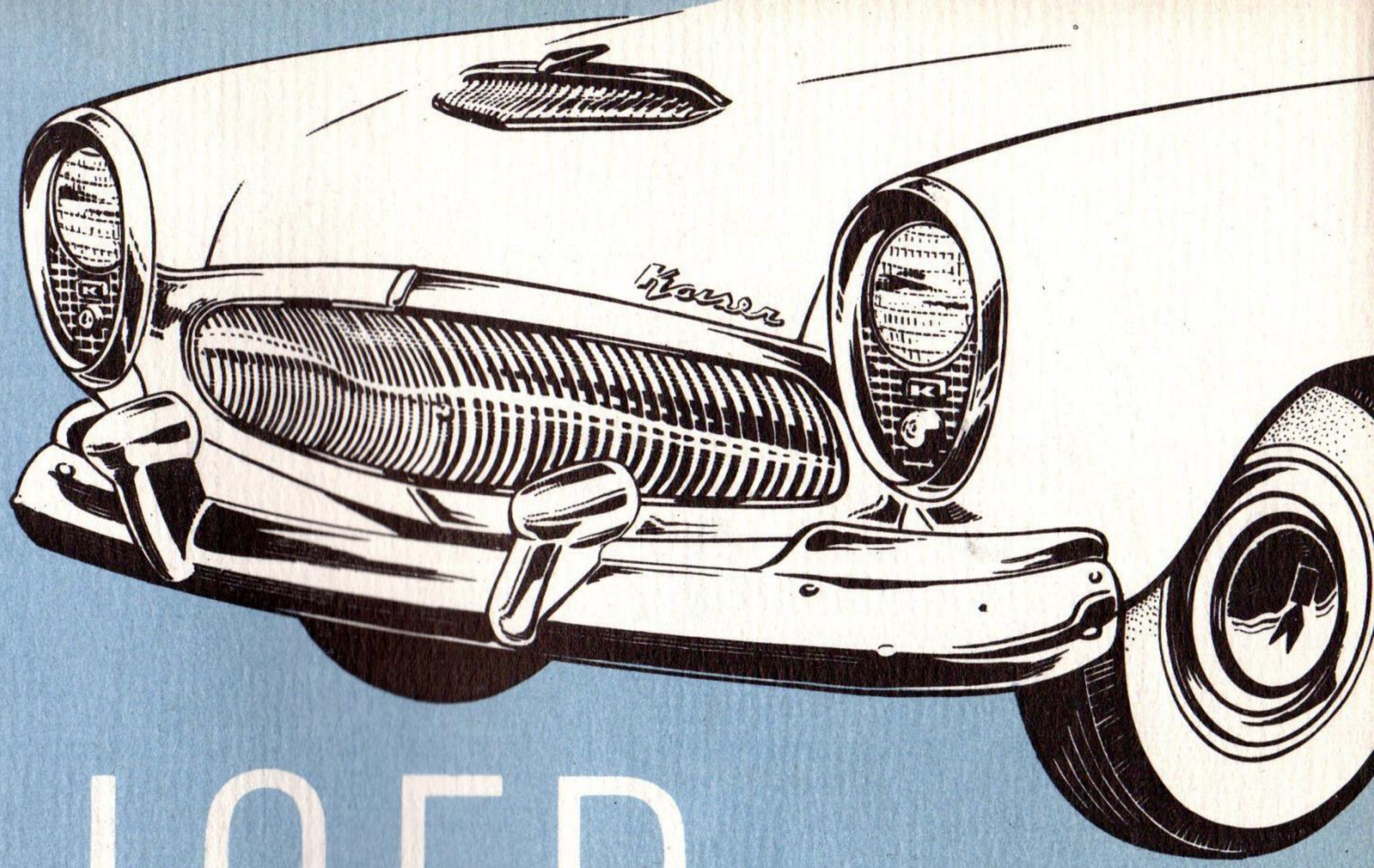
'54



KAISER

SPECIAL

owners manual

Your Service Policy

Owner's Identification Card

You have purchased a fine product and we want you to be proud of your car and satisfied with its performance. With this in mind, the following is called to your attention to assure getting your Kaiser off to the best possible start for many miles of motoring pleasure.

- Read this Owner's Manual carefully – it tells you the things you should know about the smartest car on the road today . . . your Kaiser.

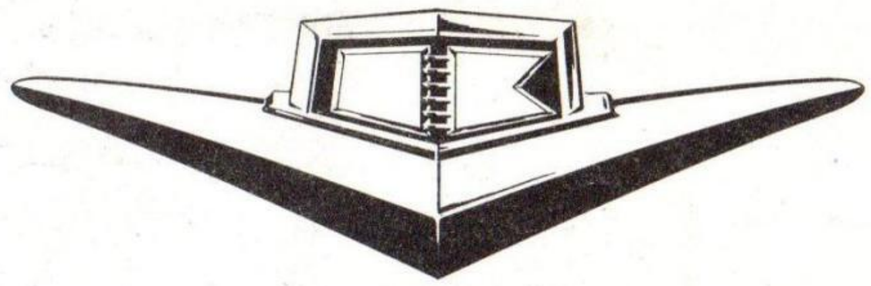
- Read your Service Policy carefully and be sure the Policy and Identification Card are properly filled out by your Kaiser Dealer.

- Attached to your Service Policy are coupons which entitle the Owner to the listed 1000 and 2000-mile inspections and adjustments which are performed without charge by any Authorized Kaiser Service Station in the United States in accordance with the terms expressed thereon. Repairs other than Warranty Service are to be charged for in the regular way. Be sure you arrange for the inspections at the proper mileage.

- Follow the simple rules for proper break-in as the early miles are most important to your car's future. These rules are included in this Owner's Manual.

Litho in U.S.A.—1st Edition

Copyright 1954
KAISER MOTORS CORP.



Your New

KAISER

from

Kaiser-Willys
SALES DIVISION

WILLYS MOTORS, INC. • TOLEDO, OHIO

YOUR 1954 KAISER

Owner's Name _____

Address _____

Dealer's Name _____

Address _____

Phone Number _____

Dealer's Sales Manager _____

Dealer's Service Manager _____

Kaiser Model K-545 _____ Body Type _____
(Special)

Serial Number _____ Engine Number _____
(on left front pillar) (on left side of cylinder block)

Number of Cylinders.....6 Brake Horsepower....118 @ 3650 RPM

Piston Displacement.....226.2 cu. in. Bore and Stroke.....$3\frac{5}{16}$" x $4\frac{3}{8}$"

Compression Ratio .....7.3 to 1. A.M.A. Horsepower 26.3

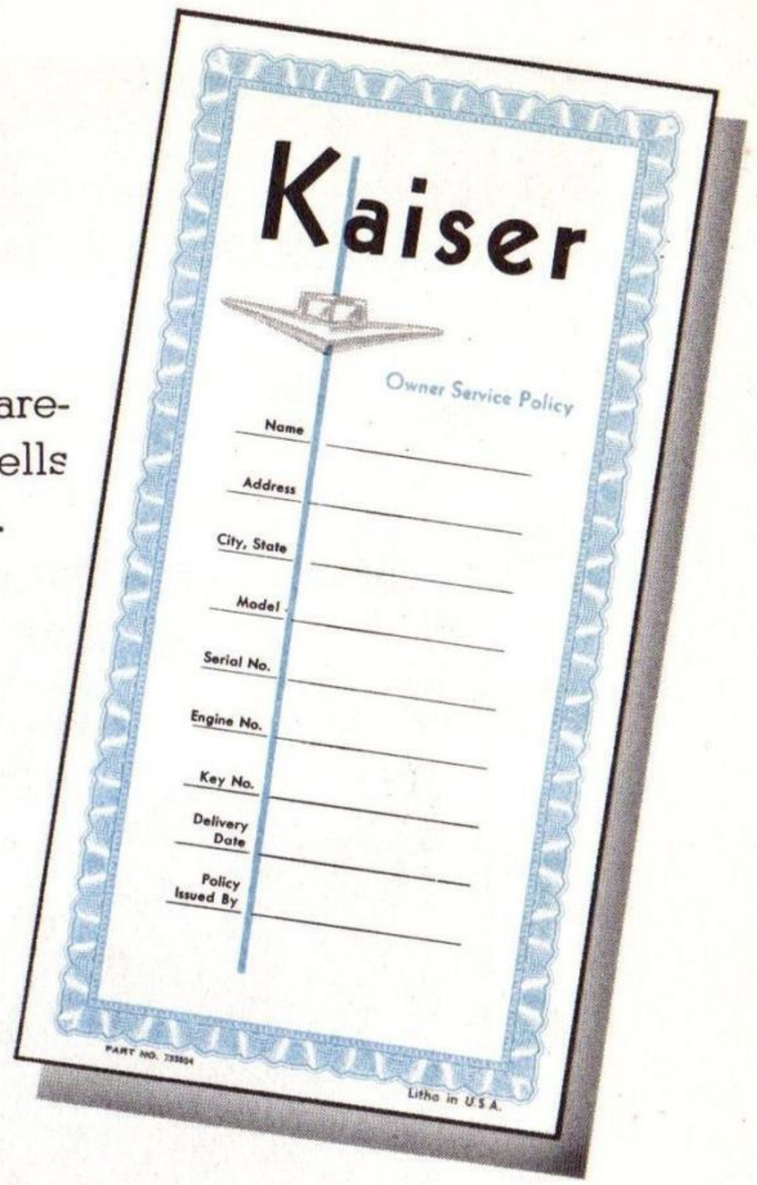
KEYS:

One key operates the combination starter-ignition-accessory switch and the doors. Another key operates the glove compartment and the rear trunk lid. Duplicate keys are furnished for your protection. Record the key number stamped on the metal tag and destroy tag.

Key Number _____ **Key Number** _____

"And may these be the keys to many years of enjoyment of fine transportation."

SERVICE POLICY AND WARRANTY



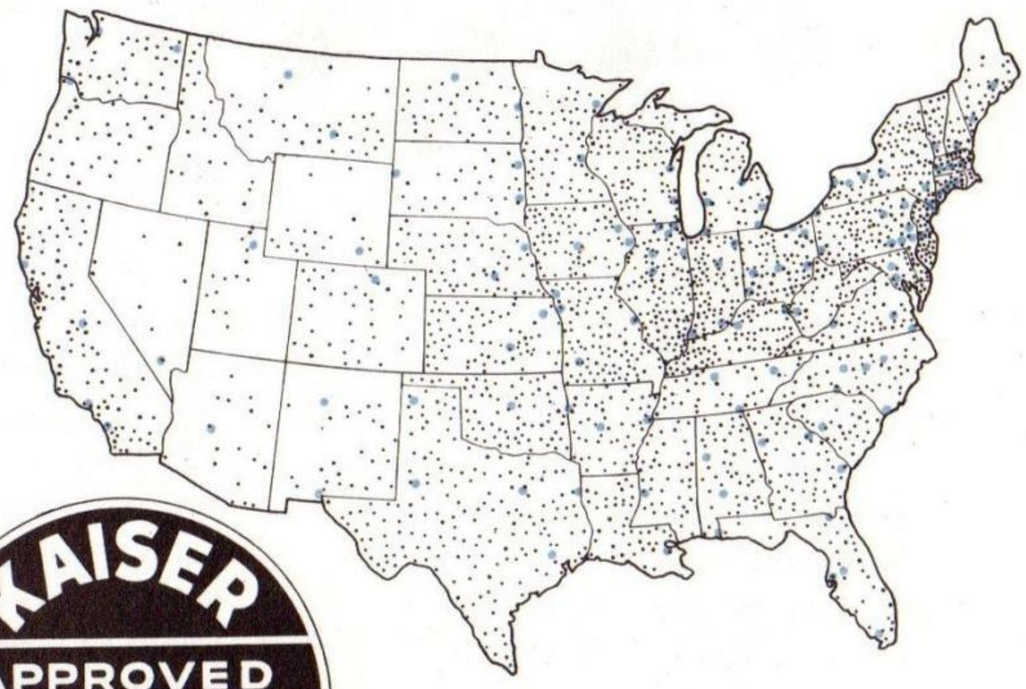
The Owner Service Policy combined with this manual should be read carefully and thoroughly understood. It is your dealer's contract with you. It tells you what you may expect from him and also what he expects from you.

"The Manufacturer warrants each new motor vehicle manufactured by it to be free from defects in material and workmanship under normal use and service, its obligation under this warranty being limited to making good at its factory any part or parts thereof, including all equipment or trade accessories (except tires) supplied by the Motor Vehicle Manufacturer, which shall, within ninety (90) days after making delivery of such vehicle to the original purchaser or before such vehicle has been driven four thousand (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 of all other obligations or liabilities on its part, and it neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of its vehicles.

"The Warranty shall not apply to any vehicle which shall have been repaired or altered outside of an authorized Kaiser Service Station in any way so as, in the judgment of the Manufacturer, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident."

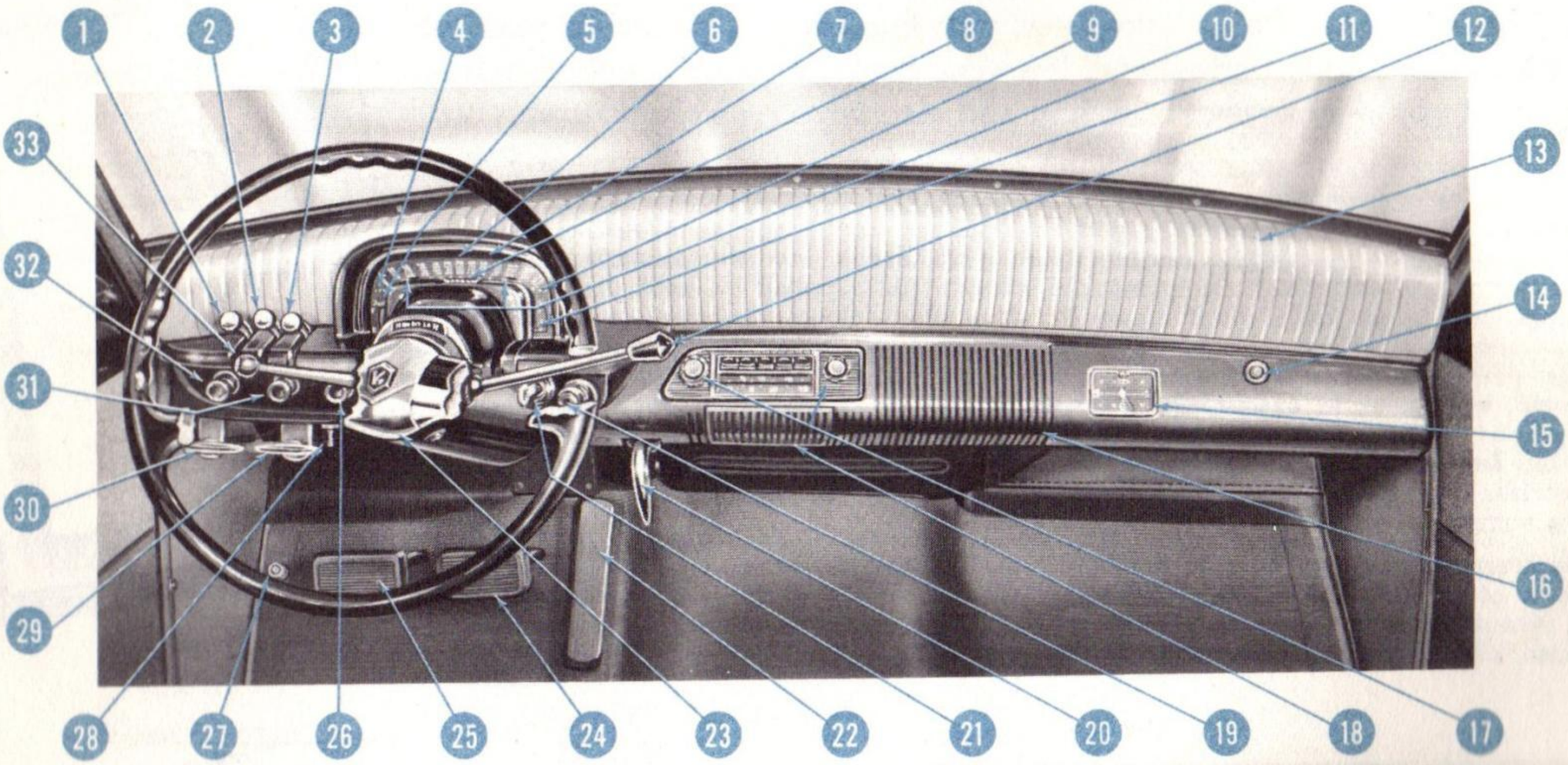
AT YOUR SERVICE

Authorized Kaiser dealers throughout the United States and Canada are completely stocked with genuine Kaiser parts and accessories and use factory approved equipment for servicing your car. Plan regular visits to your Kaiser dealer. Your continuing satisfaction with your new Kaiser is his first interest, and we know he will serve you well.



KAISER APPROVED SERVICE WILLYS

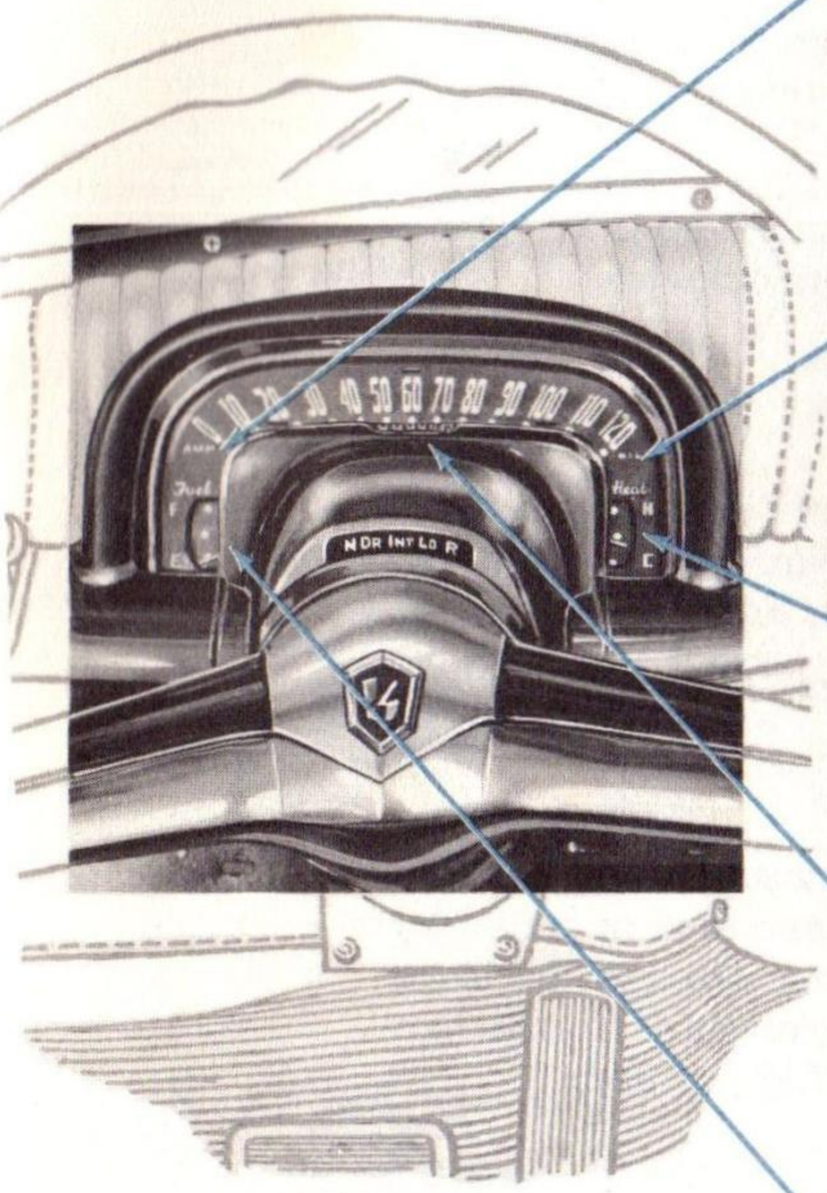
INSTRUMENTS AND CONTROLS



LEGEND

1—Defroster control (Accessory)
2—Left air vent control
3—Right air vent control
4—Charge indicator light
5—Fuel gauge
6—High-beam indicator light
7—Speedometer
8—Total mileage recorder
9—Oil pressure indicator
10—Directional arrows
11—Temperature gauge
12—Gearshift lever
13—Vinyl covered padded cowl
14—Glove compartment lock
15—Electric clock (Accessory)
16—Radio speaker grille
17—Radio controls (Accessory)
18—Ash receiver
19—Cigarette lighter
20—Hand brake handle
21—Starter-ignition-accessory switch
22—Accelerator
23—Horn
24—Service brake pedal
25—Clutch pedal (Not used with Hydra-Matic Drive)
26—Headlight light switch
27—Headlight dimmer switch
28—Courtesy lamp switch
29—Overdrive control (Optional Equipment)
30—Hood lock release handle
31—Temperature control, heater blower switch (Accessory)
32—Windshield wiper control
33—Turn signal lever (Accessory)

KNOW YOUR INSTRUMENTS



Charge Indicator

A red generator indicator lamp is lighted when the ignition switch is turned on. The lamp remains on until the generator amperage output is sufficient to begin charging the battery. Should the lamp continue to burn while driving, the electrical system should be checked.

Oil Pressure Indicator

A red oil pressure indicator lamp lights when the ignition switch is turned on and remains lighted until the operating oil pressure of approximately 8 pounds is reached. If the lamp lights at car speeds of above 20 M.P.H., check at once to determine the cause of low oil pressure.

Engine Temperature Gauge

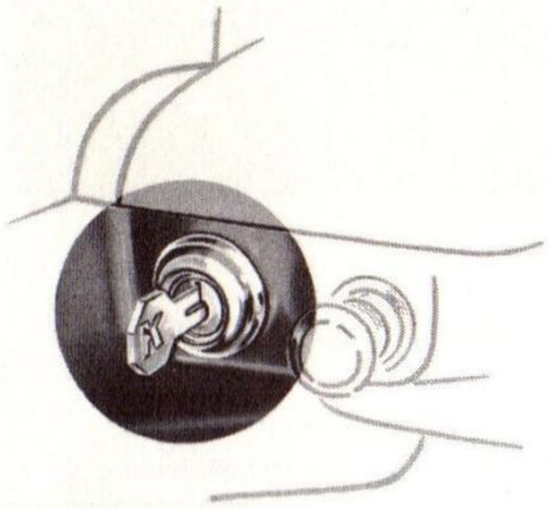
Normal operating temperature range is indicated by dot between markings "C" (cold) and "H" (hot). Indicator may lean towards "H" mark in hot weather, or when engine is idling continuously. Sudden rise to "H" mark should be investigated at once.

Speedometer

The speedometer is provided with a total mileage recorder. A headlight "high-beam" indicating light (amber) is located above the 60 M.P.H. mark. Directional arrows (green) are located in the upper section of the speedometer face when accessory turn indicator equipment is installed.

Fuel Gauge

The fuel gauge indicates the amount of fuel in the tank. It operates when the starter-ignition-accessory switch is in the ignition-accessory position.

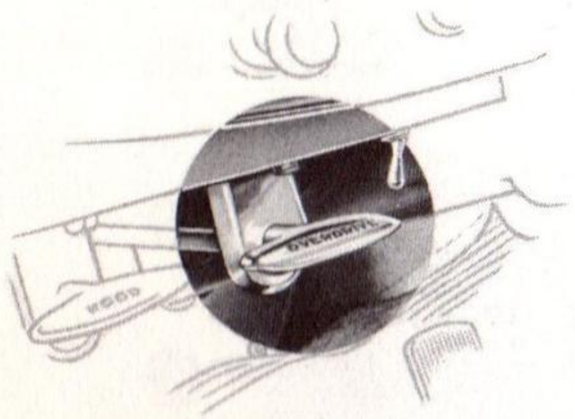


Combination Starter-Ignition-Accessory Switch

New improved combination starter-ignition-accessory switch eliminates need for both a starter button and ignition key. With this improved method of starting . . . simply turn the key and the engine starts automatically. Other than the straight up and down ("off" position), here are the three key positions:

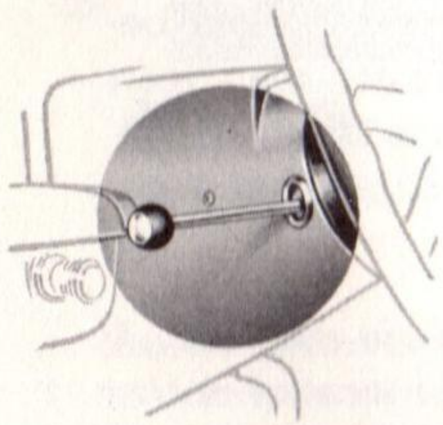
To start engine, turn key all the way clockwise (¼ turn). Release key after engine starts and key springs back to the ignition-accessory position (⅛ turn). This is the driving position. In this position, the accessories can be turned on.

However, in instances where only accessories are to be turned on (engine not running), turn the key counterclockwise.



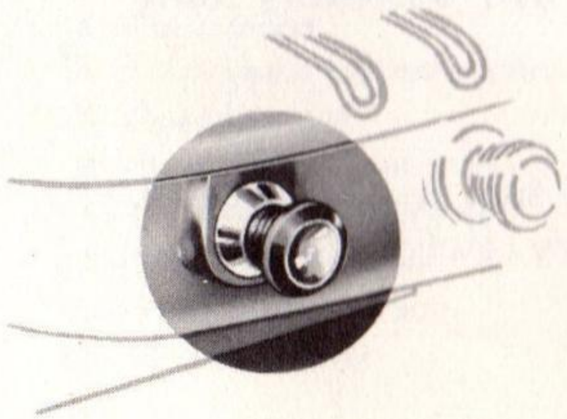
Overdrive Handle

To operate the car with overdrive (optional equipment on all models), the handle should be all the way in. For conventional operation the handle should be pulled out. For complete operating instructions see overdrive section on page 9.



Turn Signal Lever

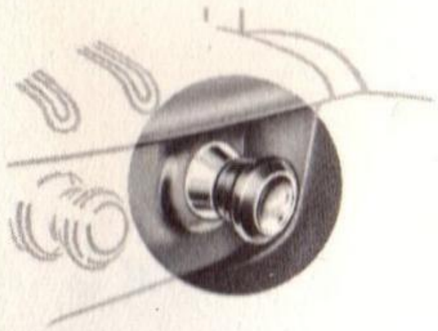
All models of the Kaiser are equipped, at the option of the purchaser, with flashing directional lights front and rear, operated by the lever on the left side of the steering post. Moving the lever "up" indicates right turn, "down" indicates left turn. Completion of turn automatically resets the lever in neutral position.



Windshield Wiper Control

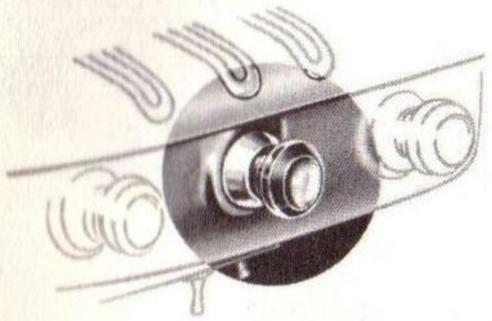
The constant speed, vacuum operated windshield wipers are operated by pulling out the control knob on the instrument panel.

Electrically driven windshield wipers, furnished as optional equipment, have two speeds and are operated by turning the control knob on the right.



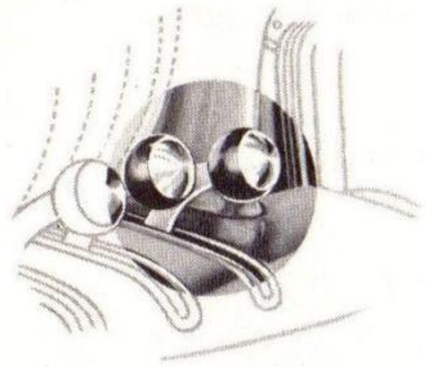
Headlight Switch

Pulling the switch knob out to the first position turns on parking, license, instrument, and tail lights. Second position turns on headlights, license, instrument, and tail lights. Turning headlight switch (in the "out" position) right or left, controls the instrument panel lighting brightness.



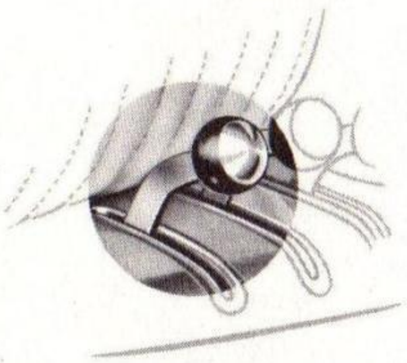
Temperature and Blower Control

Pulling out the temperature control knob regulates the flow of hot water from the engine through the heater core, thus controlling air temperature. Turning the knob to the right turns on the fan to force air through the heater and defroster channels, necessary only at speeds below 30 M.P.H., or when standing. Optional equipment on all models.



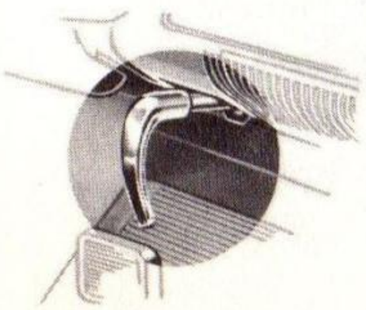
Air Intake Controls

For fresh air ventilation, pull forward the left and right vent controls to open dampers in air intake ducts opening into the car at left and right sides of dash. Push back left vent control and keep right vent control pulled forward when operating heater—fresh air from right air duct is then directed through the heater before entering the car.



Defroster Control

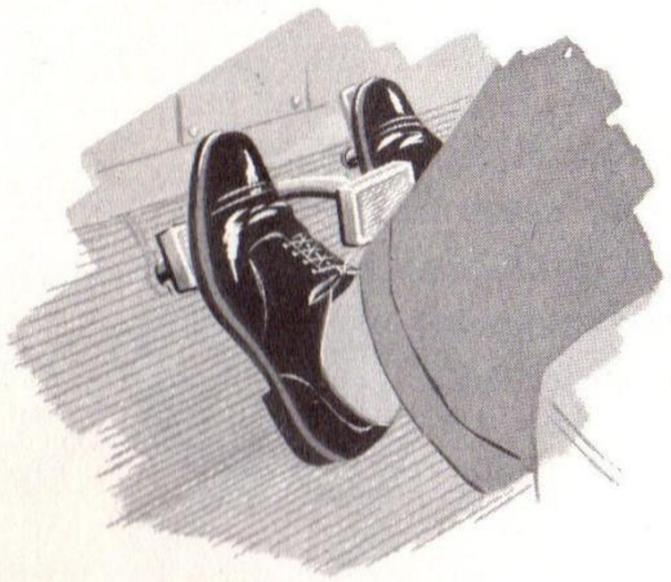
The defroster control, when pulled all the way forward, operates a baffle in the heat distributor chamber passing 80% of the hot air to the defroster system and 20% to the car heating channel. (Optional with heater.)



Hand Brake

To "set" hand brake pull out the handle. To release—turn the handle to the left. Always set the hand brake when parking.

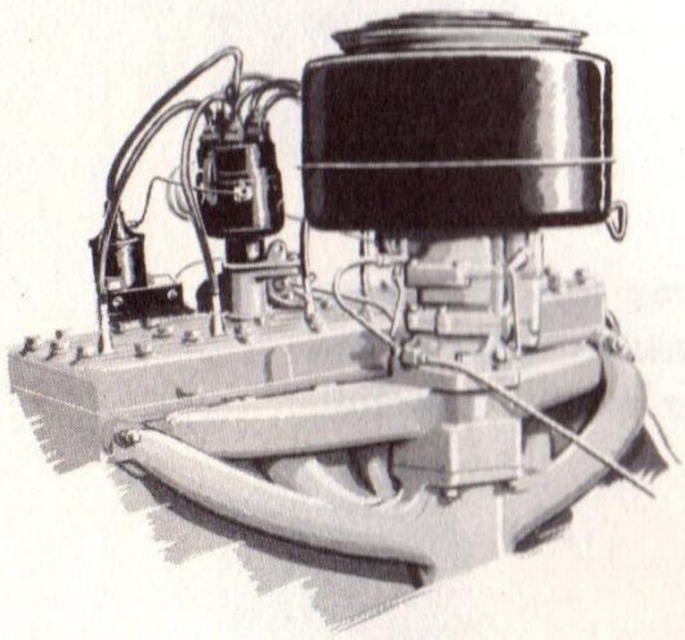
HOW TO OPERATE YOUR NEW KAISER



Starting the Engine

Be sure the gear shift lever is in neutral. Depress the clutch pedal to avoid transmission gear drag. Slightly depress the accelerator. Turn the starter-ignition-accessory switch ¼ turn clockwise until engine starts. Kaiser automatic climatic control will "choke" the engine and raise the idling speed until engine reaches operating temperature. This insures quick starting and fast warm-up with no fuel waste. For maximum performance it is recommended that premium fuels produced by responsible refineries be used in the super charge engine.

NOTE: For Hydra-Matic Drive operating instructions see separate Instruction Card and information on page 10.



Dont's . . .

Don't race the engine. Warm-up is faster at slower speeds and you will avoid damage to working parts before oil can protect them.

Don't ride the clutch pedal. It causes excessive wear and expense.

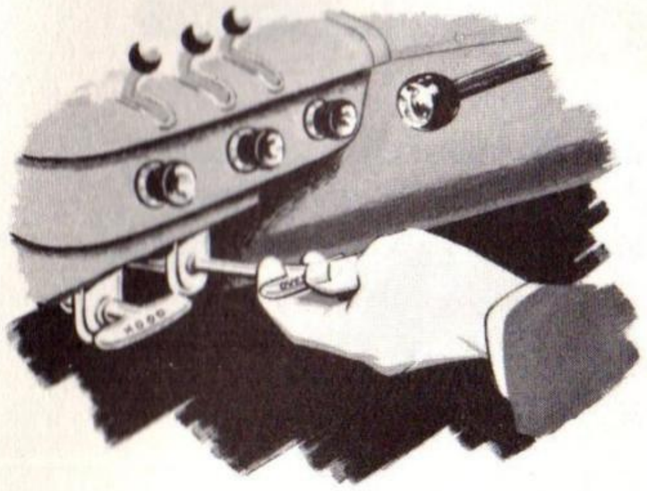
Don't shift gears without depressing the clutch pedal.

Don't "miss" gears, always shift one-two-three.

Don't shift too fast from first to second gear, or from second to third. Allow an instant for the gears to synchronize.

Don't run the engine in a closed garage. Carbon monoxide is odorless, colorless and deadly.

Don't exceed 40 M.P.H. until engine is fully warmed-up.



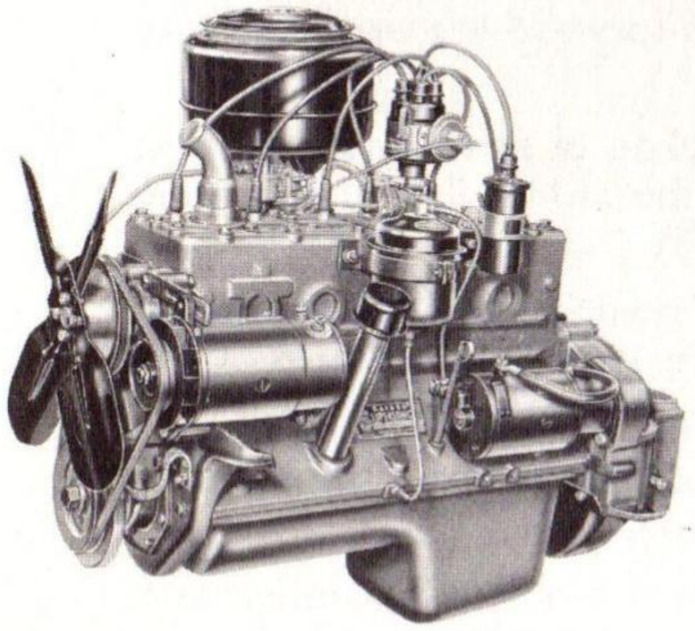
Overdrive

To use overdrive, push the overdrive handle all the way in with car stopped. At any speed above 30 M.P.H. a momentary release of the accelerator will engage the overdrive, reducing engine speed 30%.

Overdrive will disengage when car speed is reduced below approximately 24 M.P.H. Operation below approximately 24 M.P.H. is "coasting", free of engine drag, until car speed is again raised past 30 M.P.H.

While in overdrive, if more power is desired for climbing hills or passing other vehicles, press the accelerator completely to the floor. This operates a "kick down" switch, putting the car back into conventional third speed. Car speed may be reduced, in this case, without re-engaging overdrive by a **very gradual release** of the accelerator. A momentary **full** release of the accelerator will return car to overdrive at speeds above 30 M.P.H.

For conventional drive, pull out the overdrive handle **with the car stopped.** Operation in this position is necessary when pushing or towing the car to start the engine, and is recommended when driving under any hazardous road conditions, especially in snow and ice, or on long steep grades.



Engine Break-In

Vehicle speed during the first several hundred miles should not exceed the limits in the chart below. However, it is equally desirable to avoid sustained driving at low speed during the break-in period. Do not race the engine. Also, remember that fast acceleration in low and second gear is, in effect, racing the engine and is to be avoided during break-in.

After engine warm-up do not exceed:

50 M.P.H. for 0 to 300 miles
60 M.P.H. for 300 to 800 miles
70 M.P.H. for 800 to 1200 miles

DUAL-RANGE HYDRA-MATIC DRIVE



To Start Engine—Selector lever must be in the N (neutral) position to operate starter. Depress the accelerator pedal and turn ignition key ¼ turn clockwise until engine starts then release key. Do not pump accelerator or race engine.

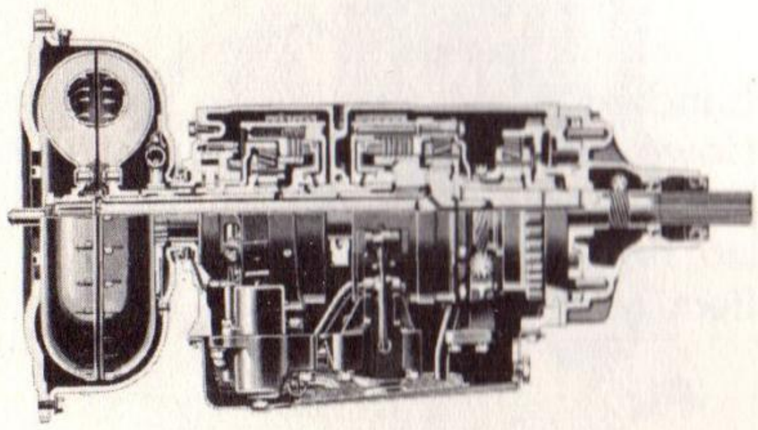
Country or Boulevard Cruising—This range is indicated by the DR position on the quadrant. Use this range for best economy in fairly level country or boulevard cruising.

Mountainous Country or Congested Traffic—This range is indicated by the INT position on the quadrant. Use this driving range for congested traffic or mountainous country.

Rapid Acceleration—Depress the accelerator pedal completely (through detent). This will down-shift the transmission into a lower gear when rapid acceleration is needed for passing.

Pulling Through Mud or Sand; Steep Grades—Raise selector lever slightly and move it to the LO position on the quadrant when pulling through deep mud, sand or snow or when ascending or descending steep grades.

Reverse—The transmission can be shifted into the R (reverse) position when the vehicle is standing still or moving forward at a speed of less than 10 M.P.H.



Rocking the Car—The car can be safely rocked in sand, snow or mud by alternating the selector lever between the LO or INT and R positions. Do not spin the wheels above 10 MPH.

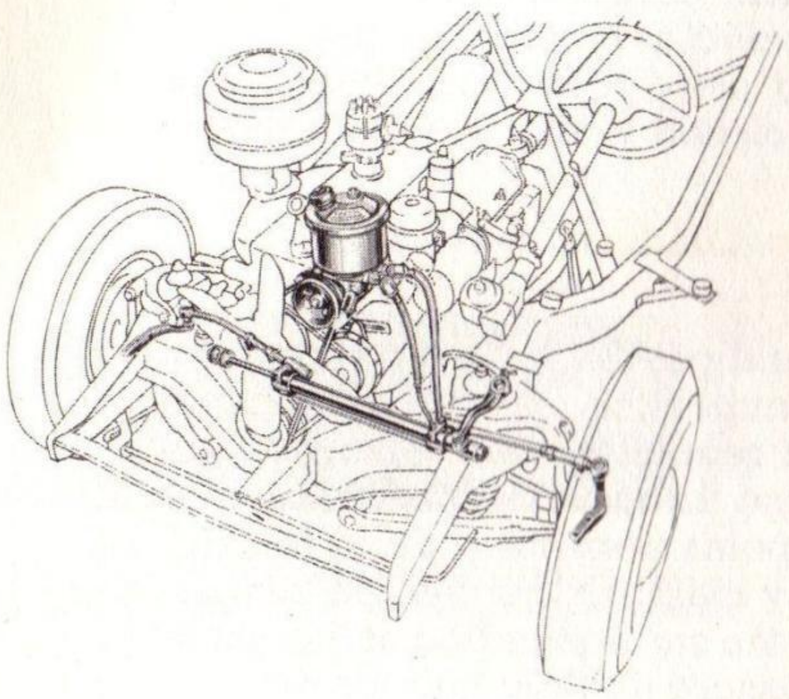
Pushing To Start—Move the selector to the N position until the speedometer reaches a speed of 25 MPH, then turn ignition switch to "ON" position and move selector lever to either DR or INT position.

Parking—"In Gear" parking may be obtained by moving the selector lever to R position after the engine is stopped.

Maintenance—Check Hydra-Matic fluid level every 1,000 miles and change fluid every 25,000 miles. Capacity is 11 quarts.

Towing—The car should always be towed with the rear wheels off the road or with the propeller shaft disconnected.

POWER STEERING



Hydraulic power steering is available as optional equipment on Kaiser cars. Power steering is designed to reduce steering effort while retaining driver "feel of the road." Steering assistance will become effective when the pull on the rim of the steering wheel reaches four pounds. Assistance increases in proportion to the additional effort required to turn the wheels.

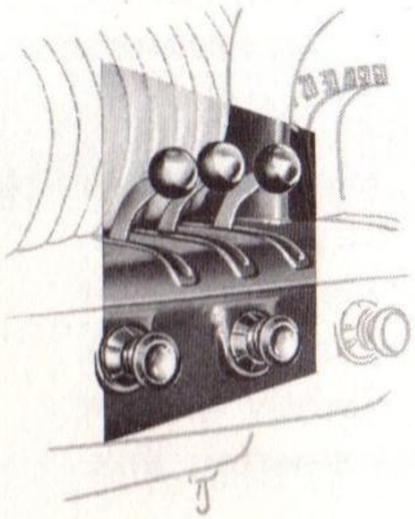
A hydraulic oil pump, belt-driven from the engine crankshaft pulley, provides oil pressure to operate the power steering unit. Therefore, the power steering operates whenever the engine is running. If the power steering system fails, steering is accomplished manually with a slightly greater manual steering effort required to move the steering linkage and hydraulic power cylinder.

Maintenance

The fluid level in the pump reservoir should be checked every 2,000 miles and maintained to the indicated level on the dip stick gage. Always check for leaks before adding any fluid to the system. Use only Automatic Transmission Fluid (type A) from containers bearing the marking "AQ-ATF" followed by a number. Total capacity of the system is 3 pints.

CAUTION: Always wipe dirt from cover before removing to check fluid level. If excessive dirt has settled around air vent in center of cover, remove cover, wash with solvent and thoroughly dry. Check position of cover gasket before installing cover.

VENTILATOR OPERATION



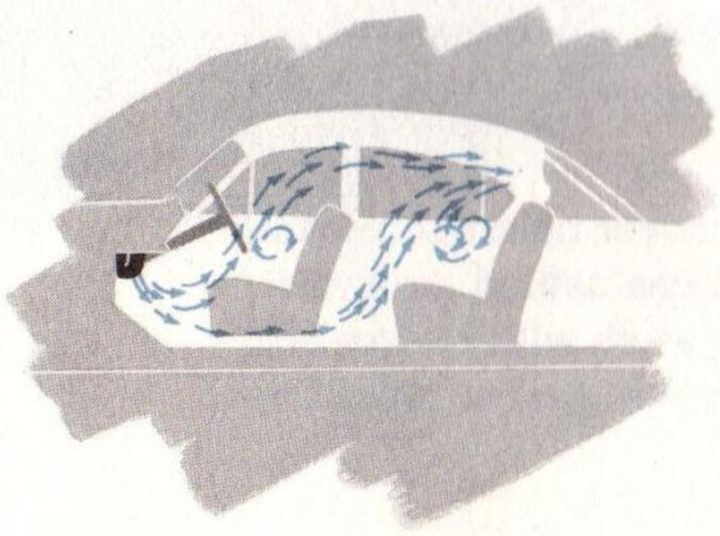
The Kaiser Ventilator unit, an optional installation, provides fresh air ventilation, heating and defrosting. Separate controls regulate the amount of fresh air flow into the car, determine how much the air is to be heated and adjusts the amount of heated air directed to the windshield.

Fresh Air Ventilation

Open the dampers in both air ducts by pulling forward both vent controls on instrument panel. Turn Temperature Control knob to right to turn on blower in right air duct to increase air flow when the car is standing still or moving slowly. Set vent controls at any point from fully open to fully closed to regulate the amount of fresh air entering the car.

Heating

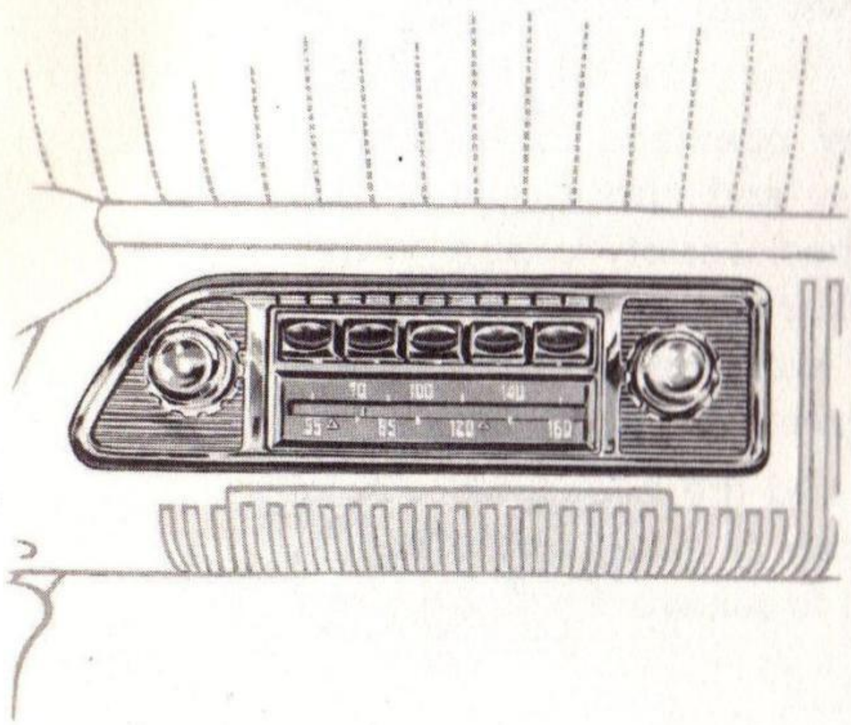
Push back the left vent control and pull forward the right vent control. Pull out the temperature control knob on instrument panel to open a thermostatic valve that regulates the amount of hot water that circulates from the engine through the heater. Set the temperature control knob at any point from fully open to fully closed to regulate and automatically maintain the desired temperature inside the car. For heat when the car is standing still or moving slowly, operate the blower to assure air flow into the car.



Defrosting

With controls set for heating, pull forward the Defroster Control. The Defroster Control can be set at any point from fully closed to fully open. When fully open, a damper directs 80% of the hot air from the heater onto the inside of the windshield. For maximum defrosting action while warming up the car before starting out, open the Temperature Control fully and operate the blower.

RADIO OPERATING INSTRUCTIONS



"On-Off" Switch and Volume Control

The radio is turned on by rotating the volume control knob to the right. The set will require from ten to twenty seconds for the radio tubes to warm-up to the operating temperature. To increase the volume, merely continue knob rotation to the right. To turn the receiver off, rotate the knob to the left to the point where a click is heard.

Manual and Automatic Tuning

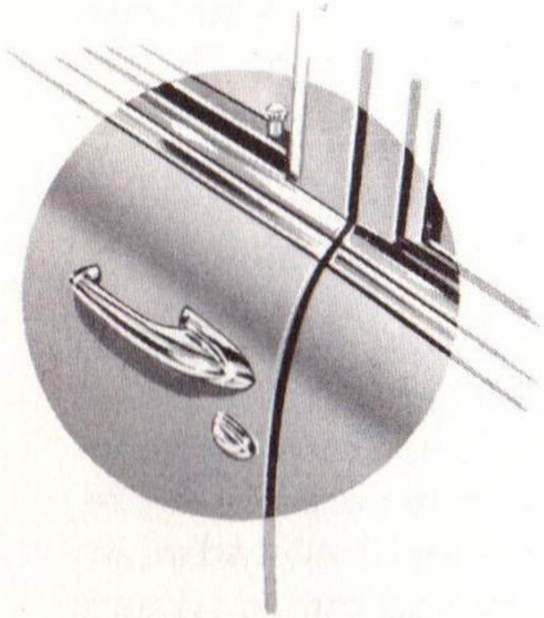
The manual tuning control is located at the right of the dial. To operate the automatic tuning, depress the desired push button all the way in and the receiver is automatically tuned to a predetermined station. Thus, with five push buttons, it is possible to preselect five individual stations. These stations may be altered when desired by pulling the push button to the left and out as far as it will go. Then manually tune in the desired station to its clearest reception and firmly push the push button in to the end of its travel to complete the setting of the control. Repeat at each button as desired. Note that the Civil Defense Administration **Conelrad** broadcasting frequencies, 640 and 1240 kilocycles, are marked by small white triangles on the radio dial.

Tone Control

The tone control ring is located directly behind the volume control knob. Turning the chrome ring to the right will emphasize the treble or brilliant high notes while turning to the left will emphasize bass notes. The treble position is generally used when the car is in motion to overcome wind noise and is almost always used for voice. The bass position is an aid in bringing out full, mellow tones of musical programs. An intermediate position gives equal emphasis of the full tonal range.

For dial lights and fuse replacements, see chart in section on electrical system. The dial lights may be replaced by merely removing the sockets located on each end of the dial.

DESIGN FEATURES



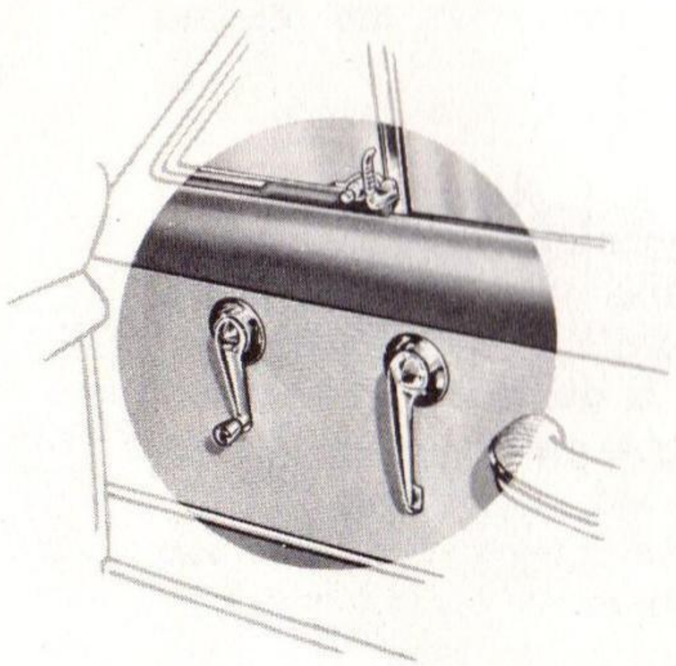
Door Locks

All doors are provided with outer "pull" type handles and inner "turn" type handles for opening the doors. Each door lock, in addition to the fully latched position, has a safety position to prevent the door from opening in case it is not fully closed.

All doors can be locked from the inside by pressing down the lock buttons in the window sills. They are locked from the outside by pushing the lock buttons down and pushing the doors closed.

Both front doors have covered key openings for unlocking from the outside. Use the ignition key and turn a quarter turn forward to unlock. Rear doors have a special safety feature—when the lock button is pushed down the door cannot be unlocked by turning the inside handle—the button must first be raised. This is important to families with small children.

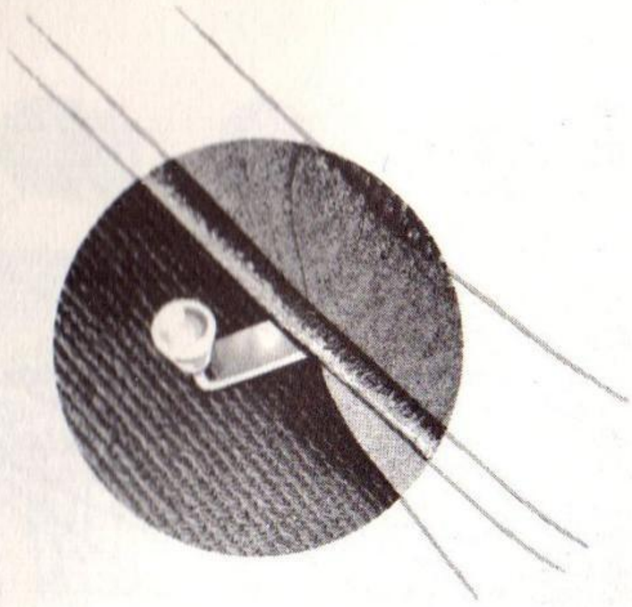
NOTE: Due to the size of the doors and the tight seals around them, door closing of two-door models is more easily accomplished by opening a window or vent to relieve the air pressure.



Windows and Regulators

An outstanding feature is the extremely large glass area providing exceptional visibility in all directions. The one-piece windshield is designed to "pop-out" when pressure is applied from the inside, one of the features of the "safest front seat."

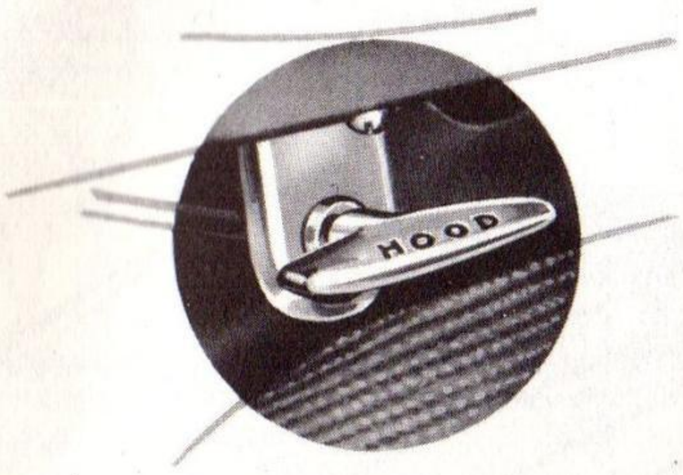
Side windows of safety glass are raised and lowered by turning the regulator handles only a few turns. Vent windows are opened manually after pressing in the lock button in the vent window latch and turning the handle to unlock the window. The vent windows open easily and will stay open in any position desired.



Front Seat Adjustment

The safety-posture front seat cradles your weight low where it is safer and the seat is adjustable forward and backward to provide leg room that is just right for relaxed driving.

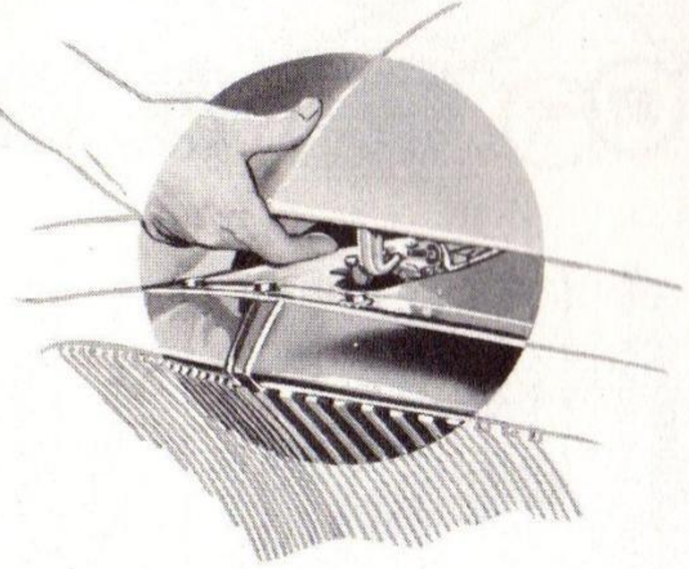
Pull the handle on the driver's side at the front edge of the seat cushion toward the center of the car and slide the seat fore or aft to the desired position. Release the handle to lock the seat in the adjusted position.



Hood Lock

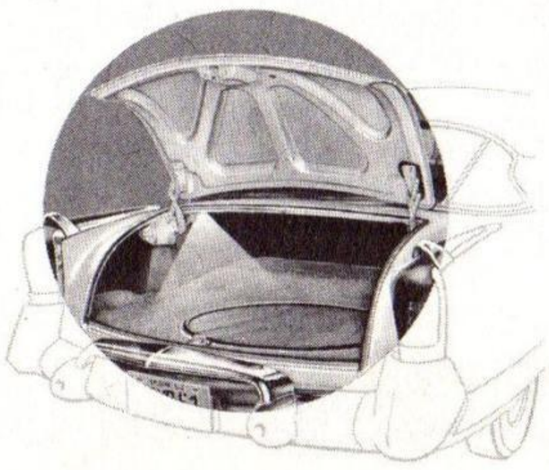
The hood cannot be opened until the hood lock release handle on the instrument panel at the left of the steering column is pulled out. The safety catch is then released manually from the outside under the front edge of the hood. Counterbalancing springs in the hood hinges assist raising of the hood and hold it open for convenient accessibility to the entire engine compartment.

To close the hood properly do not slam it—pull down on the hood at the front, until the lock plunger sets on the lock plate (safety catch position). Then press sharply on crown of hood to engage the hood lock.



Counterbalanced Deck Lid

Access to the rear compartment or trunk is easily accomplished due to design features in the rear deck lid. No handles to turn or straining to lift the lid. A quarter turn of the key releases the pop-open lid lock. A slight lift on the lid permits the spring-loaded hinges to raise the lid. A light goes on automatically to illuminate the trunk as the lid opens.



The floor of the roomy interior is level with the rear bumper bridge making it unnecessary to lift luggage etc. over obstructions to get it in or out of trunk. Spare tire and wheel are stowed out of the way in a covered well in the floor.

Pull the deck lid part way down and let go of it. The lid will close and lock by itself—the key is not required for locking.

LUBRICATION CHART

● 1,000 ● 2,000 ○ 10,000 ○ 20,000

1 FRONT WHEEL BEARINGS
Remove, Clean, Repack with Wheel Bearing Grease. 2½ oz. per Wheel—do not fill Hub.

2 STEERING IDLER LEVER
1 Fitting. Use Chassis Lubricant. Apply with pressure gun.

3 TIE ROD JOINTS
4 Fittings. Use Chassis Lubricant. Apply with pressure gun.

4 GENERATOR
2 Oil Cups, 4-5 Drops Ea. Use Engine Oil.

5 SUSPENSION BUSHINGS
8 Fittings. Use Chassis Lubricant. Apply with pressure gun.

6 STEERING KNUCKLE
4 Fittings. Use Chassis Lubricant. Apply with pressure gun.

7 CRANKCASE FILLER TUBE
Drain and refill with 5 quarts engine oil.

8 BREATHER CAP
Wash in kerosene, dry and dip in same oil as used in engine.

9 OIL DIP STICK
Check oil level when refueling. See text.

10 STEERING GEAR
Check, Refill with Steering Gear Lubricant. Maintain lubricant level to filler hole.

11 GEAR SHIFT HOUSING
Check and refill with Chassis Lubricant if shift is sticky. See Below.

12 BRAKE PEDAL
1 Fitting. Use Chassis Lubricant. Apply with pressure gun.

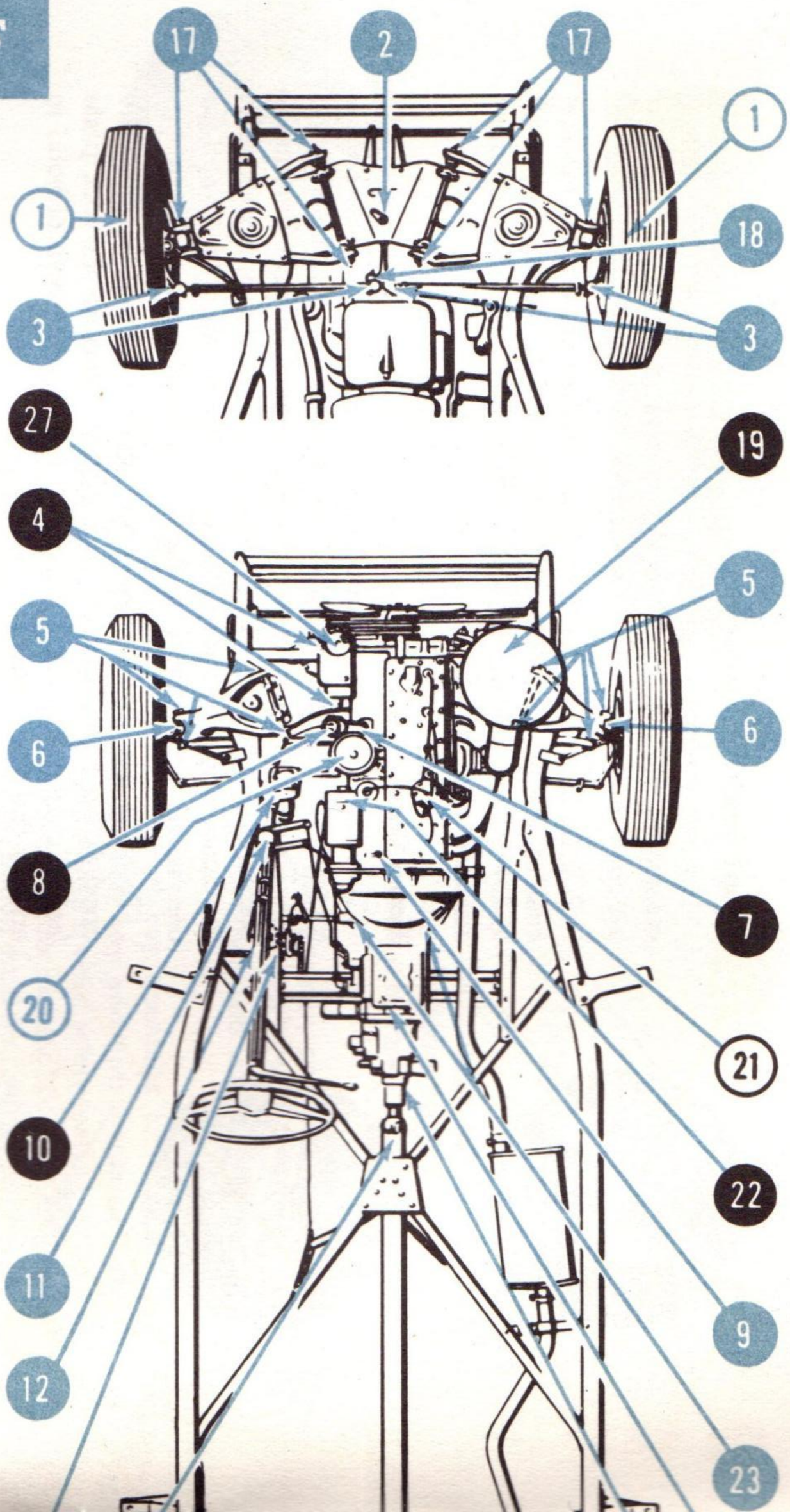
13 BRAKE MASTER CYLINDER
Check, Refill with Hydraulic Brake Fluid. Maintain fluid level to ¼" below filler hole.

14 REAR SPRING COVER
Use Graphite Grease to stop squeak.

15 REAR AXLE
Check, Refill with Hypoid Gear Lubricant. Maintain lubricant level to filler hole.

16 REAR WHEEL BEARINGS
Use Wheel Bearing Grease. Remove plug. Install fitting. Apply ½ oz. with low pressure gun.

17 SUSPENSION BUSHINGS
6 Fittings. Use Chassis Lubricant. Apply with pressure gun.



18 DRAG LINK
2 Fittings. Use Chassis Lubricant. Apply with pressure gun.

19 AIR CLEANER
Remove, Clean, and Refill Sump with one pint of Engine Oil. See text.

20 OIL FILTER
Replace. Engine oil refill 6 qts. when filter is replaced. See text.

21 DISTRIBUTOR
5 Points. Refill Reservoir with Engine Oil at 20,000 miles only—other 4 points at 2,000 miles.

22 STARTING MOTOR
1 Oil Cup, 4-5 Drops of Engine Oil.

23 CLUTCH CROSS SHAFT
2 Fittings. Use Chassis Lubricant. Apply with pressure gun.

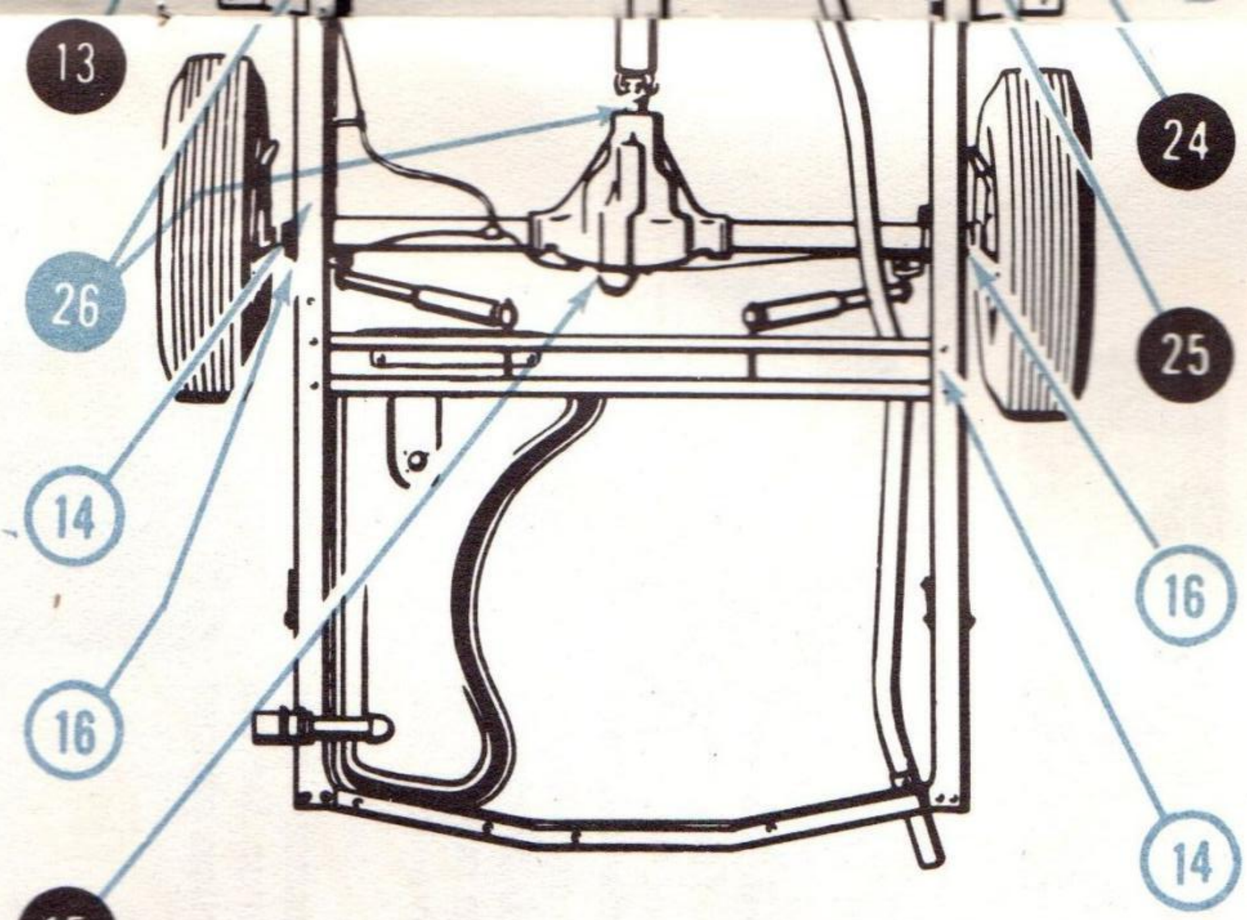
24 TRANSMISSION
Check, Refill with Transmission Gear Lubricant. Maintain lubricant level to filler hole.

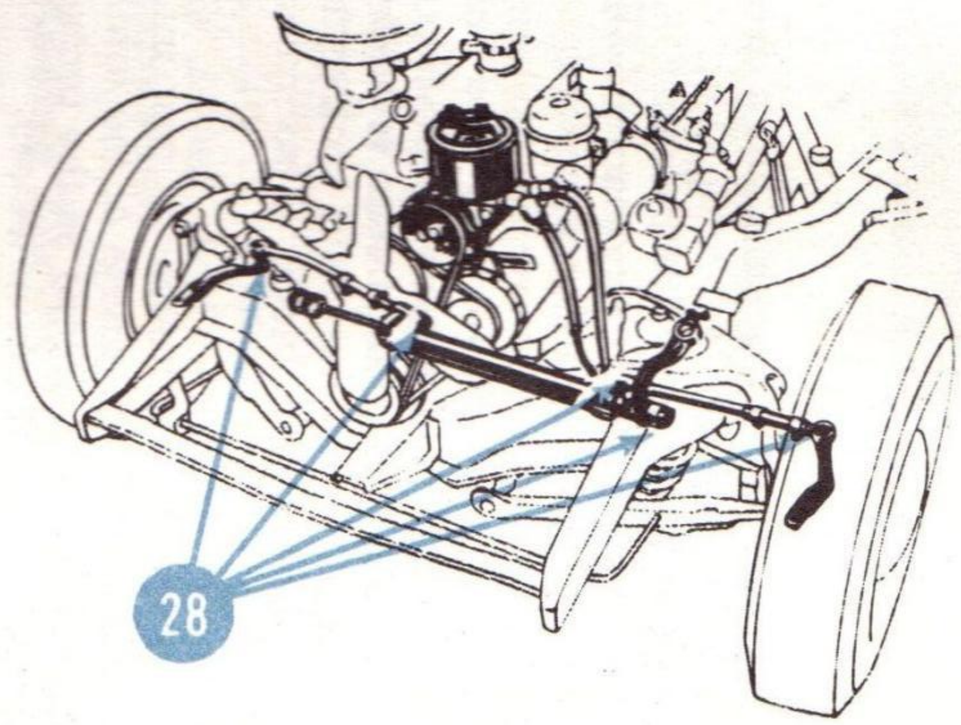
25 OVERDRIVE
Check, Refill with Transmission Gear Lubricant. Maintain lubricant level to filler hole.

26 PROP. SHAFT "U" JOINT
2 Fittings. Use Chassis Lubricant. Apply with pressure gun.

27 POWER STEERING
Check fluid level in pump reservoir and maintain at indicated mark. See Below.

28 POWER STEERING LINKAGE
5 Fittings. Use chassis lubricant. Apply with pressure gun.





RECOMMENDED SEASONAL GRADES

ENGINE OIL
Engine—Above 32° use S.A.E. 20 or 20W
+32° to +10° use S.A.E. 20W
+10° to —10° use S.A.E. 10W
Below—10° use 5W
Select oil for lowest expected temperature.
Generator—S.A.E. 10W
Starting Motor—S.A.E. 10W
Distributor—Reservoir S.A.E. 20
Cam Wick, Breaker Lever Pivot and Felt Wick Below Breaker Plate—S.A.E. 10W
Air Cleaner—Above +32° use S.A.E. 40 or 50.
Below +32° use S.A.E. 20.

CHASSIS LUBRICANT—Use NLGI No. 1—Below 32° use No. 0.

TRANSMISSION GEAR LUBRICANT—Use S.A.E. 80, except when high temperatures prevail, then use S.A.E. 90.

HYPOID GEAR LUBRICANT—Use S.A.E. 90, except when extremely low temperatures prevail, then use S.A.E. 80.

STEERING GEAR LUBRICANT—If using Multi-Purpose, use S.A.E. 90.

GRAPHITE GREASE—Use NLGI No. 1.

WHEEL BEARING GREASE—Use NLGI No. 2.

POWER STEERING—Use automatic transmission fluid (type A) AQ-ATF, capacity 3 pints.

POWER STEERING LINKAGE—Use chassis lubricant (NLGI No. 1). Below 32° use No. 0.

SHIFT LINKAGE—Use chassis lubricant (NLGI No. 1). Below 32° use No. 0.

COOLING

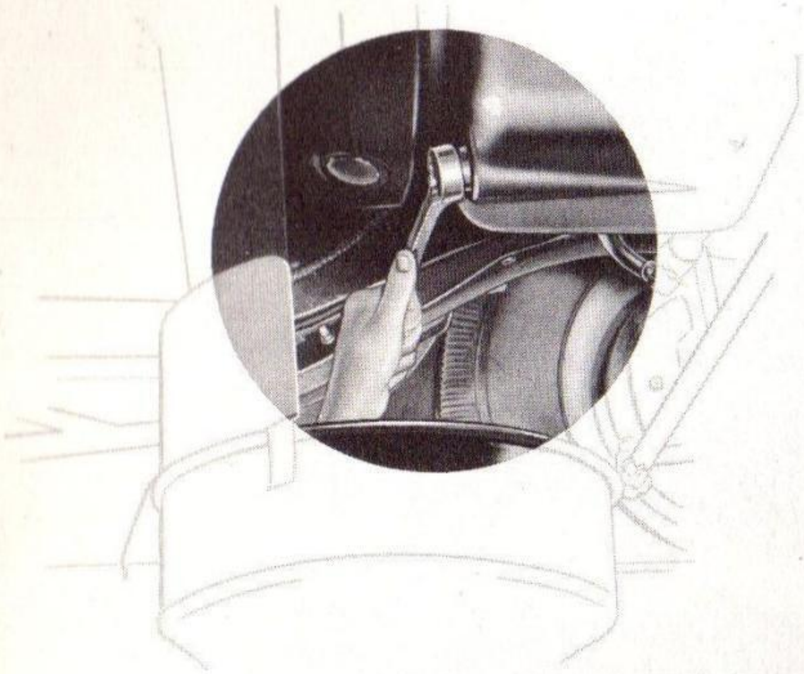
The Kaiser "pressurized" cooling system has a capacity of 13.5 quarts with heater. To inspect coolant level, turn the filler cap counter-clockwise to the first stop. This releases any pressure through the overflow pipe as a safety measure. When pressure is eliminated, turn cap to the second stop and remove. Keep coolant level approximately one inch below the bottom of the filler pipe to avoid expansion losses. **Never pour cold fluids into, nor completely drain an overheated engine.** A cracked or warped cylinder block may result. When anti-freeze is added, complete draining is recommended. Open the drain cock at the bottom of the radiator and on the engine block. Also remove the top heater hose.

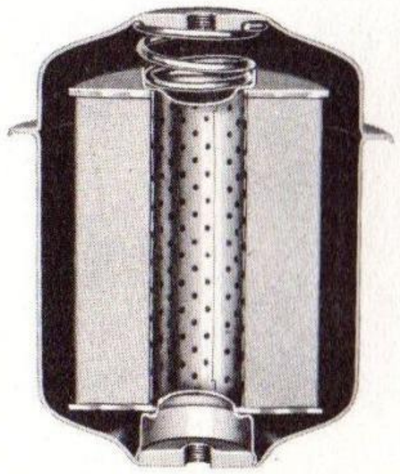
Mixing various brands of anti-freeze or rust inhibitors with anti-freeze may reduce the effectiveness of the inhibitor. Do not mix alcohol and glycol base anti-freeze as the protection cannot be determined with standard anti-freeze testers.

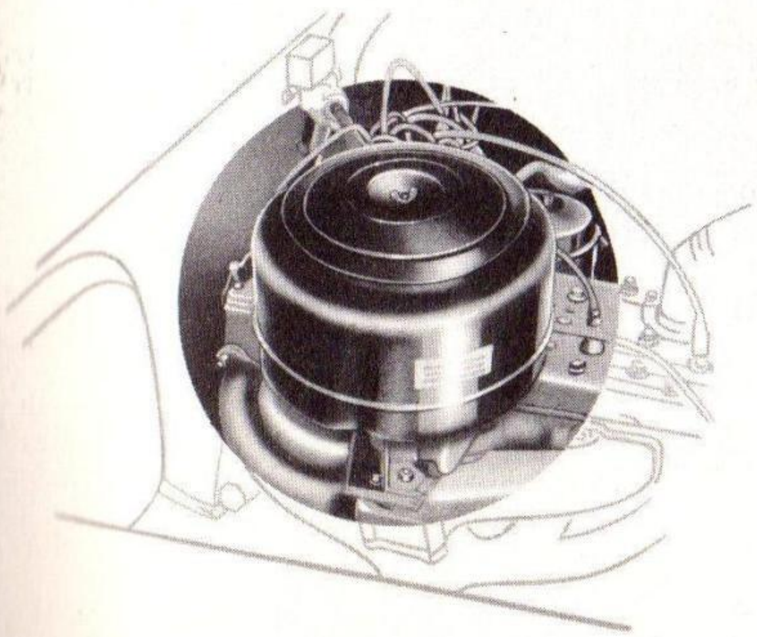
ANTI-FREEZE CHART

COOLING SYSTEM CAPACITY QUARTS	FOR PROTECTION DOWN TO	ADD QTS. METHYL ALCOHOL	ADD QTS. ETHYLENE GLYCOL	ADD QTS. ETHYL ALCOHOL
12.5	0° F.	3.5	4.5	4.5
	—10° F.	4.5	5.0	5.5
	—20° F.	5.5	6.0	6.5
13.5	0° F.	4.0	5.0	5.0
(With Heater)	—10° F.	4.5	5.5	6.0
	—20° F.	5.5	6.5	7.0

ENGINE LUBRICATION







Changing Engine Oil

Your Kaiser 226 engine is designed for lubrication with any quality, regular, premium or heavy duty type engine oil (New classifications ML, MM and MS) marketed by a reputable company.

Change engine oil at 500 miles, 1000 miles, 2000 miles and at every 2000 miles thereafter.

Change engine oil more frequently depending on type and quality of oil used, severity of operating conditions and if car is driven short distances in cold weather or allowed to idle excessively.

Adding Engine Oil in the Crankcase

The oil level gauge or dipstick is marked "Full" and "Add". Maintain oil level between these two lines, adding 1 quart of engine oil when level nears "Add" mark. Oil level should be up to "Full" mark when a long drive is started.

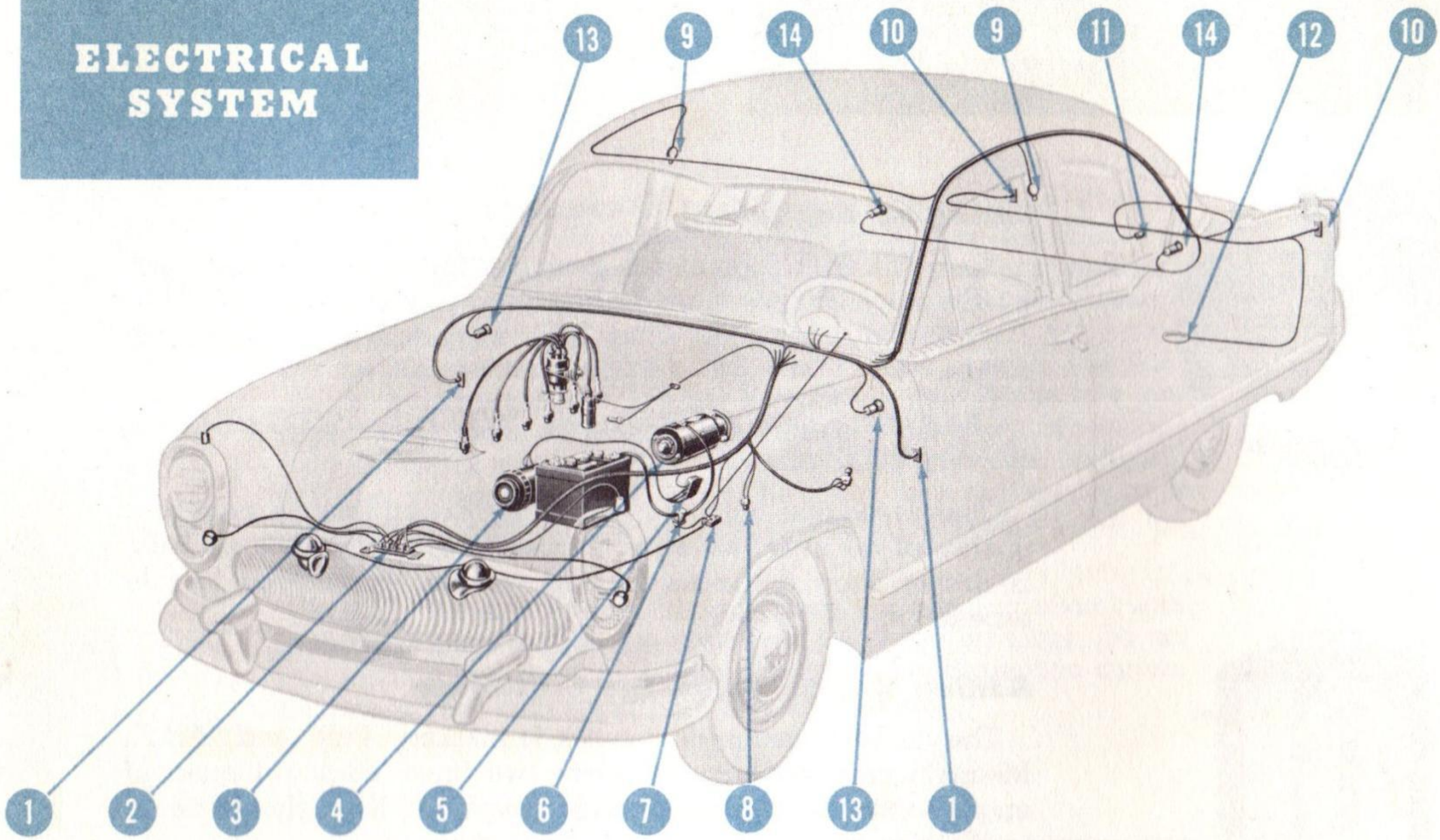
Changing Oil Filter

The engine oil is constantly circulated through an oil filter to remove dust, carbon and other foreign particles. Under normal conditions the filter should be replaced every 10,000 miles. However, if the dipstick shows evidence of dirty oil, change filter more often.

Cleaning Air Cleaner

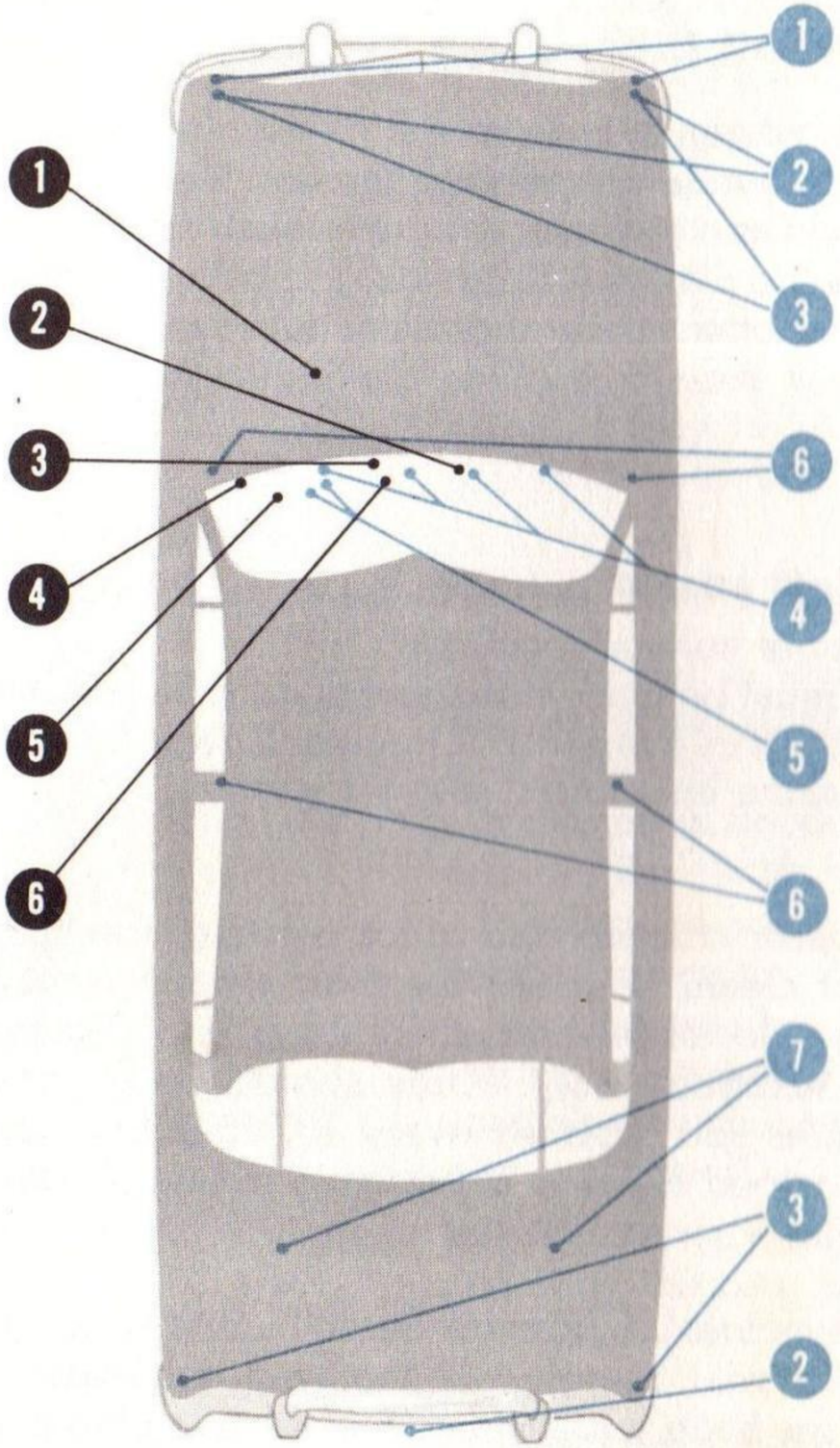
The air cleaner on your new Kaiser is of the "oil bath" type. It should be cleaned and serviced every 2000 miles, more often if car is operated over dusty or sandy roads. Use engine oil of recommended seasonal grades (See chart).

ELECTRICAL SYSTEM



LEGEND

1. Door Switch
2. Junction Block
3. Generator
4. Starter
5. Generator Regulator
6. Starter Relay Solenoid
7. Horn Relay
8. Stop Light Switch
9. Pillar Light
10. Tail, Stop and Directional Lamp
11. License Lamp
12. Fuel Gauge Tank Unit (In Tank)
13. Courtesy Lights
14. Trunk Lights



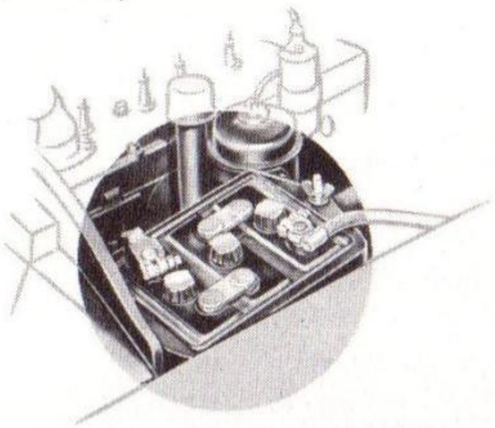
LIGHT CHART

	Location or Use	Watts or Candlepower	Trade Number
1	Head Light	45-35 Watts	4030
2	License Plate	3 CP	63
3	Parking, Direction Signal	21-3 CP	1154
	Tail, Stop, Direction Signal	21-3 CP	1158
	Tail Light Extension		1158
4	Instrument Panel, Glove Box, Clock	2 CP	55
	Radio Dial	2 CP	44
5	High Beam Indicator, Turn Signal Pilots Ignition Switch & Cigarette Lighter	1 CP	51
6	Pillar, Courtesy	6 CP	81
7	Trunk Light	21 CP	81

CIRCUIT PROTECTION

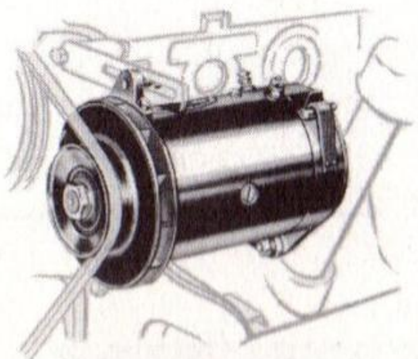
	Use and Location	Amp.	Trade Number
1	Overdrive Relay—Front of Dash, Above Hand Brake Cable	20	SFE-20
2	Radio Dial Light—In Line, Under Instrument Panel, Near Radio	14	SFE-14
3	Heater—In Line, Under Instrument Panel, Near Ignition Switch	14	SFE-14
4	Headlights—On Headlight Switch—Thermal, Automatic Reset Circuit Breaker	30	None
5	Rear Seat Cigarette Lighter—In Line, Near Ammeter	30	SFE-30
6	Radio—In Line, Under Instrument Panel, Near Radio	14	SFE-14

ELECTRICAL



Battery

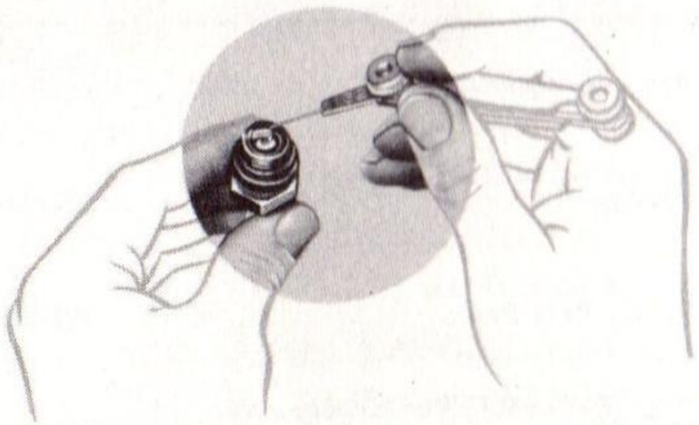
The function of the battery is to store the power delivered by the generator until it is needed to operate the car. Keep battery terminals clean and tight and the level of fluid in each cell approximately ¼ inch above the plates. A fully charged battery will not freeze and provides a hotter spark and faster turnover for your engine in cold weather. Add only clean distilled water to your battery.



Generator

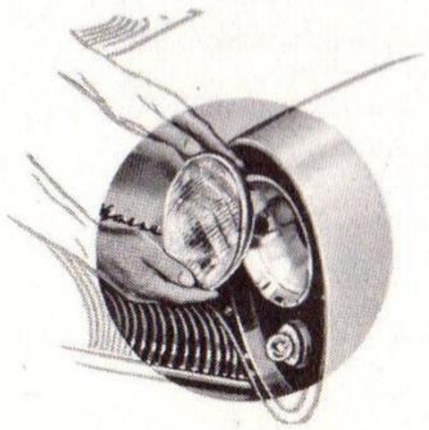
The generator delivers electric power to the storage battery. It is controlled by a reliable voltage regulator.

Proper belt tension must be maintained and should be checked by your Kaiser service man every 10,000 miles. Check the generator brushes at the same time and replace if worn.



Spark Plugs

For maximum gasoline mileage and quick starting, the spark plugs should be kept clean. Your service man should remove carbon deposits on the electrodes and adjust the gap to .030 inch by moving the side electrode only. Plugs should be checked every 3000 to 4000 miles and replaced every 10,000 miles. Keep the outside porcelain wiped clean to aid starting in wet weather.



Headlights

The headlights are powerful "Sealed Beam" units requiring no service beyond external cleaning of the lens and periodic checking for proper aim. Each unit has two filaments to give high or low beam when the foot switch is depressed. "High Beam" shows a red light over the speedometer. Use of a headlight circuit breaker rather than a conventional fuse insures a safe, intermittent driving light until any trouble can be corrected.

STARTING DIFFICULTY

Starter Will Not Work

This is generally due to a discharged battery or loose, corroded battery terminals and ground wire. When battery is discharged, car may be started by pushing or towing the car in "conventional" third gear. (See page 10 for pushing or towing Hydra-Matic equipped cars). Cause of battery failure should be investigated at once. If horn doesn't blow nor lights work, the battery connections may be at fault and should be cleaned and tightened. If corroded, though, the ground wire must be replaced.

Starter Works But Engine Will Not Start

Check fuel in tank, be sure switch is "on." If engine is wet remove all moisture from spark plugs, distributor cap, coil and ignition wiring.

If engine is flooded, press the accelerator slowly to the floor and turn the starter key on. This will exhaust the excess gas.

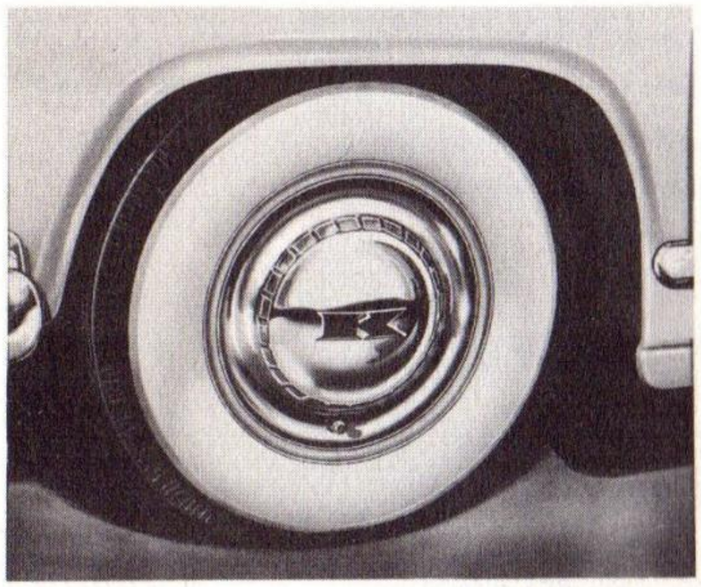
If engine is hot, press the accelerator slowly to floor and turn the starter key on. Possible vapor lock will be eliminated.

If engine cranks too slowly to start, push or tow the car in conventional third gear until started. If Hydra-Matic equipped, see special instructions on separate Hydra-Matic Instruction Card and also on page 10.

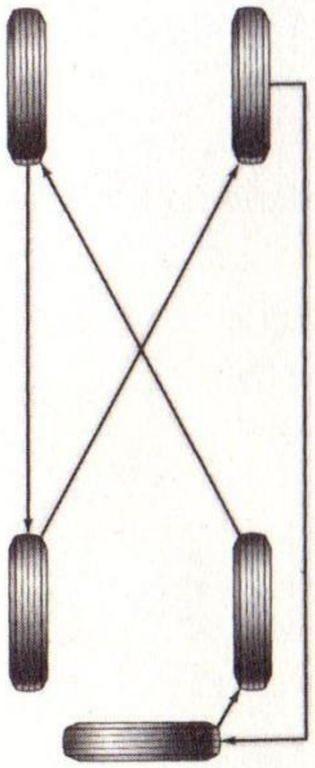
DO—When any difficulty has been experienced in starting or operating the car, drive to your Kaiser dealer and have the difficulty diagnosed and remedied at once.

DON'T—lightly dismiss any trouble as unimportant as this may allow other functions to become involved and lead to real trouble and expense.

TIRES



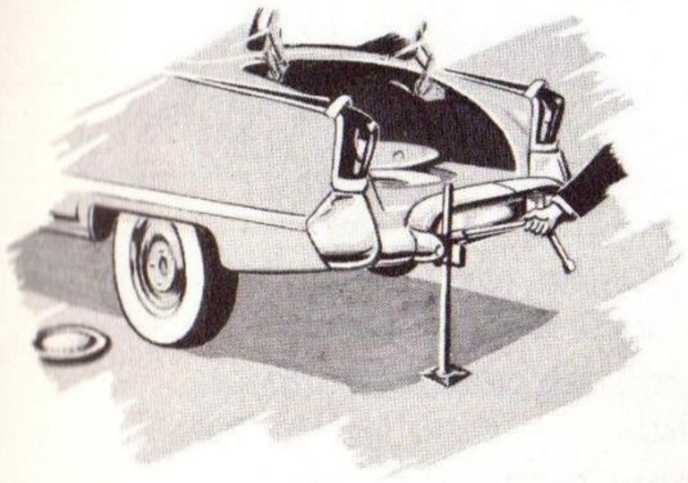
Your tires are the big, new, low pressure tires, 6.70 x 15, combining improved traction, softer riding and longer life. The combination of these qualities with matchless Kaiser springing and famous Tru-Line steering assures you thousands of miles of safe, effortless driving. Tire pressure should be checked only when tire is cold, and kept at 24 lbs. Heat generated under warm weather and hard driving conditions may add to tire pressure so do not deflate a hot tire. Pressure should be checked weekly under normal driving conditions, daily, when on a trip, or when mileage is high. **Proper tire inflation, proper front-end alignment** and **periodic rotation** of tires are the three rules allowing a full service life of the tire. Your tire warranty is void if tires show evidence of improper inflation or front-end alignment.



Tire Rotation

Tires should be rotated after the first 2500 miles, then every 5,000 miles thereafter. If any irregular wear is noted see your Kaiser dealer.

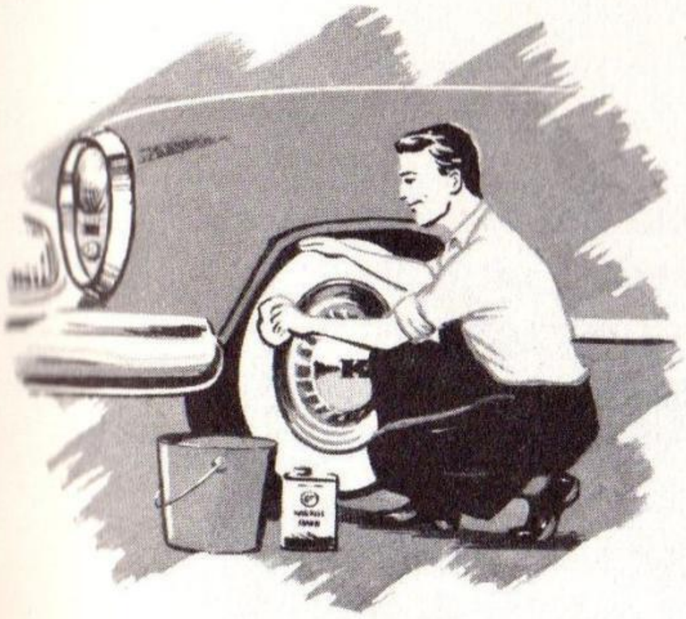
Tests on cars of all makes have shown that the most efficient speed for both gasoline and tire mileage is between 30 and 40 M.P.H. At 70 M.P.H. the gasoline mileage was reduced nearly 45% and tire life cut in half!



Changing Tires

Don't hurry! Tire and wheel changing is easy with the bumper jack included in the car tools.

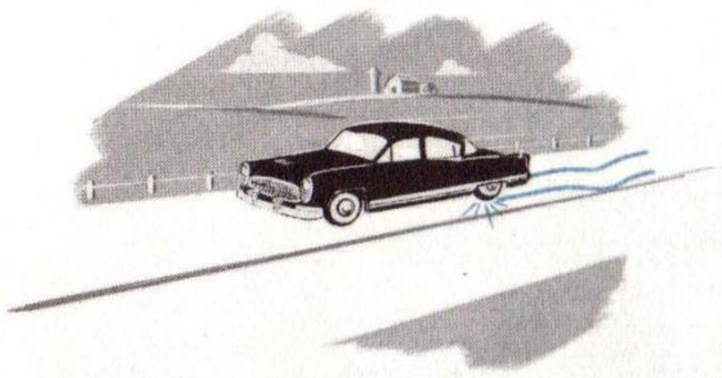
1. Set hand brake. Block the wheels if on a grade.
2. Place jack under bumper in line with the wheel and engage jack lift with the bumper.
3. Remove hub cap and loosen bolts before raising car.
4. Place jack lever in "UP" position, jack-up the car until the tire is off the ground, remove bolts and wheel, placing bolts in the hub cap.
5. Remove spare tire from the well under trunk floor. Place the tire correctly on the wheel hub with the aid of the locating peg and replace wheel bolts, tightening enough to hold the wheel in proper position.
6. Place jack lever in "Down" position, let the car down and remove the jack. Tighten the bolts securely, install the hub cap and the wheel cover and stow away the flat tire and wheel. **Don't forget** to have the flat tire fixed!



Cleaning White Sidewall Tires

White sidewalls of tires often become scuffed and dirty and require cleaning to restore their original whiteness. In some cases ordinary washing will clean the tires satisfactorily. If not, use KF White Sidewall Tire Cleaner to remove scuff marks, grease and other discoloration. Do not use steel wool or a wire brush for scrubbing as resultant scratches in the surface of the sidewall may cause serious cracking.

GOOD DRIVING TIPS



How To Stop

The four-wheel self-centering hydraulic brakes are applied by foot pressure on the brake pedal. Apply brakes gradually when driving conditions are normal to stop the car slowly and evenly. When car is nearly stopped push in the clutch pedal. Stopping in this manner will avoid locking and sliding the wheels which induces skidding. For safety keep brakes adjusted for a "high" pedal and check fluid level in brake master cylinder regularly.

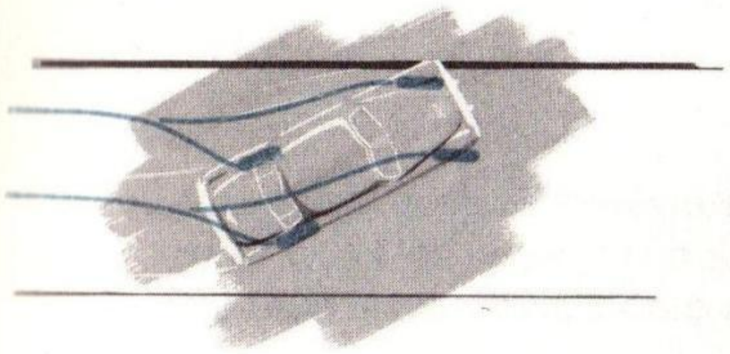
In case of a "blowout," keep the car as straight as possible and apply brakes gradually to stop car out of traffic.

Remember that minimum stopping distance, with good road conditions, brakes and driver, is 4½ car lengths at 30 M.P.H., 11 car lengths at 50 M.P.H. and at 80 M.P.H. it takes 440 feet or nearly 26 car lengths to bring your car to the quickest possible stop. Wet pavement and snow or ice, of course, increase these distances considerably.



How To Park

Drive past the space selected until even with the car ahead. Turn wheels to right and back car until rear of parked car is about at your windshield. Straighten wheels and back until your front bumper is about opposite rear bumper of parked car. Turn wheels to left and back until parallel to curb. If space is short, turn wheels again to right and move car forward into proper position. Set hand brake. When parking on an incline, turn the front wheels so any movement of the car downhill will place a wheel against the curb. **Set hand brake! Never park in traffic lanes** on city streets or country highways.



Winter Driving Suggestions

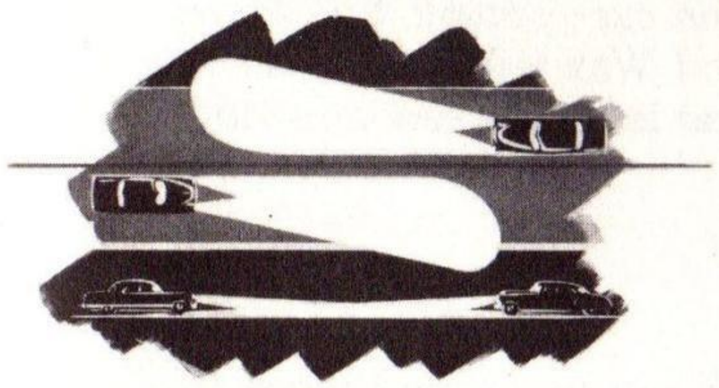
Drive slowly until engine temperature reaches normal driving range. Keep your gasoline tank as full as possible. If your driving is generally in the city, an occasional drive in the country at highway speed is recommended. This eliminates moisture and other impurities from the crankcase normally resulting from slow stop-and-go driving.

If door lock freezes, thaw it out by heating the key with a match and inserting it in the lock.

When car is stopped on a very slippery surface, start it in second, or even third speed. Engage the clutch very slowly. Do not race engine or spin the wheels. It may be necessary to "rock" the car slowly backward and forward to attain momentum.

Skidding of the car may generally be corrected by turning the front wheels in the direction of the skid. **Don't try to stop quickly!**

On ice, snow or slippery roads, operate car in conventional drive. Apply brakes slowly with intermittent pumping action to keep car straight and wheels turning. A rolling tire has far more traction than a sliding one! Following these common sense rules will give longer life to brakes, tires, and **you!**



Courtesies and Safeguards

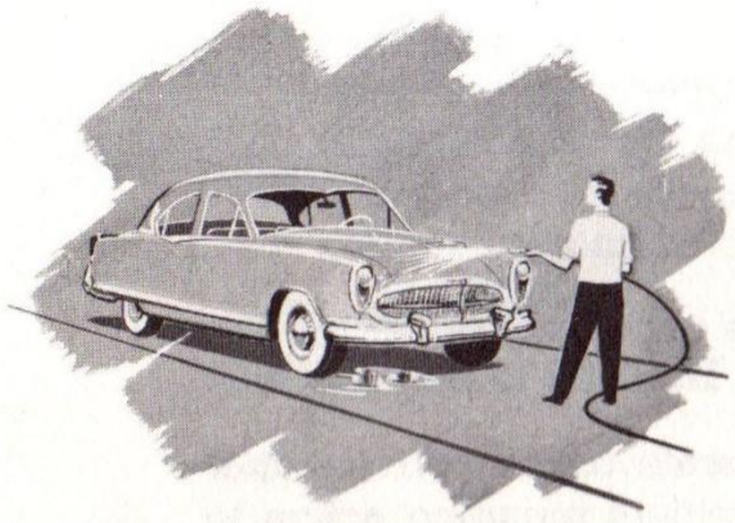
Use "low-beam" headlights for night driving in city and heavy traffic. Always switch to "low-beam" when meeting cars on country highways.

Do not come too close to the car ahead when stopping. Your heater blower may fill your car with fumes from its exhaust.

When necessary to drive through heavy mud, keep the car going! If stuck in heavy sand, deflate the tires about 10 pounds. This will broaden the tread and should enable you to get out. Reinflate tires at once.

Always let the "other fellow" know what you are going to do. Courtesy may save a life. It could be yours!

CLEANING YOUR CAR



Car Cleaning—Outside

Nothing gives a car owner more satisfaction than driving a clean, shining, "sweet-running" car. And it is easy to keep your great new Kaiser the center of admiring glances wherever you go.

DO!

1. Always soak the outside of the car thoroughly with cold water.
2. Gently remove dirt and dust with running water and a soft rubber, plastic or natural sponge.
3. Use a separate sponge or a soft brush for the wheels and chassis.
4. Dry the car with a clean, moistened chamois or a soft, clean cotton cloth.
5. If traffic film has slightly dulled the finish it may be cleaned and restored to its original brilliance by the K.F. LUSTUR-SEAL treatment available at your local Kaiser dealer. If you prefer to polish the car yourself, K.F. Polish and Cleaner or K.F. Cleaner and Wax will do a splendid job. White Sidewall Tire Cleaner is highly recommended for white sidewall tires.

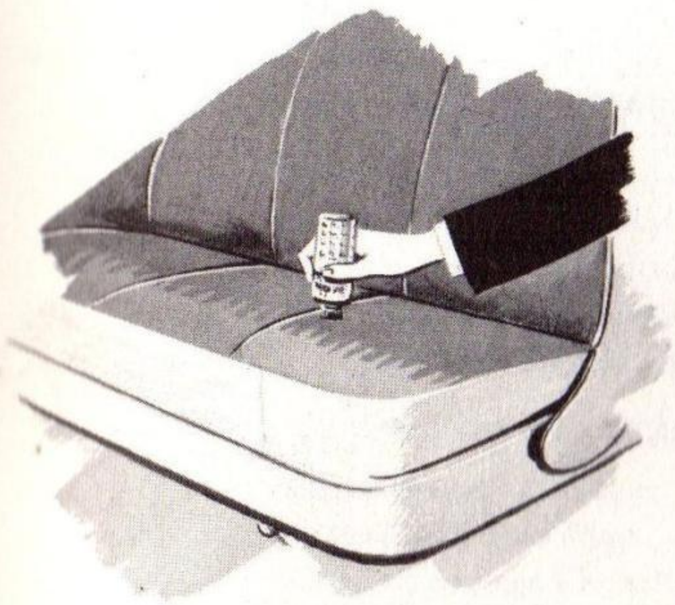


DON'T!

1. **Don't** wash or polish a car in direct sunlight or when the metal is hot.

2. **Don't** try to clean or dust a dry car. It has about the same effect on the finish as fine sandpaper.
3. Don't let the chemicals used to melt snow and ice stand on your car too long. They are injurious to the finish, especially to chrome. Frequent washing in the winter is a real necessity if you drive where these chemicals are used.

Car Cleaning—Inside



Neat, clean upholstery means not only a better-looking car but added life to the fabric. Vacuum cleaning of the headlining and all trim and seat upholstery at periodic intervals is recommended. Kaiser Fabric Cleaner (available through all Kaiser dealers) is a volatile type cleaner used in removing grease, oil, road grime, chewing gum, lipstick, tar, etc. The same methods ordinarily used in the household on fine upholstery materials will generally keep your Kaiser fabrics in excellent condition. After spot removal, going over the entire section or seat with a "foam" type upholstery cleaner is recommended.

For cleaning leather or vinyl plastic upholstery use nothing but a mild soap (saddle soap) and lukewarm water. Make up a little suds on a clean cloth pad and gently rub the surface to be cleaned. Wipe off the suds with a damp cloth, then rub briskly with a clean dry cloth to renew the lustre.

DON'T!

Don't use any colored gasolines.

Don't use bleaches or reducing agents.

Don't use too much cleaning fluid. It may cause deterioration of the rubber padding.

Don't use cleaning fluid in a closed car or a closed garage.

Don't breathe the fumes.

WHAT TO DO EACH SPRING AND FALL

In addition to the regular lubrication schedule we strongly recommend the seasonal procedure outlined below. Many added miles of carefree motoring are yours when your Kaiser service man follows the outlined inspections and services suggested.



Engine

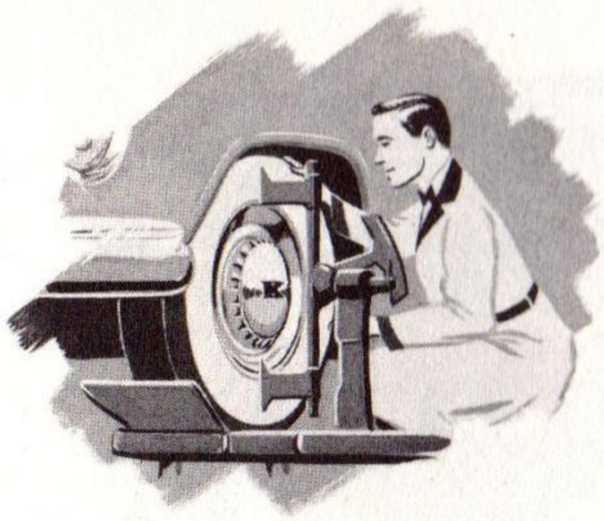
See your dealer for details.

Chassis

Lubricate chassis according to mileage.
Check wheel bearings, transmission and axle housings.
Drain engine oil, refill with proper oil.
Check oil filter and oil filler-cap filter.
Drain, clean, and refill oil bath air cleaner.

Exhaust

Inspect for rusted spots, broken hangers, leaks, etc.
Inspect and tighten exhaust manifold.



Cooling

Drain, flush, and reverse-flush cooling system.
Check anti-freeze.
Check all hoses and hose connections.
Clean insects from radiator core.

Brakes

Every 5,000 miles -
Check master cylinder fluid level.
Inspect and adjust for wear.
Check brake pedal travel.
Check and adjust hand brake.

Front-End

Inspect tires for evidence of improper wear.
Check alignment of front wheels.
Balance wheels if necessary.

SPECIFICATIONS

GENERAL

Wheelbase ..... 118½"
Overall Length (with Bumpers and Guards) ..... 215⅝"
Overall Width ..... 74⅞"
Overall Height (Loaded) ..... 60¼"

TIRES

Size ..... 6.70 x 15
Recommended Pressure (Cold) ... 24 lbs.

TIRE TREAD

Front ..... 58"
Rear ..... 58¾"

Car Weight (Approximate Shipping Weight)— Special .... 3305 lbs.
Turning Diameter ..... 38'

Clutch Pedal Free Play ..... ¾" to 1"
Brake Pedal Free Play ..... ¼" to ½"
Cooling System Capacity (with Heater) ..... 13.5 qts.

ENGINE

Type ..... L-Head
Number of Cylinders 6
Bore and Stroke ..... $3\frac{5}{16}$" x 4⅜"
Piston Displacement ..... 226.2 cu. in.
Brake Horsepower ..... 118 @ 3650 R.P.M.
Compression Ratio ..... 7.3 to 1
Ignition Timing ... 4° before T.D.C. @ 450 R.P.M.
Firing Order 1, 5, 3, 6, 2, 4

VALVE CLEARANCE (Cold)

Intake ..... .014
Exhaust ..... .014

LUBRICATION SYSTEM

Type ..... Pressure
Normal Oil Pressure ..... 35 lbs.
Crankcase Capacity ..... 5 qts.
Oil Pump Type ..... Gear
Oil Intake Type ..... Floating
Oil Filter Type ..... Sealed Cartridge

FUEL SYSTEM

Tank Capacity ..... 17 gals.

ELECTRICAL SYSTEM

Distributor Breaker Gap ..... .022
Distributor Breaker Arm Tension . 17-21 oz.

SPARK PLUG

Size ..... 14 mm
Gap ..... .030

BATTERY

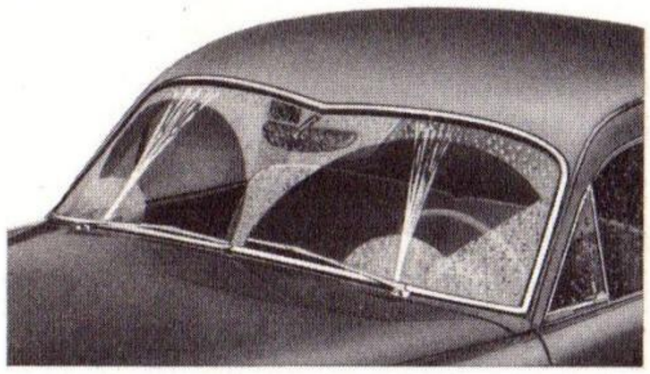
Capacity (Ampere Hours) 100
Number of Plates 15

GENERATOR

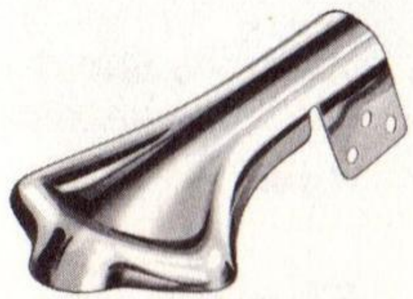
Type ..... (Delco-Shunt)
Brush Spring Tension ..... 28 oz.

Kaiser-Willys Sales Division reserves the right to make changes at any time, without notice, in prices, colors, materials, equipment, specifications and models, and also to discontinue models.

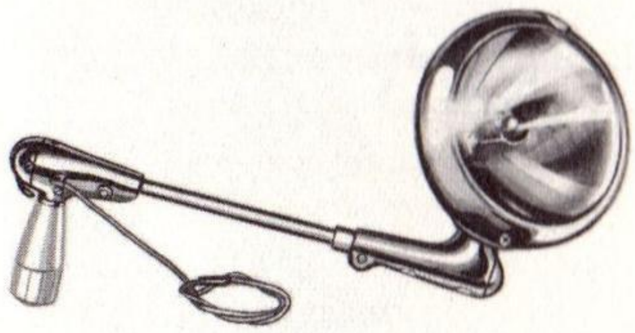
ACCESSORIES



WINDSHIELD WASHER—On standard engine models, a button on the instrument panel operates the twin jets of water that spray the windshield, after which the wipers sweep off the mud, slush, insects or dust. A special anti-freeze solution may be used in winter to prevent breakage of the reservoir jar. On supercharged engine models, a foot-operated pedal on the toe panel operates the windshield washer.



EXHAUST DEFLECTOR—By masking the tail pipe and deflecting exhaust fumes downward, this heavy gauge steel deflector prevents discoloration of the rear bumper and deck, and adds to the beauty of the car.



SPOTLIGHT—You'll bless its long-range beam when you want to pick out street and route signs and house numbers at night. Operated by a handy pistol-grip handle inside the car, the sealed-beam lamp has a brilliant chrome head.

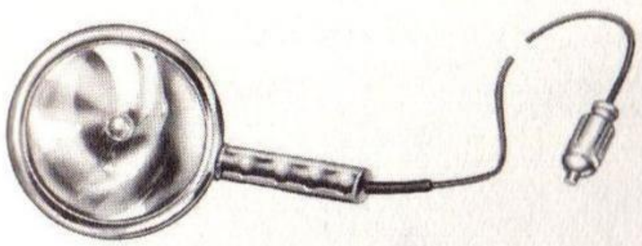


BACK-UP LIGHTS—Of real help in backing out of driveways, back-up lights turn on automatically when the car is shifted in reverse, if the car lights are on.



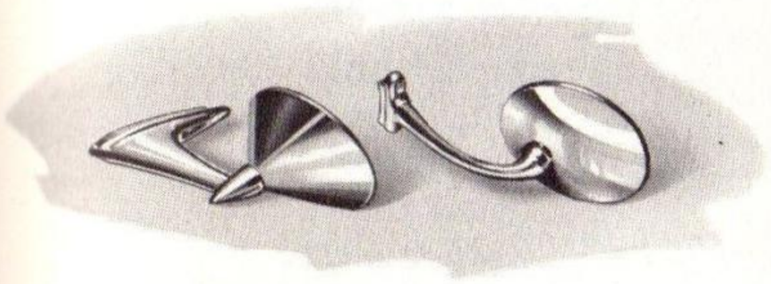
FOG LIGHTS—These extra-vision fog lights will penetrate snow, fog and rain with their amber-colored lenses in the sealed-beam lamps. A real boon to safe driving.

VENTSHADES—Tailored to fit into the window frames, Ventshades are made of stainless steel, highly polished on the outside and finished in soft green on the inside. No matter how hard it rains or snows, Ventshades allow windows to be lowered 2 or 3 inches so that fresh air can circulate throughout the car. This prevents eye-tiring sun glare, and condensation from fogging the windshield and windows.

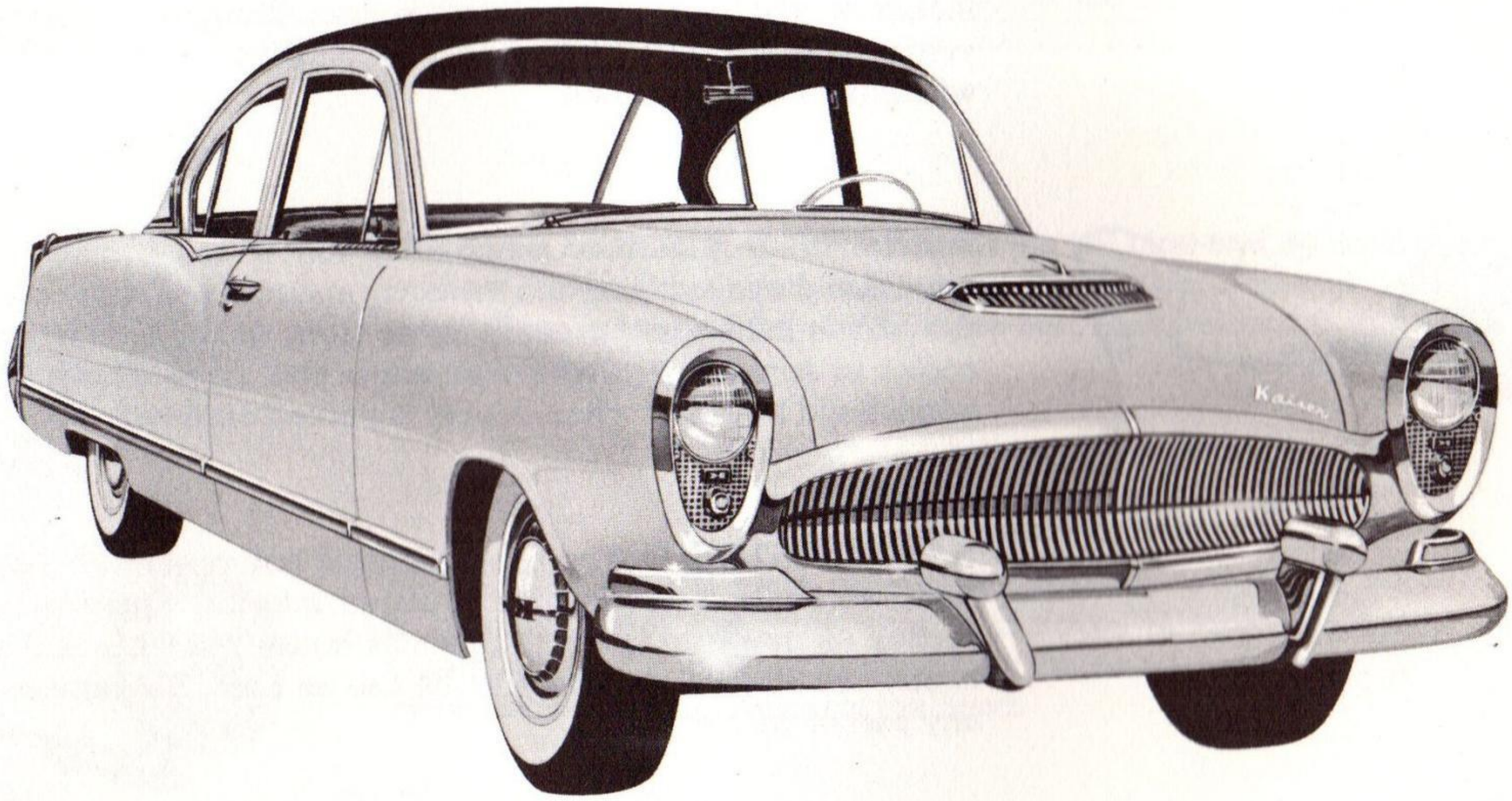


WINDSHIELD VISOR—Designed to follow the contour of the windshield and to blend into the body and roof lines of the Kaiser, the windshield visor protects eyes from glare; keeps the car cooler in summer; and prevents snow and ice from coating the windshield in winter when the car is parked outdoors.

HAND SPOTLIGHT—The hand spotlight equipped with a sealed beam serves a dual purpose. Plugged into the cigarette lighter socket, its powerful beam illuminates house numbers and street signs. The 12 foot cord permits its use as a trouble light around any part of the car.



OUTSIDE REAR VIEW MIRRORS—Two types are available—the clamp-on type, which fits into the door flange; and the bolt-on deluxe type with double adjustment, which is mounted on the door. Used on the left side of the car, either will aid the driver by giving him a full view of cars approaching from the rear. On the right, either will help in backing up or parking.



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