

## AIR CONDITIONING TROUBLE SHOOTING GUIDE FOR EVANS TEMPCON HEATER - A/C SYSTEMS

<u>PROBLEM</u>	<u>POSSIBLE CAUSES</u>	<u>REMEDY</u>
1. Inadequate Cooling (Discharge Air from A/C Vents is only slightly cool)	<p>* Misadjusted or Leaking Water Valve (Cooling may be diminished engine RPM only)</p> <p>* For Electronic Valves see: <b>ELECTRONIC COOLANT VALVE</b></p> <p>* Condenser clogged with road debris or Condenser Fan Inoperative.</p> <p>* System low on Refrigerant. Possible leak in the system (NOTE: Compressor Clutch <b>will not</b> engage if system charge is excessively low).</p> <p>* Moisture or Air present in System.</p>	<p>* Cable Operated Valve: Clamp off the heater hose line containing the Coolant Valve and re-test the air conditioner. If the performance improves, the valve may be incorrectly adjusted or leaking. Assure that the coolant flow through the valve is in the same direction as the flow arrow printed or molded onto the Valve itself. Readjust cable so that Valve is in full closed position when Control Panel Temperature Knob is in the full Cool Position. Replace Valve if no improvement is observed.</p> <p>* Examine fin region of Condenser for debris and bent fins. Clean and straighten as required. Repair and/or replace Condenser Fan componentry as required.</p> <p>* Install manifold gage set onto High and Low Service Ports and operate A/C. Observe for low pressures. If low pressures are observed, leak check all A/C components. If leak is found, discharge and recover remaining refrigerant and repair or replace components as required. Check oil level in Compressor, Evacuate and recharge.</p> <p>* Discharge and recover Refrigerant. Replace Receiver Drier. Check oil level in Compressor, evacuate and recharge.</p>

NOTE: FOLLOW DIAGNOSIS PROCEDURE IN "REMEDY" COLUMN IN THE ORDER LISTED.

## AIR CONDITIONING TROUBLE SHOOTING (Cont'd)

<b><u>PROBLEM</u></b>	<b><u>POSSIBLE CAUSES</u></b>	<b><u>REMEDY</u></b>
1. Cont'd	<ul style="list-style-type: none"><li>* Restriction in Receiver Drier or Liquid Line resulting in a starved Evaporator.</li><li>* Defective Expansion Valve restricting flow.</li><li>* Defective, Worn or Leaking Compressor</li></ul>	<ul style="list-style-type: none"><li>* If Low and High side readings are excessively Low and/or the Liquid Line at the Expansion Valve is cool to the touch and showing signs of sweating or frosting, discharge and recover refrigerant. Replace the Receiver Drier, Liquid Lines or any other defective parts. Check oil level in Compressor, evacuate and recharge.</li><li>* Symptoms are same as Receiver Drier restriction. Discharge and recover Refrigerant. Remove and replace Expansion Valve. Check Oil level in Compressor, evacuate and recharge.</li><li>* Low side gage reading too high and High Side gage reading too Low. Discharge and recover refrigerant. Remove and replace new or rebuilt Compressor and replace Receiver Drier. Check oil level in compressor, evacuate and recharge.</li></ul>
2. Inadequate Cooling during hot part of the Day	<ul style="list-style-type: none"><li>* Excessive moisture in system freezing in Expansion Valve and restricting refrigerant flow.</li></ul>	<ul style="list-style-type: none"><li>* Discharge and recover Refrigerant. Replace Receiver Drier, check oil level in compressor, evacuate and recharge.</li></ul>
3. Gradual Loss over time of Cooling and air flow during A/C Operation	<ul style="list-style-type: none"><li>* Defective Thermostat, causing continuous operation of compressor thereby freezing condensate within Evaporator Core.</li></ul>	<ul style="list-style-type: none"><li>* Examine Capillary Tube of Thermostat to ensure that it is inserted into the approximate Evaporator core center and retest. If core still freezes and Compressor Clutch doesn't cycle off, replace Thermostat.</li></ul>

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## **AIR CONDITIONING TROUBLE SHOOTING (Cont'd)**

<b><u>PROBLEM</u></b>	<b><u>POSSIBLE CAUSES</u></b>	<b><u>REMEDY</u></b>
4. Compressor Clutch cycles too rapidly or discharge air warms excessively during compressor clutch "OFF" Cycle.	* Defective Thermostat	* Replace Thermostat

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