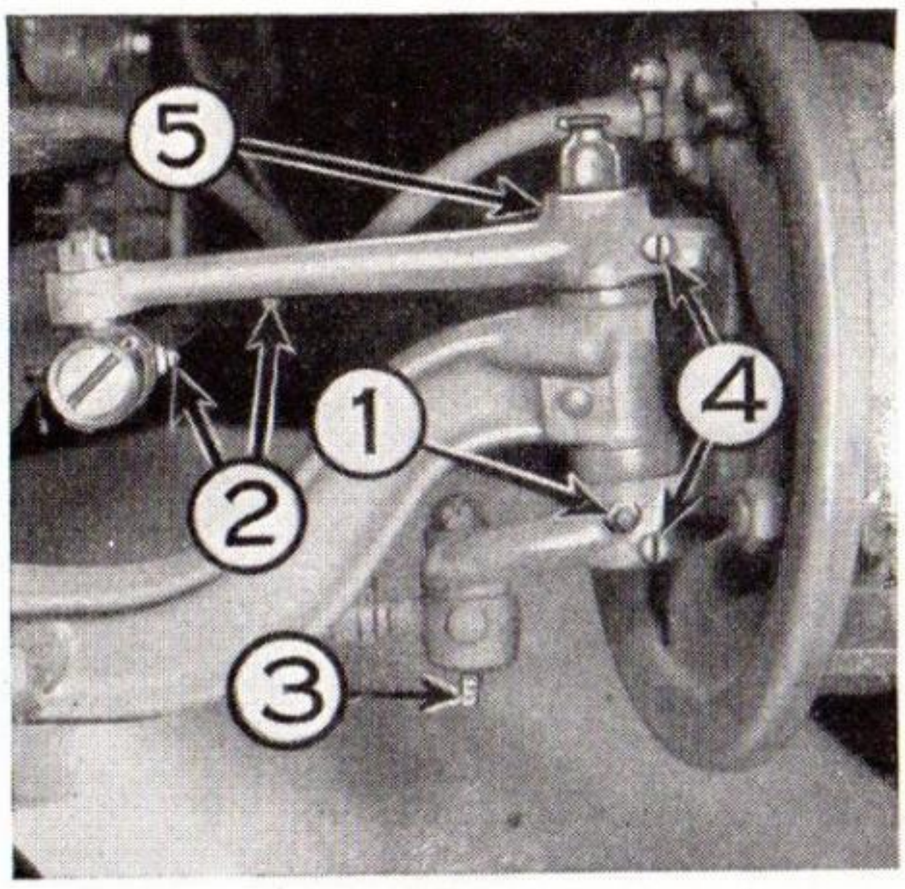


Fig. 40
Knuckle Lubrication

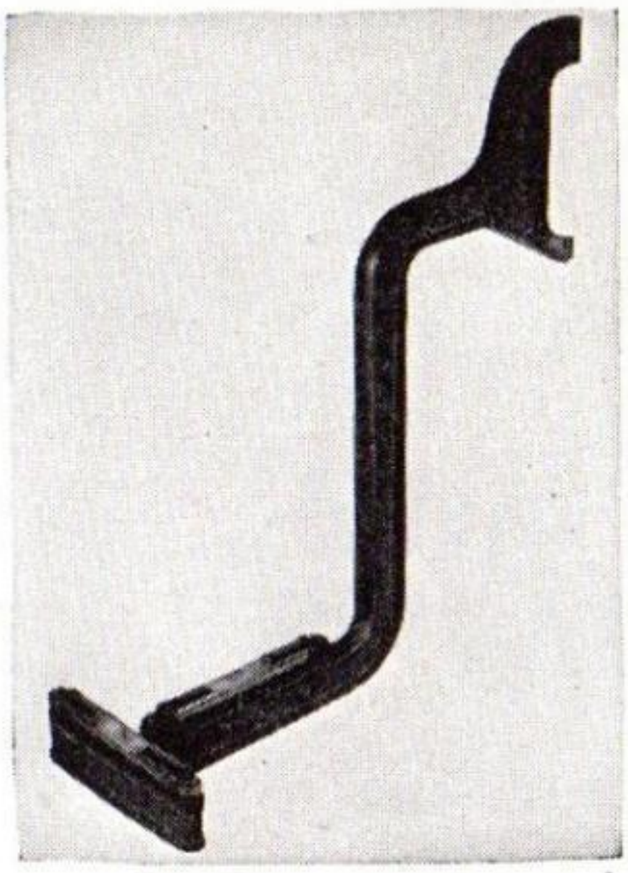


Fig. 41
Caster & Camber Gauge

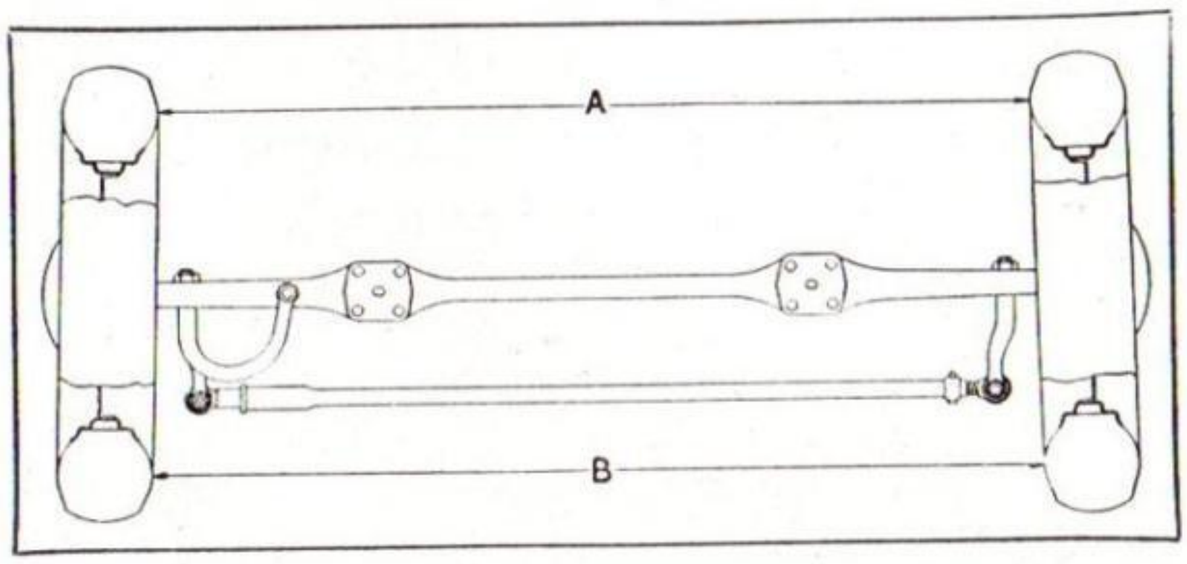


Fig. 42
Front Wheel Alignment

WHEEL ALIGNMENT—Fig. 42: Front wheels should toe-in at the front 0″ to $\frac{1}{16}$″. This should be measured with recommended toe-in gauge. If incorrect, adjust by loosening clamp at right end of the tie rod and screwing tie rod in or out of joint.

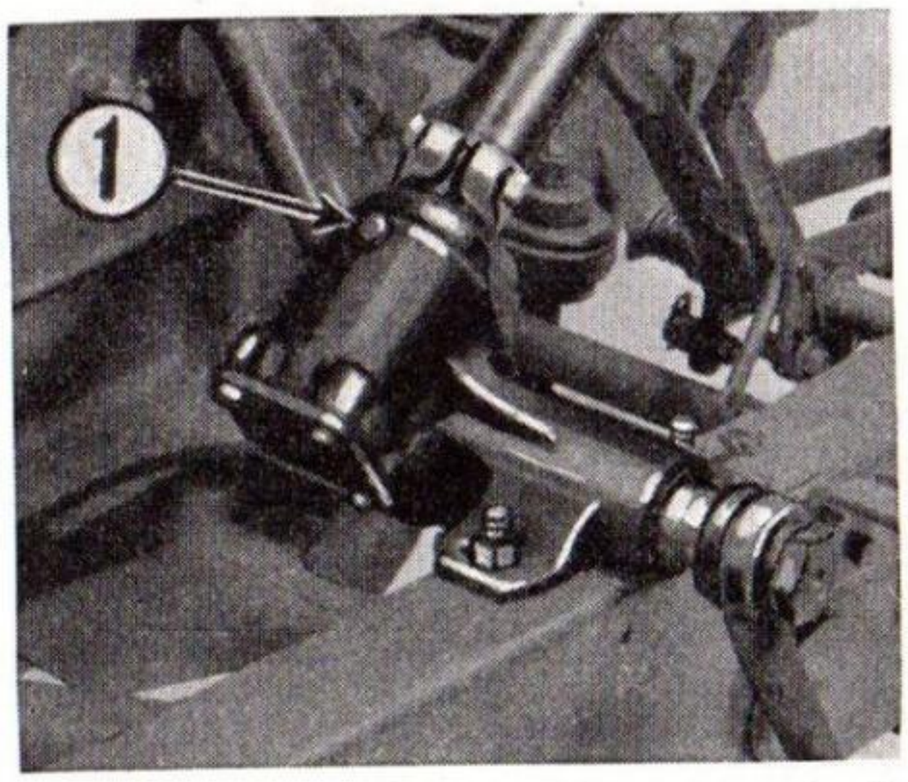


Fig. 43
Steering Gear Lubrication

STEERING KNUCKLE LUBRICATION — LUBRICATION CODE "P" To maintain the easy steering that is built into Nash cars, it is important that the following procedure is carried out:

UPPER BEARINGS—Fill oil cups (5) on Fig. 40, with motor oil every 1,000 miles.

LOWER BEARINGS—(1) of Fig. 40, use pressure gun with chassis lubricant.

NOTE: DO NOT USE HEAVY GREASE IN KNUCKLES.

DRAG LINK LUBRICATION—LUBRICATION CODE "R": Two points, one at each end of drag link (2) on Fig. 40. Lubricate every 1000 miles with chassis lubricant.

TIE ROD LUBRICATION—LUBRICATION CODE "R": Two points at end of tie rod (3) on Fig. 40 each 1,000 miles with chassis lubricant.

STEERING GEAR LUBRICATION—LUBRICATION CODE "S"—Fig. 43: Check lubricant every 1000 miles by removing plug (1) fig. 43 and fill with special steering gear lubricant to bring up to level.

STEERING GEAR ADJUSTMENTS: Adjustments are provided to take up wear in steering gear. These adjustments will be required only after a long period of time and should then be performed only by competent mechanics.

CAUTION: We caution against making adjustments on the steering gear, because sometimes adjustments may be attempted with the thought of correcting steering conditions and a check by competent mechanics with testing equipment may disclose that the proper correction is at some other point such as looseness or wear in steering knuckles, drag link, etc., wheel alignment and wheel balance or incorrect geometry of the front axle due to curb collision of the front wheels.

STEERING GEOMETRY: The front wheels must have a definite angularity in relation to each other and in relation to the chassis to maintain the easy steering that is built into these cars. This is also important in consideration of tire mileage. These angles are referred to as a caster angle, camber angle, and front wheel toe-in. All of these adjustments must be made with accuracy to assure ease of steering and protection against tire wear.

To facilitate the inspection of this, all Nash steering knuckles are machined to permit the use of a simple but efficient gauge for checking caster and camber angles. This gauge is shown on Fig. 41 and machined surfaces on knuckles for gauge location are shown on Fig. 40, indicated by 4.

Caster angle should be 1 to 2 degrees.
Camber angle should be 0 to 1½ degrees.

Shims are available to correct caster and camber angles. The need for corrections on the steering geometry is usually as a result of undue hard contacts of the tires with curbs or other obstacles and sometimes this will occur without the owner's knowledge. For this reason, it is advisable to have the caster and camber, and other points that might be affected, checked at periodical intervals.

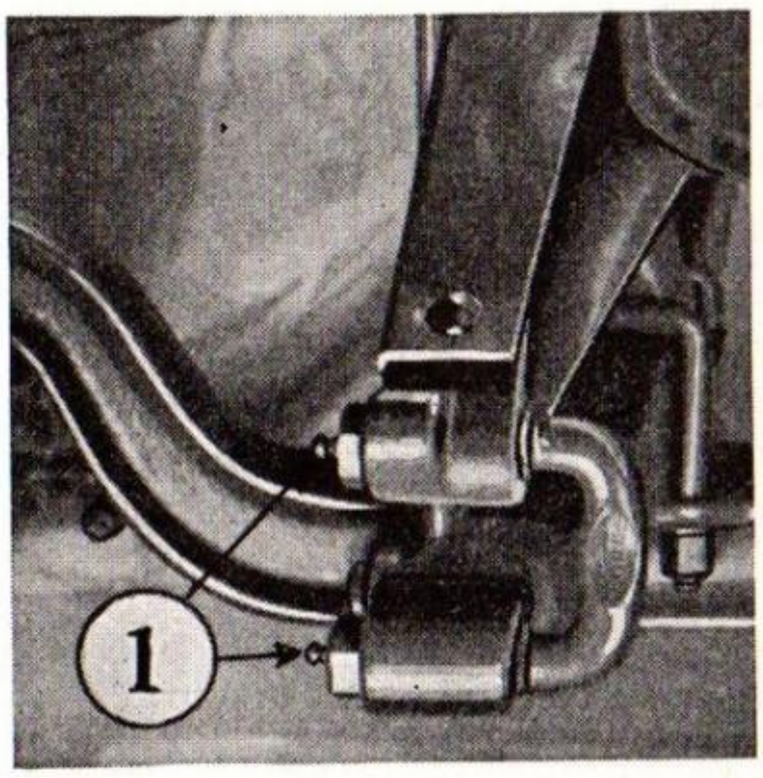


Fig. 44
Spring Shackle Lubrication

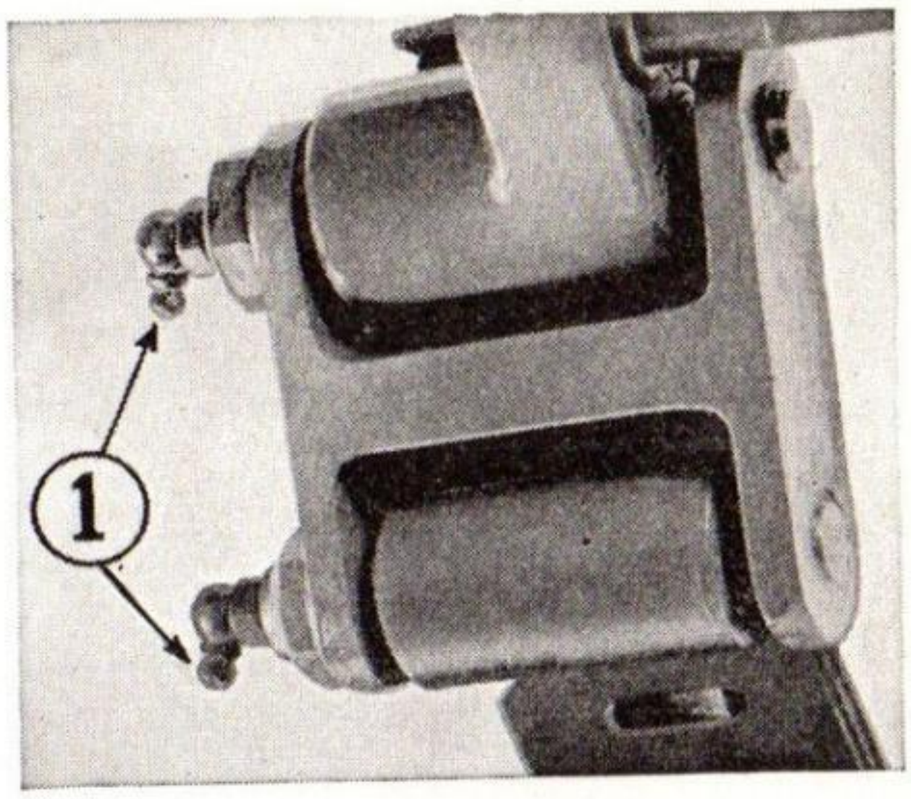


Fig. 44A
Spring Shackle Lubrication

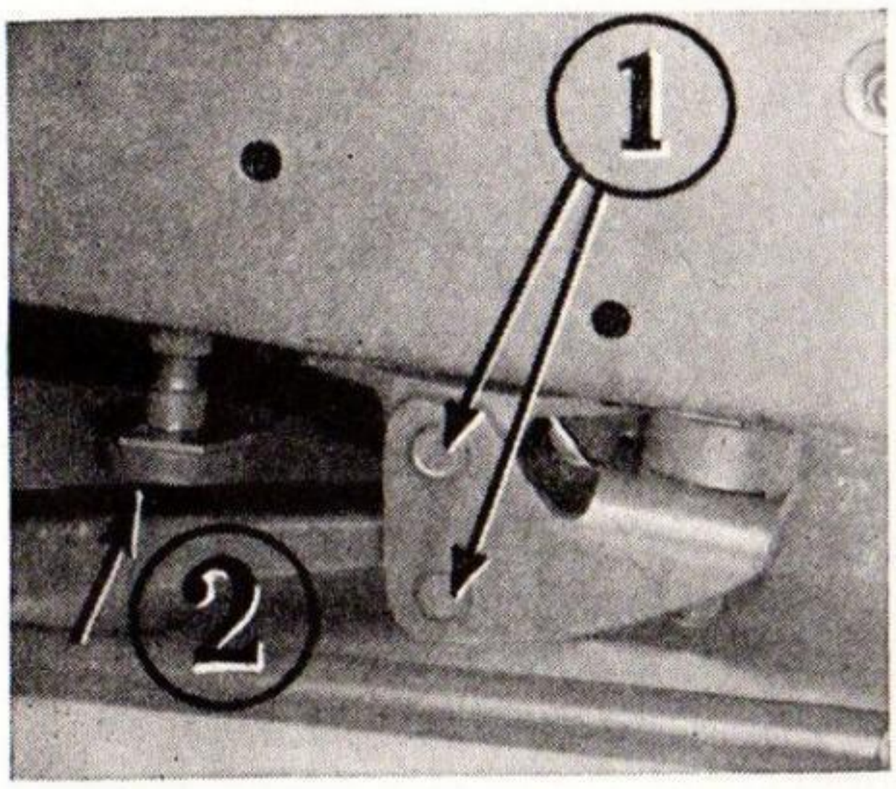


Fig. 45
Steering Shock Eliminator

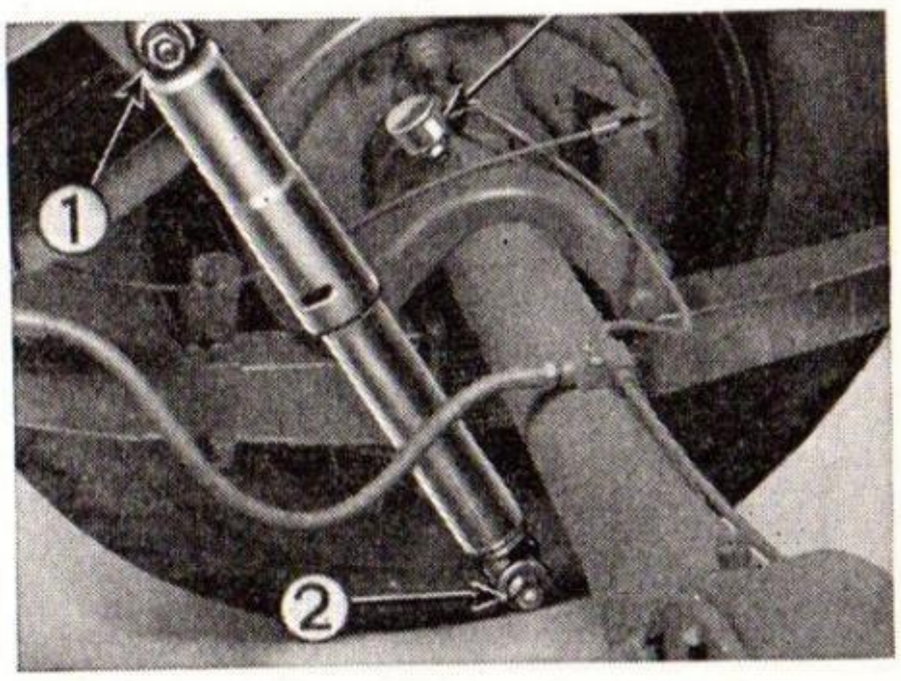


Fig. 46
Rear Shock Absorber

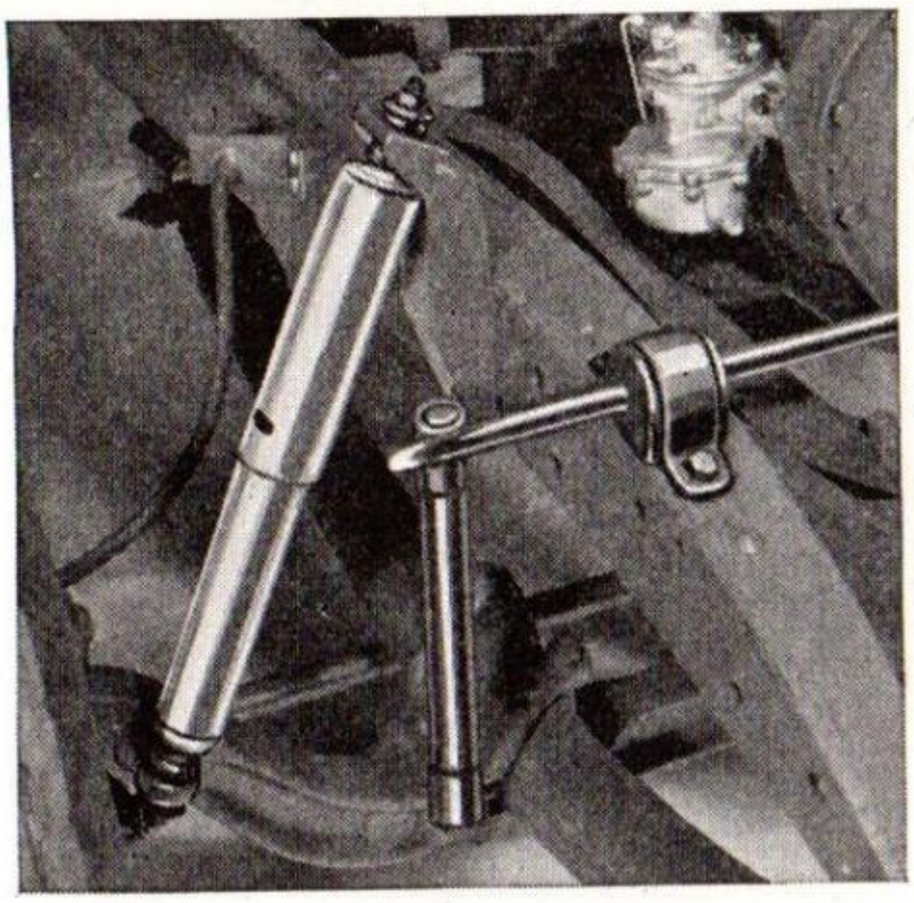


Fig. 47
Front Shock Absorber

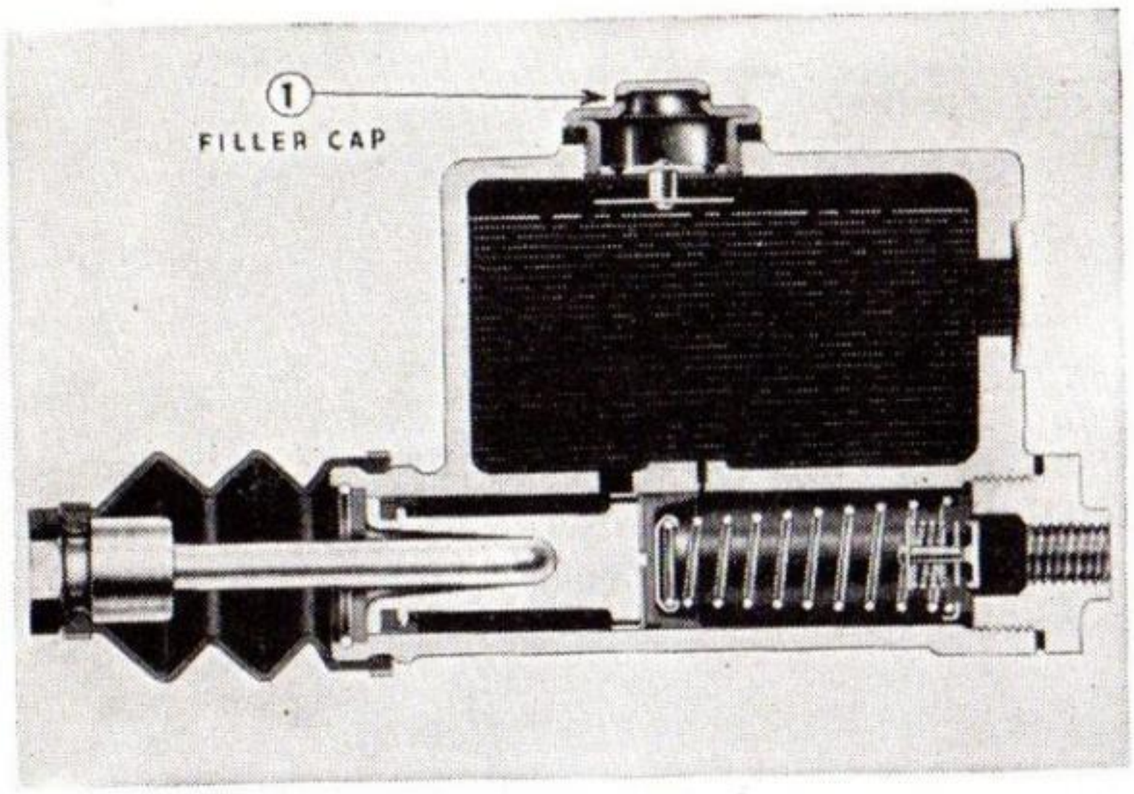


Fig. 48
Master Cylinder

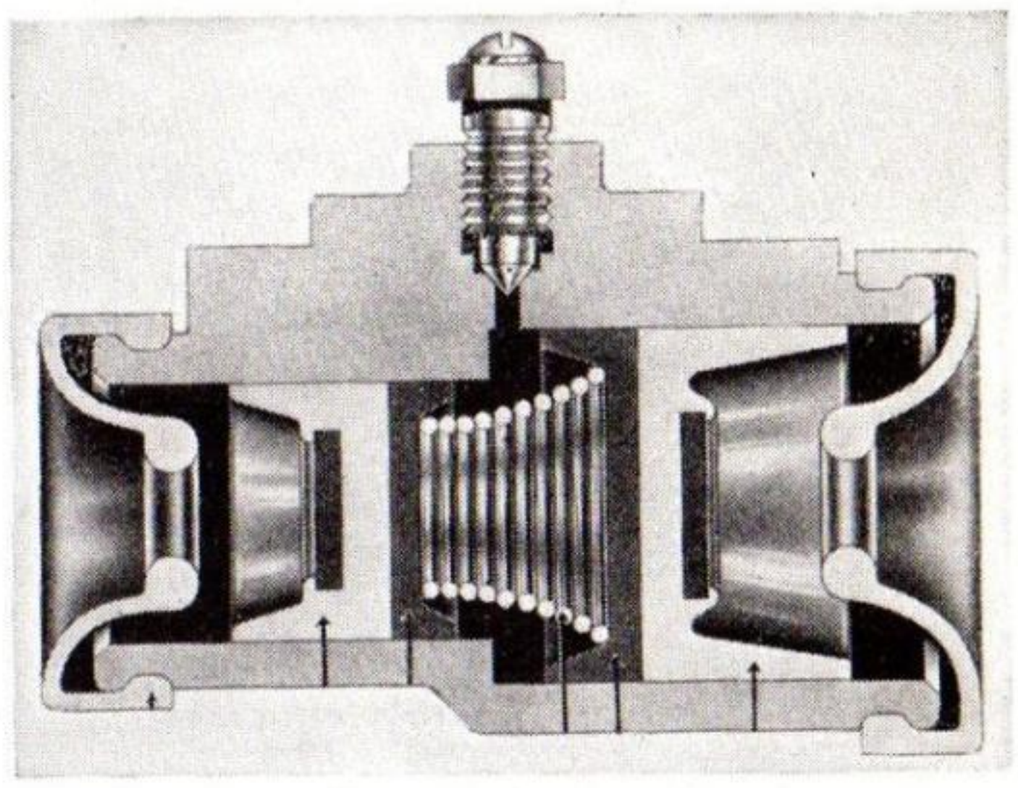


Fig. 49
Wheel Cylinder

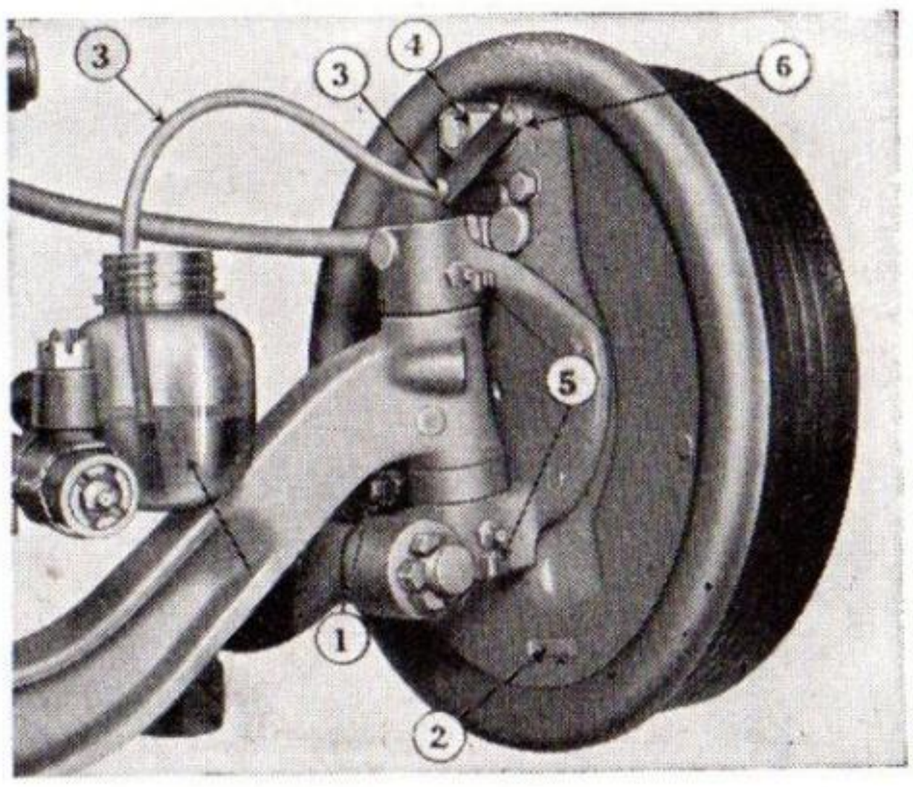


Fig. 50
Bleeding Lines

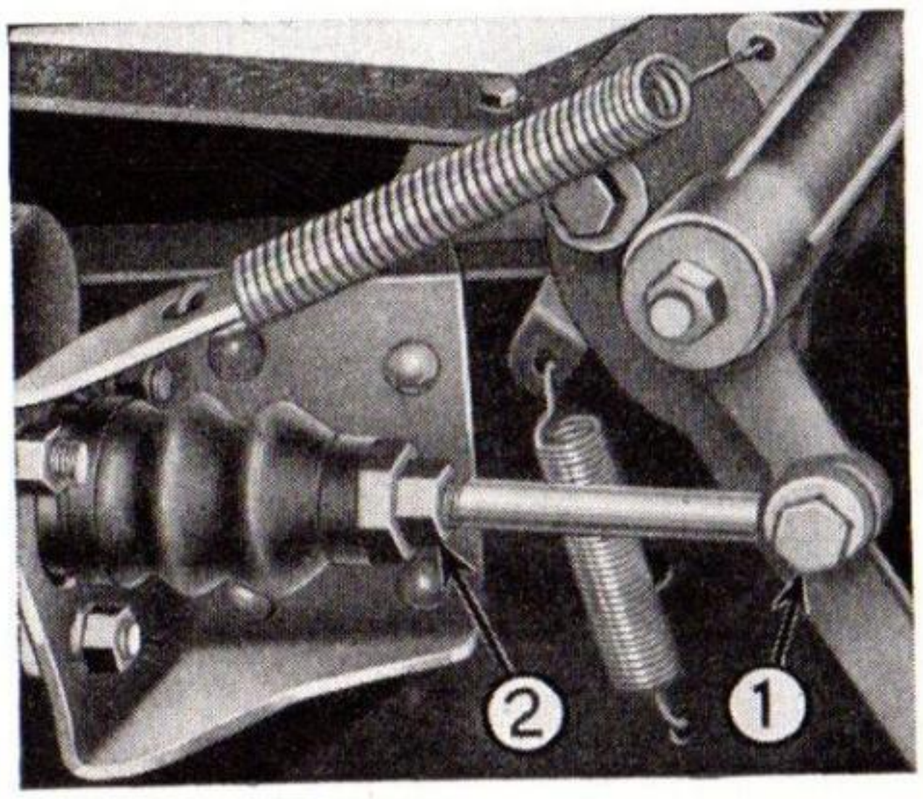


Fig. 51
Pedal Adjustment

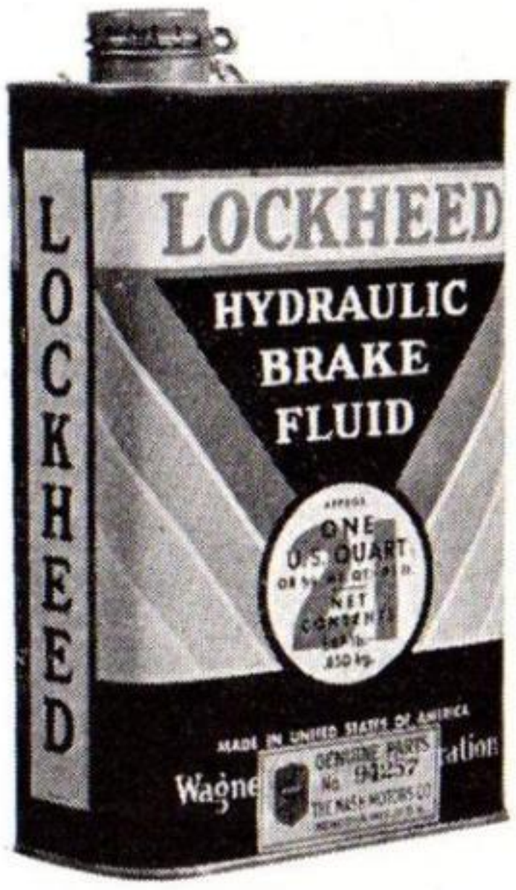


Fig. 52
Brake Fluid

BRAKES: The foot-operated brakes are of the internal expanding type actuated by hydraulic pressure. The efficient operation of brakes is of vital importance and it is therefore recommended that all servicing of the braking system be done at authorized Nash service stations.

MASTER CYLINDER—Fig. 48: The master cylinder is located under the floor board at the left side and it is important that at all times the cylinder be kept at least half full of fluid. Insufficient fluid may result in air entering the lines, in which case it will be necessary to bleed the system.

BRAKE PEDAL ADJUSTMENT—Fig. 51: It is important that ¼" free movement exists in the brake pedal before the pressure stroke starts. If no play exists the fluid in the lines will not fully return to the master cylinder and dragging brakes will result. This necessary play can easily be determined by seeing that the brake pedal pad has at least ¼" movement before any pressure is felt. If no play exists, adjust by loosening lock nuts (2) on figure 51, remove clevis (1) from yoke. Remove return spring and adjust rod so that ¼" to ⅜" free pedal pad movement is obtained before any pressure is felt. Connect clevis and tighten lock nut.

BRAKE FLUID—Fig. 52: CAUTION—It is extremely important that only genuine Lockheed brake fluid No. 21 be used with brake system. This can be obtained from Nash dealers. To fill master cylinder remove plug (1), Fig. 48. Be careful that dirt does not enter cylinder.

Fluids containing mineral oil, will swell and destroy the rubber cups and other parts. If this occurs it is necessary that all rubber parts be replaced and the entire system cleaned out. Avoid this unnecessary expense by insisting that only genuine Lockheed fluid is used.

BLEEDING HYDRAULIC LINES—Fig. 50: It is necessary to bleed air out of them when the pedal action is soft and spongy or when any of the brake lines are disconnected. Connect Nash bleeder tube (3) to bleeder screw of wheel cylinder as shown.

With wrench (4) loosen the bleeder connection ¾ of a turn. Insert end of bleeder tube in glass container partially filled with hydraulic fluid so that any air which is in the system can be observed bubbling through it. Be sure that the master cylinder reservoir is filled with fluid. Clean off all dirt from around filler plug (1) Fig. 48, before removing it. Be sure reservoir is filled with fluid during entire bleeding operation. Alternately depress and release brake pedal 10 times. This will flush all of the air out of the line leading to that wheel and the bleeder tube can be disconnected from the wheel cylinder and the small screw replaced. This should be done on all four wheels unless the pedal action is restored after bleeding one or more of them. Do not use fluid that is taken out—use new fluid at all times.

CAUTION: If for any reason it becomes necessary to clean out the master cylinder, wheel cylinders, or lines, use only alcohol for cleaning.

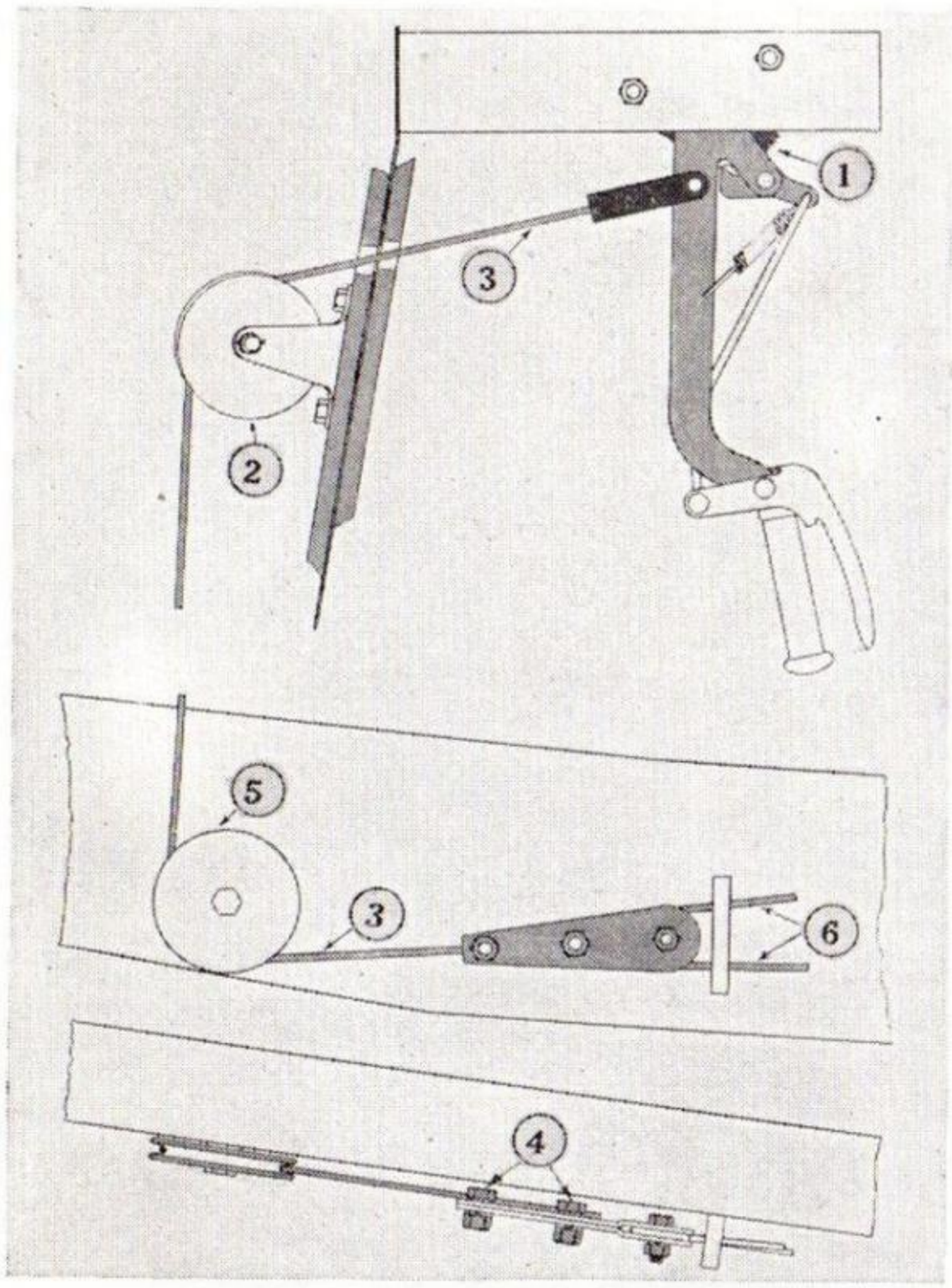


Fig. 55

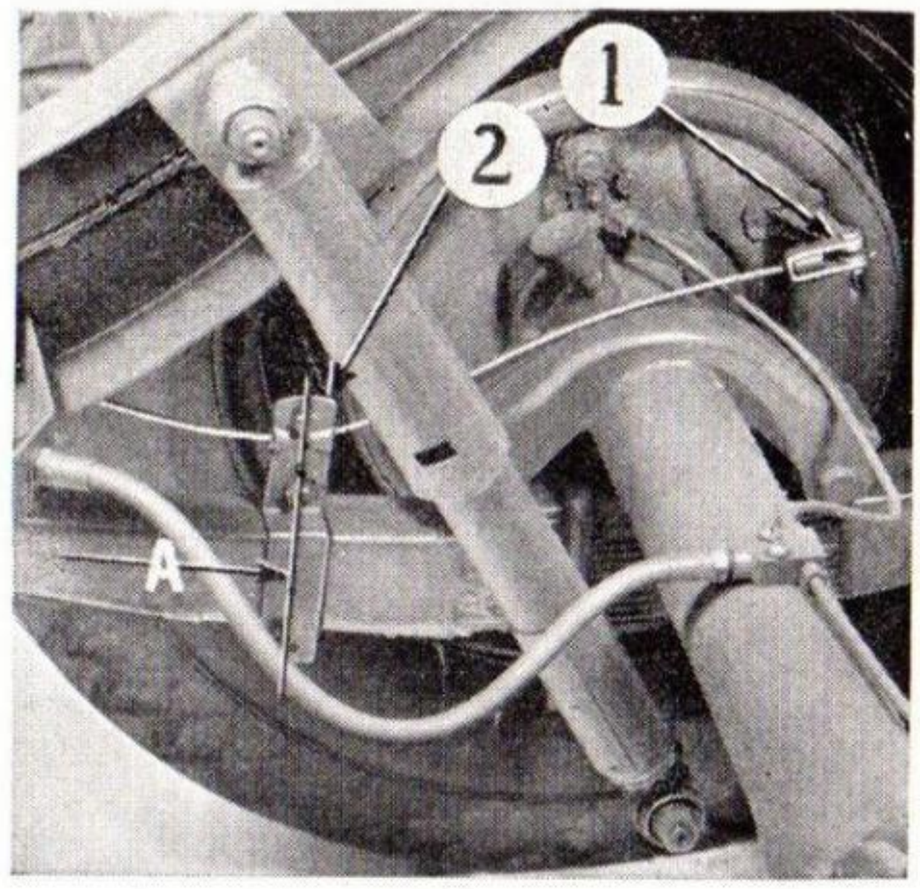


Fig. 56

ADJUSTMENT OF PARKING BRAKE—Fig. 55 and Fig. 56: The parking brake is operated by a handle located under the dash to the left of the driver.

Should adjustments be necessary proceed as follows:

Pull operating handle on two notches. Loosen cable clamps (4) on Fig. 55 on adjusting clamp on side of frame. Both cables, the one leading to the rear and also the cable leading to the handle should then be pulled tightly, until all slack is taken out, and then tighten adjusting clamp bolts (4), Fig. 55.

After all slack has been taken out of cables, release hand operating lever on dash to fully released position and this will put a little slack in cable. Then check operating levers 1 on Fig. 56 so that at least 1/8" free movement exists at the levers.

It is important that the free movement of these levers at the wheels be checked after adjustment is made as lack of free movment at these levers may result in dragging brakes.

If for any reason the cable guide (2) on Fig. 56 should be removed it is important that it be located in the proper position to assure the correct angle of the cables. The proper location of this guide as indicated by "A" Fig. 56, is measured from the center of the rear spring front eye bolt and should be exactly 19" on all models.

Changing Tires

TO RAISE CAR ON JACK FOR TIRE REMOVAL—Rear: At the extreme rear ends of the frame on both sides, there are attached flanged circular pads in which the round end of the jack screw fits.

Front: The end of the jack screw is machined with a vee slot and this vee is placed under the front bumper back bar where it attaches to the front end of the frame.

REMOVING WHEEL: The nuts holding the wheel to the hub are exposed by inserting a screw driver between the hub cover and the wheel and forcing outward from the lock ring. To install simply press firmly into place with hands.

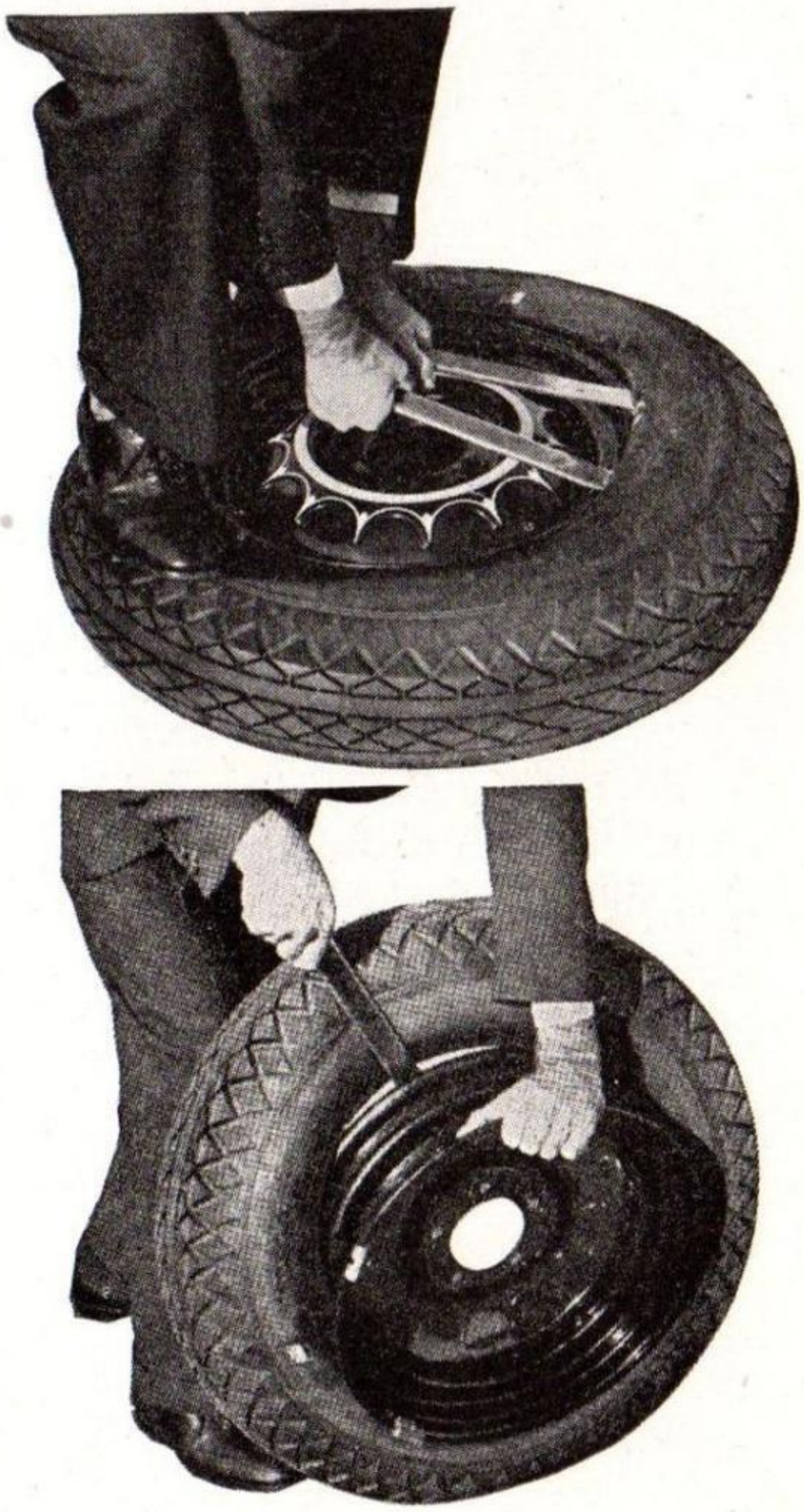
The removal of tires from the drop center type rims is very simple when the following methods are followed. Tires can be applied with the bare hands although ordinarily it is simpler to use short tire tools about 10″ long.

TO REMOVE TOP BEAD: Deflate tire completely.

Loosen both beads from rim edges, using tool if necessary.

Stand on tire with both feet, about 15″ apart, opposite valve, to force bead off bead seat.

Insert two tire tools about 8″ apart between bead and rim flange near valve and pry short lengths of bead over flange as shown. Then leaving one tool in position, follow around rim with the other tool to remove remainder of bead. Remove tube.



TO REMOVE BOTTOM BEAD: Stand wheel in upright position with bead head in well or rim at bottom. If soft soap is available apply around both sides of soft rubber tip.

Insert tool between bead and rim flange at top of wheel and pry wheel out of tire as shown.

Tire changing is made extremely easy by coating the inside and outside of the tire bead with soft soap. Do not use oil or grease.

TO APPLY BOTTOM BEAD: Inflate tube until barely rounded out and insert in tire.

Place tire on rim, guiding valve through valve hole.



Push bottom bead down into well at valve and force remaining portion of bead over rim flange.

Tire tool may be needed to pry last portion of bead over flange.

TO APPLY TOP BEAD: At point opposite valve insert tool between top bead and rim flange, prying bead over rim flange.

Holding tool in position continue prying with other tool, working around rim until bead is in place.

Push valve back into casing to make certain that tube is not pinched under bead. Do not let go of valve stem while doing this.

Pull valve through rim, inflate tire slowly, and see that tire is centered on rim on both sides.



Care of Tires

New front tires should be interchanged after from **two to three thousand miles of service.** Interchange the two front wheels without dismounting the tires. This changes their direction of rotation. Front tire interchange checks the development of irregular wear, or it will help correct irregular wear which may have started.

Keep tires inflated to the recommended pressure. Correct inflation is the most important factor in satisfactory tire service.

Tires should be checked frequently enough to insure that the pressure does not drop more than 3 lbs. below the recommended pressure. Over-inflation is undesirable as it causes rapid wear and does not provide additional protection against injuries.

Precautions: Inspect the tires, or have them inspected occasionally.

Pride of Appearance

Nash built cars are easy to keep "well groomed." Bodies are finished with high quality lacquer applied under most modern conditions, are given an original finish of very high lustre.

This beauty of the finish can be maintained for indefinite periods if given the care necessary to its preservation. **CAUTION**—Many non-freezing solutions containing alcohol will damage lacquer and care should be used in filling radiators with non-freezing solutions, if any of the solution does get on the lacquer it should be immediately cleaned off with a liberal application of cold water.

DUST—When your car gets dusty, all that is usually necessary to brighten it again is a rubbing with a clean, dry, soft cloth. This will at the same time have a polishing tendency. However, if grit or sand is mixed with the dust, or the car is muddy, the car should be washed.

WASHING—Always use cold water, and dry with a chamois or soft cloth. Avoid washing the car in the direct rays of a hot sun, and do not start to wash the car immediately after using until the metal surfaces are cooled off.

Do not be alarmed if the water used in washing the car, becomes tinted with the color of the lacquer. This is a natural condition and the original appearance is easily restored by polishing.

POLISHING—If the car has been allowed to become extremely dirty and especially if the dirt is allowed to remain on for some time, it may appear dull after washing. In most cases all that will be necessary to restore the original lustre is a small amount of good polish, and we especially recommend Nash Liquid Polish. If this is followed with the application of Nash Body Wax, additional protection will be afforded.

LACQUER CLEANING—If the finish has been neglected and traffic film and dirt have become imbedded in the lacquer, the lustre can be restored by cleaning the lacquer with Nash Lacquer Cleaner, followed by an application of Nash Wax.

If other lacquer cleaners are used, ones with harsh abrasives should be avoided.

CAUTION—Lacquer cleaners should only be used if the car has been in service for a long period of time, and if the finish has been neglected, for usually liquid polish is all that is required.







Nash Tested and Approved Material Will Be Found Especially Useful

ROAD TAR OR OIL—The use of a good standard brand of tar remover, will remove oil or tar without injury to the lacquer. However, if the tar has hardened, it should be softened first with butter or gasoline. If gasoline is used, be sure that it does not contain coloring matter or Ethyl fluid. After removing the tar it is advisable to apply a little polish.

SALT AIR—A little extra attention should be given to cars operated near the seashore. The body and sheet metal should be waxed carefully every three months. Chromium plating should also be waxed at the same time.

RUST SPOTS—Rust spots caused by collisions, or from any other cause should be given immediate attention, by cleaning the spot with a good scouring powder or fine sandpaper, followed by touch up lacquer.

CHROMIUM PLATED PARTS—Chromium plated parts should be wiped occasionally with a cloth dampened with light oil or kerosene. In salt air climates, chrome parts should have body wax applied to the surfaces every three months. Rust spots or tarnish on chrome can be removed with any scouring powder suitable for use on porcelain, or a standard chrome plate cleaner.

CLEANING GLASS—A linen cloth is most suitable, for this will remove dirt and grease, and is comparatively free from lint. Cleaning glass is especially easy when Nash glass cleaner is used. This cleaner is furnished in convenient bottles equipped with a sprayer enabling one to clean glass without soiling the hands.

CAUTION—The windshield wiper should not be operated unless the windshield is wet as operation with the glass dry may result in scratches on the glass from grit.

WINTER PRECAUTIONS—In many sections of the country where snow and ice is encountered, salt or calcium chloride is used on the streets to melt ice and snow. Under such conditions special precautions are necessary to preserve lacquer and chrome finish.

Before the winter season starts. all rust spots should be attended to and the lacquer polished and waxed. Chrome parts should also be waxed. Frequent washing to remove salt deposits will decrease the harmful effects.



Nash Glass Cleaner with Sprayer, Makes Cleaning a Simple Procedure.

Clean Windshields and Windows Promote Safety.

Care of the Interior

Keeping the interior of your car clean and fresh requires about the same attention as you give the furniture and rugs of your home.

Once a month, or more frequently if necessary, it is good practice to take the dust out of the upholstery and rugs with a wisk broom and a vacuum cleaner.

CARE OF UPHOLSTERY: In cleaning, removing spots, or renovating upholstery it is necessary to know the type of fabric used. In general two types of upholstery is used in automobiles—flat fabrics which include broadcloth, whipcord and leather. Mohair fabrics are pile fabrics.

A flat fabric is one that is woven in such a manner that the fibres lay flat, the sides of the many fibres forming the wearing surface. A pile fabric is woven so that the fibres stand erect, thousands of them to the square inch and these ends form the wearing surface of the material.

REMOVING STAINS: The following suggestions will be helpful in removing stains: Note: In using cleaning fluids always follow the procedure that is commonly used in cleaning clothes; that is to dampen a clean cloth with the fluid and start rubbing lightly around the **OUTSIDE** of the spot and gradually work to the center. This method keeps the spot from spreading and is less likely to leave a ring.

BATTERY ACID: Pour household ammonia directly on the spot and allow to remain for one minute. Rinse with cold water. It is essential that such treatment be applied at once as the acid will eat a hole in the fabric within a few hours.

GREASE & OIL STAINS: Use a good cleaning fluid. If the fabric is saturated with oil, pour the fluid on the spot and soak it up by pressing a white blotter on the spot; before cleaning with a cloth dampened with the fluid.



When reference is made to cleaning fluids, use a good non-inflammable fluid of which carbon tetrachloride is the principal ingredient. Nash dealers can supply you with the Nash Fabric Cleaner in convenient cans. It is easy to use and produces remarkable results.

BLOOD STAINS: Use cold water. If this does not remove the entire stain, pour ammonia on spot and rub with a clean cloth.

Note: Never use hot water on a blood stain as this will only set the stain.

CANDY STAINS: Use hot water on all candy stains that do not contain chocolate. If a chocolate stain, first rub out the stain with a clean cloth dampened with cleaning fluid. Then scrape with a dull knife and rinse with cold water. In both cases after the spot has dried, it is advisable to finish the job by using a cleaning fluid.

CAUTION: Avoid the use of hot water except where specifically recommended.

FRUIT STAINS: Rub vigorously with a cloth dampened in hot water and when dry use a good cleaning fluid.

ICE CREAM: Follow the same procedure as for fruit stains.

LIPSTICK: Pour a small quantity of cleaning fluid directly on the spot. Press a clean white blotter over the stain. Repeat this process using a new blotter each time until no stain remains.

NAUSEA STAINS: Use warm soapsuds. Sponge the stained area until stain is removed. Brush with a whisk broom, with fabric pile when wet and against the pile when dry.

MILK STAINS: Follow the same procedure as for nausea stains.

WATER SPOTS: Sponge the entire panel with a cloth dampened with cold water, and then sponge the spots with cleaning fluid.

CHEWING GUM: Moisten the gum with cleaning fluid, remove with a dull knife and then finish with cleaning fluid.

RENOVATING MOHAIR UPHOLSTERY: If your car is trimmed with mohair upholstery, the fabric pile may, after a long period of time, become slightly flattened or "shiny." If this happens it is a very simple matter to restore the pile.

Dampen a clean cloth, and spread it over the pressed down portion of the upholstery. Then press a hot iron over the cloth lightly. This will drive the steam into the core of the resilient fibres and cause them to spring erect. Should the pile be crushed down badly, it may be necessary to repeat this several times.

SEAT COVERS: For protection of the upholstery, a decided practical addition to your car is the installation of a set of seat covers. The Nash Motors Accessory Dept. has made available custom built seat covers, individually tailored to each model. The material is such that it can be cleaned easily with a cloth dampened in soap suds, without removal from the car. Your Nash dealer will be pleased to demonstrate their comfort and usefulness.

Radio

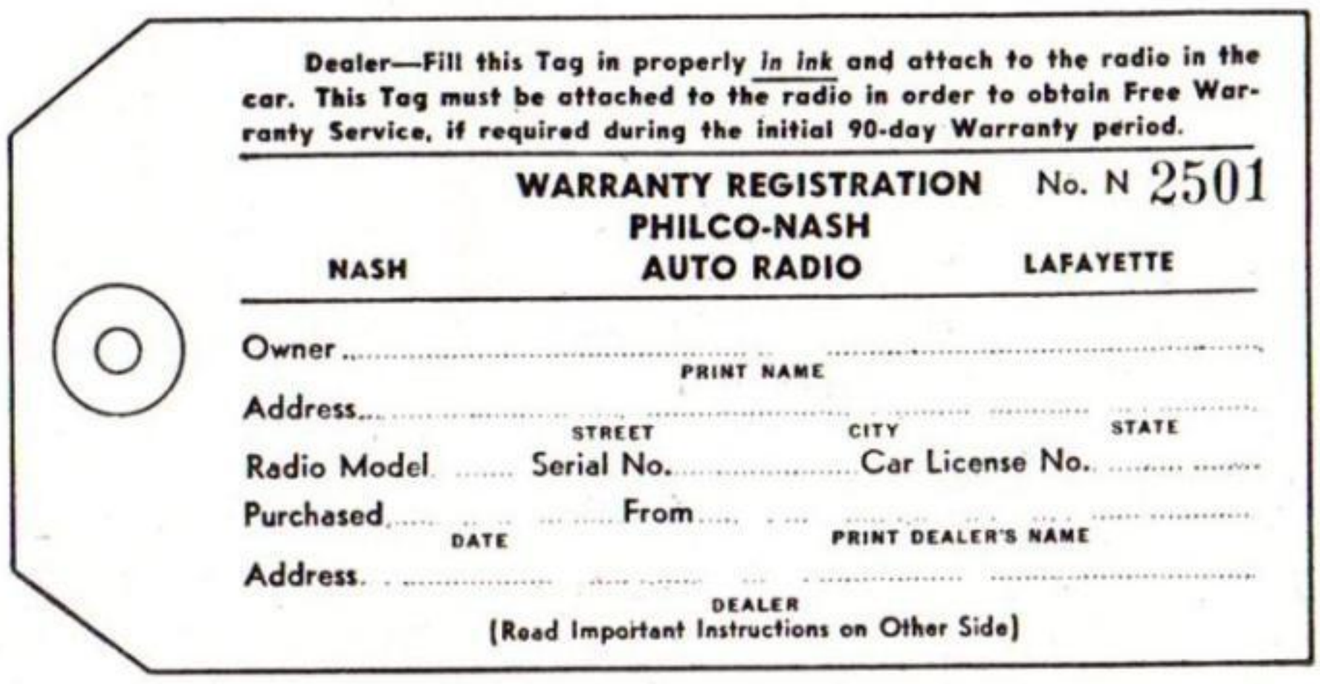
Nash owners are assured of the finest in radio sets in the specially designed, custom built Nash-Philco radios. Two quality sets are available. One incorporates an ear level speaker built into the front part of the body over the windshield. This set has seven tubes.

The other set, of the single unit type without the overhead speaker, has six tubes.

Only a custom built radio, with specifications and installation dictated by the engineers who built your car can give complete satisfaction in performance and reception.

Harmonizing with the appointments on the instrument panel, the center location of the radio controls, make them convenient to all front seat passengers.

If you did not order a radio with your new car, we suggest that you arrange for a demonstration, as this will be convincing proof of the superiority of these Nash custom built radios.



Dealer—Fill this Tag in properly *in ink* and attach to the radio in the car. This Tag must be attached to the radio in order to obtain Free Warranty Service, if required during the initial 90-day Warranty period.

WARRANTY REGISTRATION No. N 2501

PHILCO-NASH

NASH **AUTO RADIO** **LAFAYETTE**

Owner ..... (PRINT NAME)

Address ..... (STREET) (CITY) (STATE)

Radio Model ..... Serial No. ..... Car License No. .....

Purchased ..... (DATE) From ..... (PRINT DEALER'S NAME)

Address ..... (DEALER)

(Read Important Instructions on Other Side)

RADIO WARRANTY TAG: Be sure that the Nash Dealer attaches the radio warranty tag (sample above) upon delivery of the car, if radio equipped, or if subsequent installation is made.

Nash Conditioned Air System

With the 1938 series cars, Nash presents the greatest step forward in passenger comfort, by introducing the **Nash Conditioned Air System.**

Designed and produced exclusively by Nash this new system provides an entirely new conception of comfort. **Clean, heated, filtered** air is now uniformly distributed throughout the car.

Contrast this with the conventional type of car heater, where usually, a hot blast of air is directed to the front seat passengers and very little to the occupants of the rear seat.

Nash now takes fresh air from the outside through the cowl ventilator, passes the air over an eliminator plate to remove rain or snow and then filters it, before uniformly distributing it throughout the car.

The filter serves a dual purpose in that first it collects dust, insects, or other foreign particles and second it acts as a distributor to cause an even flow of air through the heating core, and thus assists uniform heating of the car.

This is a pressure system which functions efficiently with all windows tightly closed, and yet furnishes **a complete change of air every minute** in sufficient volume to meet physical and healthful requirements of all passengers.

Drafts are avoided for with this new system all windows may be tightly closed, yet **clean, fresh, heated air is constantly being introduced.**

The degree of heat desired is conveniently controlled for both the flow of air from the fan, and the flow of hot water through the core, are controlled by switches from the front seat.

The filter can be instantly removed for cleaning, and after a long period of time if the filter becomes plugged, it can be replaced at a very nominal charge.

If your new car was not equipped with this remarkable Nash Conditioned Air System, when you took delivery, be sure to have your dealer demonstrate the many features for an actual demonstration will be far greater convincing proof than anything we might state here.

Nash Engineered Accessories

Your Nash car is an attractive, distinctly styled and precision built automobile. You will be proud of its appearance and pleased with its fine performance and operation.

Any accessory that you may purchase should give equal satisfaction; therefore Nash has made available a line of accessories designed, tested and approved by Nash engineers.

Your Nash dealer will be pleased to show and demonstrate these quality accessories. He is in position to make the installation quickly and satisfactory. Nash radios and Nash conditioned air systems have been described on previous pages.

Among the other items are:

NASH SLEEPING CAR EQUIPMENT: Originated by Nash two years ago and improvements added each year, this sleeping car feature enables you to convert your car into a real comfortable bed in less than ten minutes.

WINDOW SCREENS: First developed as an accessory to the sleeping car, these window screens have become very popular for summer use. Neat in appearance, the screens are fitted so that windows can be raised or lowered with the screens in place.

ROAD LAMP: Attached to the bumper, in pairs, these lamps are particularly useful in foggy or rainy weather.

SAFETY LIGHT: Neatly fitted through the front door post and controlled from the inside of the car, the driving light projects a concentrated beam to show up long distance hazards. Finger tip control turns the beam in any desired direction.

SEAT COVERS: Custom built, tailored to fit the individual model, for all year round satisfaction. Strongly constructed, and easily cleaned without removal from car.

ELECTRIC CLOCKS: Accurate time pieces, in an attractive setting.

MASTER BUMPER GUARD: Strongly constructed and attractively designed guards that bolt to the bumpers. An indispensable item, both front and rear, for protection in present day traffic.

RADIATOR SCREENS: A rust proof screen, of attractive design that will prevent insects of all kinds from becoming lodged in the radiator core.

RADIATOR GRILLE COVER: For quickly warming up the engine and probably additional heat for the car conditioning system.

LUBRICATION AND INSPECTION

Approx. Miles	Actual Miles	Date	Oil Changed
500			
1500			
2500			
3500			
4500			
5500			
6500			
7500			
8500			
9500			
10500			
11500			
12500			
13500			
14500			
15500			
16500			
17500			
18500			
19500			
20500			
21500			

LUBRICATION AND INSPECTION

Approx. Miles	Actual Miles	Date	Oil Changed
22500			
23500			
24500			
25500			
26500			
27500			
28500			
29500			
30500			
31500			
32500			
33500			
34500			
35500			
36500			
37500			
38500			
39500			
40500			
41500			
42500			
43500			
44500			

LUBRICATION AND INSPECTION

Approx. Miles	Actual Miles	Date	Oil Changed
45000			
45500			
46000			
46500			
47000			
47500			
48000			
48500			
49000			
49500			
50000			
50500			
51000			
51500			
52000			
52500			
53000			
53500			
54000			
54500			
55000			
55500			
56000			
56500			

LUBRICATION AND INSPECTION

Approx. Miles	Actual Miles	Date	Oil Changed
57000			
57500			
58000			
58500			
59000			
59500			
60000			
60500			
61000			
61500			
62000			
62500			
63000			
63500			
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66500			
67000			
67500			
68000			

PERMIT only the installation of Genuine Nash Parts.

All Nash Parts are manufactured with the same care and precision exercised in the production of parts from which your car was constructed.

That means exact dimensions, uniform hardness and the best of materials.

Substitution may be dangerous.

INSIST UPON

GENUINE PARTS

No.

THE NASH MOTORS CO.

KENOSHA, WIS., U. S. A.

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