

1965 Corvette: Service Bulletin: Air Conditioning Cooling Capacity Loss

Subject: Air Conditioning Cooling Capacity Loss

Model and Year: 1965 Chevrolet

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TO: ALL CHEVROLET SERVICE PERSONNEL

1965 Chevrolets with air conditioning may experience loss in cooling capacity (outlet temperature higher than specifications) under high ambient temperature conditions when no refrigerant leakage or component damage is evident. This problem may be due to internal leakage at the seat contact area in the expansion valve and is most evident when high ambient temperatures result in compressor head pressures above 200 psi with corresponding higher leak rate in expansion valve. This condition may incorrectly indicate a low refrigerant charge at the sight glass. Use the procedure outlined on page 2 to determine if loss of cooling capacity is due to a defective expansion valve.

This possible deficiency was corrected, effective July, 1965. Expansion valve identification (No. 16A followed by the month and year) is stamped on the side of the valve as shown in the following illustration. When replacing the expansion valve (Part #5910525), be sure the identification stamp is 16A-"75" or later. Qualified parts may also be identified by an "X" preceding the quantity and part number on the parts label, i.e., X1-5910525 (first design parts label reads 1-5910525).

PARTS DATA

Part No. : 5910525

Description : Thermostatic Expansion Valve

EXPANSION VALVE TEST PROCEDURE

1. Conduct the "System Performance Test" as outlined in the 1965 Chassis Service Manual, Page 15-24.

NOTE: The loss of system performance is most evident when the "Compressor Head Pressure" is above 200 psi. If necessary, increase the "Compressor Head Pressure" to a minimum of 200 psi by partially blocking the condenser during the "System Performance Test".

2. With a minimum compressor head pressure of 200 psi, disconnect the blower lead (or 3-wire relay connector) and repeat the performance test to determine if specified "Low Pressure" can be obtained. If the "Low Pressure" readings (S.T.V. or suction pressure) are above specifications, a defective expansion valve and/or S.T.V. valve is indicated.
3. All except Four Season A/C - Replace expansion valve and recharge and recheck the system.
4. Four Season Air Conditioning - Determine Defective Unit
 - a. Disengage the expansion valve capillary power element bulb from the evaporator outlet pipe and disconnect the three wire connector at the high blower relay. With the engine operating at 2,000 rpm, check the S.T. V. gauge pressure.
 - b. Insert the expansion valve bulb in a cup of crushed ice. This should lower the S.T.V. pressure to approximately 30 psi (indicating a defective expansion valve). If the pressure does not reduce to this level, the S.T.V. valve is defective.
 - c. Replace defective unit, then recharge and recheck system.

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