OWNER'S MANUAL

What you should know about your

All-New

1949 MERCURY



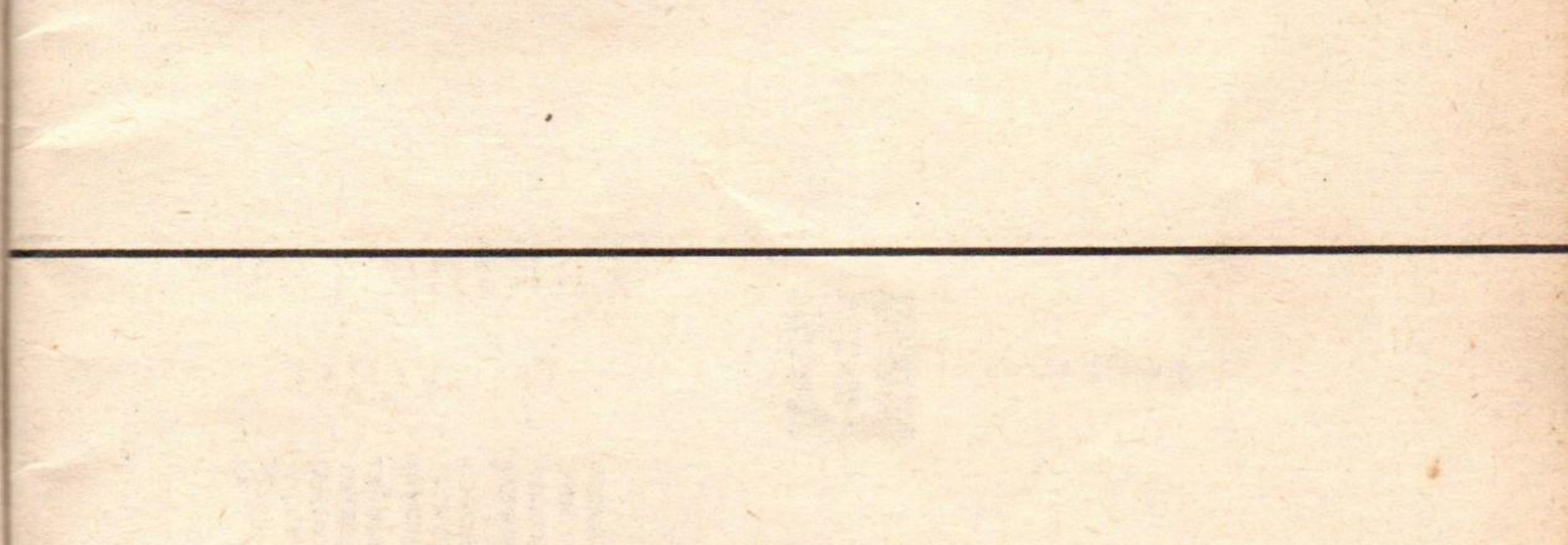
Your All-New 1949 MERCURY

LINCOLN-MERCURY
DIVISION OF
FORD MOTOR
COMPANY
DETROIT, MICHIGAN

YOU ARE NOW THE OWNER of an outstanding car. You can be proud of the beauty and the performance of your all-new Mercury. The industry's top designers have given it advanced styling. Experienced engineers have built in durability and safety and have made it practical yet luxurious. We know how rugged this car is because our test pilots have driven it hundreds of thousands of miles in the toughest and most exacting road tests.

Every fine piece of craftsmanship is worth caring for, and this is especially true of your Mercury. This booklet will help you give your car the proper care and enable you to enjoy your Mercury to the utmost.

Happy driving . . .



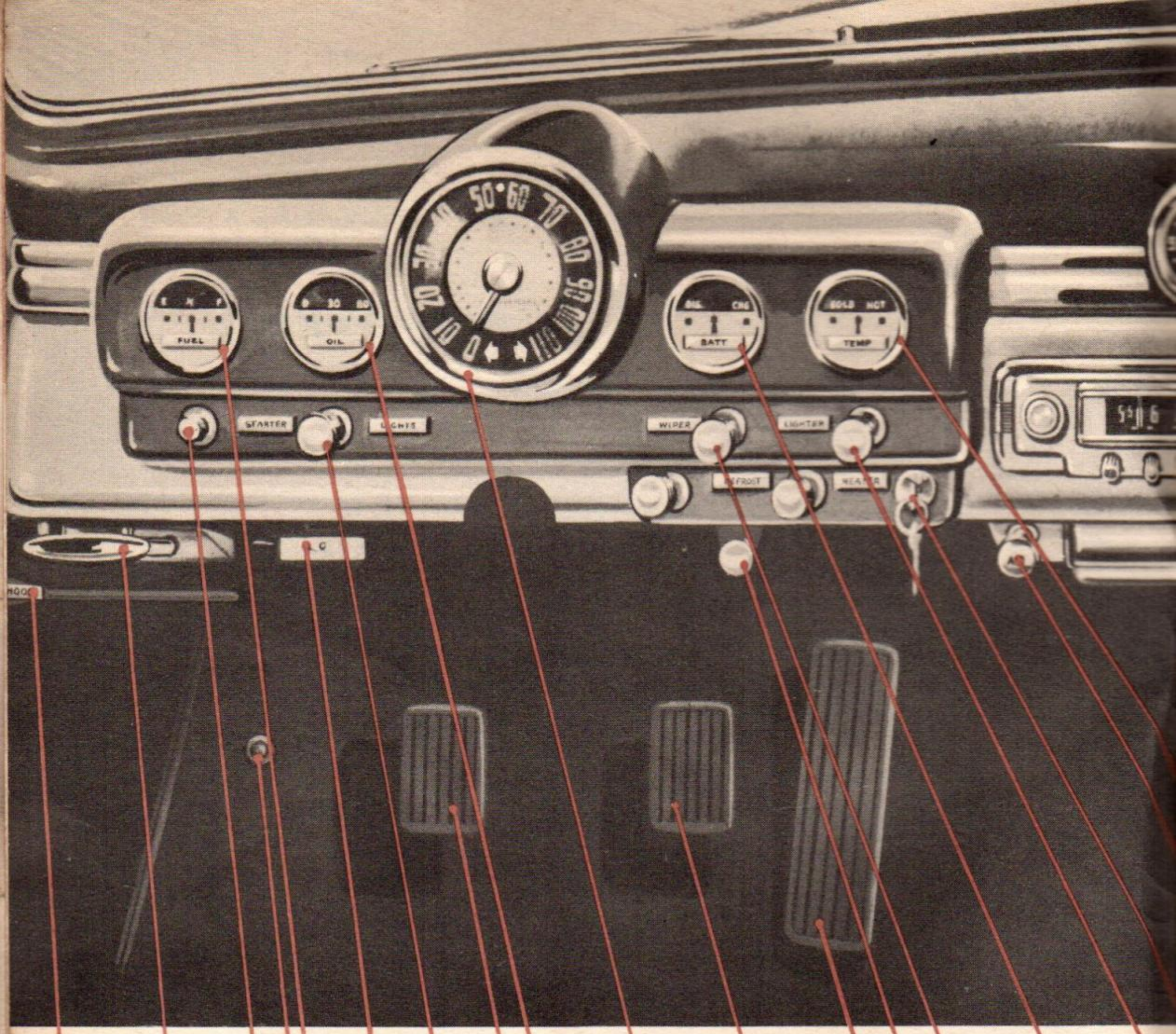
*paragraphs**

Breaking In A1-A5
Instruments A6-A12
Controls A13-A25
Starting and Shifting A26-A32
Touch-O-Matic Overdrive A33-A37
Good Driving Practices A38-A41
Lights A42-A51
Finger-Tip Weather Control A52-A58
Appointments A59-A64
Accessories A65-A74

Service Calendar B1-B3
Lubrication B4-B16
Water and Anti-Freeze B17-B25
Tire Care B26-B32
Brakes B33-B36
Care of Finish and Upholstery B37-B47
Service B48-B52

Engine C1-C39
Transmission, Propeller Shaft, Rear Axle . . . C40-C47
Suspension C48-C54
Summary of Specifications C55-C66

**For your convenience, contents are listed in Index and Table of Contents by paragraph number instead of page number.*



Hood Latch Release
par. A19

Parking Brake
pars. A18, B35

Fuel Gage
par. A7

Overdrive Control Knob
pars. A33, A37

Oil Pressure Gage
pars. A8, B7

Speedometer
par. A9

Accelerator Pedal
par. A17

Wiper Control
par. A23

Starter Button
par. A15

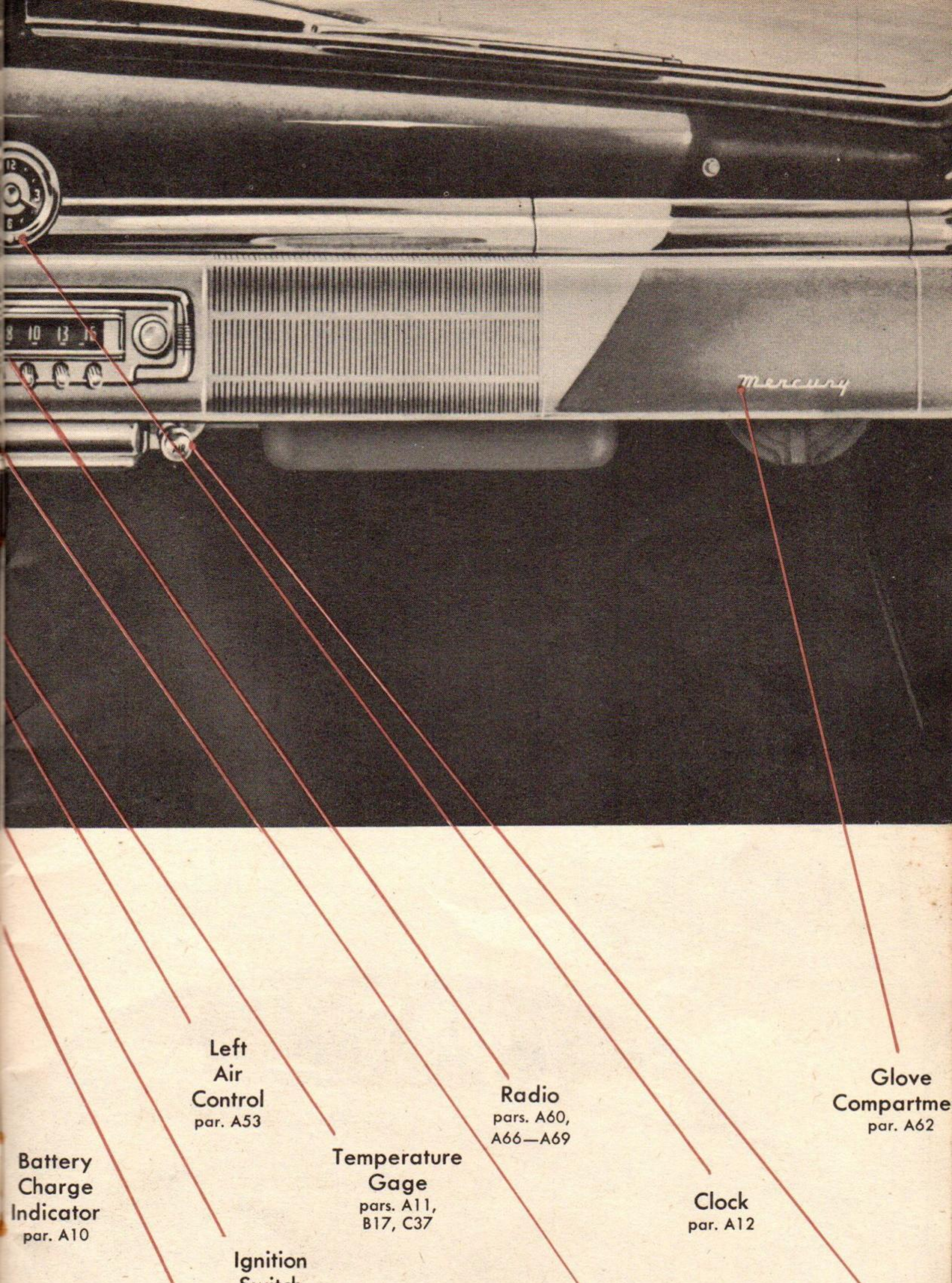
Head Light Beam Control
par. A43

Lights
pars. A42, A51

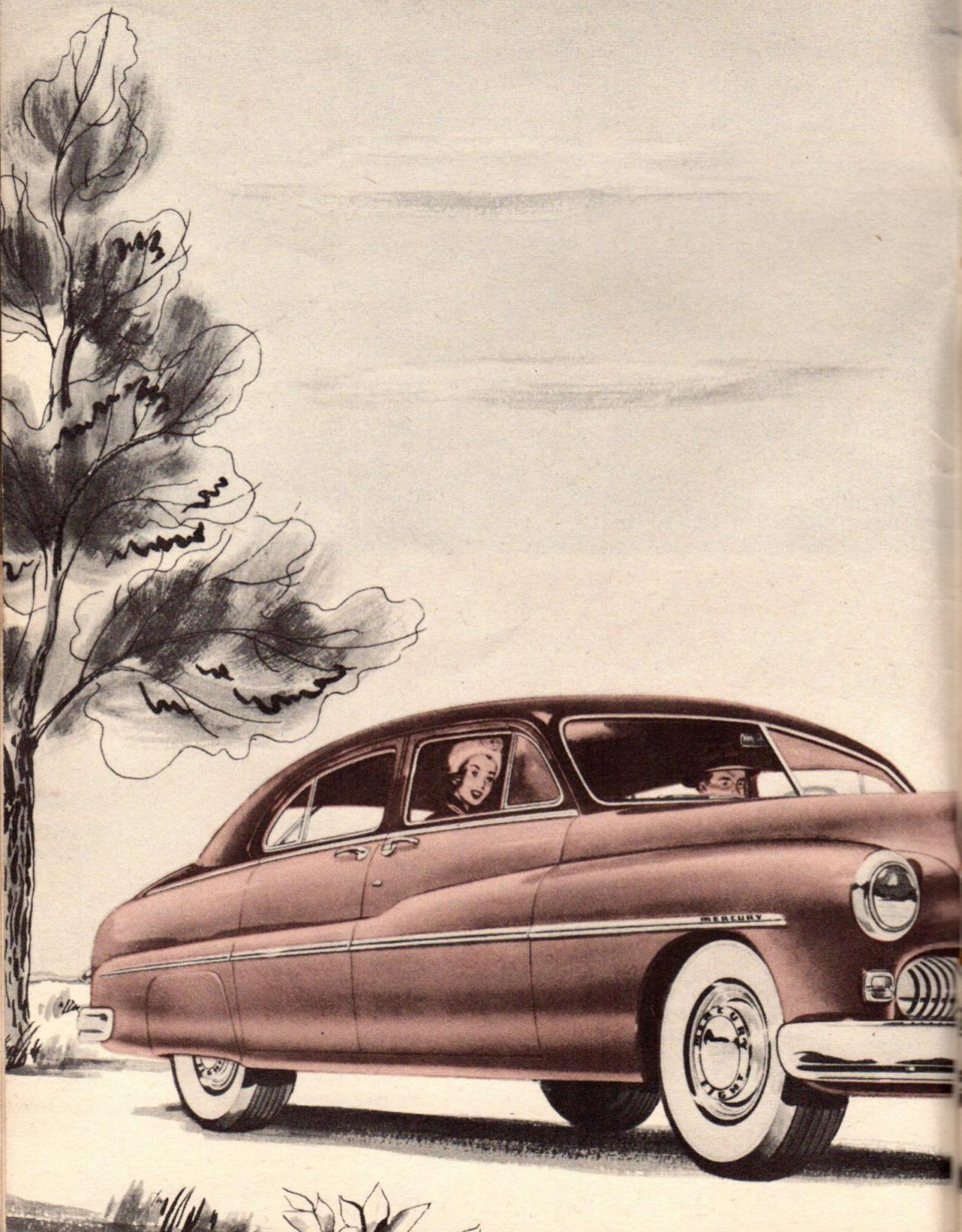
Clutch Pedal
par. A16

Foot Brake Pedal
par. A16

Finger Tip Weather Controls
pars. A52—A



A COMPLETE INDEX IS IN THE BACK OF THE BOOK.


MERCURY

SECTION

a

Getting acquainted with your new MERCURY

YOUR FIRST THOUSAND MILES

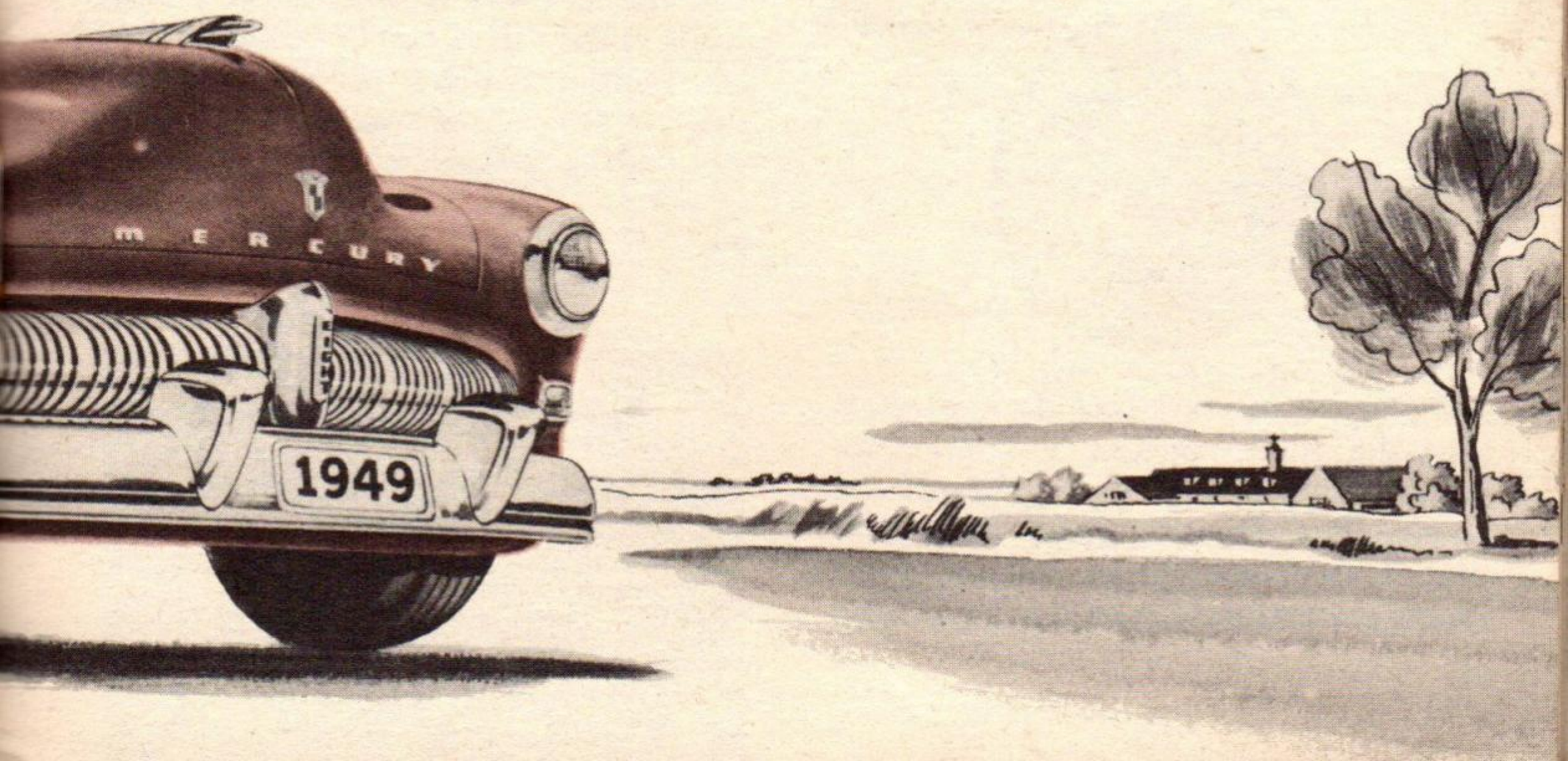
A1. When you first get behind the wheel of your new Mercury, you'll find a whirl-wind of power at your command . . . a smoothness you'd scarcely dream possible. And you may find it hard to "hold it down" during the short break-in period. That's why your first thousand miles are mighty important.

A2. A little care for the first thousand miles will pay off in longer life, greater economy, more motoring pleasure.

A3. For the first 300 miles, keep the speed under 40. That will give the new moving parts a chance to get acquainted with one another—let the brand-new, highly machined metal surfaces acquire a liking for a tough, protective film of oil.

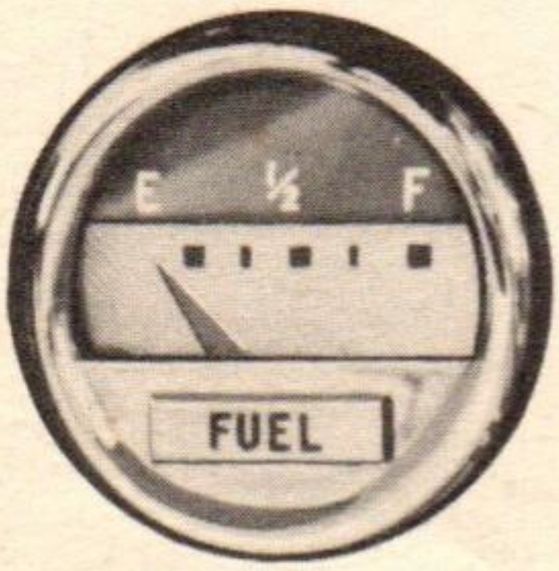
A4. After 300 miles, the speed can be "stepped up" to 60. It is advisable that the speed be varied. Do not drive at a constant speed (high or low) for a length of time. When the speedometer turns 1000 and you've had the first free inspection you can drive with the knowledge that you have given your new car a good start in life.

A5. One more thing—and this is good practice throughout the life of the car—whenever you start out with a cold engine, you can save a lot of wear by keeping the speed under 30 until the engine warms up.



INSTRUMENTS

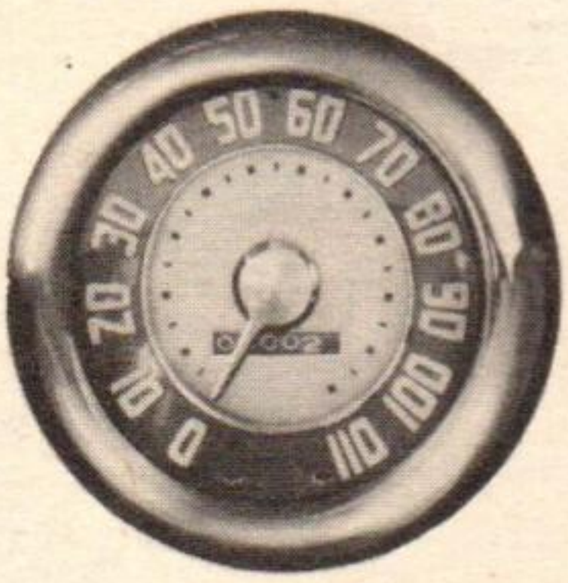
A6. The panel for the 1949 Mercury follows the Table of Contents. Mercury engineers have arranged the instrument panel and controls to help make your driving safe and easy.



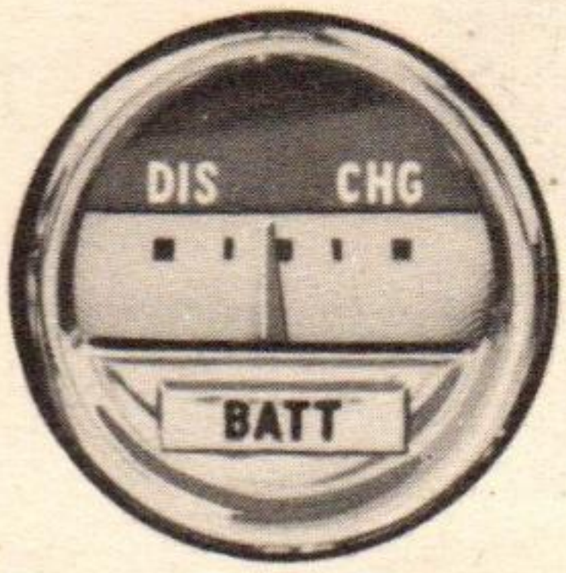
A7. Fuel Gage operates only when Ignition switch is "on".



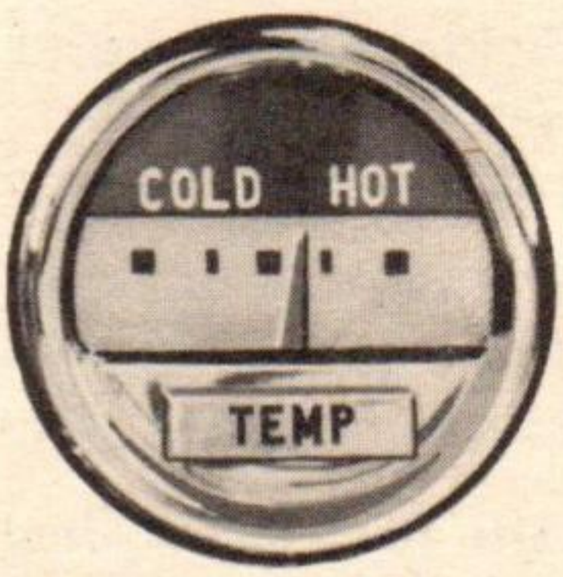
A8. Oil Pressure Gage. This gage shows **pressure** in the oil system when the ignition switch is "on"; it does **not** indicate oil **quantity.** (See "Lubrication" Section). Normal reading is about "30".



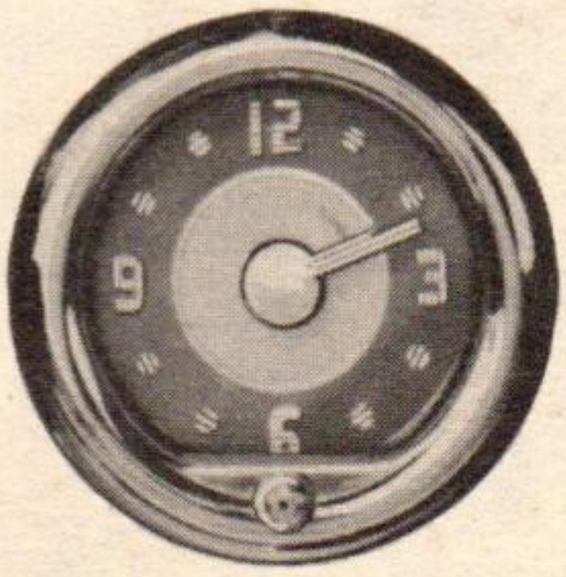
A9. Speedometer. Includes indicators for the total mileage, the direction-signal lights, and the driving-beam head lamp. The direction-signal light indicators are located at the bottom of the speedometer face; the driving-beam head lamp indicator at the top between the numbers 50 and 60.



A10. Battery Charge Indicator indicates when energy is flowing into the battery from the generator ("CHG") or discharging from battery ("DIS"). Normal position when driving is slightly to the right (toward "CHG") depending on the use of lights and other electrical equipment.



A11. Water Temperature Gage. Indicates temperature of water in the cooling system when the ignition switch is "on". The normal operating range is indicated on the dial. (See Section on "Water and Anti-freeze"). (The Pointer rests at the "HOT" end of the dial when the ignition switch is in "off" position.)

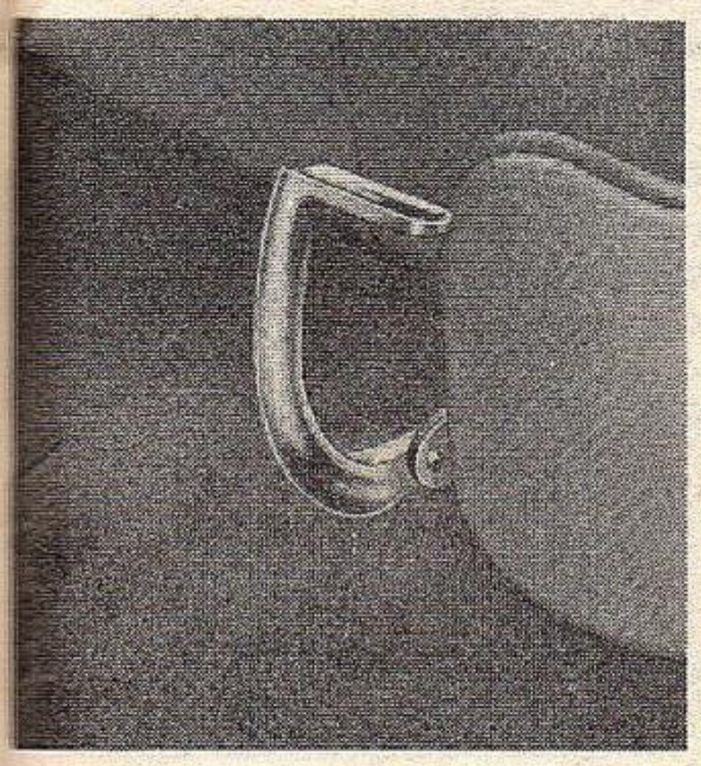


A12. Clock. Electrically wound . . . "Fast" and "slow" adjustment on the back . . . Reset knob is just below the figure "6".

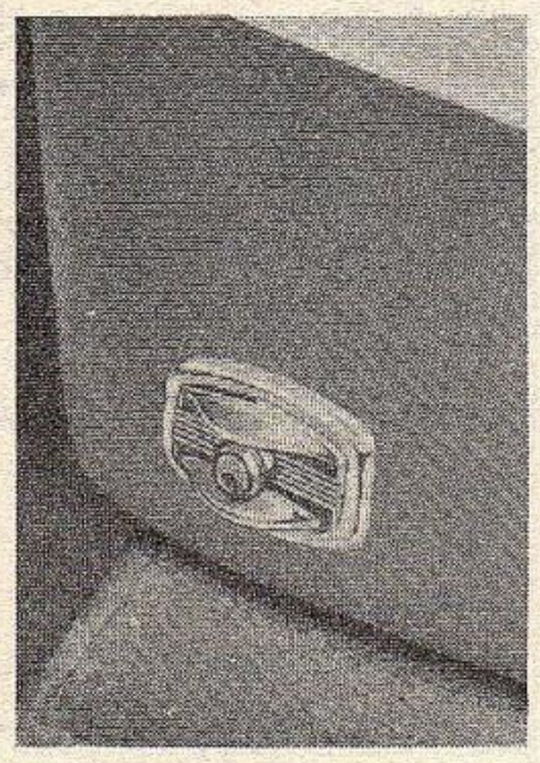
CONTROLS

A13. Front Seat Adjustment. The front seat is mounted on a new "swinging link" which makes for easy adjustment. The control lever is at the left end of the front seat in easy reach of the driver. Pull control lever upward to release seat for motion in either direction.

If your Mercury is equipped with a hydraulic seat control (optional equipment) the control button will be on the left side of the seat (see illustration). Push forward to move seat forward, back to move seat back.

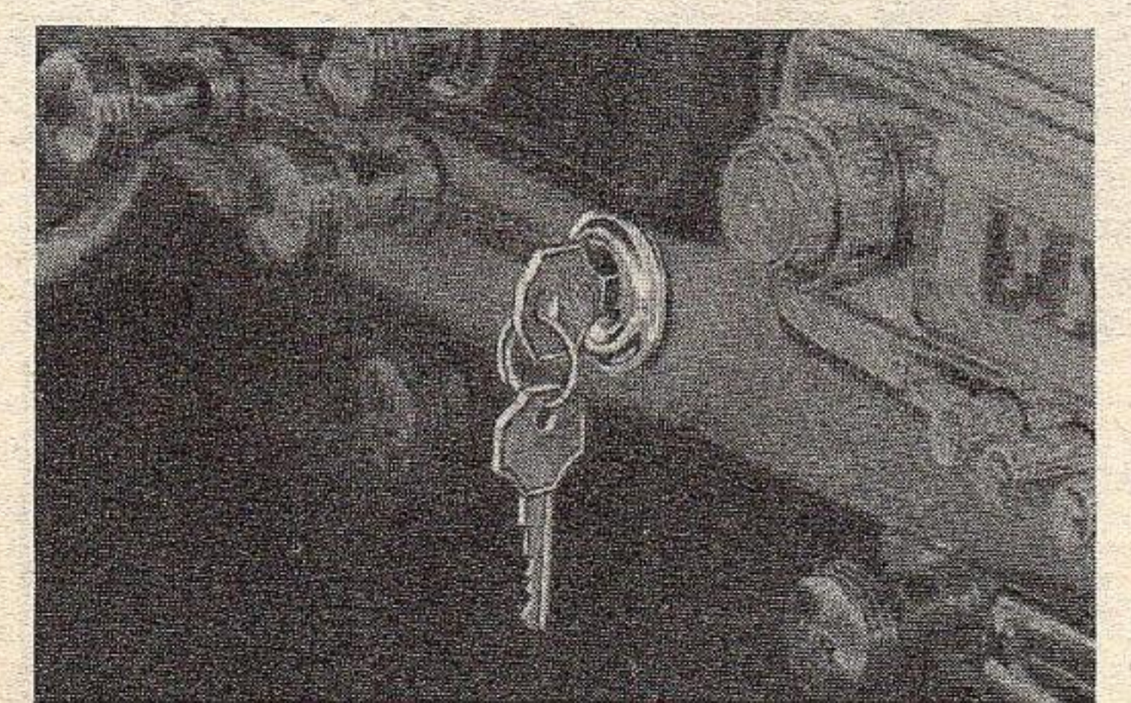


Mechanical Control



Hydraulic Control

A14. Ignition Switch. Controls both the engine ignition and the instrument and the accessory operation. When the key is in the center position, the switch is "off." Turning the key to the left turns on the instruments and permits use of the accessories (radio, heater-blower, etc.) **only;** turning the key to the right also turns on the engine ignition. For convenience, the ignition key also fits the locks on both front doors. (A separate key is provided for the glove compartment and the trunk.)



A15. Starter Button is located at the left of the instrument panel below the fuel gage. With ignition turned "on", simply press the button to start engine. (See section on starting.)

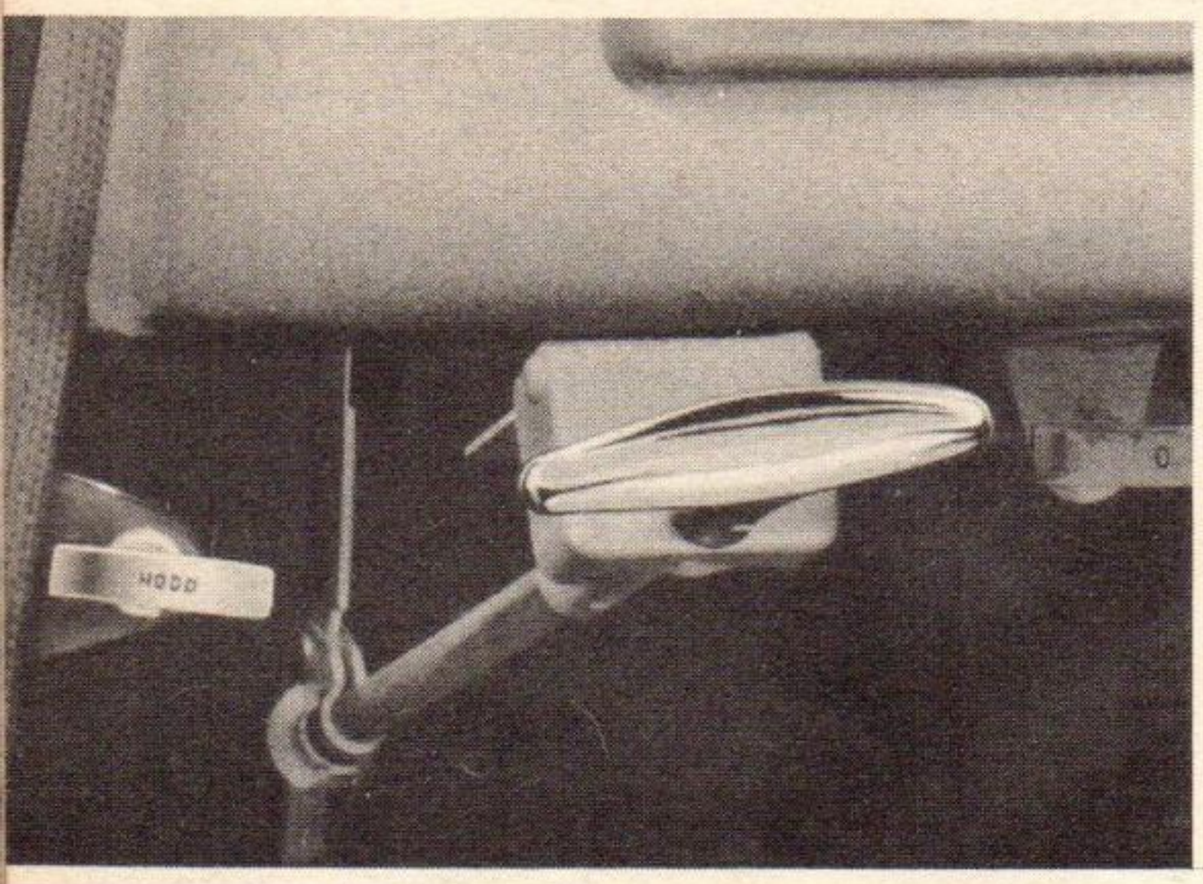


A16. Clutch and Brake Pedals. The new Mercury clutch operates with little pedal pressure—an important comfort feature when driving in heavy traffic. Avoid driving with your foot resting on the clutch pedal. It creates abnormal wear on the clutch by causing it to "slip" slightly. The brake pedal, in the conventional location, controls the new Mercury Easy-Action, self-energizing hydraulic brakes. The "Duo-Servo" design uses the car's motion to reduce pedal pressure.

A17. Accelerator Pedal is located for greatest driving comfort and ease of control. If your Mercury is equipped with overdrive, the overdrive section tells how the accelerator is used to control overdrive operation.

A18. Parking Brake Handle. This large T-shaped handle at the left of the steering post controls the mechanical brakes on the rear wheels. Pull out to set brakes. To release, turn left one-quarter turn and push in. The mechanical parking brake control is entirely separate

from the hydraulic service brake control —an added safety feature. Hand brake can be operated more easily by pushing foot brake at the same time.



Hand Brake and Hood Latch Release

A19. Hood Latch Release. To unlatch the hood, pull out the T-shaped handle below the instrument panel at the left. A safety catch is provided under the hood in front, which must also be pushed back before the hood can be raised. This prevents the hood flying open should the release lever be pulled out accidentally while the car is in motion. Hood is counterbalanced so it will open easily and safely. To close hood, push down rapidly.

A20. Keys. Two sets of keys are supplied. One key operates the ignition and the two front door locks. The other key operates the glove compartment and the rear compartment locks. By providing a separate key for these storage spaces, they can be locked when the car is parked with the ignition key in place, as in a parking lot or public garage. Each key has a number tag attached. A lost key can be readily replaced by your Dealer, if you know the number. It is a wise precaution to keep the code number tags in a safe place.

A21. Door Locks. Both front doors are equipped with key locks. Either door can be locked from the inside by depressing a small button in the top of each window molding. Whether the door is locked from the inside or outside it can be unlocked with your key.

A22. Luggage Compartment Lock will be found by swinging aside the Weather Protecting Mercury Crest. Same key fits glove compartment lock.

A23. Wiper Control. Pull out to start windshield wipers. The farther out the knob is pulled, the faster the wiper speed. A special vacuum booster pump keeps the wipers operating even when the engine is pulling hard—as on hills. If your Mercury is equipped with a windshield **washer** (optional), this same knob controls the washer operation. Push in for a moment and then release and pull out knob to spray windshield and to restart wipers.

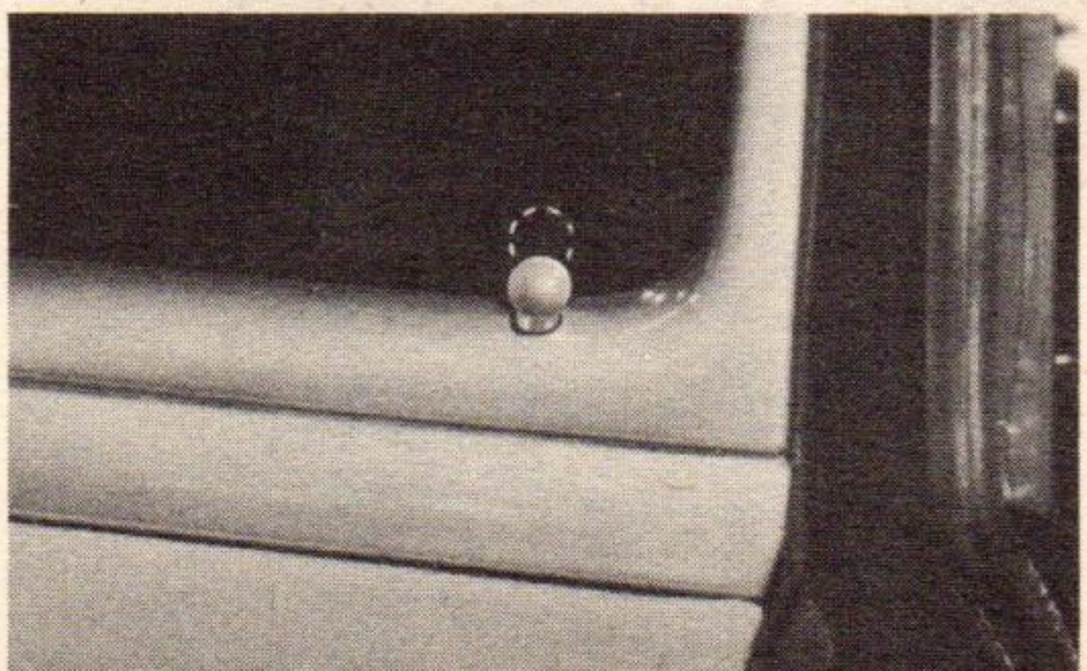
A24. Horn. The tuned dual horns are controlled by the chrome horn ring on the steering wheel.

A25. Convertible Automatic Top is hydraulically operated. The control button is located beside the hand brake. (For care of the top see paragraph B44.)

a. To Lower Top

1. **Be sure car is standing still.**
2. Turn the handle over the top of the windshield until the top is free from the metal pins.
3. Push top up about one inch from the windshield.
4. Pull out the "top" control and hold until the top is completely

Interior Door Lock



STARTING

A26. Automatic Choke. In your easy-starting Mercury, the hand choke and hand throttle have been replaced by an automatic choke of advanced design. This device provides the correct fuel mixture and controls the "idling" speed of the engine to keep it from dying when it is cold.

A27. Before You Start. It is a good idea to press the clutch pedal down while starting the engine. With the clutch pedal in, the starter and battery have less work to do because this disconnects the transmission from the engine and eliminates the "drag" of transmission gears in their heavy grease. It also avoids accidents that might result from the car's being left in gear. All electrical equipment should be turned off when starting in cold weather to make full battery power available for starting.

A28. To Start the Engine.

a. Depress the clutch pedal.
b. Turn the ignition key to the right.
c. Press the starter button.

Release starter button as soon as engine starts, which normally will be after one or two revolutions. If the engine does not start immediately depress the accelerator slightly.

A29. Flooding. If the engine does not start it may be "flooded." This is due to over-choking. To start the engine, push the accelerator to the floor (this prevents the choke from operating) and press the starter button.

A30. Warm Up. It is always advisable to let the engine warm up momentarily before starting to drive in order to distribute the lubricating oil in the engine thoroughly.

CAUTION: *Never start your car in a garage with the doors closed. Carbon monoxide gas, present in all automobile exhaust gases, is a deadly killer. It is colorless, odorless, tasteless—but it works fast.*

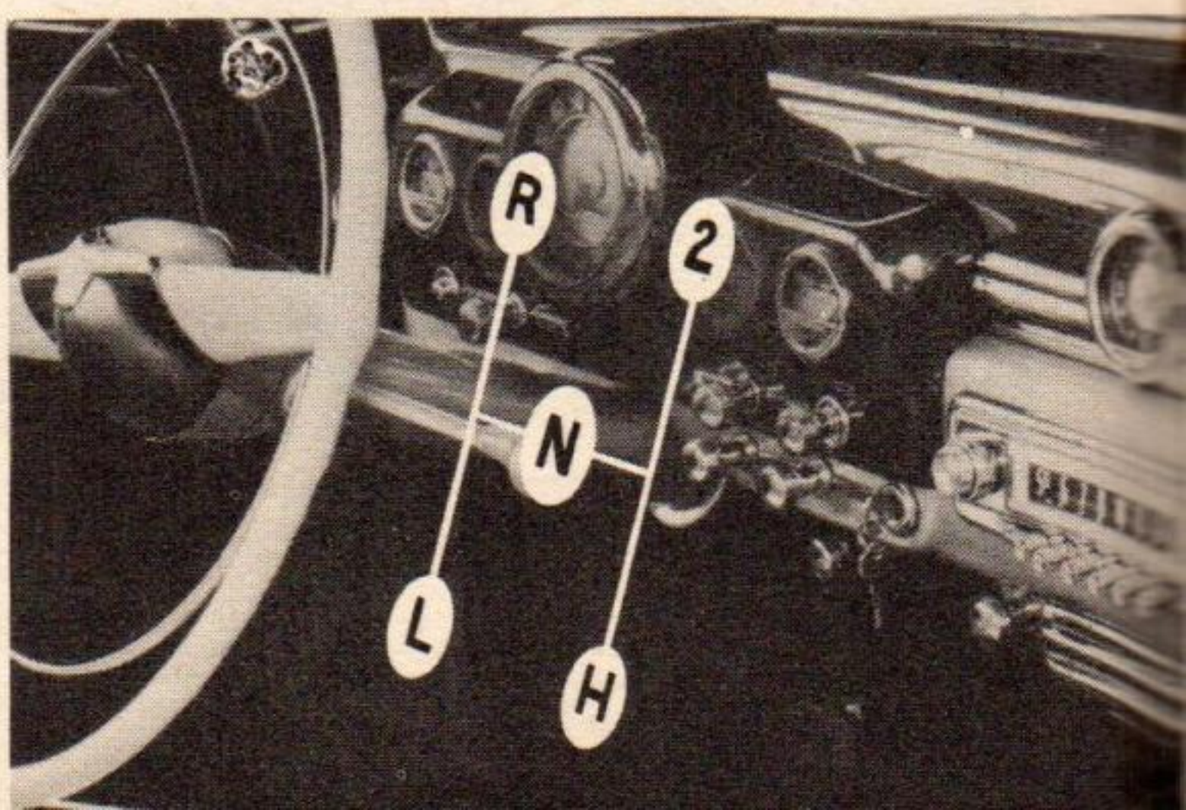
SHIFTING GEARS

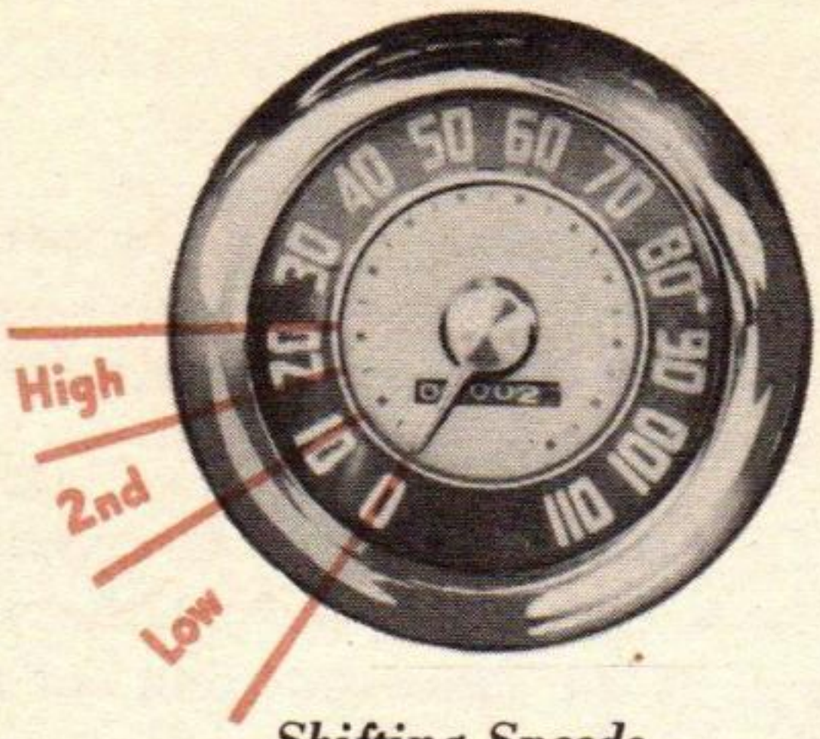
A31. The gear shift on your Mercury is the conventional and practical "H" pattern type, with control lever on the steering column. Shifting, accelerating and use of the clutch, all follow the standard practice with which most people are already familiar.

A32. Some Shifting Hints.

1. "When should I shift gears?" There is no hard and fast answer, for such things as road surface, weather conditions, traffic and grade must be considered. However, for normal driving conditions it is a good idea to shift from low to second at between 10 and 15 miles per hour, and from second to high at around 20. Fast starts in low and second waste fuel, and place extra strain on the transmission, differential and tires. It is a good idea to avoid the practice.

Gearshift Pattern





Shifting Speeds

2. Another good shifting habit is that of starting in low gear. It makes your car last longer and gives you smoother, effortless starting. However, in ice or snow starting in second gear reduces the tendency for wheels to spin.

3. Always stop the forward motion of the car **completely** before shifting into reverse to avoid placing unnecessary and severe strain on the clutch, transmission and differential.

4. To start up hill, hold the car with the hand brake, shift into low gear, then gradually depress accelerator and at the same time release clutch. As engine "takes hold," release hand brake. Use of the hand brake leaves the feet free for accelerator and clutch. Do not use the clutch to keep the car from rolling backwards on an incline (by partially releasing the clutch pedal.) This causes the clutch to "slip" and results in increased wear and shorter clutch life.

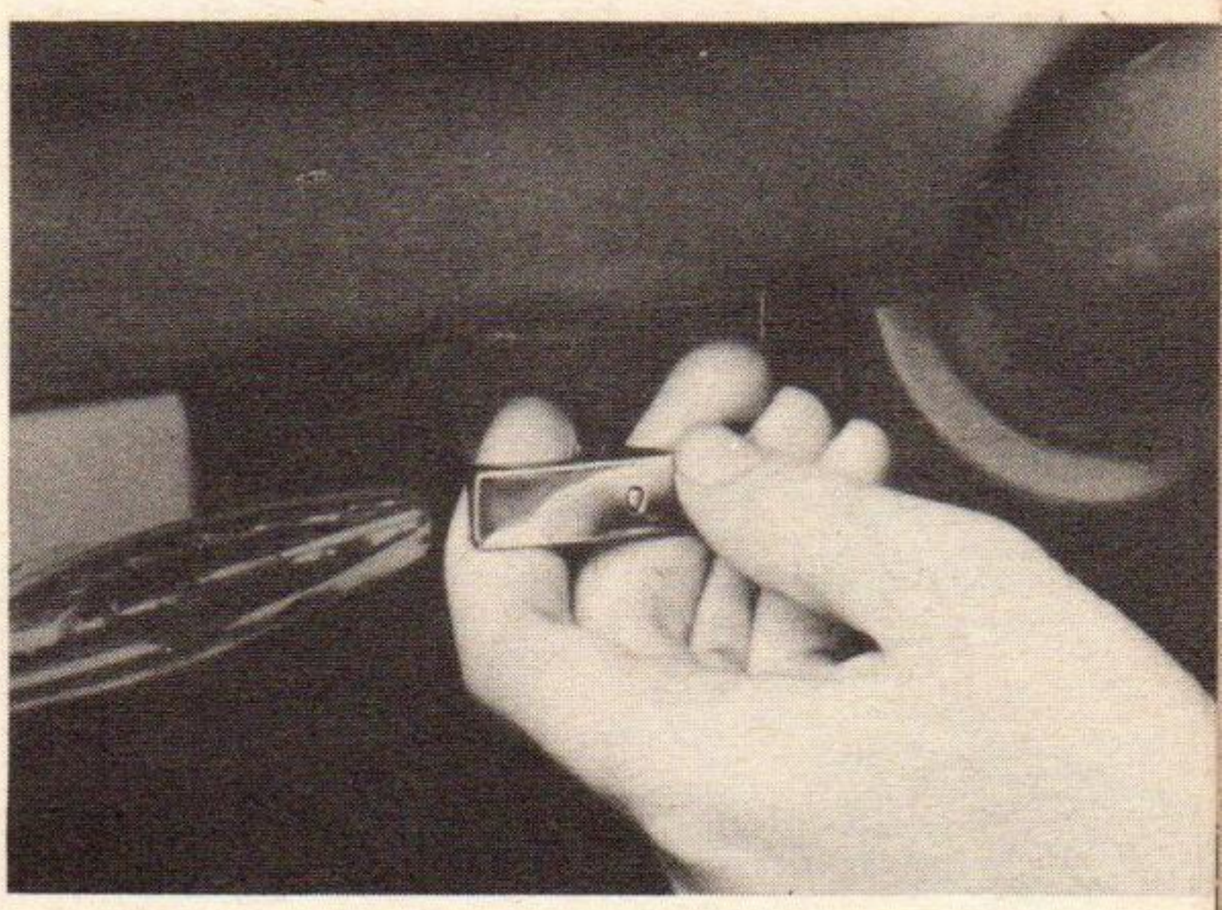
5. When going down a steep hill you may want to shift into second gear to use the engine as a brake. With Mercury's constant mesh gears, you can quickly and easily shift from "high" to "second" without clashing of gears and while still in motion.

TOUCH-O-MATIC OVERDRIVE

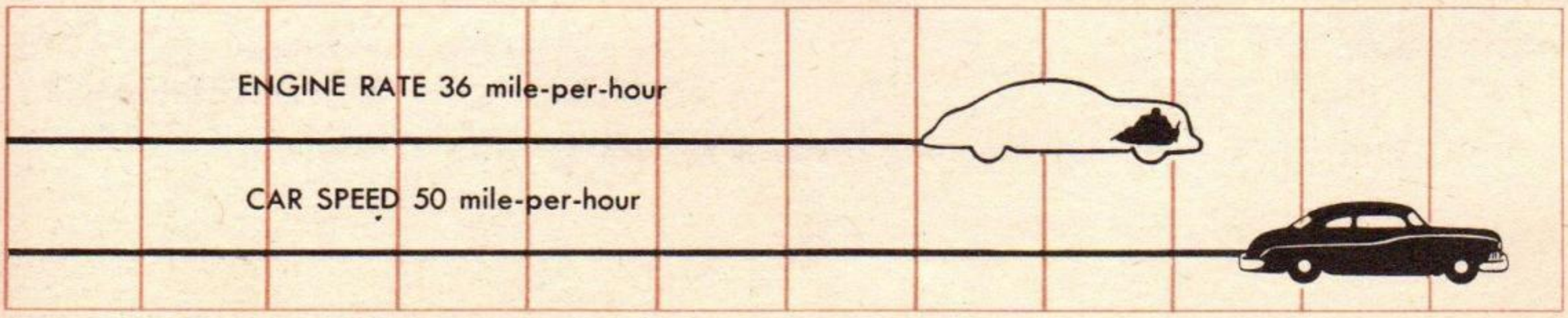
(Optional Equipment)

A33. Touch-O-Matic Overdrive provides a fourth or "cruising" speed which allows lower engine speed and wear. The advantages of the Overdrive are:

1. Less engine speed for a given road speed.
2. Longer engine life.
3. Greater fuel economy.
4. Quieter engine operation.



Overdrive Control Knob



A34. To Operate in Overdrive. Push in the "Overdrive" knob below the instrument panel and to the left.

Shift gears as usual. At any speed above approximately 26 miles per hour, release the accelerator momentarily. The Overdrive gears will change automatically.

A35. To Return to Conventional Drive. If more power is required to pass in traffic or climb a steep grade, push the accelerator all the way down quickly, and hold or release only enough to maintain speed desired. The Overdrive automatically cuts out and the transmission goes into regular third gear giving a faster pick up.

To return to Overdrive, release the accelerator pedal momentarily.

A36. Reverse Gear. When the car is in reverse, the Overdrive does not operate regardless of the position of the Overdrive control knob.

A37. To Lock Out the Overdrive. Push the accelerator pedal all the way down and at the same time pull out the "Overdrive" knob. Then release the accelerator pedal and continue to drive in conventional way.

The Overdrive should be "Locked out" when driving on slippery roads, descending steep hills, or in heavy traffic.

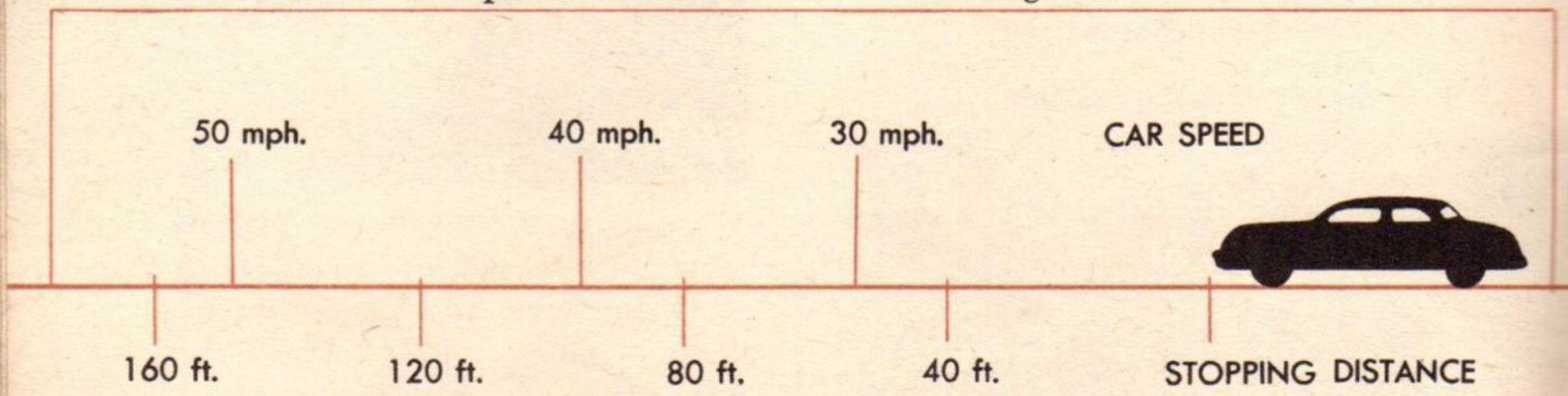
SOME GOOD DRIVING PRACTICES

A38. The great driving ease built into your Mercury can be even further increased by good driving habits and practices. Here is a check-list that will pay real dividends in greater safety and economy and longer car life. Chances are that you already know and practice these fine points of expert driving. However, you may be interested in using these suggestions as a yardstick with which to measure your own driving habits.*

**A39. City Driving.*

**If there are beginning drivers in your family, this section can be of particular value to them.*

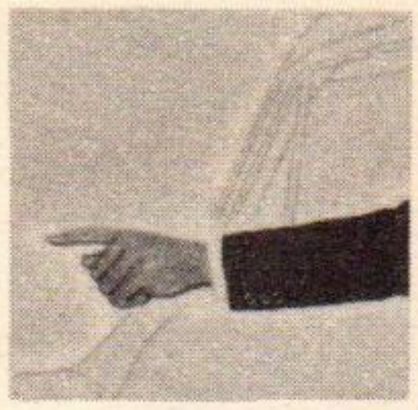
1. One mark of the experienced driver is that he always drives "ahead" of himself. He knows in advance what he is going to do next, and plans for it. And he always makes allowances for the other fellow doing the unexpected. The stopping distance chart gives you a good idea of why this is important.
2. You can easily park parallel to the curb in a space only slightly longer than your car by following these simple steps:
   a. Pull up **even** with the car ahead.
   b. Cramp wheels toward curb and back in slowly. Front of car will swing out.

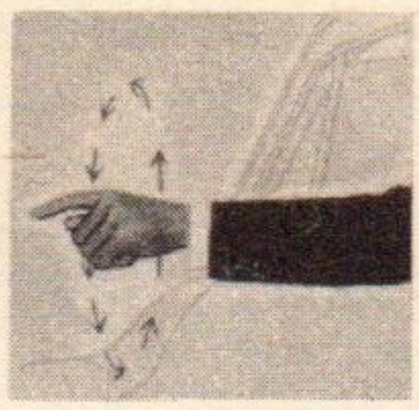


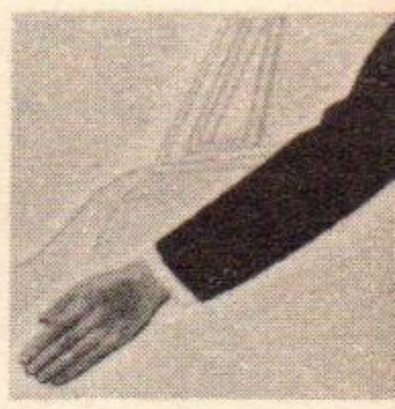
Average Stopping Distance for Average Road Conditions

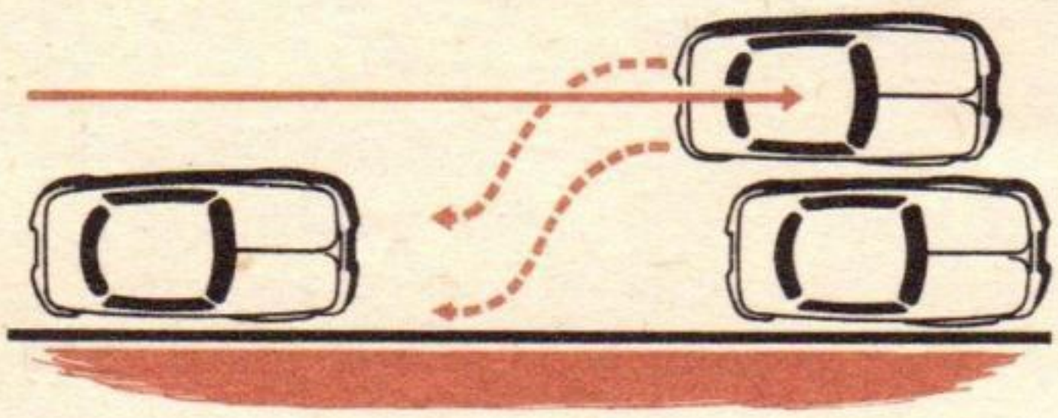
c. When rear of car in front is approximately opposite your windshield, turn front wheels to the left and continue backing, bringing front end in towards the curb.

d. Drive ahead into proper parking position, if necessary.



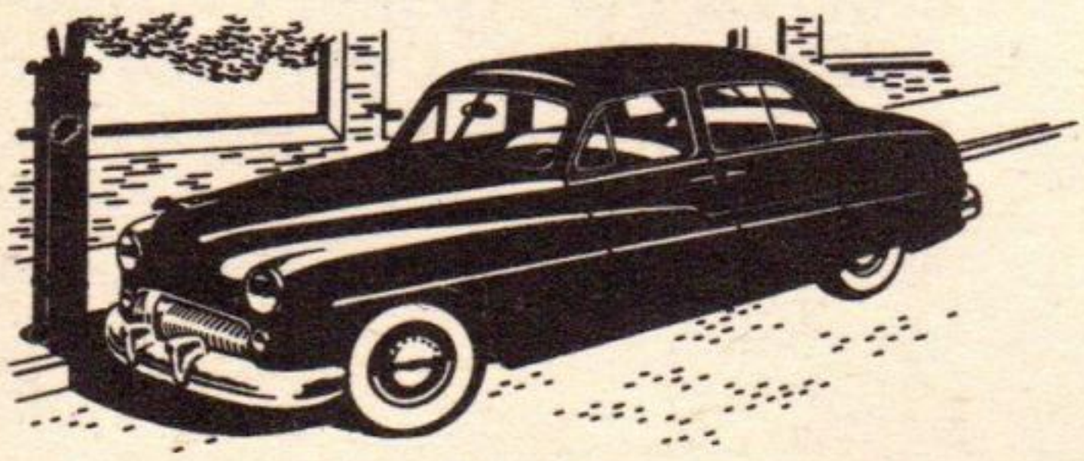






3. Always set the hand brake when leaving your car parked unless it is prohibited by local regulations. It is not good practice to leave the car in gear. For example, if you leave your car parked in low gear, and the driver ahead tries to push your car back in order to get out, excessive strains are imposed on the transmission and damage may result.

4. When parking on a grade, always turn the front wheels in toward the curb.



Keep Wheels Toward the Curb on a Hill

5. For most city night driving conditions, the lower headlamp beam provides plenty of light and will not annoy oncoming drivers.

6. Always signal for turns. (If your car is equipped with direction signals, a flick of the finger will start them operating.) Proper arm signals in general use are as follows:

For a **left** turn, arm straight out.

For a **right** turn, arm straight up or signal car behind to pass by a circular clockwise motion.

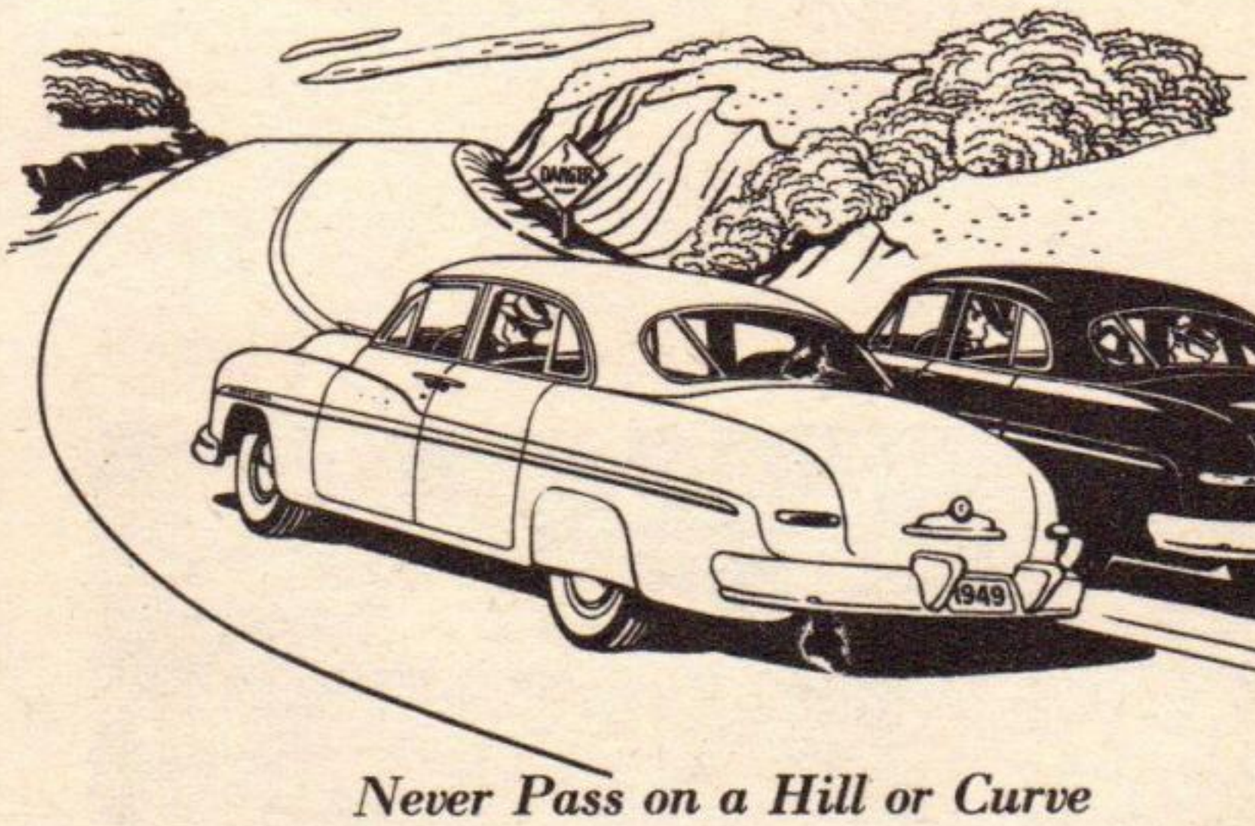
For a **stop**, arm points down.

A40. Country Driving

1. When climbing steep hills, don't wait until the last minute to shift into a lower gear. Make the change into second at about fifteen miles per hour and avoid extra strain on the engine.

2. When going down long hills, you will save brake wear if you slow the car by a series of brake applications sometimes called "pumping," rather than applying the brakes steadily. And always keep the car in gear—it saves the brakes and is much safer than "coasting."

3. Never pass a car going over a hill or around a curve—you never know what may be coming toward you on the other side. Many states have stringent laws regarding this.



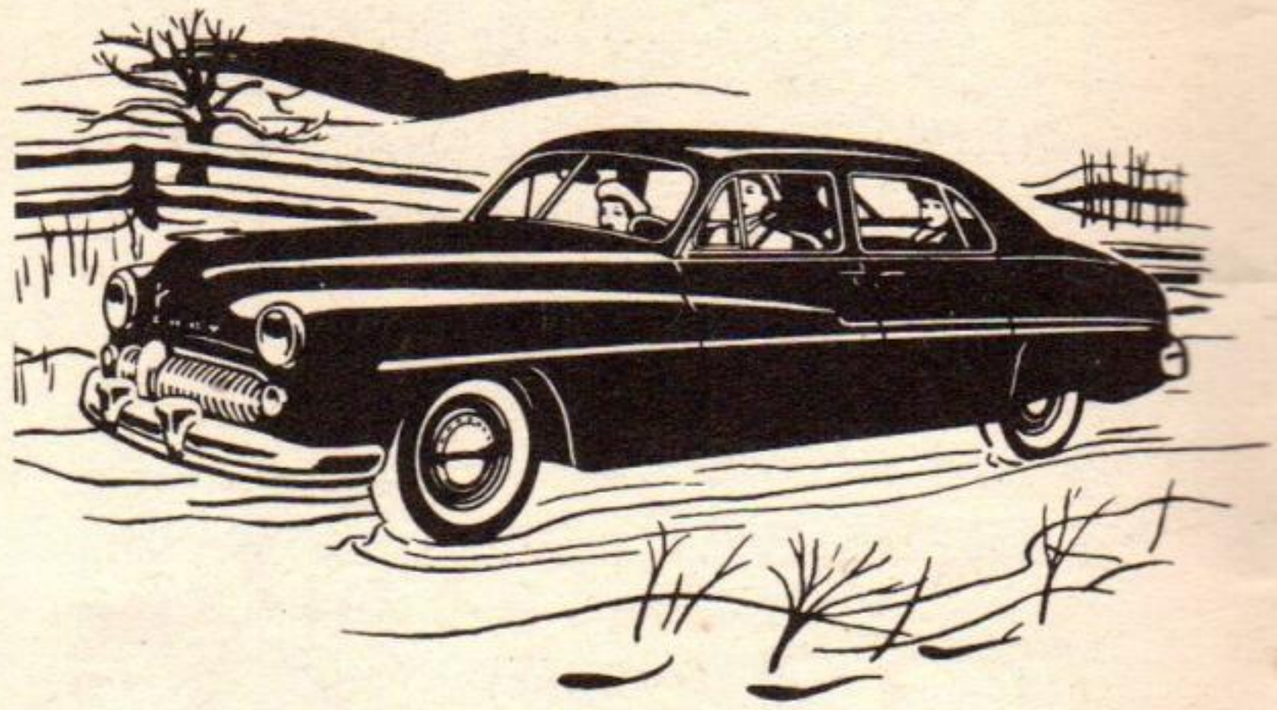
Never Pass on a Hill or Curve

4. Always pull off the highway onto the shoulder of the road when parking. You, as well as the other drivers, will be a lot safer.

5. Tire blowouts are relatively rare today, but if you have one, don't "slam" on the brakes. Let the car lose speed gradually while holding it on a straight course. Apply brakes gently. The same method should be used if you accidentally run off the edge of the pavement. Wait until car speed drops before turning back, then make the turn quickly.

6. Night driving on the highway calls for the use of the upper headlamp beam, especially when running at high speeds. This beam lights a wide area far down the road. Always shift to the lower beam when meeting oncoming cars.

7. Vacation tours can be more fun with a little advance planning. Have your car thoroughly lubricated and checked over by your Mercury dealer to be sure everything is in proper operating condition. If your car is still within the period covered by the Mercury Warranty and Owner's Service Policy, be sure to take these papers with you. You can then obtain the stated service inspections and lubrications from any Mercury Dealer. If you plan to go somewhat off the main tourist routes, take along a short length board to use in supporting the base of the jack in case you have to change a tire in soft or sandy soil.



A41. Driving in Bad Weather.

1. Driving on slippery pavement always calls for caution. Apply brakes gently when stopping. When starting up, use second gear and accelerate slowly—this will prevent spinning the rear wheels, which is dangerous and hard on the tires.

2. In case of a skid, always steer **in the direction the car is skidding.** Use brakes sparingly.

3. If engine should overheat, for any reason, stop immediately and turn off ignition, allowing engine to cool down. **Do not attempt to remove radiator filler cap while radiator is boiling.** Turn the cap part way and allow the water vapor to escape. Never add cold water until engine has cooled.

OPERATION OF LIGHTS



A42. Light Switch is directly below the oil pressure gage. It operates in three positions—all the way in is "off"; middle position turns on the parking lights; all the way out turns on the head-lamps. Tail lamps, rear license plate lamp, and

the instrument lights (if the instrument light switch is "on") operate in both positions.

A43. Head-Lamp Beam Control. The small floor-board button next to the clutch pedal controls the beam thrown by the head-lamps. With the head-lights on, the button is pushed with the left foot to change the country (upper) to the traffic (lower) beam or vice-versa. For your own and others' safety, make it a rule to lower the beam when meeting other cars. The beam indicator light at the top of the speedometer face between the numbers 50 and 60 shows when the upper beam is on. It is important that your headlights be adjusted by your dealer, as provided in your "Owners Service Policy."

A44. Instrument Light Switch. The intensity of the instrument lights may be varied by a rotary switch located under the instrument panel on the left side. Notice that the instrument graduations, numbers, and letters are lighted softly, without distracting glare.

A45. Road Lamp Switch. Turns on road lamps when pulled out—providing head lamp switch is on. (Optional equipment.)

A46. Map Light Switch. Pull out to turn map light "on." Provides a quick, convenient light for reading maps or directions. (Optional equipment.)

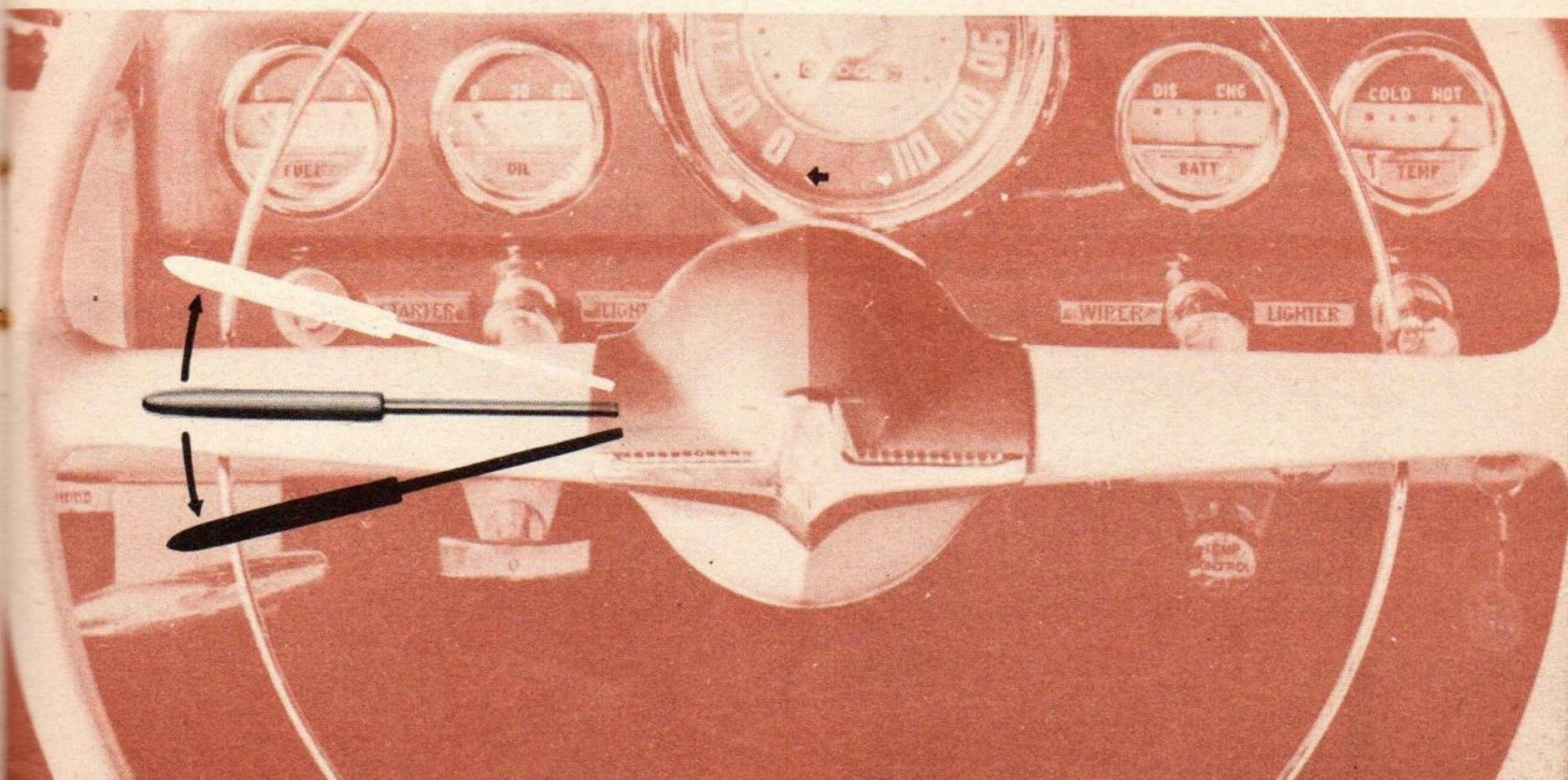
A47. Compartment Lights. The glove compartment and the trunk compartment have interior lights which go on when the doors are opened.

A48. Courtesy Lights are provided for the front doors. The lights are under the instrument panel at each side. The dome light operates as a courtesy light when the rear doors are open.

A49. Dome Light is controlled by a switch on the left hand center pillar.

A50. Tail and Stop Lights. The tail lights, and stop lights, are housed together. The switch for the stop light is operated automatically by brake pedal. The tail light is controlled by the head light switch.

A51. Direction Signal Lever. Conveniently located on the left side of the steering column, this control makes driving safer. Pushed up, it operates flashing signal lamps in the right tail light and right front parking light. Pushed down, it lights corresponding signals on the left side. Thus you can "telegraph" your intentions to both oncoming and following traffic before you start to turn. Right and left indicator lights in the speedometer dial show which signals are operating. When you've completed the turn, the direction signal lever automatically returns to "off" position.



2. Right hand "AIR" knob all the way out.

3. "Temperature" control (Thermostat) knob when set all the way "in" is off; all the way "out" supplies the greatest quantity of heat.

4. "Heater" control (blower) can be set according to weather conditions. "HIGH" speed is for extreme cold (first position).

b. For Quick Warm-up

Set controls as above except right "AIR" control which should be pushed in and right register should be open.

c. Defroster

1. Pull "Defroster" knob out.*

2. Pull "Temperature" control out.

3. Set "Heater" control (blower) to "HIGH" speed (first position).

*Push in defroster control after defrosting is completed as this quantity of air can then be used for car heating.

A56. Summer Operation.

a. For Normal Operation.

1. Pull left "AIR" control out.

2. Pull right "AIR" half way out.

3. "Temperature" control should be pushed all the way in.

4. "Heater" control may be according to flow of air desired. "HIGH" speed will circulate air rapidly. In the "OFF" position the flow of air will depend on the motion of the car.

b. De-fogging the windshield during rain or warm weather.

1. Pull "Defroster" control out.

2. Pull right "AIR" control out.

3. Set "Heater" control (blower) at "HIGH" speed position.

A57. Ventilating Windows are provided in the front portion of front door window. These are operated with a crack lever, and can be locked by turning the small catch at the lower rear corner. Body styles with rear quarter windows have ventilating panes that are pushed out to open. They are locked in the same manner as the front ventilating panes.

A58. Hydraulic Window Control System (optional equipment). All side windows except vents are raised and lowered by hydraulic lifts in the door walls, driven by a master pump near the engine. Window control switches are conveniently located on each door, providing individual control of ventilation. The driver's door carries a complete set of window control buttons, allowing the driver to open or close any window. Push buttons upward to close window, down to open them. Windows can be stopped in any position. Fluid in the hydraulic control reservoir should be checked by your dealer every 2,000 miles.

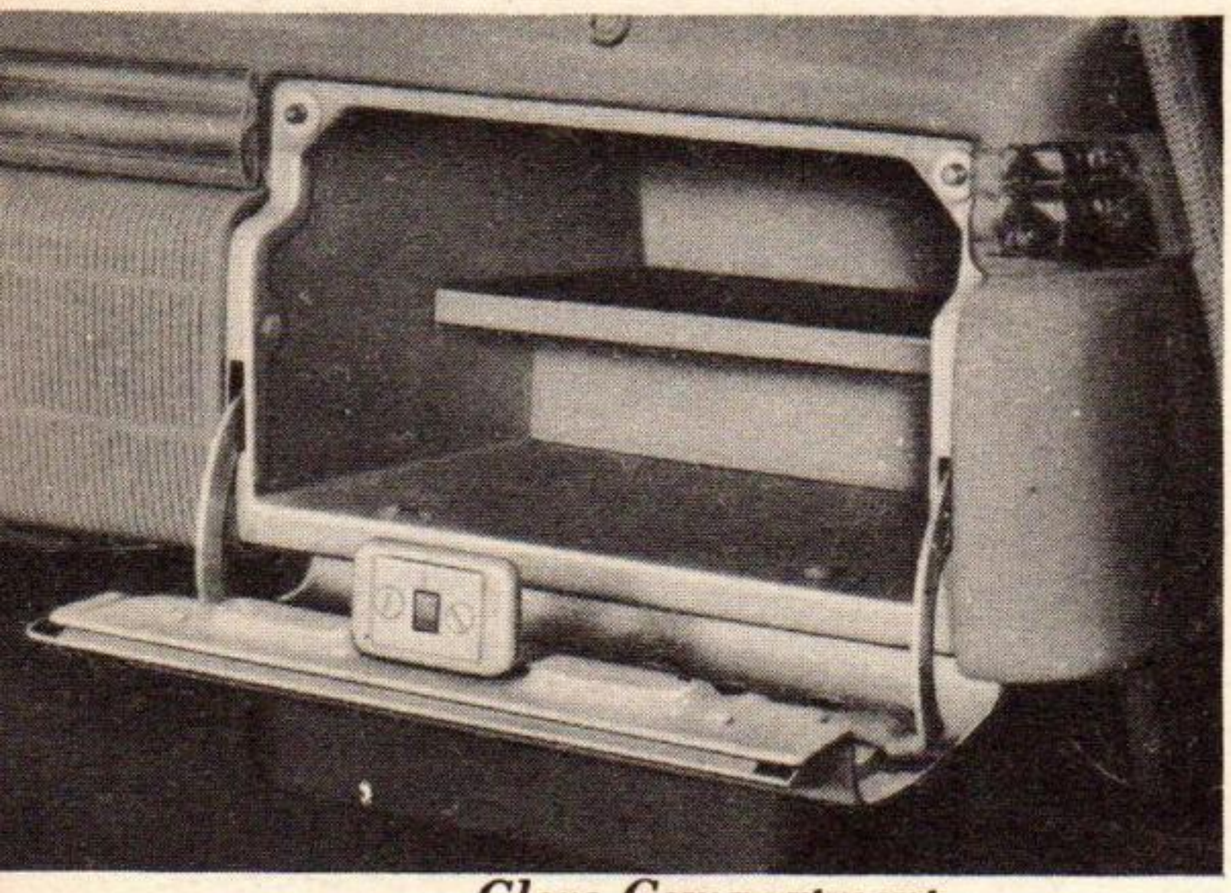
Heating and Ventilating Controls



APPOINTMENTS

A59. As you become fully familiar with your new car, you will find that there are a great many other features of great importance—features that have been designed into your Mercury to give you a greater measure of comfort, convenience and safety.

A60. Radio. Your Mercury Radio (an optional accessory) fits smoothly into the receptacle provided for it in the center of the instrument panel. The location of the speaker grille at the right of the radio set gives greatly improved reception for both front and rear seat passengers. (See par. A66.)



Glove Compartment

A61. Ash Receiver. Located at the bottom of the instrument panel. Inside case can be readily removed for cleaning.

A62. Glove Compartment. Opens by pressing the push-button catch. A special shelf has been built into the compartment for your convenience when storing maps, handbooks, etc. Interior light goes on automatically when door is opened. Compartment can be locked with luggage compartment key.

A63. Lighter. Just push it in. When lighter is hot, it pops out automatically. Don't **hold** lighter in, because it may overheat and burn out.

A64. Door Handles. Interior door handles are located for convenience and safety, and are curved inward to practically eliminate catching of clothing. Handles must be pulled upward to open, a safety feature preventing accidental opening by leaning on the handle. Exterior door handles are pull type. Doors may be locked from the inside by depressing the small button in the top of each door window molding. To unlock, pull up. Both front doors are equipped with key locks; the key must be used to lock these doors from the outside.

MERCURY ACCESSORIES

A65. Mercury accessories are in the same matchless taste as your all-new Mercury itself. They are designed to enhance the beauty of your car and add to your comfort. Your dealer can supply you with the following accessories.

The Mercury Radio

A66. The specially-designed radio receiver is of the amplitude modulation, or AM type, having eight tubes including rectifier. It is mounted in the center of the instrument panel, where controls are convenient to driver or passenger. The speaker is mounted at the right of the set.



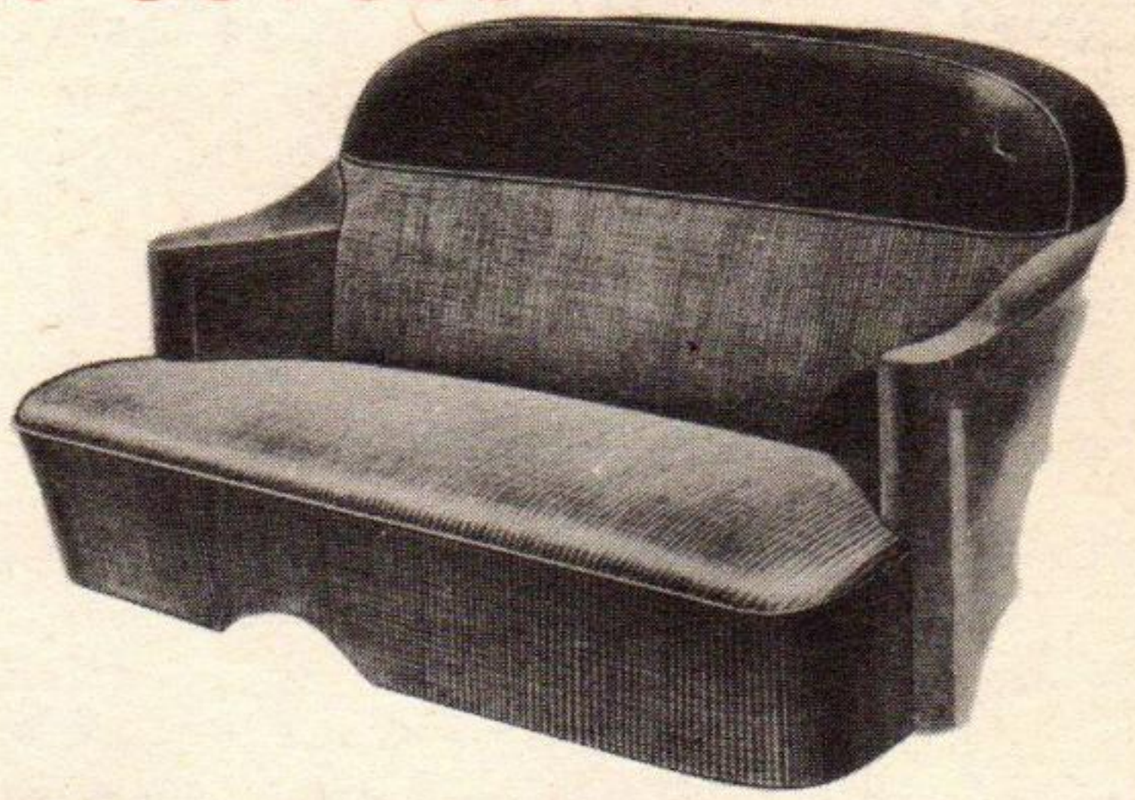
A67. Operation. There are six push buttons at the bottom of the radio panel. To turn on, push any one of the five buttons on the right. This also selects the station at the same time. It is very simple to set these buttons to your five favorite stations. If you are not familiar with the procedure, your dealer will set the buttons for you. To turn off, push the first button on the left end of the panel. A "manual" control knob at the right side of the radio dial can be used at any time. This permits wider selection of stations than is possible with push-button control alone.

A68. At the left side of the dial is a double control knob. The small center knob regulates volume. The large outer knob permits selection of four tone ranges—low noise; high fidelity; music; speech. An indicator in the radio dial shows which setting is in operation.

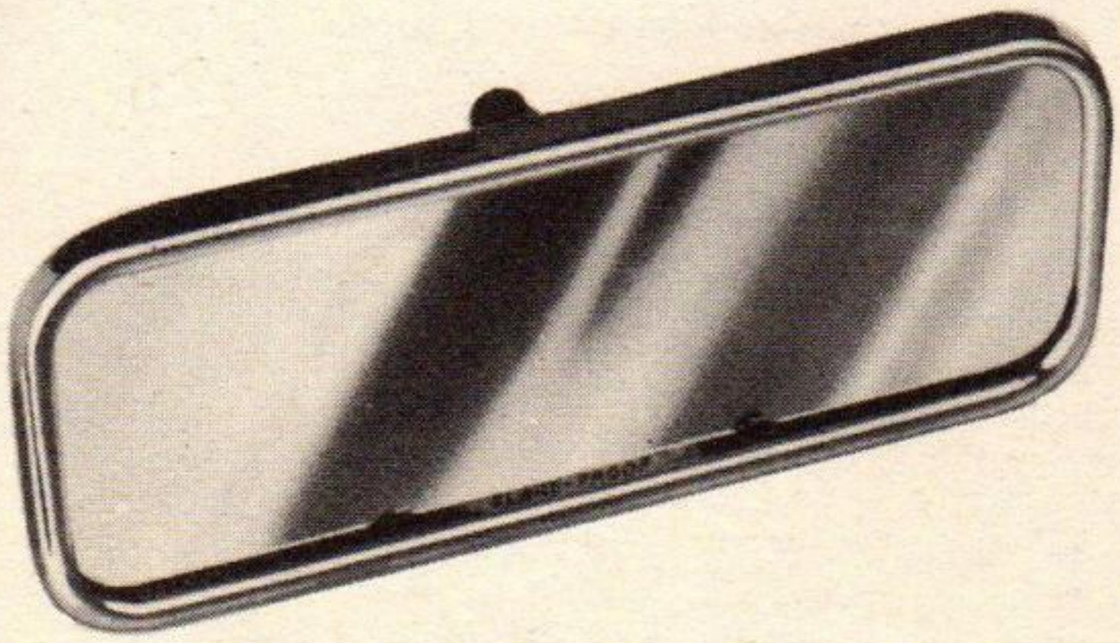
A69. Antenna. The three-piece telescopic antenna is operated manually. It is mounted on the right side of the top cowl.

Fibre Seat Covers

A70. Seat covers are in three eye-catching patterns that will harmonize with the interior of your car. They are made of fibre trimmed with leather grained plastic. Exceptionally strong and durable, they are smooth and will not snag stockings. Seat covers are custom fitted, easily cleaned without removing, and give maximum upholstery protection.



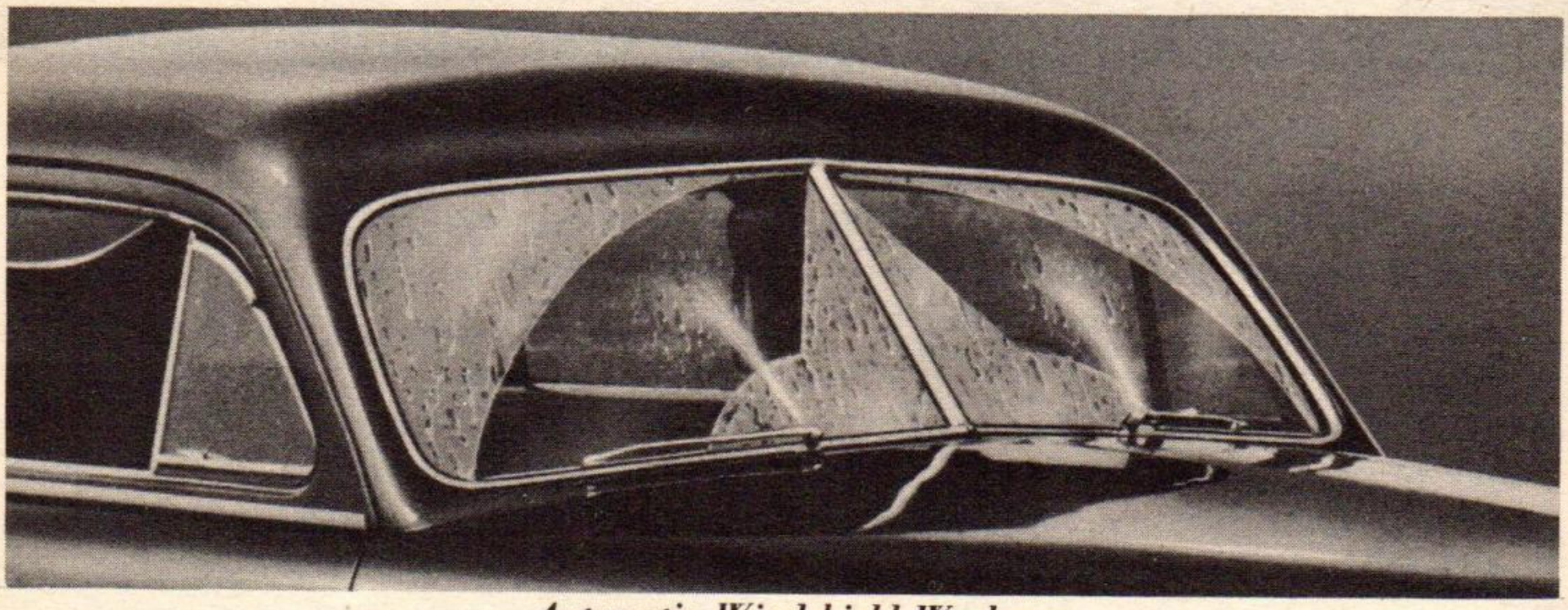
No-Glare Rear-View Mirror



A71. This is an unusual two-way mirror. In daytime it is an efficient silver-backed mirror. At night, press a lever and the blinding reflected glare from the car behind you is cut 93 per cent although visibility is not sacrificed. This is accomplished by a prismatic-type reflector with two reflecting surfaces, one behind the other. (See Safety Group, par. 79.)

Automatic Windshield Washers

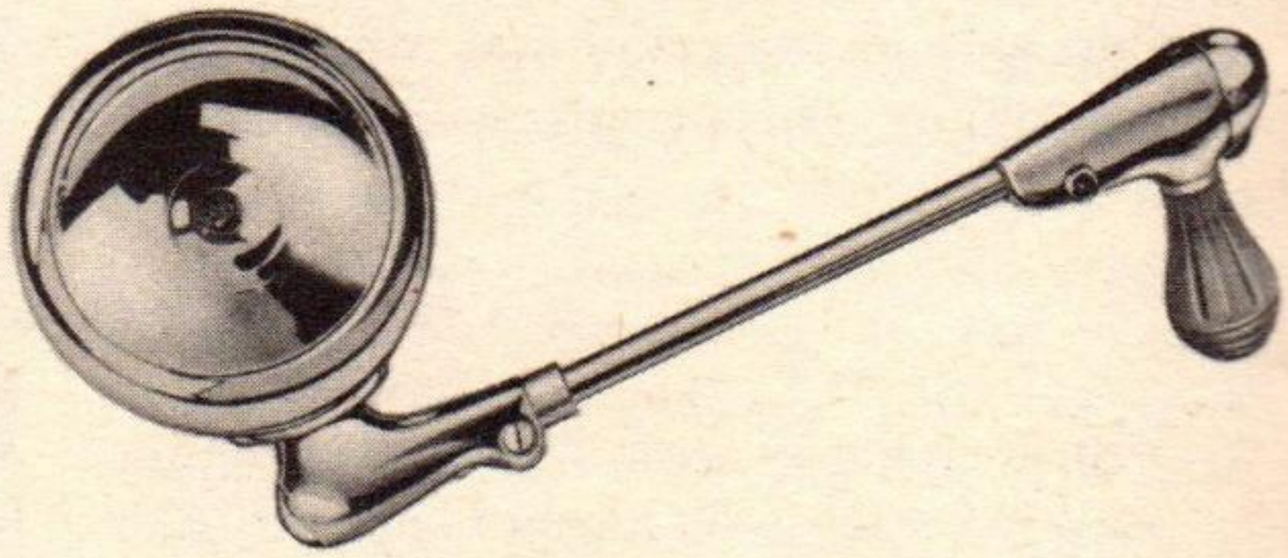
A72. Here's a convenient safety aid to give you a sparkling clean windshield at any time. Press the button, and a fine spray is released from tiny sprayers located in the windshield-wiper housing. The wipers then clean away dirt, dust, insects, or mud splash. The reservoir for the washer fluid is located in the engine compartment. (See Safety Group, par. 74.)



Automatic Windshield Washer

Spotlight

A73. This powerful light picks up objects clearly a thousand feet away. At night it helps in reading road signs, house numbers and in lighting hazards. It has heavy chrome finish with a sealed-beam lamp and a pistol-grip handle. Adjusts to almost any angle from inside the car.



A74. To further contribute to your driving pleasure and safety the following accessories are also available:

Road Lamps
Rear Window Wiper
Initial Plates
Lap Robe
Luggage
Wheel Trim Rings
Grille Guard
Custom Steering Wheel
Fender Shields
Battery Corrosion Arrestor

UTILITY GROUP*

Gas Tank Lid Lock
Utility Lamp
Exhaust Pipe Extension
License Plate Frames
Vanity Mirror (Visor)

SAFETY GROUP*

No-Glare, Rear-View Mirror
(See Par. A71)
Automatic Windshield Washers
(See Par. A72)
Outside Rear View Mirror
Automatic Back-up Lamp
Hand Brake Signal

AUXILIARY GROUP*

Courtesy and Map Light
Spare Air Assembly
Engine Compartment Lamp

*These accessories, when purchased as a group, are offered at a special price.

SECTION b

Taking care of your MERCURY

SERVICE CALENDAR FOR YOUR MERCURY

B1. Regular lubrications and inspections of your Mercury will help you get the most enjoyment, the finest performance and the best economy. The Owner's Service Policy, supplied with your car by your Mercury dealer, entitles you to inspections and service at 1,000 and 2,000-mile intervals at no cost (except for engine oil).

B2. Inspection Service. You are also entitled to have your Mercury inspected, without charge, every 30 days or 1,000 miles throughout the life of the car. Repair and maintenance operations which you authorize will be charged for at the regular prices for such work.

B3. Service Calendar below will serve as a handy reminder of the regular care which your Mercury should receive for greatest satisfaction.

a. Breaking-in Period

At 350 to 500 Miles

Change engine oil.

At 1,000 Miles

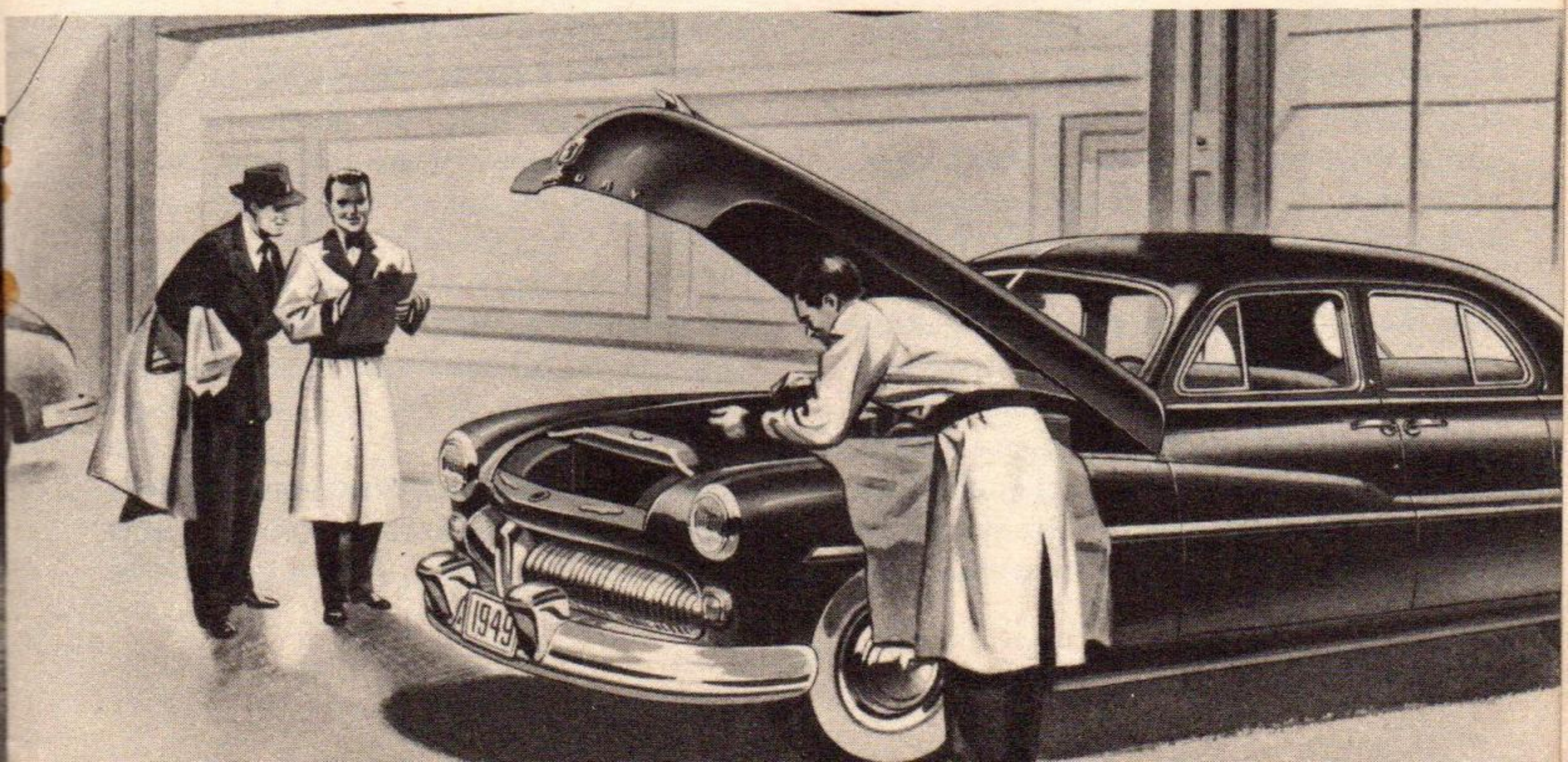
Use the "1,000 Mile Inspection and Service Coupon" which is attached to the Owner's Service Policy.

At 2,000 Miles

Use the "2,000 Mile Inspection and Service Coupon."

b. Every Day

1. Check engine oil level.



2. Check tire pressure (including the spare).
3. Check battery water level.
4. Check radiator water level. In winter, check strength of anti-freeze.

c. Every 2,500 Miles

1. Change engine oil.
2. Lubricate car ("Grease job") and check transmission and differential grease.
3. Check level of fluid in brake reservoir and window-control reservoir.
4. Check battery water level.
5. Check tire wear and pressure.
6. Check air filter (clean if necessary).

d. Every 5,000 Miles OR Every Spring and Fall

1. Inspect and rotate tires (don't forget the spare).
2. Check front wheel alignment and steering gear and linkages.
3. Have engine tune-up to include:
   Check carburetor adjustment
   Replace oil filter cartridge
   Clean fuel pump screen
   Clean and lubricate breather cap
   Check fan and generator belts
   Tighten battery connections
   Clean and adjust distributor points.
4. Check all lamp bulbs and headlight adjustment.
5. Check windshield wiper blades.
6. Clean and adjust spark plugs.

e. Every 10,000 Miles

1. Remove wheels and check brakes and drums.
2. Clean and repack front wheel bearings.
3. Drain, and refill differential and transmission.

f. Fall

1. Change to winter oil.
2. Drain, and refill transmission and differential.
3. Drain and clean cooling system.
4. Tighten hose connections.
5. Check or add anti-freeze.
6. Complete lubrication ("grease") job.
7. Clean and wax body.

g. Spring

1. Drain and clean cooling system.
2. Add rust inhibitor.
3. Drain and refill transmission and differential.
4. Complete lubrication ("grease") job.
5. Have spring engine "tune-up."
6. Clean and wax body.

h. If you find duplication between the items listed to be done at various mileages and those listed for "Fall" and "Spring" attention, you can, of course, make the necessary changes in your own "service" calendar. These suggestions are intended only as a general guide to be sure important service operations are not overlooked.

i. Care will keep your Mercury "like new" for a long, long time.

LUBRICATION

B4. Regular lubrication will help keep your Mercury "young" and will prevent the inconvenience and expense which often results from lack of oil and grease.

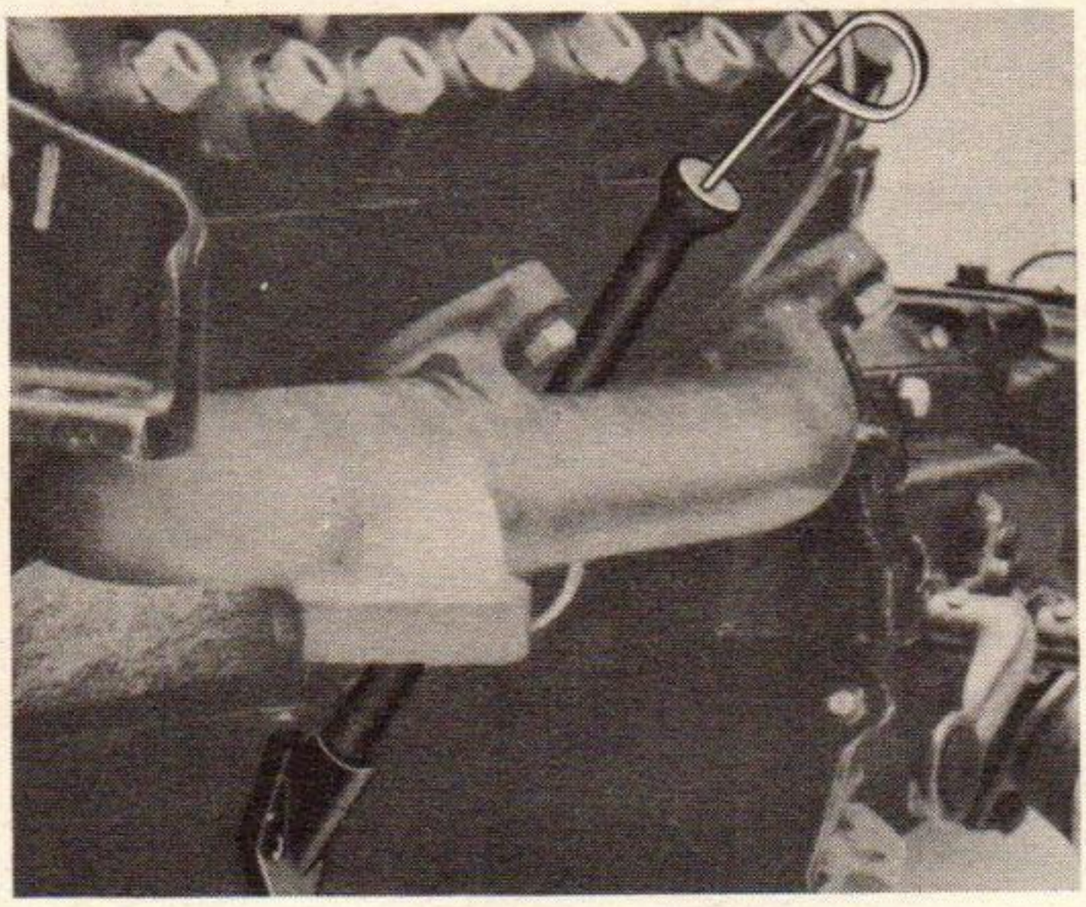
In general, engine oil should be changed every 2,500 miles and the car should be lubricated at 1,000-mile intervals after the break-in period. More detailed suggestions on lubrication follow.

B5. Engine Oil

There are three facts to remember about engine oil: There must always be **enough** to protect the engine; it must be of the

proper "weight" (viscosity); it should be clean.

Four factors should be kept in mind with respect to engine oil: Quantity, quality, weight (viscosity), and freedom from contamination.



Oil Level Gage

B6. Quantity

The Mercury engine holds 5 quarts of oil. Oil level is indicated by a steel rod (or "dip-stick") which extends down into the oil "pan" through a guide on the left side of the engine. This "dip-stick" is marked "Full," "1 Qt.", and "2 Qt." Measurements must be taken with the engine stopped.

Oil level should be checked every day and should be added only whenever the level drops below the "1 Qt." mark. It's a good idea to start long trips with the oil pan "Full." **DO NOT OVERFILL.**

B7. Oil Pressure Gage

The "Oil Pressure" gage on the instrument panel does **not** measure the quantity of oil in the engine. It indicates oil **pressure** when the engine is running, and should normally read about "30" except when the engine is idling. If the oil pressure is much lower, or if it fluctuates rapidly, stop at once and check the oil level.

If it is necessary to drive the car to get more oil or to have repairs made, drive very slowly.

B8. Quality

For ordinary driving, "regular" grades of motor oil are entirely satisfactory, but for long trips at high speeds—particularly in hot weather—a "premium" grade is recommended.

It is wise to use oils of a recognized brand, purchased from a reputable dealer. "Reclaimed" oils should not be used, since they may contain foreign matter or chemicals which would be harmful to the engine.

B9. What Is the Proper "Weight" To Use?

The "weight" of any oil varies with its temperature. Cold oil is thick; hot oil is thin. **In winter,** light weight oil gives better lubrication, since engine temperature is lower in cold weather. **In summer,** heavier oil is needed, since it thins out as the engine heats.

Oil weight (viscosity) is designated by number (as specified by the Society of Automotive Engineers).

In warm weather, use S.A.E. No. 20 or 20W in your Mercury.

In below-freezing weather, use S.A.E. No. 10 or 10W.

If temperatures less than —10°F persist, use 1 pint of kerosene to 4½ quarts of No. 10 or 10W.

B10. Keeping Oil Clean

Your Mercury is equipped with an oil filter which removes dirt, metal particles, etc. and reduces the need for oil changes. The filter cartridge should be changed every 5,000 miles under normal conditions. If you use your car in a very dusty area, however, it may be necessary to change the cartridge more often. This is good insurance against excessive engine wear—and much cheaper. It also saves oil. Another cause of oil contamination is condensation of water and fuel vapors in the crankcase, especially in cold weather. Condensated gasoline thins the oil and reduces its lubricating value. Water causes "sludging," which thickens the oil, clogs oil passages, interferes with valve operation, and may cause corrosion and rust. Mercury engineers have

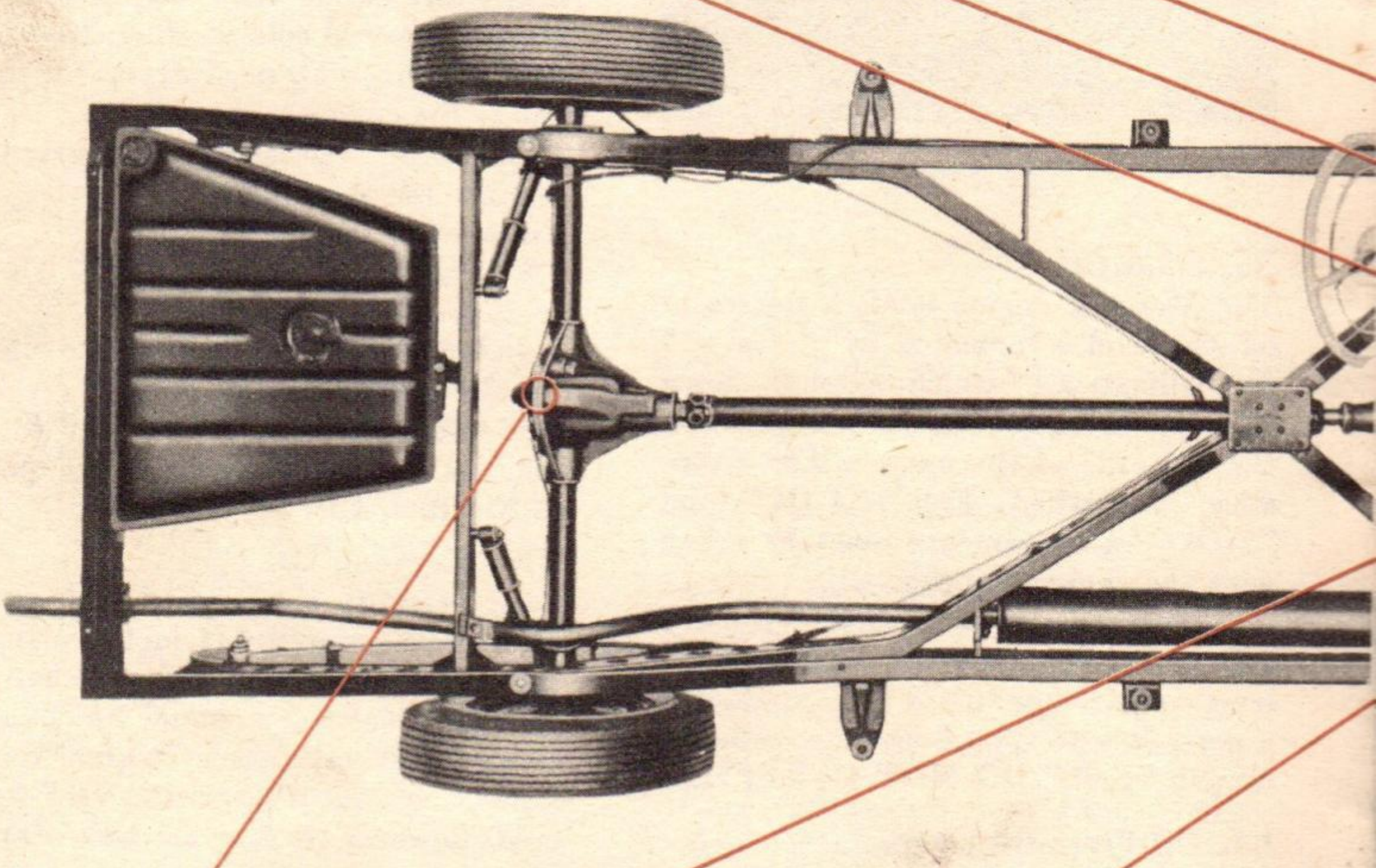
1949 MERCURY LUBRICATION CHART

1,000 MILES
LOWER GEAR SHIFT LEVERS
PRESSURE GUN GREASE.

1,000 MILES
CLUTCH, BRAKE PEDAL AND EQUALIZER SHAFT
PRESSURE GUN GREASE.

5,000 MILES
HYDRAULIC MOTOR
3 TO 5 DROPS ENGINE OIL IN TOP MOTOR BEARING • CLEAN RESERVOIR AND REFILL EVERY FALL WITH 8L-19545 FLUID.

5,000 MILES
BRAKE MASTER CYLINDER
BRAKE FLUID– 8L-19542 (CORRECT LEVEL ¼" FROM TOP). ADD AS REQUIRED.



10,000 MILES
REAR AXLE
HYPOID OR MULTI-PURPOSE LUBRICANT
3 PTS. S.A.E. 90 W. & S.
CHECK EVERY 1000 MILES, DRAIN & REFILL EVERY 10,000 MILES.

10,000 MILES
TRANSMISSION
(OVERDRIVE OR EXTENSION HOUSING IS FILLED FROM OVERFLOW OF TRANSMISSION)
3½ PTS. S.A.E. 80 E.P. W. & S.
CHECK EVERY 1000 MILES
DRAIN & REFILL EVERY 10,000 MILES.

2,500 MILES
OIL BATH AIR CLEANER
REMOVE CLEANER, CLEAN & REFILL SUMP TO LEVEL MARK WITH ENGINE OIL.
OCCASIONALLY WASH FILTER ASSY. IN CLEANING FLUID.

1,000 MILES
KING PINS
PRESSURE GUN GREASE.

10,000 MILES
GENERATOR
10 DROPS ENGINE OIL

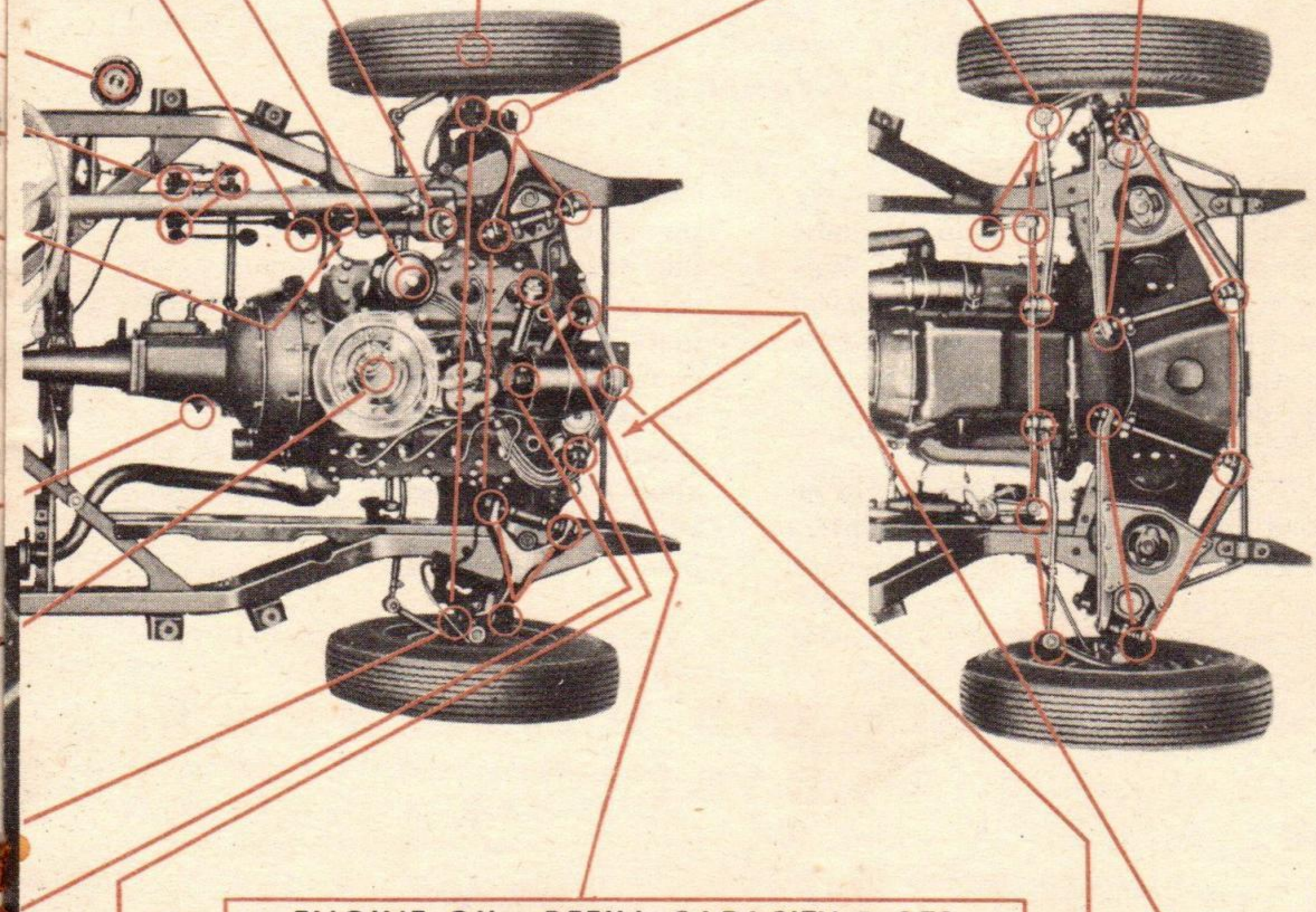
5,000 MILES
OIL FILTER
REPLACE ELEMENT.

1,000 MILES
STEERING GEAR
S.A.E. 90E.P.
ADD AS REQUIRED

10,000 MILES
FRONT WHEEL BEARINGS
FRONT WHEEL BEARING GREASE BL-19585

1,000 MILES
STEERING IDLER ARM TIE RODS AND BALL STUDS CONNECTING LINK AND BALL STUDS.
PRESSURE GUN GREASE.

1,000 MILES
UPPER AND LOWER CONTROL ARM PIVOTS.
PRESSURE GUN GREASE.



ENGINE OIL—REFILL CAPACITY 5 QTS.
CHECK FREQUENTLY AND REPLENISH AS REQUIRED
1ST. CHANGE 350-500 MILES. 2ND. 2000 MILES—THEREAFTER EVERY 2500 MILES OR A MINIMUM OF FOUR TIMES A YEAR.
IF TEMP. CONDITIONS ARE ABOVE +32°F. USE S.A.E. 20 OR 20W.
IF TEMP. CONDITIONS ARE +32°F. TO -10°F. USE S.A.E. 10 OR 10W.
IF TEMP. CONDITIONS ARE BELOW -10°F. USE 10W+10% KEROSENE.

5,000 MILES
DISTRIBUTOR
FEW DROPS OF ENGINE OIL.

5,000 MILES
FAN
2 OZ. ENG. OIL.

1,000 MILES
WATER PUMPS
ENG. OIL.

taken every precaution to reduce condensation by thorough crankcase ventilation, and special "quick warm-up" features. But if it is necessary for you to make many short trips during cold weather, some condensation may take place. Your dealer can advise you if it is necessary to change oil more often than recommended below.

B11. How Often Should Oil Be Changed?

When your Mercury is new, oil should be changed at 350 to 500 miles; 2,000 miles and every 2,500 miles thereafter.

If you are driving at high speed, with unusually heavy loads, on long, hard pulls, or through very dusty areas, more frequent changes may be desirable.

Darkening or discoloration of oil does not necessarily mean it is bad. But evidence of dilution or dirt is a good indication that new oil is needed.

If you should need to store your Mercury for a long period of time, your dealer can give you helpful advise on precautions to take to protect it.

Be sure the engine is warm before draining engine oil—cold oil does not drain well.

CHASSIS LUBRICATION

(*"Greasing"*)

B12. There are a number of moving parts of your car which require periodic greasing to prevent noise and wear. Normally this should be done every 1,000 miles (following the 1,000 and 2,000-mile inspections which your Owner's Service Policy provides).

B13. A few additional points should be greased at 5,000 and 10,000-mile intervals. The Lubrication and Maintenance Chart gives detailed instructions on points needing attention and types of lubricants to use. Your Mercury dealer can provide this service for you at nominal cost. He uses factory approved equipment, methods and materials, and his skilled staff will assure you of a thorough and competent job. Ask him about his Lubrication Coupon Book which provides for twelve lubrication jobs and inspections.

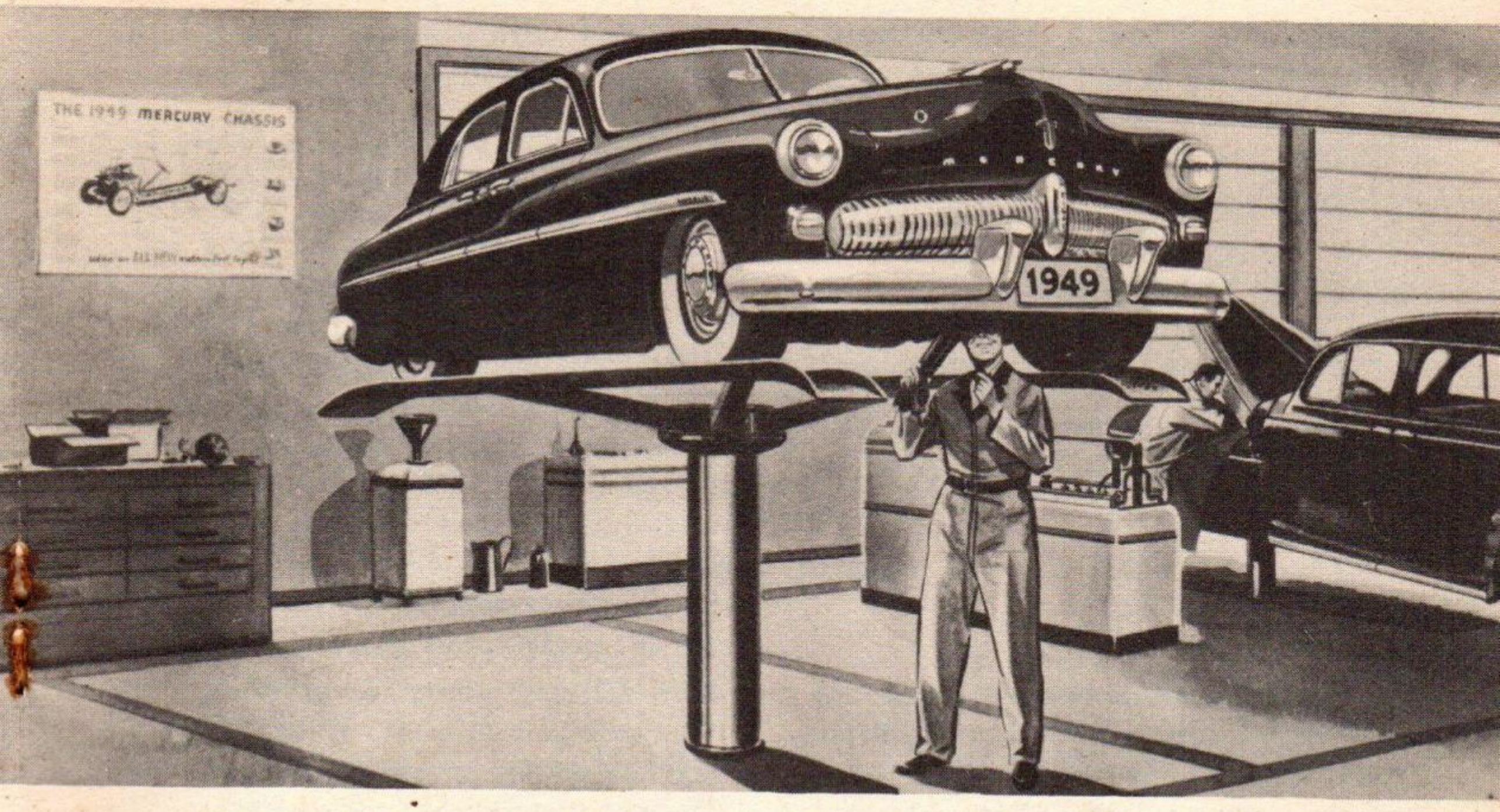
LUBRICATION AND MAINTENANCE CHART*

B14. Every 1,000 Miles

a. Pressure Fittings—(**Use Pressure Gun Lubricant M-538.** See lubrication chart.)

- Idler Arm
- Spindle Connecting Rod
- Spindle Pins
- Spindle Supports, Upper and Lower Arms
- Upper Suspension Arms
- Lower Suspension Arms
- Tie Rod
- Front Universal Joint
- Rear Universal Joint
- Brake Pedal
- Clutch Pedal

**See pages 20-21*



Shaft, Clutch Release Equalizer
Gear Shift Lever
Steering Arm

b. Use Engine Oil
Distributor Shaft (see lubrication chart)
Brake Clevis Pins
Accelerator

c. Transmission—add gear oil S.A.E. 80 E.P. to level of filler plug. Capacity: 3½ pints.

d. Steering Gear—S.A.E. 90 mild E.P. gear oil for all seasons. Capacity: ½ pint.

e. Rear Axle (Differential)—add hypoid type gear oil. S.A.E. 90 S. and W. Capacity: 3 pints.

f. Fuel Line—empty sediment bowl if necessary.

g. Battery—add distilled water.

h. Hydraulic Window Lift Reservoir—with all windows open, add 8L-19545 fluid to within ½ inch of top reservoir. CAUTION—do not use mineral oil.

i. Brake Master-Cylinder Reservoir—fill with 8L-19542 brake fluid.

j. Oil Pump Screen—Reached by removing oil pan. Wash in gasoline; wet with engine oil when dry.

k. Body Lubrication—Use impregnated wax on dovetails, door striker plates and hood lacings. Use penetrating dripless-type lubricant for door hinges.

l. Crankcase—Drain, and refill crankcase with proper grade of engine oil, as shown on chart. More frequent changing may be desirable under certain operating conditions, as explained in section B11. Capacity: 5 quarts.

B15. Spring and Fall or Every 5,000 Miles (Whichever occurs first)

a. Oil Filter—Replace cartridge every 5,000 miles.

b. Fuel Pump—Remove and clean screen.

c. Cooling System—(Section B17-B25, C30-39). Capacity: 22.25 quarts. Always play safe—an engine can be permanently damaged by freezing.

d. **Hydraulic Window Lift Pump**—Each fall, drain and clean with alcohol. **Do not use cleaning fluid.** Refill with 8L-19545 to within ½ inch of top.

B16. Every 10,000 Miles

a. **Front Wheel Bearings**—clean and repack with wheel bearing lubricant. (See Lubrication Chart.)

b. **Rear Axle** (Differential)—Drain, and refill with hypoid type gear oil S.A.E. 90 S. & W.

c. **Transmission** — Drain and refill with S.A.E. 80 E.P. W. and S. to level of filler plug. Capacity: 3½ pints.

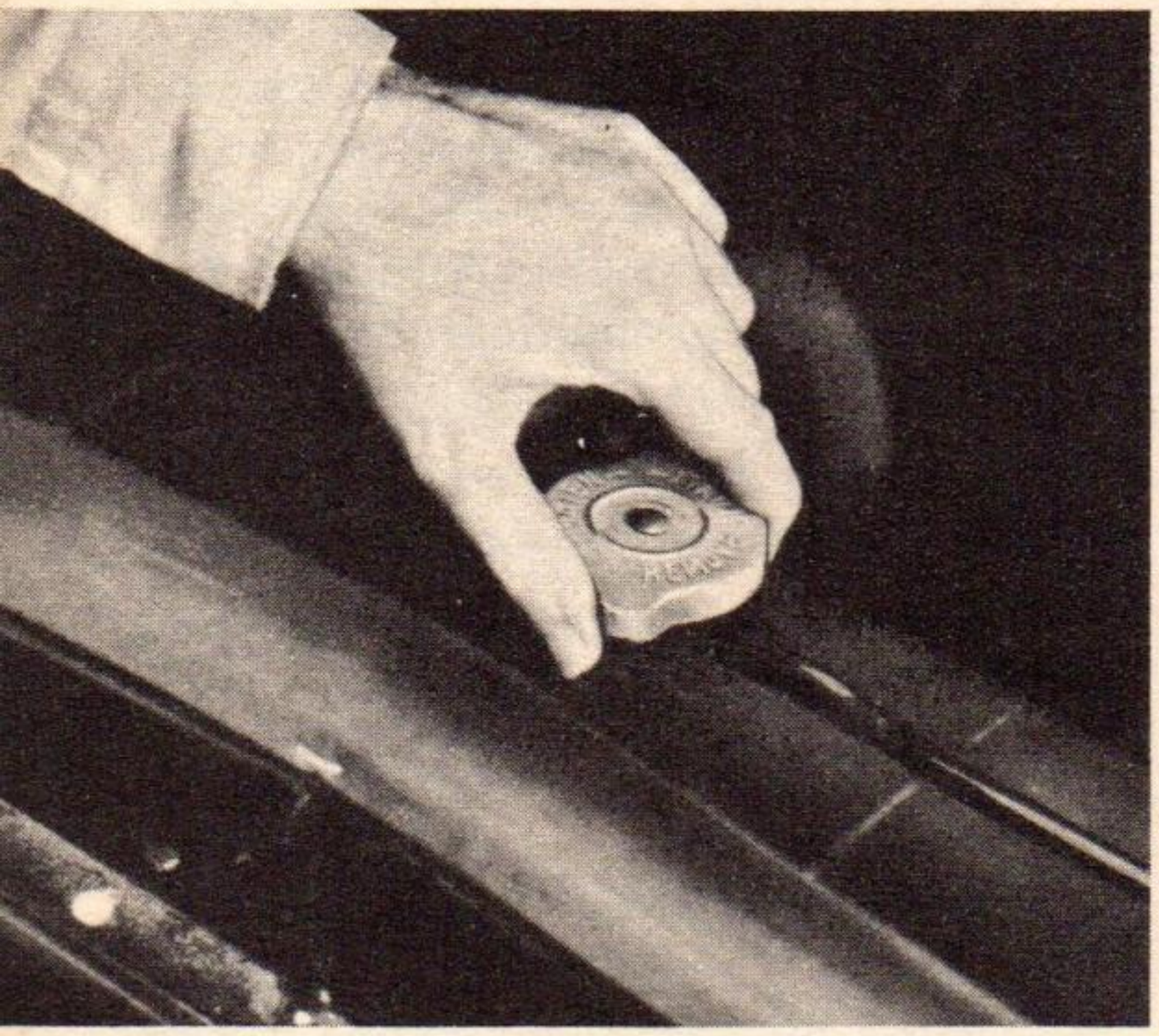
WATER

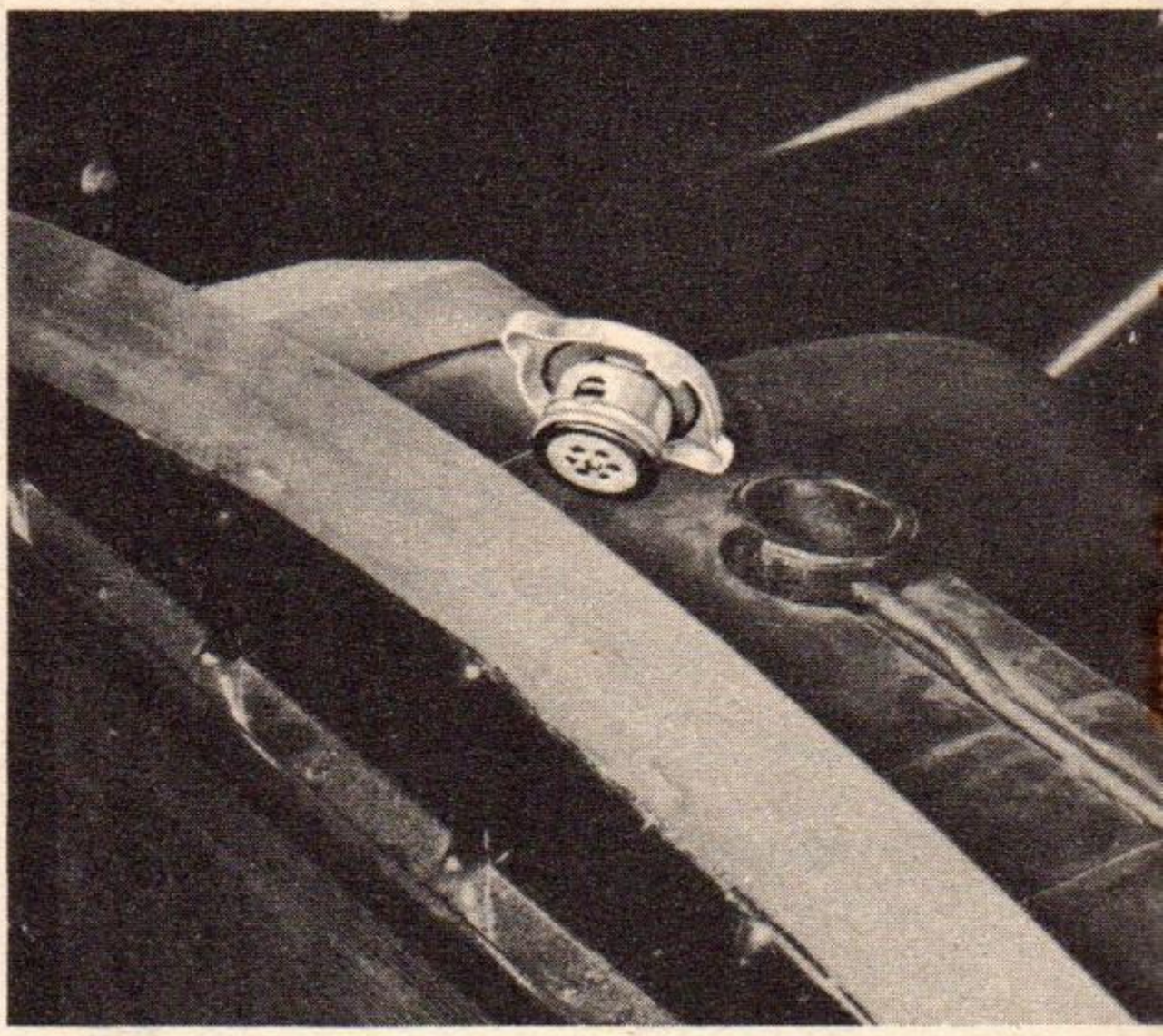
B17. Water Temperature Gage: If the Water Temperature Gage indicates "HOT" your engine is overheated. Stop; turn the engine off, and allow it to cool down before adding more water. **Never** pour cold water into an overheated engine.

B18. Radiator Pressure Cap; When removing the radiator pressure cap, turn to the "partly open" stop. After the water vapor ceases to escape remove the cap.

B19. Check water level every time you stop for gasoline. Keep the water level about one inch below the filler neck. **Do not** operate the engine with only a small amount of water in the system.

B20. Correction of water loss: If the cooling system continually loses water tighten all connections and replace spongy or cracked rubber hose with new hose. Be sure drain cocks are closed. Tighten all cylinder head bolts. If loss of water continues, see your Mercury dealer.





Radiator Pressure Cap

1. Run the engine until water is warm, then shut it off.
2. Open the drain cocks on the front lower corners of the engine and at the lower left corner of the radiator, and let the water run out.
3. Close the drain cocks, refill the radiator with hot water and drain again. Repeat this procedure until drain water is clear.
4. If the scale or rust is too great for this procedure, the Lincoln Cooling System Cleaner Kit is recommended. Your dealer can supply you with this kit. A complete set of instructions accompany the kit.

TIRE CARE

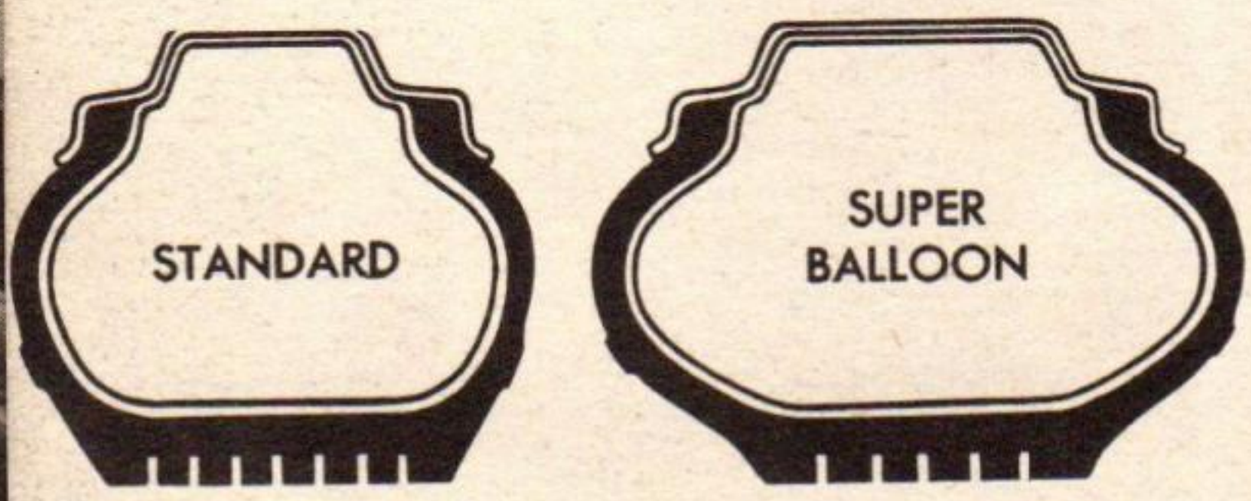
B26. The Mercury is equipped with the new size 7.10 by 15, 4-ply super-balloon tires, mounted on extra-wide rims. They provide a larger air cushion at lower pressure than former tires, greater traction for starting and stopping, easier steering, and greater safety.

B27. Low pressure, plus cooler operation, means extra protection against blowouts. Super-balloon tires will withstand greater road shocks than former tires, and give a much softer ride.

Regular attention will prolong tire life greatly.

B28. Air Pressure of all tires—including the spare—should be checked weekly to be sure it is kept as near 24 pounds as possible. Too much pressure will cause tires to wear too fast in the center of the tread. Too little pressure will cause unnecessary wear of the outer edges of the tread.

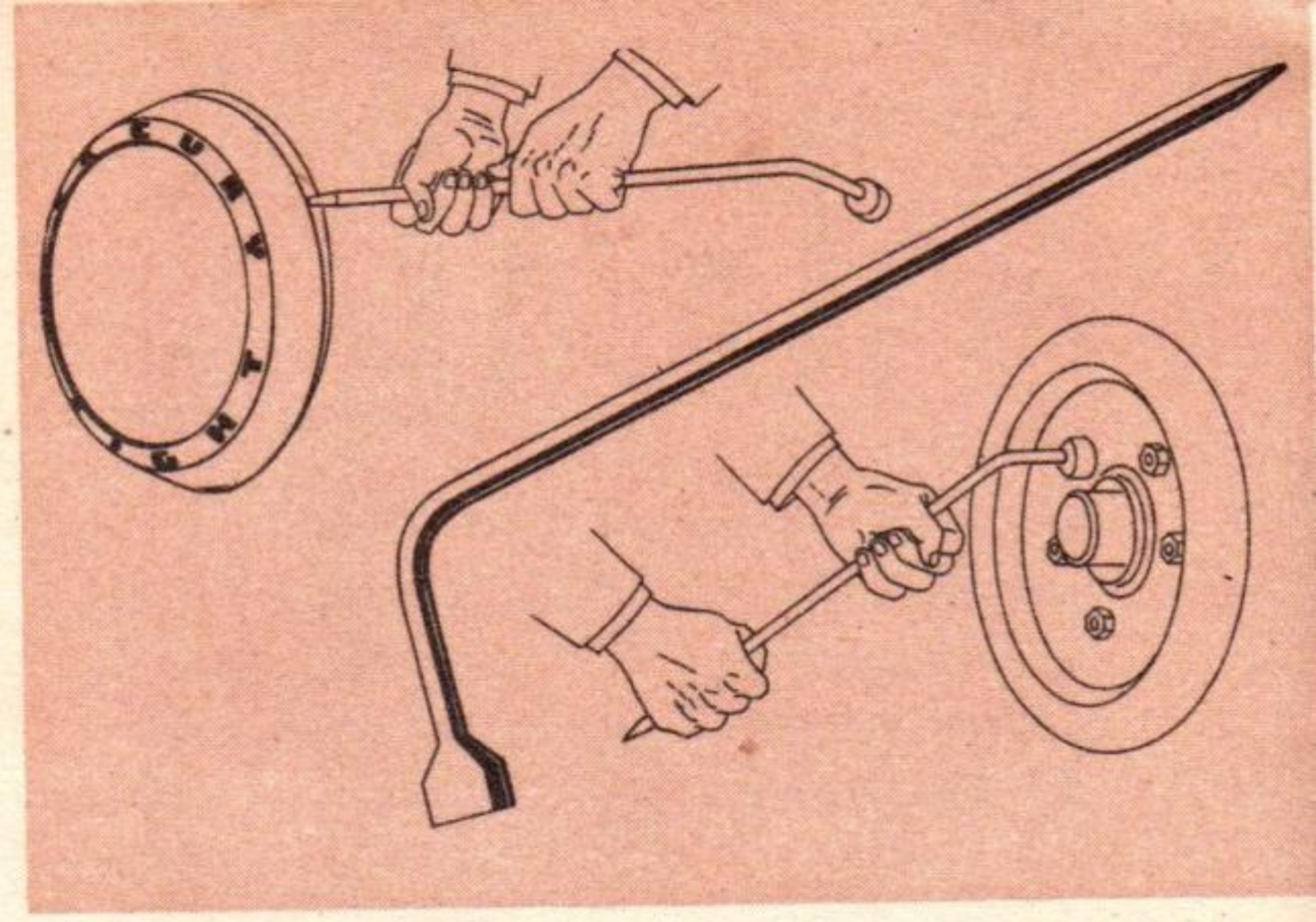
On long trips—particularly in hot weather—tire air pressure may increase. This increased pressure should not be bled from tires to reduce the pressure to the recommended 24 pounds. Tire pressure should only be checked when tires are cool.



B29. How to Prolong Tire Life: Maintaining correct air pressure is the best assurance of long tire life. However, certain other precautions are helpful.

1. At 5000-mile intervals, all tires—including the spare—should be changed to different wheels as shown in the diagram. This equalizes wear on all tires.
2. As an extra precaution, ask your Mercury dealer to check front wheel alignment at 5000-mile intervals. Out-of-line front wheels can wear out tires in only a few thousand miles.
3. If at any time you find your car has a tendency to pull to one side or the other, stop at the first opportunity to see if you have a soft tire. If all tires are all right, have wheel alignment checked at once.
4. If you discover uneven tire wear of any kind, see your Mercury dealer to determine the cause.
5. Avoid fast starts, sudden stops, and high speed around curves.

B30. How to Change Tires: You need only the Mercury jack and the combination jack handle and wrench which you



front of the car until the rear "guide" rod is free. Then slide the cover toward the back of the car until front "guide" rod is free and cover comes off.

4. To replace wheel cover, put front guide rod in place and slide cover forward as far as it will go. Then put rear guide rod in place and slide cover back to its normal position. Press wheel cover toward fender until it is flush. Push locking rod upward until upper end is inside fender. Replace end of locking rod on flange on inside of cover.

d. Remove hub cap from wheel by prying the edge up with the end of the jack handle. Then **slightly** loosen nuts holding wheel in place, with wrench end of jack handle.

e. Put the square jack base directly under the bumper nearest wheel to be removed—and about a foot from the end of the bumper. Insert the bottom of the post in the base and slide the movable part of the jack up until V-shaped notch is under edge of bumper. The post of the jack should be as near vertical as possible. You will find a small lever under the socket into which the jack handle fits (see illustration). This lever should be in the upper position to raise the car.

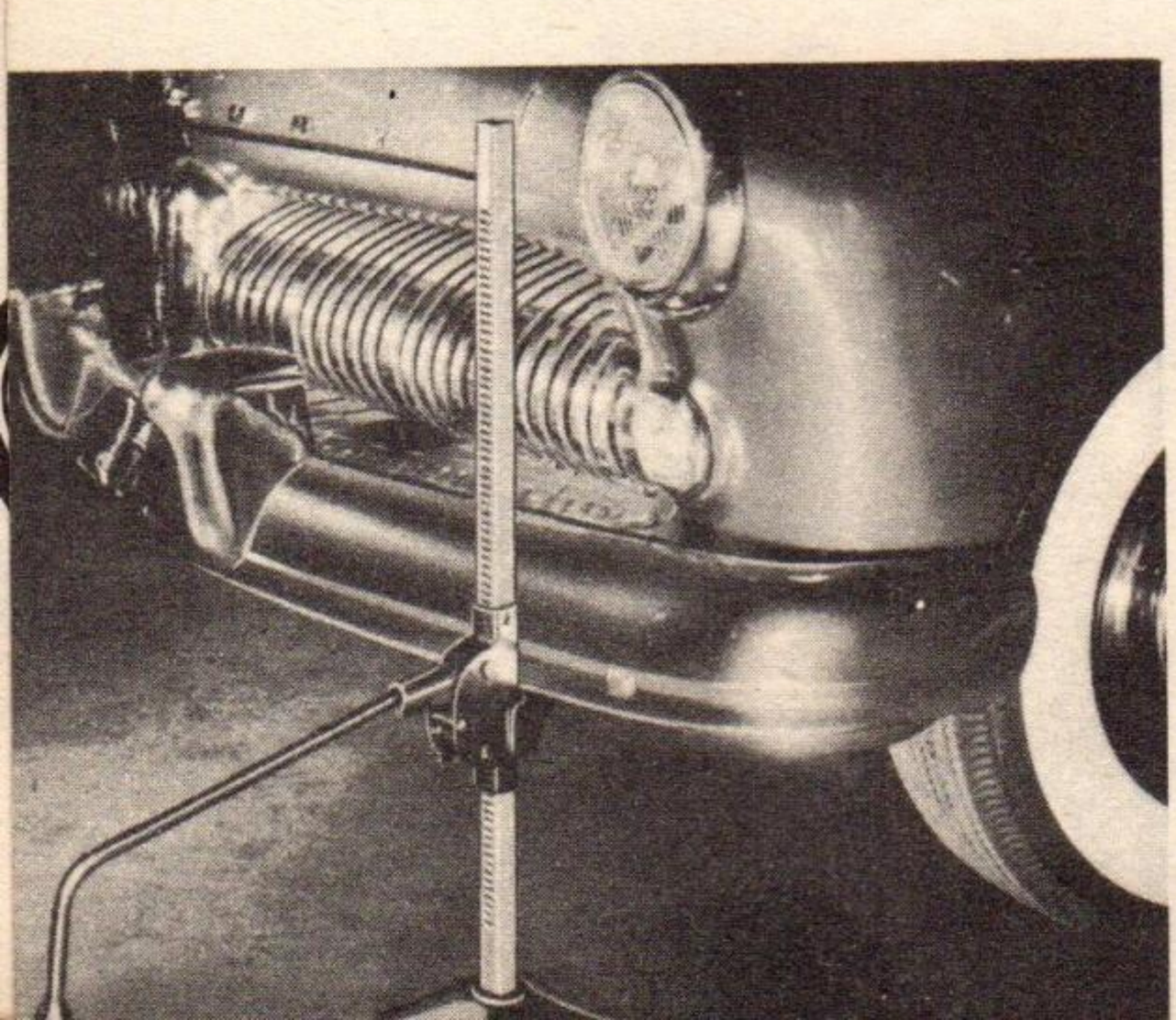
Put the jack handle in the socket and work it up and down until the wheel is just off the ground.

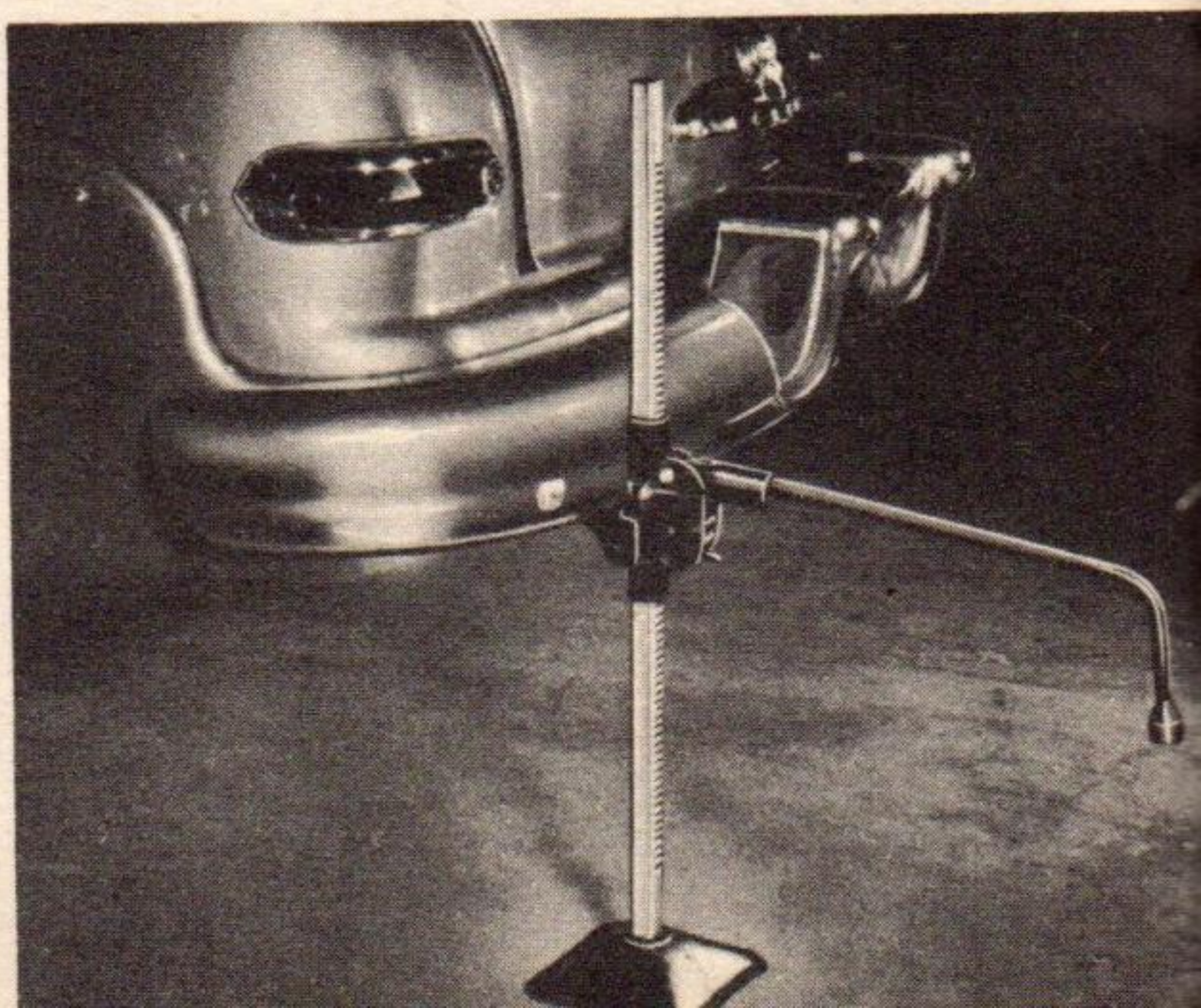
f. Remove wheel nuts. Slide wheel off and immediately replace it with the spare. Replace nuts but do not tighten them until all nuts have been drawn up ready to tighten. Then tighten each nut carefully. Replace hub cap, being sure it is snapped into place all the way around.

g. Push the small lever below the jack handle socket all the way down. Let the jack down—keeping a firm grasp of the handle. (Don't forget to replace wheel cover.)

NOTE: *A "Spare Air Assembly" for refilling low tires on the road is available from your Mercury dealer.*

B31. Replacing Worn Tires: Good tires are one of your greatest safety features. Tires which are worn—or which have been somewhat damaged—should





be replaced at the earliest possible time. Never drive a tire when the tread is worn smooth—the chance you take is too great.

In general, your best tires should be on the front wheels, since a flat while driving will have less effect on the car on rear wheels.

Tires should be inspected by your Mercury dealer twice a year, or at 5000 mile intervals—whichever comes first.

B32. Tire Chains: Tire chains are especially helpful in snow and mud. On ice they may be helpful—but they can also be dangerous. Chains should be used on rear wheels only. Your Mercury dealer will recommend suitable chains for your needs and will install them for you. You will find the Mercury bumper jack a great help in putting on and removing chains—especially if you are stuck and cannot move the car.

Follow these suggestions for best results:

1. Leave enough slack so the chains can "creep" slightly.
2. Use springs or "equalizers" to keep chains taut, and prevent damage to wheel covers and fenders.
3. Remove chains when driving on hard surface roads.
4. Carry a box of spare open links to make emergency repairs in case a link breaks.

BRAKES

B33. Foot Brakes. Smooth, swift, straight-line stops are provided by Mercury's Easy-Action-self energizing hydraulic brakes (Duo-Servo type) which use the forward motion of the car to reduce pedal pressure. Mercury brakes have a generous margin of safety. Brakes are large . . . brake linings are tough and durable . . . brake drums carry away heat quickly.



B34. The following suggestions will help you keep your brakes in first-class condition:

a. If the brake pedal comes within 1½ inches of the floor when you are stopping, see your dealer at once. Brakes may need adjustment or additional brake fluid.

b. If the action of the pedal seems "soft" or "spongy," air has entered the hydraulic brake system. Have your dealer check this, and, if necessary, "bleed" the system and refill it.

c. Ask your dealer to check the brake-fluid level each time the car is lubricated. Brake linings should be inspected at 5,000 to 10,000-mile intervals, and replaced when necessary to avoid damaging brake drums.

The brake pedal automatically operates the stop lights, which should be checked occasionally.

B35. Parking Brake. The parking brake operates on the rear wheels only, and is controlled by the "T" handle at the left and just below the instrument panel. Pull it straight out to put the

brake on. Turn the "T" one-quarter turn to the left to release the brake. (The parking brake uses the rear service brake shoes, but controls them entirely independently of the foot brake.) You will find it easier to pull out the hand brake lever if you push on the foot brake at the same time.

B36. Brake Accessory. Your Mercury dealer can supply a Parking Brake Indicator Light which flashes when the ignition is turned on while the parking brake is on.

HOW TO KEEP YOUR MERCURY LOOKING NEW

B37. Your all-new Mercury represents an important investment. Protect that investment by maintaining the new-car appearance of its body and interior. It is easy to do, and will well repay you in pride in your Mercury's look and in greater trade-in value when the time comes for you to get a new Mercury.

B38. Body Finish. The body finish applied to your Mercury is of the finest quality baked-on enamel and will give long-lasting service. To retain the original high luster the following suggestions should be followed:

a. Wash the car frequently. Use warm or cold water. Avoid the use of hot water or household soap.

b. From time to time the finish should be cleaned, polished, and waxed. Continued exposure to bright sunlight and weather will tend to make the finish slightly dull and chalky. Lincoln cleaners are specifically designed to remove this dullness without harming the finish. A good coat of Lincoln wax will protect the finish for several months.

c. If tar or road oil gets on the car it can be removed with gasoline, kerosene, or turpentine. If the tar has remained on the car for a period of time a commercial tar remover recommended by your dealer can be used.

B39. Porcelainizing. This treatment will give your Mercury body finish a tough, long lasting, protective coating. It will deepen the lustre of the paint, prevent chalking, and—since it is not a wax or polish—it will not wash off. It is dry and will not pick up dust or scum. This treatment is given the world famous Lincoln Continentals before they leave the factory. Your Mercury dealer can apply this finish for you.

B40. Station Wagon Finish. While the finish is new, it should be waxed regularly. Varnish the woodwork at least once a year being careful to remove all wax before varnishing. This will protect it against weathering and help retain the original "new" look.

B41. Undercoating. As further protection against rust and corrosion, your dealer can apply a protective undercoating. This also reduces road roar, helps seal the car against traffic fumes, and insulates the floor against winter cold and summer heat. Undercoating is applied to the bottom of the car and under the hood. One application will last the lifetime of the car.

B42. Chrome Plated Parts—Salt or calcium chloride (often used to melt snow or ice), can cause damage if allowed to remain on chrome plated parts. These parts should be cleaned with Lincoln

Chrome Cleaner. A coat of wax can then be applied for further protection.

B43. White Sidewall Tires can be cleaned with warm water and ordinary household soap. Use a brush or heavy cloth. Do not use cleaning fluid, gasoline, or kerosene. Oil derivatives will cause rubber to deteriorate.

B44. Convertible Tops can be sponged with warm water and a mild non-caustic soap. Do not saturate. Sponge gently. **Do not fold when wet.**

B45. Upholstery—Only the finest materials are used in the upholstery and rugs of your Mercury. To keep them in good condition, they should be brushed and vacuumed at least once a month.

Stains can be removed in much the same manner used in cleaning your clothes or household furniture. Since volatile-type cleaners are harmful to rubber, those parts where foam rubber is used (seat cushions, arm rests, etc.) should not be soaked with cleaning fluid. The following suggestions may prove useful in removing stains:

Blood Stain—Use a clean cloth dampened with cold water. Never use hot water.

Candy—All candy stains, except chocolate, can be removed, using hot water. (Ordinarily, the use of hot water on upholstery should be avoided.) Use Lincoln spot remover or carbon tetrachloride for chocolate stains.

Fruit Stains, Ice Cream—Rub stain with clean cloth and hot water. Let dry, then use carbon tetrachloride.

Grease, Oil—For small grease or oil spots, use a clean cloth and carbon tetrachloride. If the fabric is saturated with oil, pour on cleaning fluid and soak up quickly with a white blotter. Then sponge spot with **cloth** dampened with cleaning solution.

Lipstick—Use cleaning solution and a white blotter.

Milk, Nausea—Wash stain with warm soap suds. Then rub the stain with cold water and a clean cloth. Any remaining stain should be removed using a cloth moistened with carbon tetrachloride.

Water—Sponge the entire panel with a clean cloth moistened with cold water. Sponge spots with cleaning fluid.

B46. Leather Upholstery — Sponge with warm water and mild soap. Sponge over the area again using a soft cloth moistened in clean water. Wipe dry with cheese cloth.

B47. What Cleaners Are Best?
In cleaning the exterior and interior of your car, care should be taken in the selection of cleaning agents. There are many reliable commercial cleaners and polishes. There are also many that may prove detrimental to the car's finish or upholstery. The fabrics and finish of your car will always be safe with the



following recommended Lincoln cleaners, which can be obtained from your Mercury dealer.

Lincoln Spot Remover
Lincoln Paste Cleaner
Lincoln Polishing Wax
Lincoln Body Polish
Lincoln Foam Upholstery Cleaner
Lincoln Cleaner—Wax—Polish
Lincoln Cleaner and Polish
Lincoln Liquid Cleaner
Lincoln Chrome Cleaner

Detailed cleaning instructions are supplied with all Lincoln cleaners and polishes.

MERCURY SERVICE

B48. Your Mercury is a precision-engineered product. As such, it will give you many tens of thousands of miles of riding luxury. At home your own Mercury dealer knows your car best. When you travel, a nationwide network of authorized dealers stands ready to provide the high quality of service your Mercury deserves. The primary interest of this group is to see that your Mercury gives you complete satisfaction. It is to their benefit to see that you get the greatest amount of pleasure from your car.

B49. Mercury service men are factory trained to attend to the needs of the Mercury car. They are kept abreast of the latest techniques and procedures through company bulletins. They use factory-approved modern tools, test fixtures and methods. These precision instruments are designed specifically for the Mercury motor car and assure the proper adjustments necessary for its efficient operation.

B50. Genuine Mercury parts are used by your Mercury dealer. These parts are of the same high quality, and held to the same rigid tolerances, as those used in your car.

B51. Owner's Service Policy: With your Mercury you will receive an Owner's Service Policy which entitles you to special services at 1000 and 2000 miles, a 90-day or 4000-mile guarantee (whichever occurs first) and free 30-day inspections **for the life of the car!** Read it thoroughly—keep it handy.

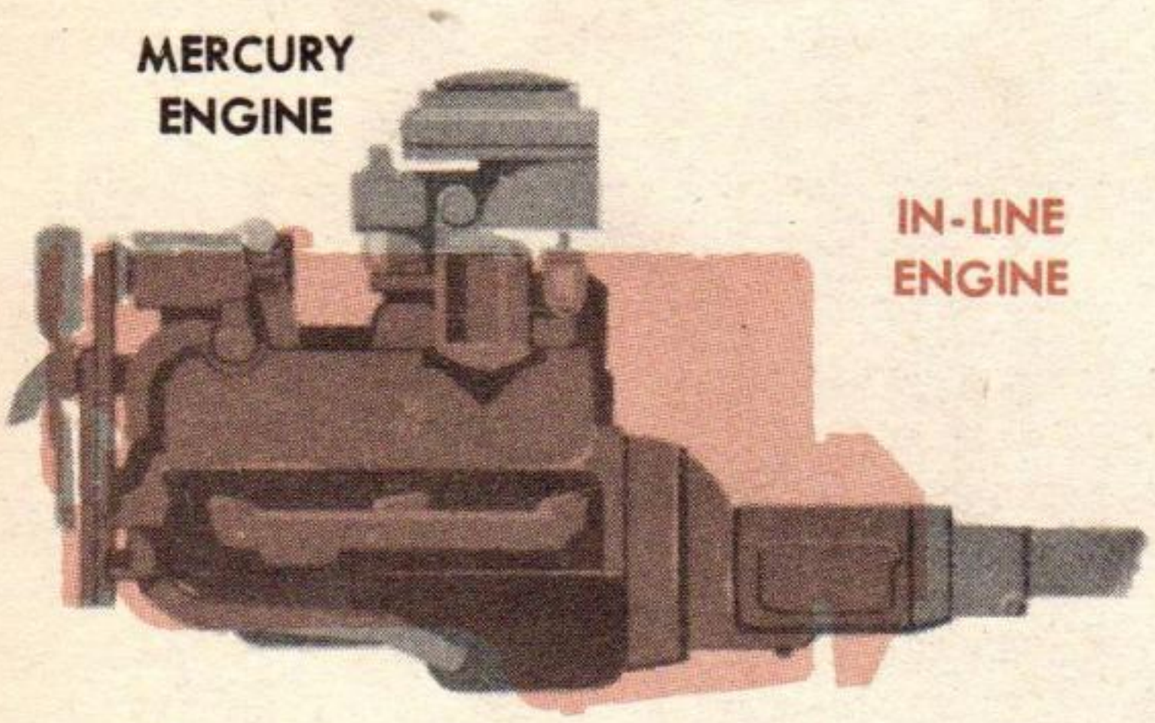
B52. Lubrication Coupon Book. We suggest you purchase from your Mercury dealer a "Lubrication Coupon Booklet," which will provide twelve lubrications and inspections. At the time of these lubrication and inspection services, the Service Department will advise you of any adjustments they find necessary, and that might result in your inconvenience at a later date if not attended to promptly.



The crankshaft in any internal combustion engine is subjected to heavy bending and twisting forces. In the Mercury V design the crankshaft is short and heavy and, accordingly, more resistant to these forces than a longer shaft.

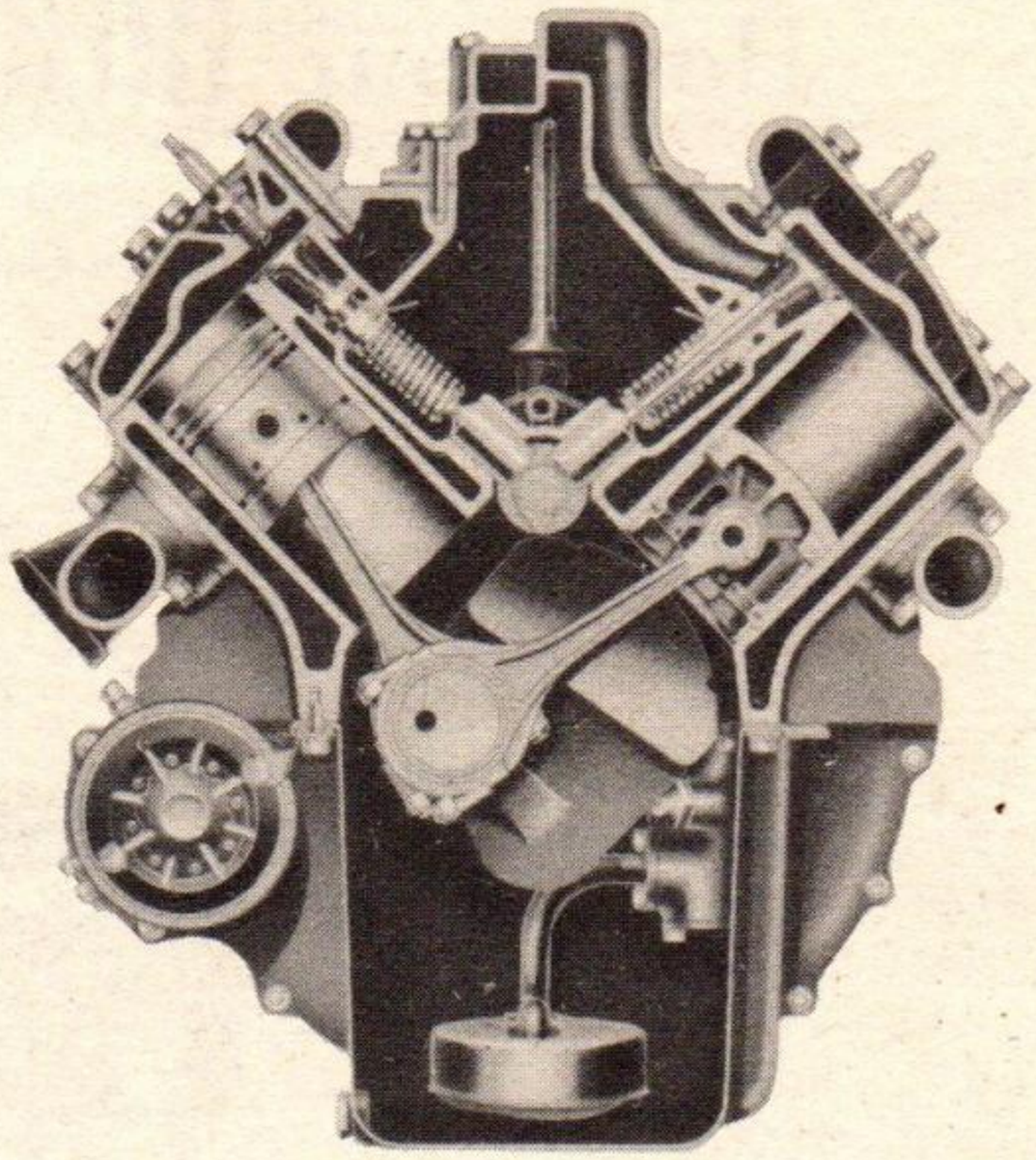
Another built-in advantage of V design is its improved lubrication. Oil passages in cylinder block and crankshaft are shorter, less apt to become clogged. The three extra-wide crankshaft bearings retain oil better than narrower bearings usually used in in-line engines.

The great compactness of the Mercury engine gives more length inside the car body in proportion to the overall body length, as well as allowing the use of a shorter hood to increase visibility.



C3. Cylinder Block and crankcase, of high grade iron, are cast in one piece, which results in great uniformity, freedom from distortion and exceptionally long life. Heavy ribs in the crankcase add to rigidity of engine base. Full length water jackets and uniform water passages give equalized cooling.

C4. Controlled Quality Finish of the cylinder bore surfaces increases service life. Metal surfaces requiring lubrication can be finished so smooth that the oil film will not adhere in an unbroken layer. But with Mercury "Controlled Quality Finish" the surface will hold a uniform lubricating film. The result is continuous lubrication, less wear, longer engine life, and lower oil consumption.



Engine Cross Section

C5. The Cylinder Heads have special Mercury-designed combustion chambers which complete the mixing of the fuel and air delivered by the carburetor. This produces uniform combustion and smooth power. High compression is achieved without detonation or "knocking," even with non-premium fuels.

C6. Pistons are made of light-weight, heat-treated aluminum alloy, with "thermal controlled clearance." Controlled expansion is achieved by imbedding a steel strut in each side of the piston skirt, and by a special grinding process.

Each piston is provided with four piston rings, three above and one below the piston pin. The first two rings are compression sealing rings; the other two are slotted oil control rings, giving a double wiping action against the cylinder wall to leave just the right amount of oil necessary for proper cylinder lubrication.

C7. Connecting Rods are high quality drop-forged steel, heat treated to relieve internal strains. The upper end of each

rod is fitted with a special bronze bushing, pressed and burnished in place. The lower end contains a replaceable, steel-backed precision bearing, made of copper-lead alloy.

C8. Crankshaft is a high-carbon steel casting, with six counter-weights cast as part of the shaft. Its shortness gives great resistance to twisting and bending forces, and minimizes tendency to vibrate or "whip."

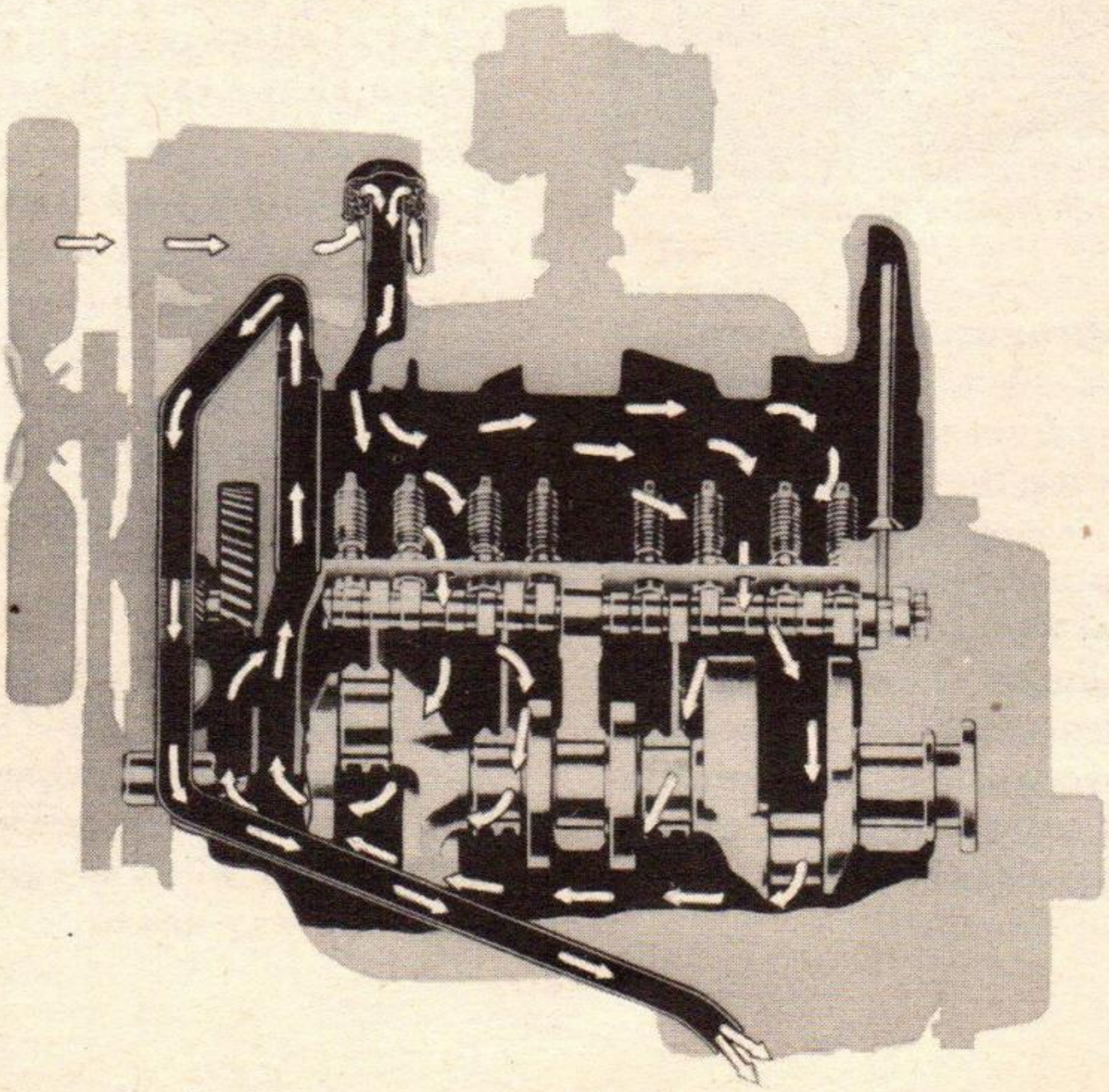
Main bearings are extra-wide, steel-backed precision type. The bearing material is triple-layer copper-lead alloy, noted for its long-wearing qualities and excellent heat conductivity.

C9. Crankcase Ventilation. The combustion of gasoline forms water vapors and gases that are highly corrosive to iron and steel. A certain amount of condensed gasoline also finds its way to the crankcase. It is, therefore, very important that these gases be carried away before they can cause harm. Your Mercury crankcase ventilation system is designed to draw off vapors and gases as they are formed.

The ventilation system is simple but efficient. The forward motion of the car creates a vacuum in a tail pipe connected to the crankcase. Fresh air is then drawn through a screened opening around the oil filter cap and passes through the crankcase and out the tail pipe. There is, therefore, a continual circulation of air through the crankcase which eliminates vapors and harmful gases.

C10. Camshafts. The short, rigid camshafts are chill cast alloy steel. Cam surfaces are extra-hard, and long-wearing. Camshaft drive is through a wide silent aluminum gear bolted to the front end of the camshaft and meshing with a gear on the crankshaft. All camshaft bearings are pressure lubricated.

C11. Valves. Mercury valves assure long trouble-free life because they have ground stems, cooled valve seats, one piece valve guides (better oil economy), large valve areas, heavy valve springs, and precisely adjusted valve clearances. They are one-piece hardened valves that resist burning, pitting and corrosion. Close seating prevents power loss and assures good contact for cooling. Valve seats are fitted with hardened alloy-steel inserts that will withstand the pounding forces exerted on them and the action of the exhaust gases. The intake valves are adjusted for a clearance of .010 to .012 inch and the exhaust valves for a clearance of .014 to .016 inch.

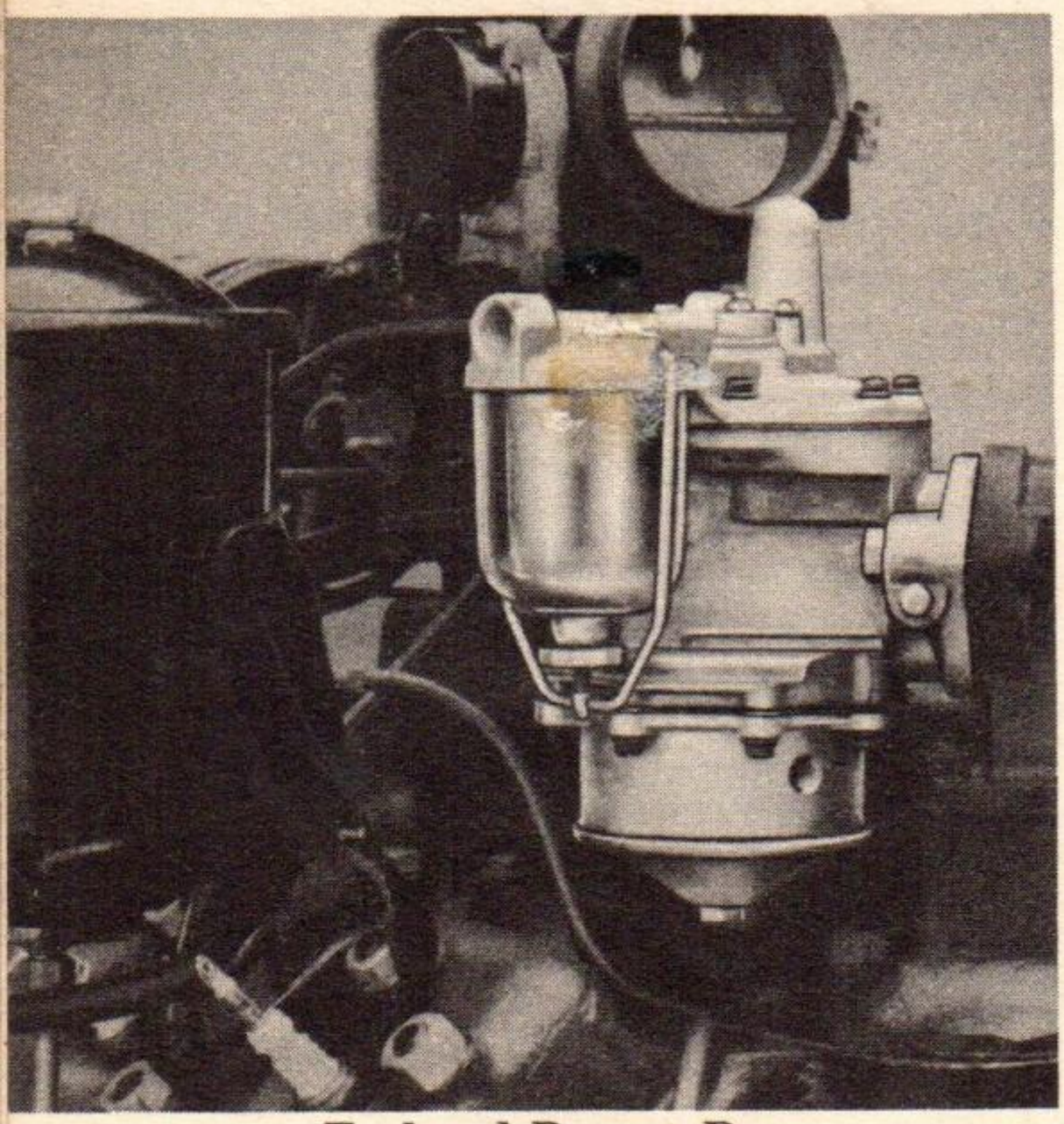


Crankcase Ventilation

FUEL SYSTEM

C12. Fuel Tank is mounted at the rear of the frame under the body with a three-point mounting. In the bottom of the tank is a sump where any water or sediment in the fuel collects; a drain plug is provided for draining. If you have trouble due to watered or dirty gasoline, the fuel lines should be blown out with compressed air, the drain plug in the tank removed and the sump cleaned.

C13. Fuel Tank Capacity of the Mercury is 19½ gallons.



Fuel and Booster Pumps

C14. A Diaphragm Fuel Pump is mounted on the engine at the rear. This location is away from the exhaust manifolds, thus keeping the gasoline cool and reducing the chance of "vapor lock." The fuel pump is driven by a push rod from the rear of the camshaft. A removable glass sediment bowl is easy to inspect and clean. The bowl should be cleaned whenever you can see a substantial amount of sediment. The fine mesh screen should be cleaned with compressed air at the same time.

C15. Vacuum Booster Pump. A diaphragm type vacuum pump is mounted with the fuel pump and is operated by the same push rod. This booster pump keeps the windshield wipers operating at a constant speed when the engine accelerates or is under a heavy load.

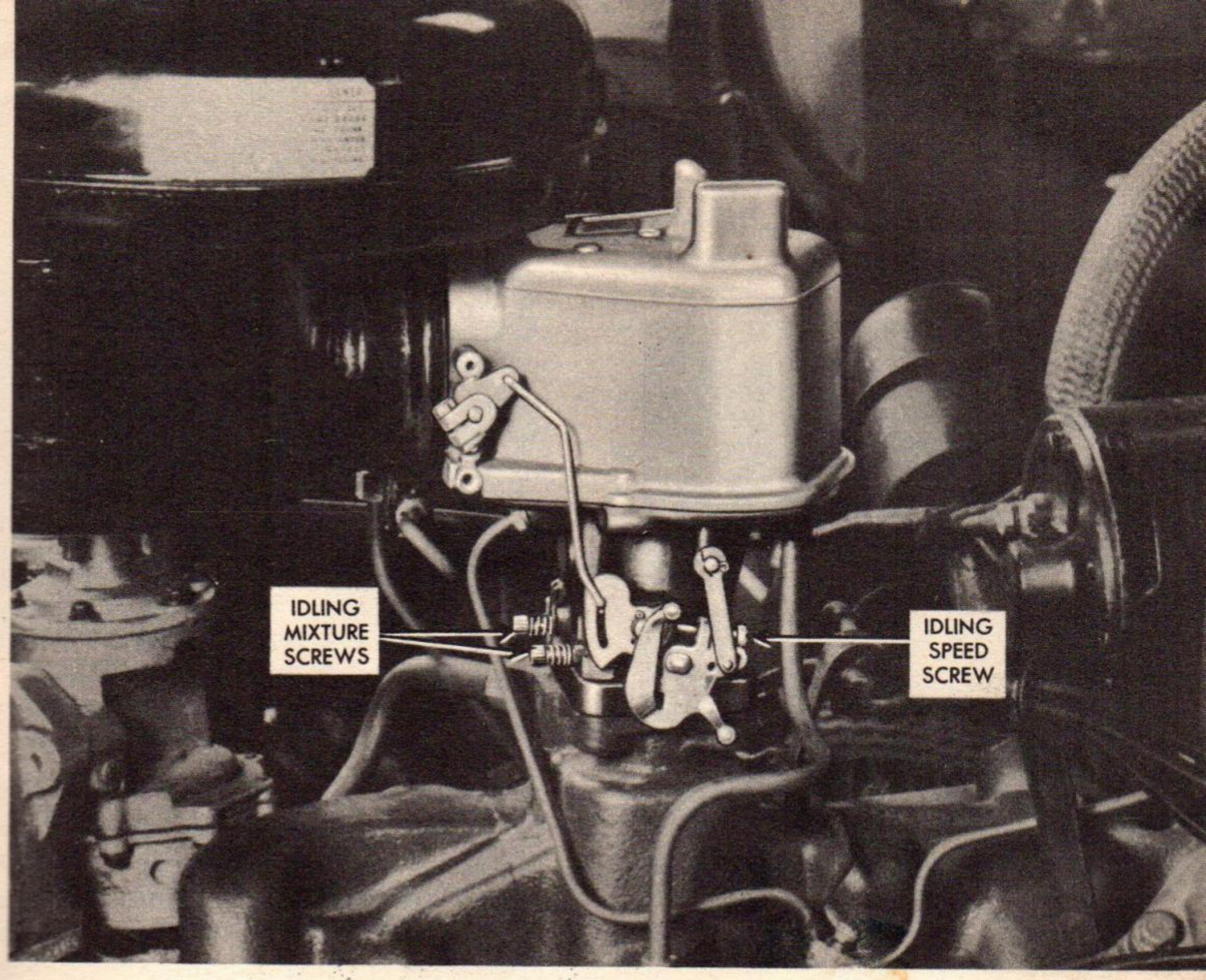
C16. The Mercury Carburetor embodies several important new developments. Known as a "Dual Concentric" carburetor, it is of the plain tube, balanced, down-draft type, and provides smooth, economical operation and maximum power under virtually all operating conditions.

It may be considered as two carburetors in one since each side has its own venturi tube, throttle plate, idling system, main metering system and accelerating jet. One fuel chamber and one air passage feed the twin mixing chambers. The main air supply circulates completely around and cools the fuel chamber, minimizing hot-starting difficulties (vapor-lock).

Accelerating pumps and jets provide increased power for rapid acceleration or heavy pulling. The concentric fuel bowl with dual floats meters fuel correctly at all operating angles. The overall design allows exceptionally easy servicing.

C17. Idling Speed is adjusted by turning the screw located on the top of the throttle arm on the right side of the carburetor. The fuel-air mixture for idling speeds is regulated by adjusting screws on the back of the carburetor (see illustration). One full turn of the screw away from the stop position is approximately correct.*

C18. The automatic choke, built into the carburetor, controls fuel-air mixture according to engine exhaust temperature and throttle opening. The choke is held partly open when the accelerator pedal is all the way down.



Carburetor

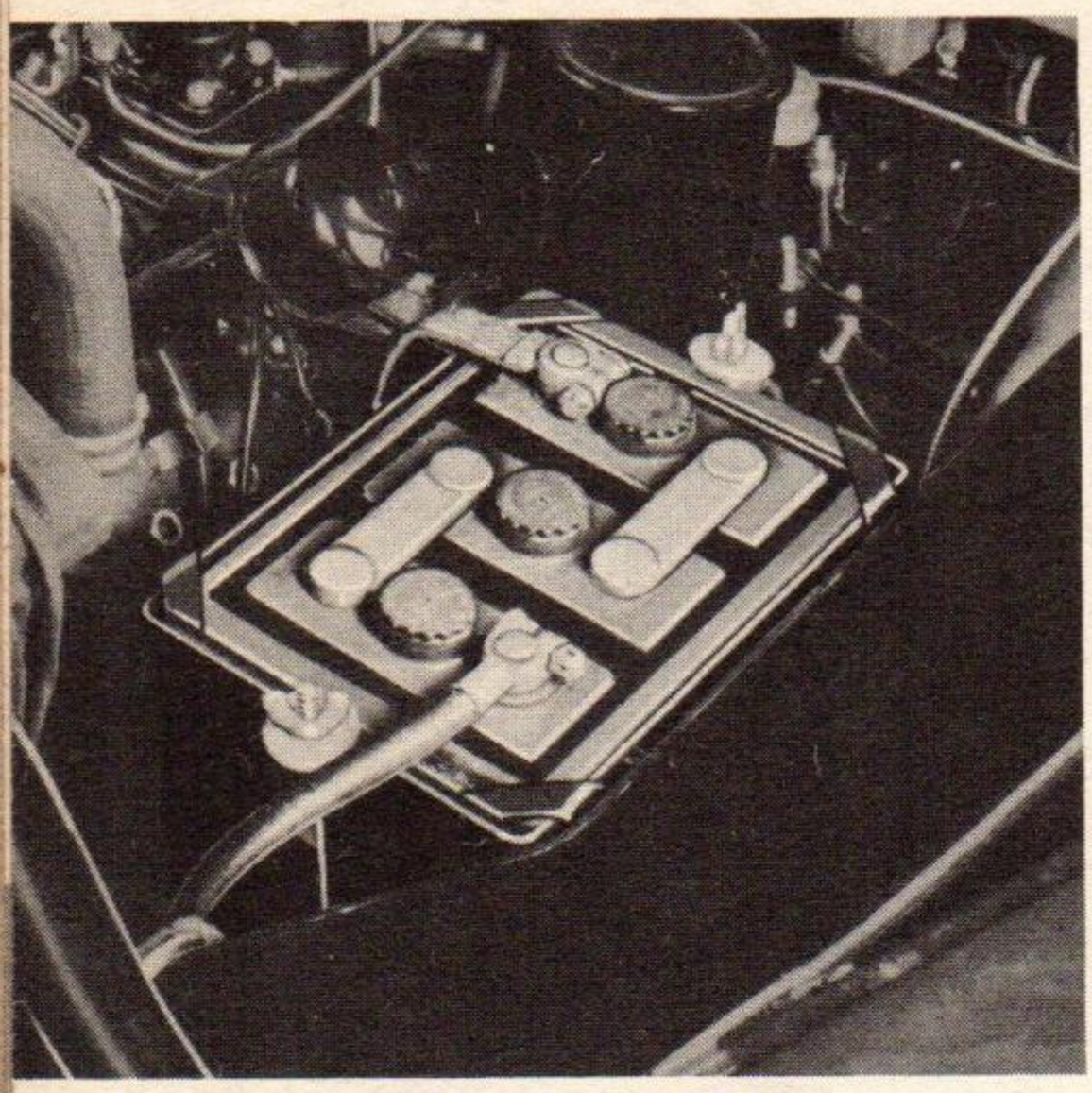
C19. The automatic fast idle control is operated by the automatic choke. During starting and warm-up periods the throttle is held slightly open giving greater idle speed at the start, and gradually decreasing to normal as the engine warms up. It is not necessary to hold the accelerator down to keep the engine running after a cold start.

*CAUTION: *Any carburetor is essentially a precision instrument. Many of its parts are extremely small; most of them are fitted to close tolerances. Unless you are experienced in carburetor adjustment, the safest rule to follow is "let your Dealer do it."*

C20. The Oil Bath Air Cleaner (extra cost equipment) removes virtually 100% of the foreign matter from the incoming air. The illustration shows the air path through the cleaner. See lubrication section for instructions on cleaning and oil renewal.

C21. The Dual Intake Manifold and the cover for the valve chamber are combined in a single casting, a feature exclusive with the V-type design. All manifold passages are extra-short and of equal length, contributing to uniform fuel distribution. A special isolated heat chamber in the intake manifold just below the carburetor is served by an automatic valve in the exhaust line. This deflects hot exhaust gases through the chamber during warm-up periods and in cold weather. These hot gases rapidly heat the manifold, preventing condensation of fuel vapors and evaporating any raw gasoline that may escape from the carburetor. With this device, engine warm-up time is reduced, combustion improved, and a major cause of crankcase oil dilution eliminated.

ELECTRICAL SYSTEM



Battery Location

C22. The electrical system of your all new Mercury offers many refinements.

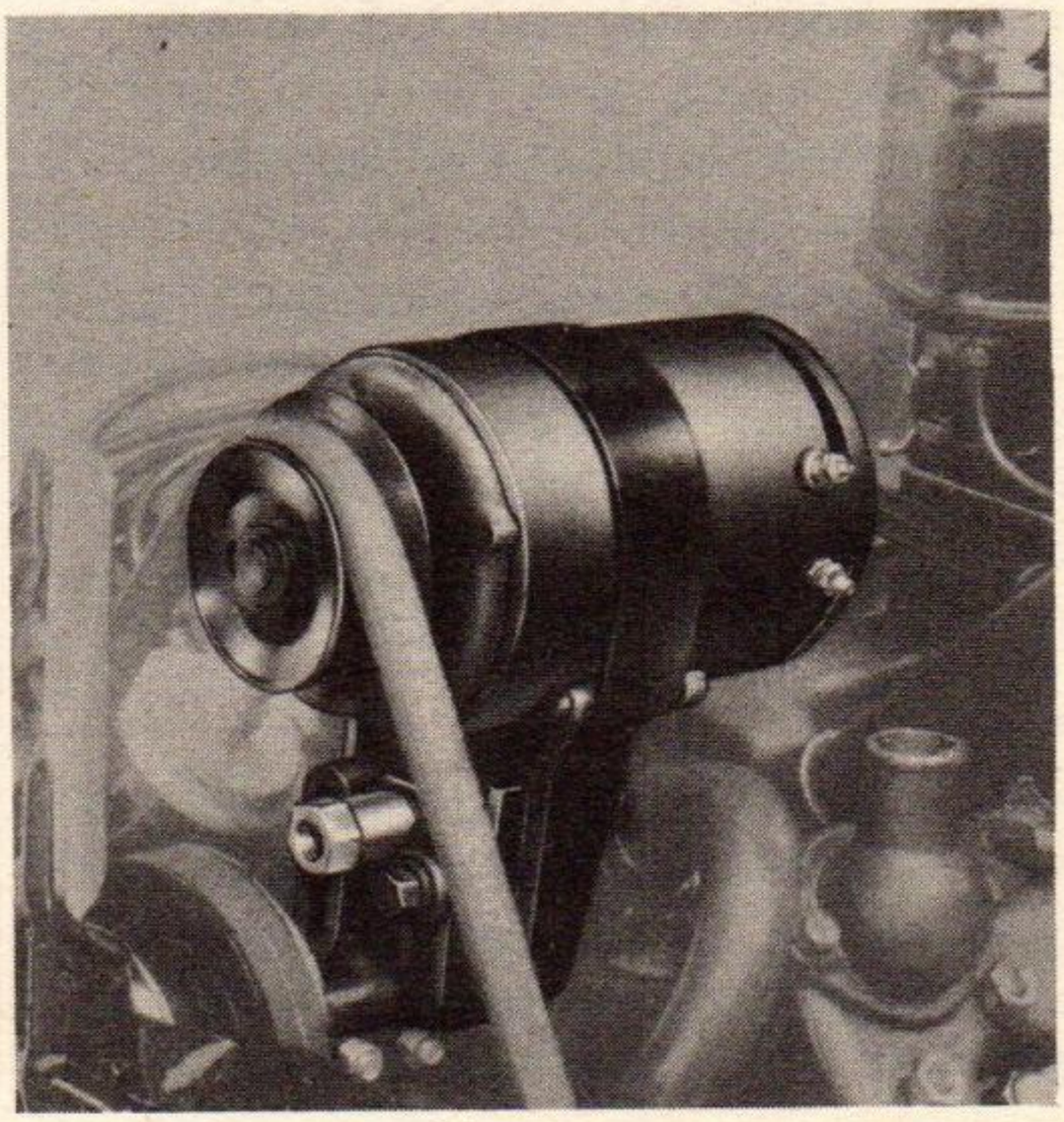
C23. The Battery is conveniently located under the hood at the front left-hand corner. It has 17 plates per cell and its 100 ampere-hour capacity gives ample reserve for operation of accessories. Water level in the battery should be checked every week; more often in extreme hot weather. Use distilled water; if not available, use drinking water.

C24. The Generator is of new design, with a high-charging capacity which will take care of power requirements of accessories under normal driving conditions. It is mounted above the engine at the front and is driven by the same V-belt that drives the water pumps. Maximum charging rate is 33 amperes at 1650 r.p.m. generator speed or approximately 21 m.p.h. car speed.

The output of the generator is controlled by an automatic regulator, mounted on the front of the dash in a dust-proof housing. The three units of the regulator are (1) a voltage-control that maintains constant voltage of a predetermined value while the engine is running; (2) a current-control element that prevents overloading and overheating of the generator; (3) a cut-out relay automatically disconnects the battery from the generator when the engine is stopped or, in general, when the generator voltage is of lower value than the battery voltage. It is not necessary to turn on the lights when driving long distances to protect the battery from overcharging. The automatic controls protect the battery for you.

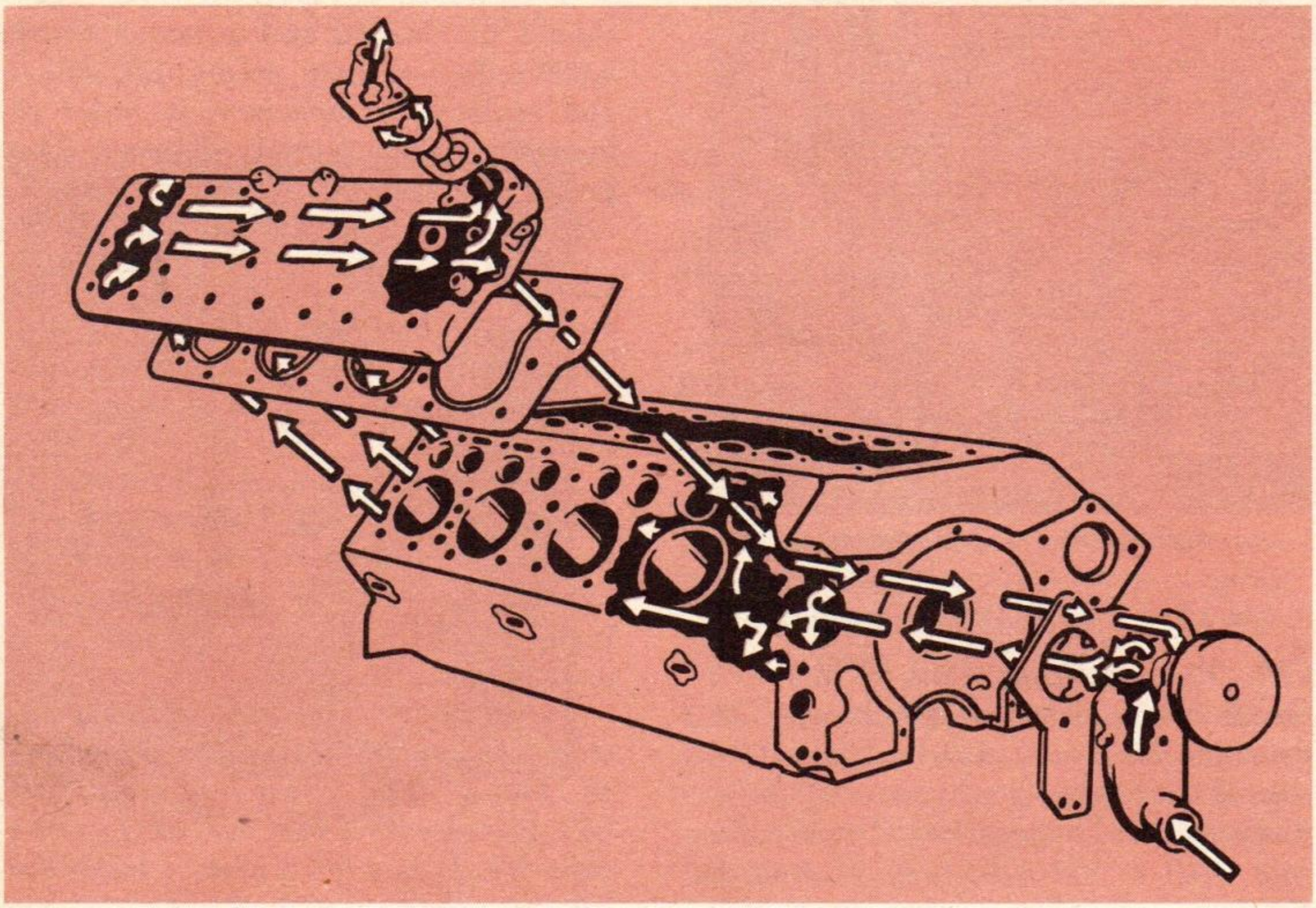
C25. The Starter Motor, located on the lower rear right-hand side of the engine, provides the power needed for quick, easy starting at all times. No lubrication is required.

C26. The Starter Switch—operated by the "Starter" push-button on the instrument panel—is located on the engine-side of the dash near the starter in order to keep the heavy electric cables to the starter as short and efficient as possible.



Generator

COOLING SYSTEM



Engine Cooling System

C30. The new and highly effective Mercury cooling system contributes to engine smoothness and efficiency by keeping all parts of the engine at the best operating temperature—winter or summer.

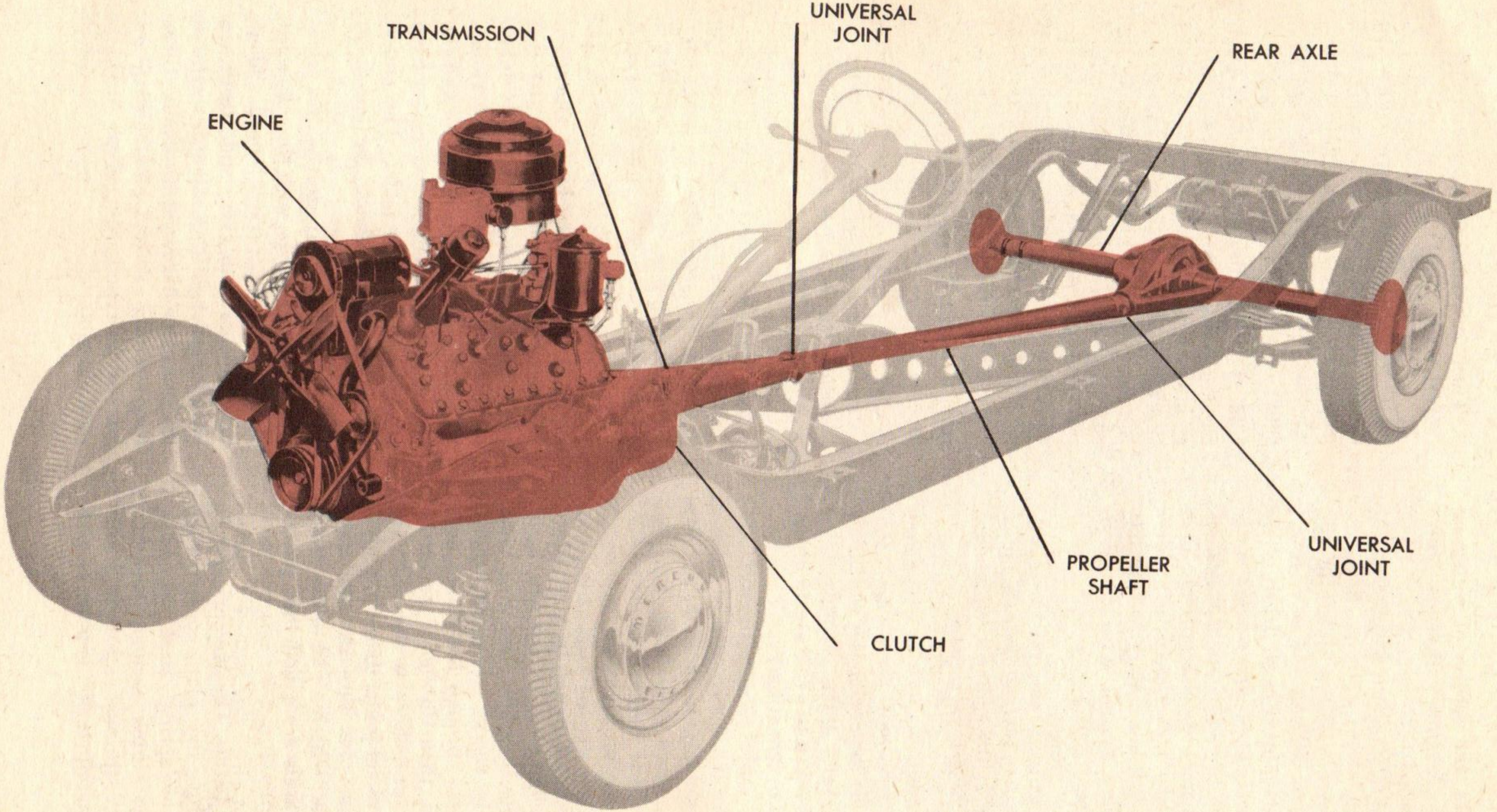
C31. Full-Flow Cooling in the Mercury engine circulates the entire flow of cooling water through the entire engine. Thus all cylinders operate at the same temperature and deliver an even flow of power.

C32. Water Pumps. A high capacity water pump at the front of **each** bank of cylinders circulates the cooling water several times per minute so the amount of heat which must be carried away each time through the engine is small, and the water temperature at all points of the engine at any time varies only a few degrees. When your Mercury is having a periodic checkup, the tension of the V-belt should be adjusted, if necessary, by moving the generator on its sliding mounting.

C33. Thermostats. When the engine is cold, heat-operated valves (thermostats) at the front of each bank of cylinders cause the cooling water to be recirculated in the engine until it reaches the correct operating temperature. The valves then pass enough water through the radiator to keep the engine temperature constant. This helps the engine warm up quickly, and provides a quick source of hot water for the heater in the car.

C34. Oil Temperature Control. Because the water jacket in the Mercury engine surrounds the crankcase, it helps warm the engine oil quickly, so its full lubricating value can be obtained. This reduces engine wear during the warm-up period. Likewise, the water jacket helps keep the oil from overheating when the engine is warm, again reducing engine wear, and saving oil.

C35. Pressure Cap. The cooling system is sealed with a "pressure cap,"


TRANSMISSION
UNIVERSAL JOINT
REAR AXLE
ENGINE
CLUTCH
PROPELLER SHAFT
UNIVERSAL JOINT

POWER TRAIN

C43. The Propeller-shaft (or drive-shaft), linking transmission and rear axle, is tubular, combining maximum strength with minimum weight.

C44. Universal Joints at the ends of the shaft have four needle bearings which are sealed against dirt and moisture. The front universal joint is connected to the main shaft of the transmission (or Over-drive, when installed). It allows movement of the propeller shaft as the rear axle moves up and down. This connection is lubricated from the transmission or overdrive. A spring seal keeps lubricant in, and dirt and moisture out.

C45. The Rear Axle is the semi-floating type, with hypoid-type ring gear and pinion, two-pinion differential, and a new light-weight one-piece housing. Use of this type of rear axle lowers the "tunnel" in the floor—an important factor in the low, streamlined design and road stability of your Mercury.

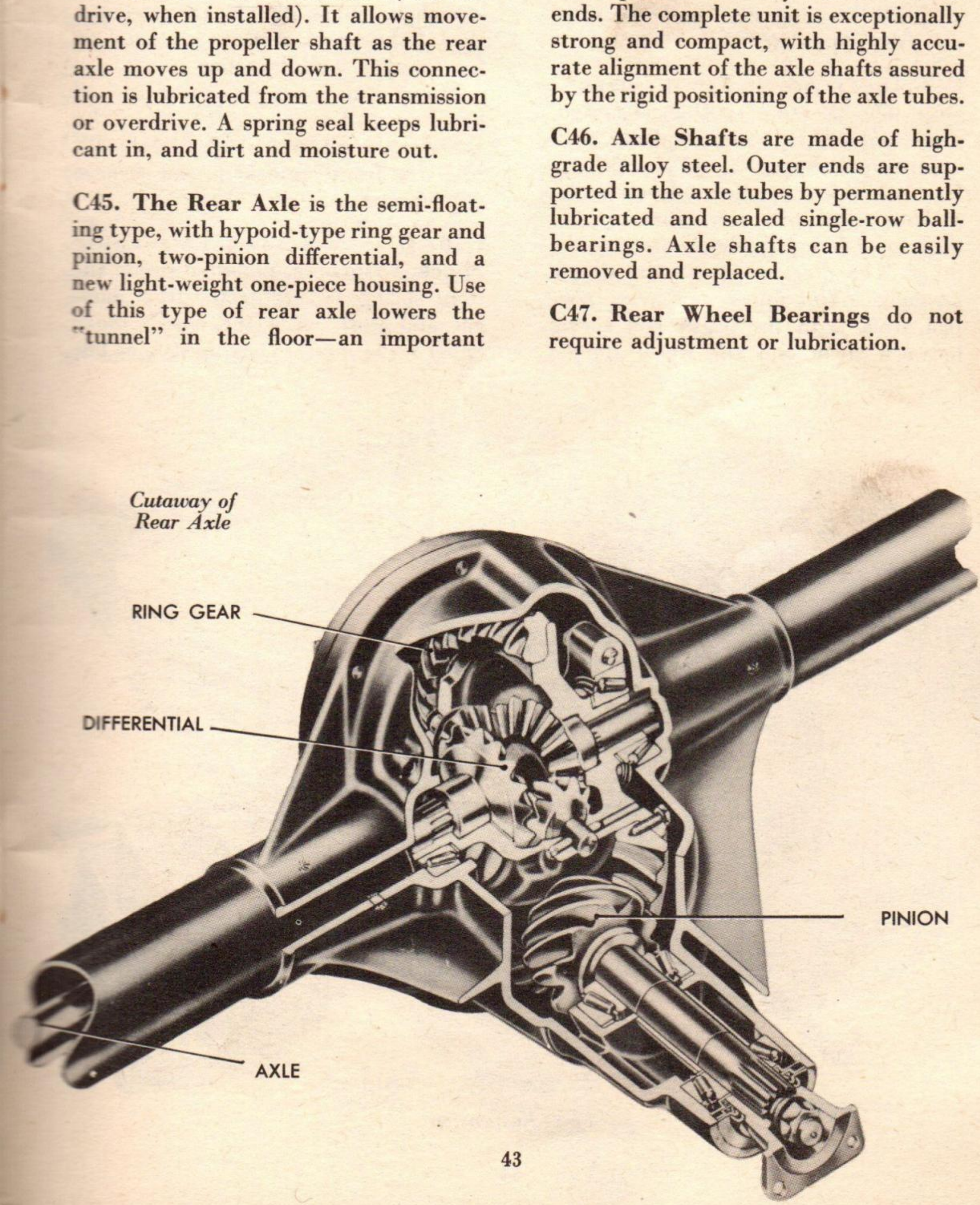
Hypoid gears have the further advantage of large contact area between gear teeth, resulting in long gear life.

Mercury's new one-piece housing combines a rugged, malleable iron casting for the differential housing proper with extra-long, light-weight steel axle tubes pressed and key-welded into its ends. The complete unit is exceptionally strong and compact, with highly accurate alignment of the axle shafts assured by the rigid positioning of the axle tubes.

C46. Axle Shafts are made of high-grade alloy steel. Outer ends are supported in the axle tubes by permanently lubricated and sealed single-row ball-bearings. Axle shafts can be easily removed and replaced.

C47. Rear Wheel Bearings do not require adjustment or lubrication.

Cutaway of Rear Axle



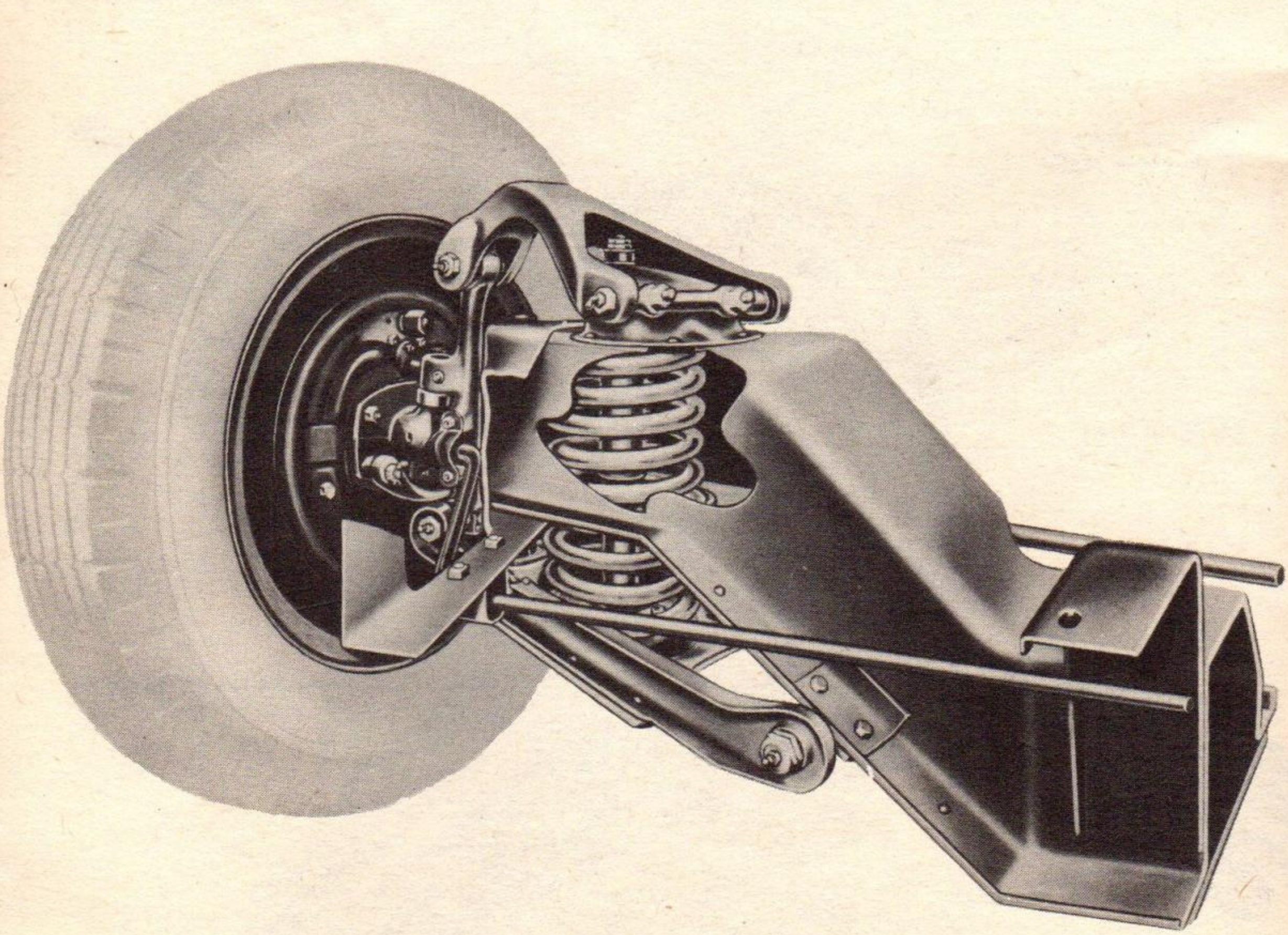
WHEEL SUSPENSION

C48. The extraordinary riding qualities of your Mercury are in large part due to its completely new system of spring suspension, both front and rear. Here is maximum riding comfort and smoothness, with all the advantages of great stability, steering ease and minimum servicing requirements.

C49. Independent Front Suspension. The Mercury front-wheel suspension combines extreme simplicity with exceptional strength and durability. Each wheel is supported independently, so that either one may move up and down over bumps without affecting the other. The diagram shows the simple arrangement of upper and lower control arms, with the heavy coil spring between them and the wheel spindle support. Arrangement and positioning of the control area maintains correct wheel alignment as they move up and down, and control the "lean" of the wheels on turns. The front wheels return smoothly and automatically to the straight-ahead position for easy steering. (See Lubrication section for data on front suspension lubrication.)

These same control arms carry all braking and steering forces so the springs have only to cushion road shocks. Mercury front springs do not require any lubrication.

C50. Direct-Acting Telescopic Shock Absorbers, mounted inside the front springs, are protected from damage and work when the wheels move either up or down. They operate at low



Front Suspension

pressures and have no bearings or links to wear and rattle. To remove front shock absorbers for service, take off the one nut at the top and two at the bottom; on the rear shock absorbers remove one nut on the frame and one nut on the spring. It is not necessary to jack up the car.

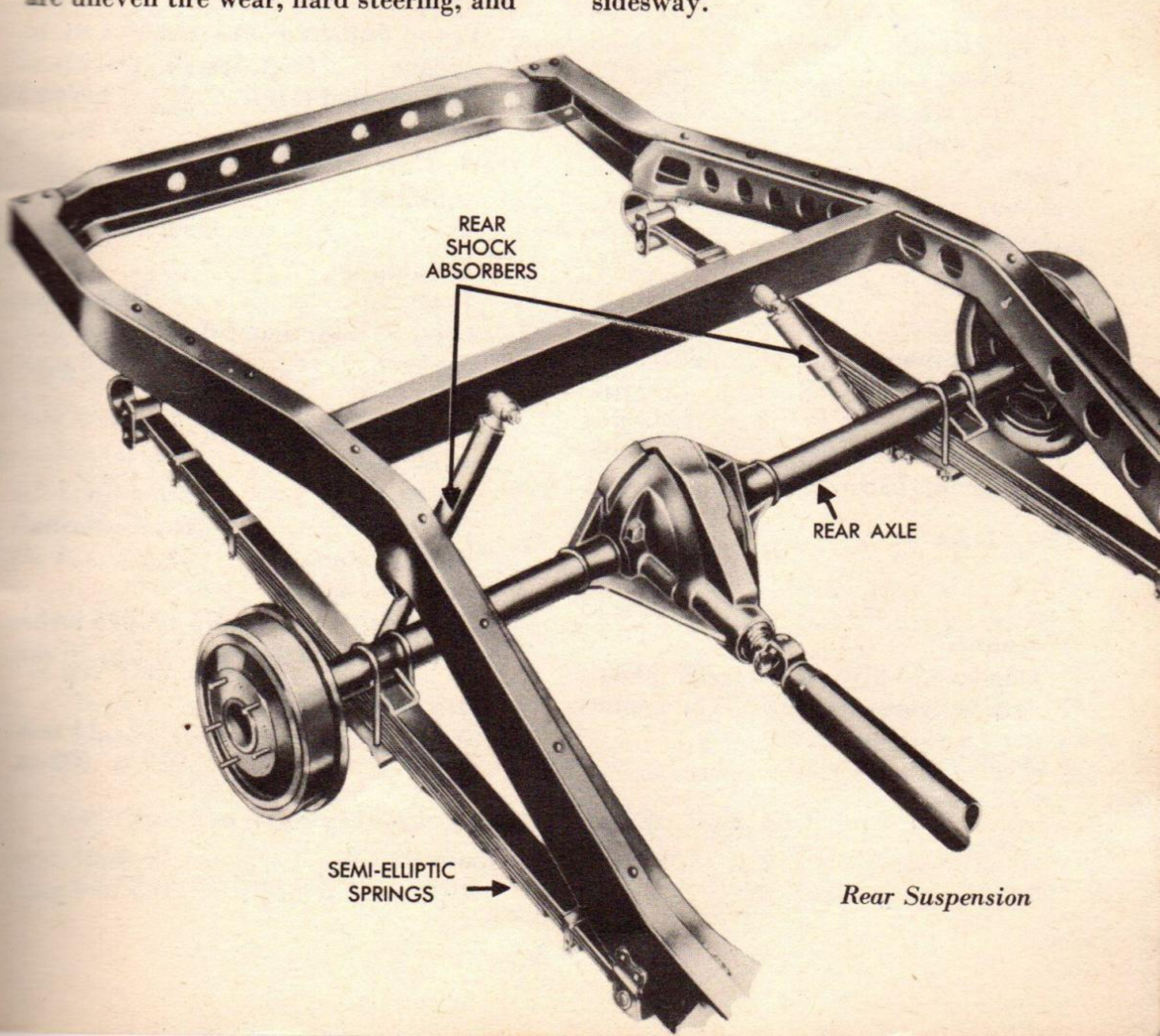
C51. A Torsional Stabilizer Bar is connected between the front wheel vertical supports and the chassis frame to check sidesway and keep the car on an even keel when rounding curves. It requires no attention.

C52. Wheel Alignment. One of the greatest causes of excessive front tire wear is improper wheel alignment. Simple independent adjustments of the elements affecting wheel alignment are provided. Two common causes of poor alignment are large, sharp bumps, and running into curbs. The "symptoms" are uneven tire wear, hard steering, and a tendency for the car to pull to the side of the road. Improper wheel alignment should be corrected by your Mercury dealer as soon as it is discovered.

It is a good idea to have wheel alignment checked at 5,000 mile (or 6-month) intervals.

C53. Rear Suspension. Extra-long, semi-elliptic rear springs are provided on your new Mercury. Wax impregnated liners control friction between spring leaves, contributing to smooth, easy spring action. It is a simple operation to service the liner tips. Bracket and shackle bolts are equipped with compression-type rubber bushings, and require no lubrication.

C54. Rear Shock Absorbers are telescopic hydraulic type. They are mounted in an inverted "V" position and have a "sea-leg" action to check sidesway.



Rear Suspension

1949 MERCURY

SPECIFICATIONS

C55. Chassis Dimensions

Wheelbase.....118 in.
Over-all length
  Standard car.....206.8 in.
  Station wagon.....213.53 in.
Over-all width.....76.4 in.
Tread:
  Front.....58.5 in.
  Rear.....60.0 in.

C56. Capacities

Fuel tank.....19½ gal.
Cooling system.....22.25 qts.
Engine oil.....5 qts.
Transmission.....3½ pts.
Rear Axle (differential).....3 pts.
Air filter (oil bath).....1 pint

C57. Tires

Type.....Super-balloon
Size.....7.10 x 15
Pressure:
  Standard (4 ply).....24 pounds
  Station wagon (6 ply).....30 pounds

C58. Engine

Cylinders.....8
Type.....90 degree V-type
Horsepower.....110 at 3600 r.p.m.
Taxable horsepower.....32.5
Bore.....3 3/16 in.
Stroke.....4 in.
Piston displacement.....255.4 cu. in.
Torque.....200 ft.-lbs. at 2000 r.p.m.
Compression ratio.....6.8 to 1

C59. Fuel System

Carburetor:
  Type.....Dual down-draft
Fuel pump:
  Type.....Diaphragm
  Drive.....Mechanical from camshaft
  Pressure.....3.5 to 4.5 p.s.i.

C60. Ignition System

Distributor:
  Firing order.....1-5-4-8-6-3-7-2
  Drive.....Gear off camshaft
  Breaker contacts.....1 set
  Breaker contact
    spacing..... .014 to .016 inches
  Breaker arm tension.....17 to 20 ozs.
Spark plugs:
  Size.....14 mm.
  Gap..... .029 to .032 in.

C61. Cooling System

Radiator cap.....Pressure type
  Operating pressure.....3.5 to 4 p.s.i.

Water pumps (two):
- Type . . . . . Centrifugal
- Drive . . . . . V-belt

Fan:
- Type 4-blade
- Drive . . . . . V-belt

Thermostats (two):
- Type . . . . . Bellows balanced
- Start to open at . . . . . 140° to 153° F.
- Fully open at . . . . . 168° to 173° F.

C62. Electrical System

Generator:
- Type . . . . . Shunt wound
- Drive . . . . . V-belt
- Rating . . . . . 33 amperes at 7 volts
- Lubrication . . . . . Permanent

Generator regulator:
- Type . . . . . 3 coil
- Cutout closing voltage . . . . . 6.0 to 6.3 volts
- Voltage regulation (at 72° F. ambient) . . . . 7.0 to 7.3 volts
- Current limit . . . . . 30 to 33 amperes

Battery:
- Type . . . . . Lead 3-cell
- Voltage . . . . . 6 volts
- Number of plates (each cell) 17
- Capacity in ampere-hours 100
- Terminal grounded . . . . . Positive

Starting Motor:
- Type . . . . . 6 volt
- Drive . . . . . Automatic engagement
- Lubrication . . . . . Permanent

BULB CHART FOR 1949 MERCURY

Single Lamps or Single Bulbs	No. Bulbs Required	Candle Power	Trade No.	Mercury Release Number
Head Lamps - Hi Beam	2	45 Watts	4030	09A-13007
Head Lamps - Lo Beam		35 Watts		
Front Parking Light	2	3 C.P.	63	B-13466
Rear	2	3 C.P.	1154	11A-13465
Stop Light		21 C.P.		
Dome Light	1	6 C.P.	82	8A-13464
Luggage Compt. Light	1	6 C.P.	81	40-13730
License Plate Light	1	3 C.P.	63	B-13466
Hi Beam Indicator Light	1	1 C.P.	51	48-15021
Instrument Panel Lights	2	2 C.P.	55	78-13466
Speedometer	2			
Ignition Lock	1			
Clock	2			
Glove Compt.	1			

C63. Transmission

- Type . . . . . Selective sliding gear
- Speeds Three forward and one reverse

C64. Clutch

- Type . . . . . Dry single plate
- Clutch pedal free travel . . . . . 1 inch

C65. Foot Brake

- Type . . . . . Four-wheel, duo-servo, self-energizing, hydraulic
- Total brake area . . . . . 179 sq. inches

C66. Parking Brake

- Type . . . . . Two-wheel cable-operated on rear wheels



INDEX

	Paragraph
Accessories	A65-A74
Accelerator	A17
Air cleaner	C20
Anti-freeze	B21-B23
Appointments	A59-A64
Ash receiver	A61
Automatic choke	A26, C18
Automatic top (operation)	A25
Automatic top (cleaning)	B44
Battery	C23
Battery charge indicator	A10
Beam indicator	A9
Brakes	B33-B36
Breaking in	A1-A5
Camshaft	C10
Car care (finish and upholstery)	B37-B47
Carburetor	C16
Carburetor adjustments	C17
Clock	A12
Clutch	C41
Clutch and brake pedals	A16
Connecting rods	C7
Controls	A13-A25
Convertible top (operation)	A25
Convertible top (cleaning)	B44
Cooling System	B17-B25; C30-C39
Cooling System (draining, cleaning)	B25
Courtesy lights	A48
Crankcase ventilation	C9
Crankshaft	C8
Chrome plated parts (cleaning)	B42
Cylinder block	C3
Cylinder head	C5
Defroster control	A53, A55
Directional signal lever	A51
Distributor	C27
Door handles	A64
Driving hints	A38-A41
Electrical system	C22-C29
Engine	C1-C39
Engine cooling system	C30-C39
Fan	C38
Finish (care of)	B37-B47
Flushing (radiator)	B25

	Paragraph
Front seat adjustment	A13
Fuel gage	A7
Fuel pump	C14
Fuel system	C12-C21
Fuel tank	C12
Fuses	C29
Gear shift lever	A31-A32
Generator	C24
Glove compartment	A62
Good driving practice	A38-A41
Hand signals	A39
Head-lamp beam control	A43
Heater	A52-A56
Hood latch release	A19
Idling speed adjustment	C17
Idling mixture adjustment	C17
Ignition coil	C27
Ignition switch	A14
Instruments	A6-A12
Instrument light switch	A44
Intake manifolds	C21
Jack	B30
Keys	A20
Lamp bulb specifications	C62
Lights	A42-A51
Lights (spotlight)	A73
Lighter	A63
Lubrication (engine)	B4-B11
Lubrication (chassis)	B12-B16
Lubrication chart	B13
Map light switch	A46
Mirror (rear view)	A71
Oil (change)	B11
Oil pressure gage	A8, B7
Oil level gage	B6
Oil filter	B10
Overdrive	A33-A37
Parking brake	A18, B35
Pistons	C6
Power train (transmission propeller shaft, etc.)	C40-C47
Pressure cooling	C30-C39
Propeller shaft	C43
Radiator Cap	C36
Radio	A60, A66-A69
Rear axle	C45
Rear axle lubrication	B13-B15
Rust inhibitor	B24
Seat covers	A70
Service	B48-B52
Service calendar	B1-B3
Service policy	B51
Shifting gears	A31-A32
Shifting hints	A32
Shock absorbers	C50, C54
Spark plugs	C28
Specifications	C55-C66
Speedometer	A9
Springs	C49, C53
Stabilizer	C51
Stains (removing)	B45-B47
Starter button	A15
Starter motor	C25
Starting	A26-A30
Suspension, front	C49
Suspension, rear	C53
Temperature gage	A11, B17, C37
Thermostats	C33
Tires	B26-B32
Tires (changing)	B30
Tire chains	B32
Tire pressure	B28
Top (convertible—operation)	A25
Top (convertible—cleaning)	B44
Transmission	C42
Upholstery (care of)	B45-B47
Vacuum booster pump	C15
Valves	C11
Ventilating system (Weather Control)	A52-A56
Ventilating windows	A57
Water and anti-freeze	B17-B25
Water temperature gage	A11, B17, C37
Water drain	B25
Water pumps	C32
Wheel (remove)	B30
Wheel alignment	C52
Wheel cover	B30
Wheelbase	C55
Windows	A57, A58
Windshield washer	A72
Wiper control	A23

ACCESSORIES, OPTIONAL EQUIPMENT, AND WHITE SIDEWALL TIRES AVAILABLE AT EXTRA COST.

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