

ACCESSORIES

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RADIO

GENERAL DESCRIPTION

The 1955 radio is a push button tuned, dual unit, superheterodyne set having six tubes plus a rectifier. The radio consists of two units which are the tuner and the audio-power unit. In addition to push button tuning, the radio has manual tuning, an off-on and volume control, and a tone control. The rear seat speaker control, on cars so equipped, mounts on front of the tuner unit just above the dial face. Either the standard (manually operated) antenna or the motor driven antenna may be used with the radio.

Both radio units are located behind, and attached to the instrument panel. The audio-power unit contains the vibrator, rectifier tube, phase inverter transformer, speaker, and two output tubes which are accessible from behind the right side of the instrument panel. After the tuner, located in the center of the panel, has been removed, a cover on top provides access to the remaining four tubes.

SERVICE INFORMATION

SETTING PUSH BUTTONS

1. Turn the receiver on and let it play for ten or fifteen minutes so all metal parts expand to operating temperature.

2. Select the push button to be adjusted and pull it to the right and out, as far as it will go.

3. Tune in the desired station with the manual tuning knob.

4. Push the push button all the way in and release. The push button is now set up.

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ANTENNA TRIMMER ADJUSTMENT

1. Turn radio on and allow it to operate for approximately 10-15 minutes to reach normal operating temperature.

2. Extend antenna to full length.

3. Turn volume control on full and tune to a weak station between 600 and 1000 kilocycles.

4. Using a small screw driver, inserted through small hole (indicated by arrow) in right side of tuner, adjust trimmer screw to obtain maximum volume.

TUNER—REMOVE AND REPLACE

REMOVE

1. Disconnect "A" lead and dial light lead from fuse block (terminals number 12 and 7 respectively) and remove wires (taped together) from clips above left cowl trim pad, on braces between steering column and firewall, and beneath glove box.

2. Remove interconnecting cable from audio-power unit.

3. Remove antenna lead-in from right side of tuner unit.

4. Disconnect "A" lead at connector between tuner unit and audio-power unit.

5. If car is equipped with rear seat speaker, disconnect rear seat speaker wires from connector on right cowl trim pad and from audio-power unit.

6. Remove nut, lock washer, and plain washer from stud at right rear side of tuner unit.

7. Loosen set screws in two outer control knobs; remove all control knobs, washers, and nuts which bear against instrument panel finish plate. Remove finish plate.

8. If car is equipped with rear seat speaker, remove two screws which retain rear speaker control to tuner and remove control (Fig. 14-1).

9. Remove screw and lock washer from tabs on either side of tuner (Fig. 14-1).

10. Remove tuner by pulling outward from in front of instrument panel.

REPLACE

1. Position tuner unit in opening in instrument panel and place brace over stud on right hand side of tuner; install screws on either side of tuner (Fig. 14-1) and tighten screws securely.

2. If car is equipped with rear seat speaker, install speaker control on tuner unit (Fig. 14-1).

3. From beneath instrument panel, install washers and nut on stud on right rear side of tuner and tighten nut securely.

4. Connect "A" lead connector between tuner unit and audio-power unit.

5. Connect rear speaker wires on cars so equipped.

6. Replace antenna lead-in in tuner unit.

7. Replace interconnecting cable plug in socket on audio-power unit.

8. Replace "A" lead wire and dial light wire in clips and connect to fuse block (terminals number 12 and 7 respectively).

9. Replace instrument panel finish plate, retaining nuts, and control knobs.

AUDIO-POWER UNIT—REMOVE AND REPLACE

REMOVE

1. If tuner unit has not been removed, perform steps 2 and 4 of tuner unit removal procedure.

2. Disconnect rear seat speaker wires from audio-power unit.

3. Remove antenna lead-in from clips on underside of audio-power unit. (If car is equipped with motor driven antenna, remove power cables from clips.)

4. Remove screw at top left side of audio-power unit.

5. Support unit and remove two retaining screws from bottom of instrument panel; remove audio-power unit.

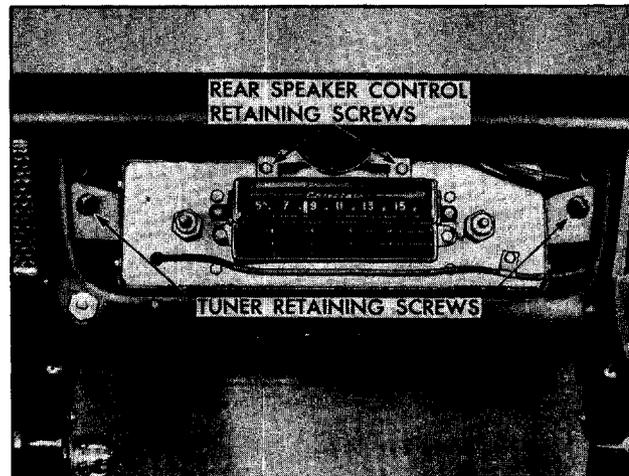


Fig. 14-1 Radio Tuner and Rear Speaker Control Installation

REPLACE

1. Place audio-power unit in position behind instrument panel and loosely install two screws at bottom of panel.

2. Replace retaining screw at top left side of audio-power unit and tighten screw securely.

3. Replace antenna lead-in (and motor driven antenna power cables) in clips on underside of audio-power unit.

4. Connect rear speaker and rear speaker control wires to audio-power unit; connect "A" lead at connector between tuner and audio-power unit.

5. Replace interconnecting plug in audio-power unit.

6. Tighten retaining screws at bottom of instrument panel.

MOTOR DRIVEN ANTENNA

OPERATION

The electric antenna operating switch is located on the instrument panel. To raise antenna, lift operating switch lever up; to lower, push switch lever down. When lever is released it returns automatically to the "Off" position. The antenna can be raised or lowered to any intermediate height by releasing switch lever when desired position is reached. **CAUTION:** Do not hold switch in operating position beyond full travel of antenna (up or down) any longer than necessary to make sure antenna has reached the end of its travel. Such practice would result in motor overload and excessive wear of the drive mechanism.

MOTOR DRIVEN ANTENNA—REMOVE, OVERHAUL, AND REPLACE

REMOVE

1. Lower antenna sections and remove upper mounting nut, using Antenna Nut Spanner Wrench J-5185-1; remove adapter and pad.
2. Disconnect wires to antenna motor and disconnect antenna lead-in at point where rear lead-in connects to front lead-in.
3. Remove screws which retain fender bracket to fender.
4. Remove antenna assembly and insulator on upper end of tube.

DISASSEMBLE

1. Remove clamp from aluminum tube and body tube.
2. Remove screws holding aluminum tube to motor and carefully slide tube down away from motor to remove nylon strip from tube.
3. Remove three body tube to motor cover screws and remove body tube.
4. Remove mast sections and nylon strip assembly from motor as follows:
 - a. If motor is in operating condition connect motor cables to 12 volt current source to operate motor and run nylon strip out of drive pulleys of drive assembly.
 - b. If motor is inoperative, nylon strip can be pulled out of drive by holding motor firmly and pulling lower or large section of antenna mast until nylon strip is disengaged from drive. **NOTE:** It may take considerable force to pull nylon strip through motor drive mechanism, but this will not damage unit.
5. If power unit is to be replaced, remove antenna support bracket from power unit and drive assembly. **CAUTION:** Power unit and drive assembly should never be disassembled. This part is serviced only as a unit.

ASSEMBLE

1. If new power unit is being installed, fasten bracket to stud on lower end of power unit assembly using lockwasher and nut.
2. Insert end of nylon strip of mast sections into opening in motor assembly and connect motor terminals to 12 volt source to operate motor and drive unit. This will draw the nylon strip through motor.

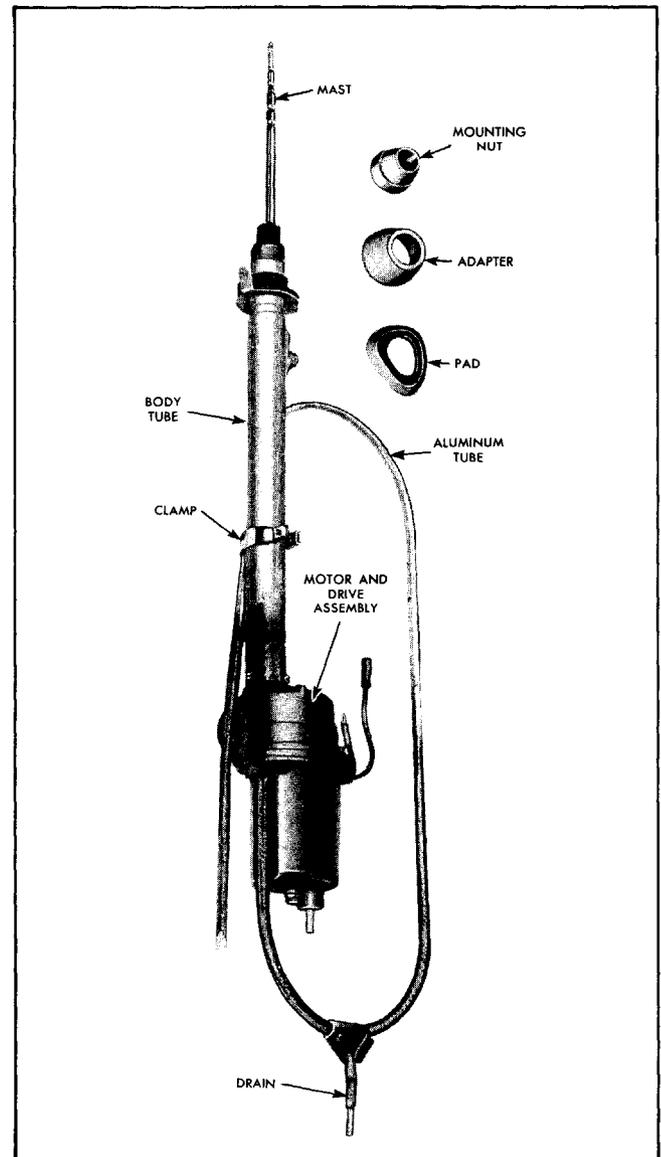


Fig. 14-2 Motor Driven Antenna

3. Place body tube over mast sections with connector facing motor side, slide body tube down onto motor cover, and install three attaching screws.
4. Inspect aluminum tube to make sure it is free of any obstruction due to mutilation or broken nylon strip. Check hole in drain shield on aluminum tube to be certain it is open. Insert nylon strip in tube, position tube on antenna assembly as shown in Fig. 14-2 and fasten aluminum tube to motor using two attaching screws.
5. Install clamp which holds aluminum tube to body tube.
6. Operate antenna for 10 to 15 complete cycles to make certain it operates properly.

REPLACE

1. Place insulator on flange at upper end of tube; place antenna tube through hole in fender making certain that insulator protrudes through fender.
2. Ensure that fender bracket and flange of fender are clean so as to provide good contact; position bracket on fender and install lock washers and screws.
3. Connect antenna lead-in; connect wires to motor.
4. Replace pad on fender; replace adapter, and upper mounting nut. Tighten nut securely with Antenna Nut Spanner Wrench J-5185-1.
5. Check antenna travel. Time must not exceed 12 seconds for full up or down travel.

DIRECTION SIGNAL**CONTROL ASSEMBLY—REMOVE AND REPLACE****REMOVE**

NOTE: The direction signal control assembly has six wires of various colors which run through the steering column mast jacket and connect to the flasher unit, body wire harness, and main wire harness. One wire connects directly to the flasher unit, two wires connect to the body wire harness by means of a three-way connector, and three wires connect to the main wire harness by means of a six-way connector (Fig. 14-3).

1. Remove clip which retains flasher unit to clamp on steering column and remove wire from "L" terminal of flasher unit.
2. Disconnect steering column wires from body wires at three-way connector and remove two direction signal control wires from connector.
3. Disconnect steering column wires from main wires at six-way connector. Using a small screwdriver or similar tool to depress locking tab on side of terminals (Fig. 14-3), remove three direction signal control wires from connector.
4. Remove screw which retains steering column clamp and remove clamp.
5. Attach a small wire to direction signal control wires to facilitate reinstallation of wires.
6. Remove horn button and steering wheel.
7. Remove two screws which retain control housing and remove control assembly; remove wire and tie to shift lever.

REPLACE

1. Tape end of wire harness to keep all leads together and attach wire which was pulled through mast when wires were removed.
2. Pull wire harness through mast jacket and position control housing on steering column; install retaining screws.
3. Remove "pull" wire and tape from wire harness.
4. Place clamp over wire harness, position clamp against steering column and loosely install retaining screw. Pull wires tight against clamp and tighten retaining screw.
5. Note carefully the colors of the wires in main wire harness connector. Replace three direction signal control wires in six-way connector so colors match with those in main wire harness. **NOTE:** The terminals of each of these three wires have a locking tab on the side and a tang at the rear (Fig. 14-3). The terminals must be installed so that tang fits into slot in rear of connector. If necessary, bend locking tab so terminals will lock in connector.
6. Replace two wires in three-way connector, matching colors with wires in body wire connector.
7. Replace remaining wire in "L" terminal of flasher unit socket.
8. Position flasher unit on clamp and install retaining clip.
9. Replace steering wheel and horn button.
10. Turn ignition "ON" and check operation of direction signals.

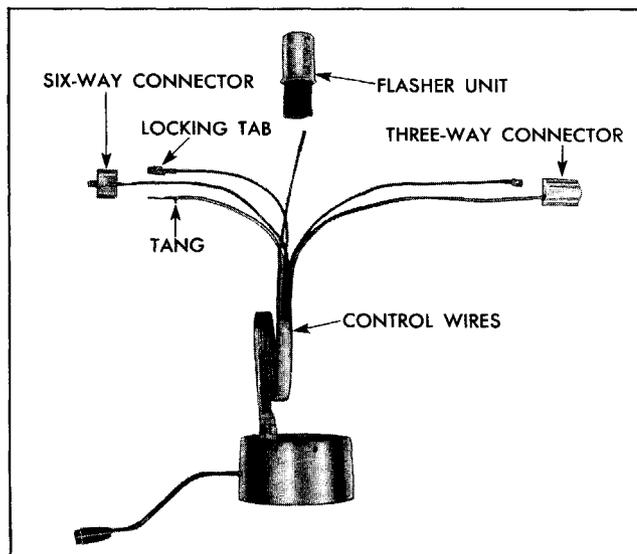


Fig. 14-3 Direction Signal Control Wire Connections

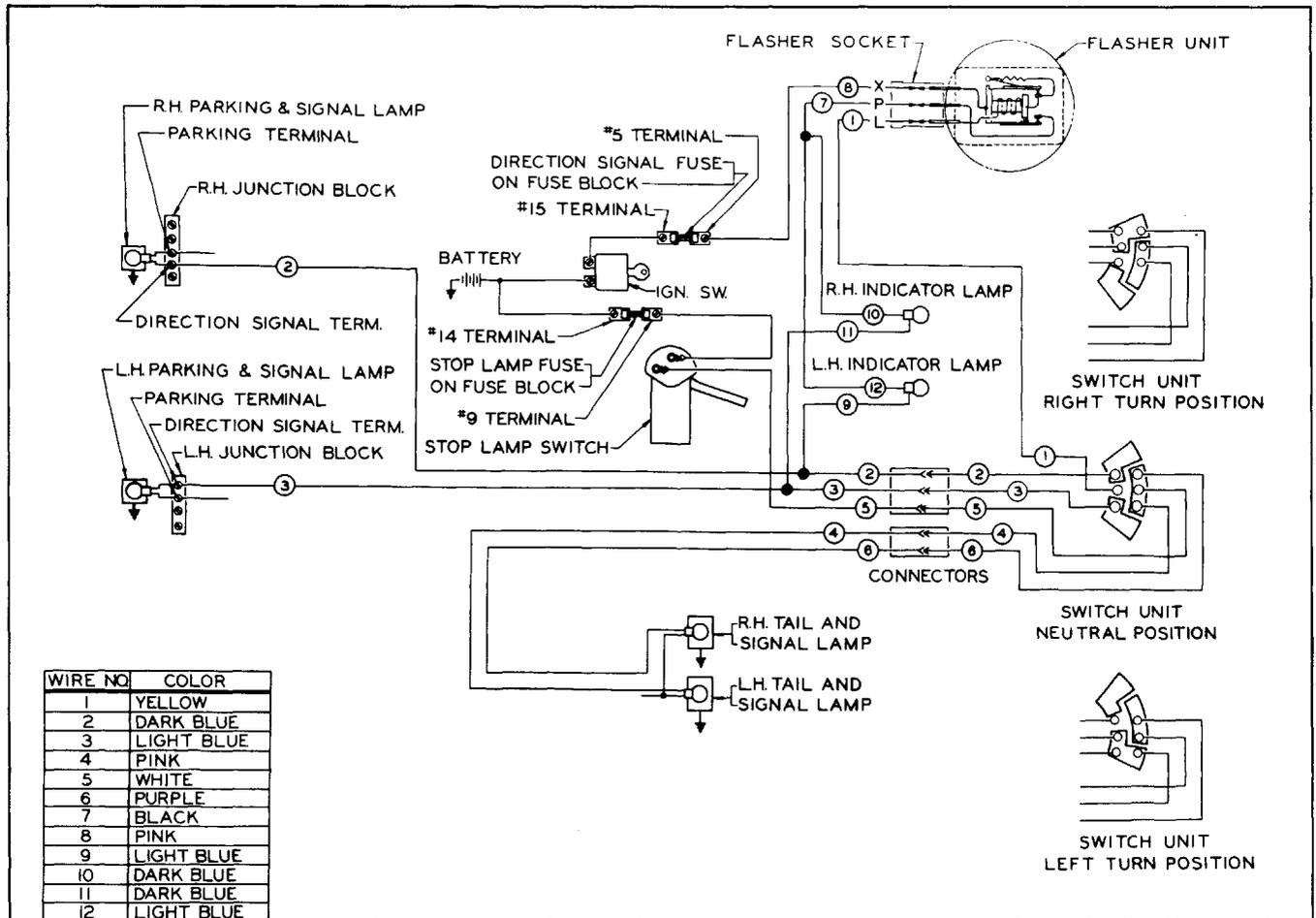


Fig. 14-4 Direction Signal Circuit Diagram

DIRECTION SIGNAL WIRING

The wiring circuits for 1955 direction signal are shown in Fig. 14-4.

VENTILATION AND HEATING AND DEFROSTING SYSTEMS

VENTILATION SYSTEM

The air intake for the ventilation system is located at the horizontal portion of the cowl forward of the windshield reveal moulding and flush with the hood. Outside air enters the louvered intake into an enclosed chamber which extends on each side of the cowl. Air in the chamber travels to inlets in the sides of the cowl trim pads. Control knobs mounted below the instrument panel provide individual control of the air flow through the inlets into the front passenger compartment.

Contour of the air chamber is such that water in the air is deflected away from the inlet ducts, which extend into the chamber and are also flanged to further prevent the entrance of water through the inlets in the cowl trim pads and the heater inlet duct located in the left side of the chamber. A large volume of water, such as would be present when the car is being washed, is prevented from entering the inlet ducts by gutters above the ducts in each side of the chamber.

HEATING AND DEFROSTING SYSTEM

GENERAL DESCRIPTION

The major components of the heating and defrosting system are the underseat heater, defroster, thermostatic control valve, and blower motor.

The heater unit is located under the front seat and circulates warm air at floor level to both the front

and rear compartment by means of a distribution manifold running crosswise of the body under the front seat.

The defroster is located on the left side of the cowl in the engine compartment and discharges cool or warmed air, at the driver's option, across the windshield through slots at the bottom to reduce fogging and icing.

The thermostatic control valve located on the dash insulator behind the instrument panel automatically regulates the flow of hot water to the heater and defroster. In addition to automatic regulation, the valve may be manually opened or closed by the "TEMP" control on the instrument panel.

A two speed blower motor is located at the end of the heater inlet duct between the tubes leading to the heater and defroster. The use of the blower for normal driving is not required since sufficient air is forced through the heater and defroster by the forward motion of the car. For low speed driving or under severe conditions, the blower should be used.

WATER FLOW

The water flow in the heater and defroster units is illustrated in Fig. 14-5. Water flows from the water passage in the intake manifold to the thermostatic control valve and then through the defroster core to the underseat heater. From the heater, water flows to the bottom of the radiator from where it is pumped back to the engine.

AIR FLOW

The heater inlet duct is located in the left side of the air chamber. Outside air enters through the air intake and travels downward in the left side of the chamber to the heater and defroster inlet duct. When the air control is in either the "NORM" or "DE-ICE" position, the air valve in the heater and defroster inlet duct is open and air is admitted to the blower motor. From the blower motor air is directed to the defroster unit and underseat heater.

As the air control is moved from "NORM" toward "DE-ICE" a valve in the defroster moves to direct air over the defroster core and by-pass less around the core. Thus, at "DE-ICE" position all defroster air passes through the core and reaches the windshield as warm air.

In cool or moderately cold weather the air control can be set at "NORM" to provide cool refreshing air at the breathing level. In extremely cold weather, however, the air control should be set at "DE-ICE" so that warm air will be supplied from the defroster

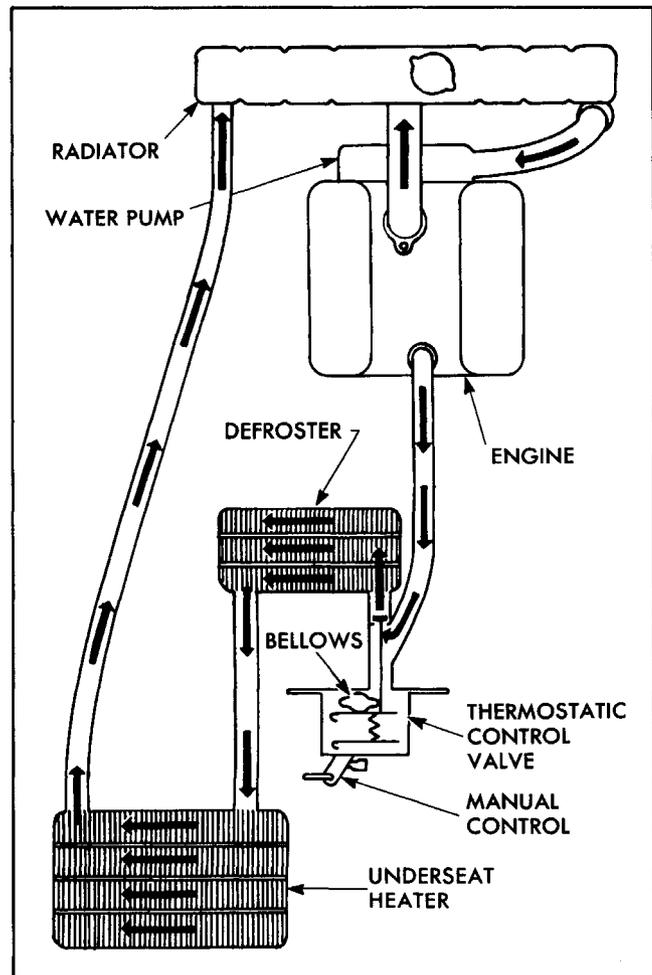


Fig. 14-5 Water Flow Through Heating and Defrosting System

nozzles. Otherwise the extremely cold air passing from the defroster nozzles will cool the car, making adequate heating impossible.

ADJUSTMENTS ON CAR

HEATER AND DEFROSTER AIR VALVE LINKAGE—ADJUST

1. Loosen trunion lock nuts on heater air inlet valve located between blower and dash, and on defroster valve on right side of defroster unit.
2. Place "AIR" control lever in "DE-ICE" position.
3. Rotate arm on defroster air valve clockwise (forward and down) until it is against stop and tighten trunion lock nuts.
4. Set "AIR" control lever in "OFF" position.

5. Move arm on air inlet valve counterclockwise (outward toward fender) until valve seats and tighten lock nuts.

6. Check linkage for freedom of operation. If binding occurs, make minor adjustments (half turns on lock nuts) until linkage operates freely.

THERMOSTATIC CONTROL VALVE LINKAGE

-ADJUST

1. Set "TEMP" control lever in "OFF" position.
2. Loosen lock nuts on rod which attaches to arm on thermostatic valve lever and rotate lever fully clockwise as viewed from bottom.
3. With "TEMP" indicator in "OFF" position and thermostatic valve lever fully clockwise, tighten lock nuts.

HEATER AND DEFROSTER TROUBLE DIAGNOSIS

1. Kinked Hoses

Observe all heater hoses for presence of kinks which would restrict the flow of water. Check especially the intake manifold to temperature control valve hose.

This hose makes a sharp bend at the vertical pipe threaded into the front of the intake manifold. Early production cars were equipped with a straight hose which in some cases flattens at this bend and restricts the flow of water. The hose used in later production has a formed bend at this point. Only the late production hose with the formed bend is serviced. When a kink is observed at this point, a new hose should be installed.

2. Floor Mats

Check front floor mat to see that it is flat and not cutting off part of air flow. Rear floor mat should be retained by the heater air distributor duct.

3. Engine Thermostat

It should be kept in mind that the normal warm up time is slightly higher in 1955.

4. Defroster Nozzles

Check defroster nozzles to be sure that they are not pinched together, blocked by windshield rubber or installed partially under the garnish molding.

BACK-UP LAMPS

The back-up lamp switch on Hydra-Matic equipped cars is incorporated in the starter neutral-

izer switch. See the 1955 Hydra-Matic Shop Manual (page 40) for correct adjustment of starter neutralizer and back-up lamp switch.

On Synchro-Mesh equipped cars the back-up lamp switch is mounted in the upper left corner of the transmission rear bearing retainer (Fig. 7-2). No adjustment of the switch is necessary.

ELECTRIC CLOCK

GENERAL DESCRIPTION

The electric clock is operated by current from the car battery so that hand winding is eliminated. Automobile clocks operating on direct current from the car battery must not be compared too closely for accuracy to the home electric clock operating on alternating current. The cycles per second of alternating current used in the home are controlled and periodically corrected at the power house, thereby eliminating accumulation of errors.

With the direct current system such as used in a car, no such control is possible; therefore, automobile electric clocks will accumulate errors day by day the same as hand wound, spring operated clocks. For this reason, it may be necessary to regulate electric automobile clocks.

Two makes of clocks are used. While both receive power from the radio-clock fuse on the fuse block, one make also has a 1½ ampere fuse mounted on the back of the clock.

With proper regulation, the variation from correct time should not be in excess of 2 minutes in 24 hours. The Pontiac clock starts automatically when set.

CLOCK ADJUSTMENT

To regulate clock, insert small screwdriver in slot of regulator screw at bottom of bezel and turn a slight amount. If clock runs fast, turn toward "S", or if clock runs slow, turn toward "F". One quarter turn is equivalent to about 5 minutes in 24 hours.

WINDSHIELD WASHER

ADJUSTMENTS ON CAR

If jets are not aimed properly the pinhole opening in nozzle should be adjusted to direct the stream of water against windshield at a point near the top of windshield wiper arc, toward center line of car.

