

CHEVROLET—CENTRAL OFFICE

DIVISION OF GENERAL MOTORS CORPORATION
DETROIT 2, MICHIGAN



TECHNICAL SERVICE BULLETIN

Technical Service Department



SUBJECT: CORVAIR DIRECT AIR HEATER
OPERATING AND SERVICE INSTRUCTIONS

BULLETIN NO. DR #463

SECTION XV

TO: ALL CHEVROLET DEALERS

DATE January 20, 1961

To insure 1961 Corvair owners receive maximum comfort and efficiency from their Direct Air Heater, the following information is presented. It is also suggested that dealership Sales Personnel give new Corvair owners a pre-delivery demonstration on how to operate the Direct Air Heater.

GENERAL OPERATION

The Direct Air Heater makes use of engine cooling air to heat the interior of the car. After the air has performed its cooling function, the heated air is channeled through a blower and into the car. Cooling air drawn in by the engine blower may be diverted prior to circulating around the engine to provide cooler air to vary the temperature of the heater air. With the Heat and Air levers in the "off" position, the engine heat is directed to the rear of the engine and out through the thermostatically controlled engine cooling doors.

HEATER CONTROLS

- FAN - The three-position lever controls the speed of the heater blower which affects the volume of air to the passenger compartment. The blower should not be operated unless either the Heat or Air lever is depressed.
- HEAT - The Heat lever controls the amount of hot air to the heater system.
- AIR - The Air lever controls the amount of moderately warmed air to the heater system.
- DEFROSTER - The Defroster lever controls the position of the diverter outlet doors which blocks off the flow of air to the front compartment and causes it to flow to the defroster outlets. Under some conditions, fogging of the windshield may occur on initial defroster operation. Opening one of the front door ventilators will allaviate this condition.

The following directions are presented to give the operator an understanding of how to operate the heater for varying heat requirements:

MINIMUM HEAT - During Spring and Fall in the areas where climatic conditions are not severe, depress Air lever only as required.

MEDIUM HEAT - Depress the Air lever all the way down, then depress the Heat lever as required. This will control the quantity of moderately warmed air and hot air being mixed which varies the temperature of the air entering the passenger compartment.

MAXIMUM HEAT - Depress the Heat and Air levers to the extreme "down" position. If heat becomes excessive, pull up Heat lever to obtain the desired temperature.

HEATER BLOWER HOUSING

Some instances have been reported of air leakage at the heat and/or air diverter doors in the blower housing. This can be caused by the doors not closing completely or inadequate door sealing.

The primary cause for the doors not closing completely is the bowden cable adjustment. Early Corvair Models (5-7-900 Series) incorporated an air control cable with a short sheath. This makes the air door adjustment difficult because the sheath cannot be properly clamped. Service stock is not affected, only one long cable is serviced - this must be cut to size for all usages.

The following is a step by step diagnosis and repair procedure to correct diverter door air leakage.

1. If air leakage is present with the Heat, Air and Defroster levers closed, disconnect bowden cables from diverter doors and manually close the doors.
2. Start engine, with fan control lever off, feel for air leakage at the passenger compartment heater outlets.
3. If no leakage is evident, the problem is with improper bowden cable adjustment.
4. If the air door cable sheath is not in clamp with 1/8" extending, assume it to be a short sheath and replace it with a longer cable from Parts stock which will have to be cut to proper length at the door end. It will be necessary to form a new wire loop and be sure to cut sheath 7/8" longer than existing cable sheath.

5. Adjust cables till a "cushion" is felt at the end of the travel in the closed position.
6. If leakage is still evident with cables disconnected and doors closed manually, it must be assumed the door seals are deficient and replacement of the heater housing is necessary.

DEFROST OPERATION - 5-7-900 SERIES

To obtain maximum efficiency at the defroster outlets, it is important that air leakage at the passenger compartment diverter doors along the rocker panel be highly restricted when the Defrost lever is depressed. Effective mid-December in Production, Polyurethan pads have been installed on the inside of the passenger compartment diverter doors to minimize this air leakage.

For in-service vehicles, improved de-fogging and de-icing can be obtained by installing Polyurethan or sponge rubber pads as follows:

1. Remove both diverter door grilles and diverter door housing assemblies.
2. Remove felt sealing material stapled to the edge of the diverter doors.
3. Cement a 1/4" thick 2-1/2" x 3-1/4" Polyurethan or sponge rubber pad to both diverter doors. The rear edge of the pad should be flush with rear edge of diverter door and the pad will extend beyond the diverter door only at the upper corner which is cut from the door. The 2-1/2" x 3-1/4" size is important as the pad must fit into the pocket area of the grille when reassembled into the car.
4. When housing assemblies are reinstalled, bend diverter door slightly inboard and adjust Defrost cable to insure positive sealing of the pads against the deflector grilles and the door edge at the forward end against the housing.
5. Reinstall both deflector grilles.


To further improve defrost operation, check for air leakage at upper end of defrost flexible hose connections at base of defroster outlets.

If air leakage is evident, tape or seal at this location. Then too, insure that defroster outlets are positioned forward and out from under windshield garnish moulding.

GENERAL

The above are basic service procedures for known deficiencies. A complete over-all inspection of flexible hose connections and heater duct junctions should be made and noted discrepancies corrected to insure maximum efficiency from the heater system.

Time Allowance: One hour for operations and adjustments other than for replacement of Parts.



Director, Technical Service Department