

SYSTEM DIAGNOSTICS - EVANS HVAC SYSTEM WITH ATC 2000

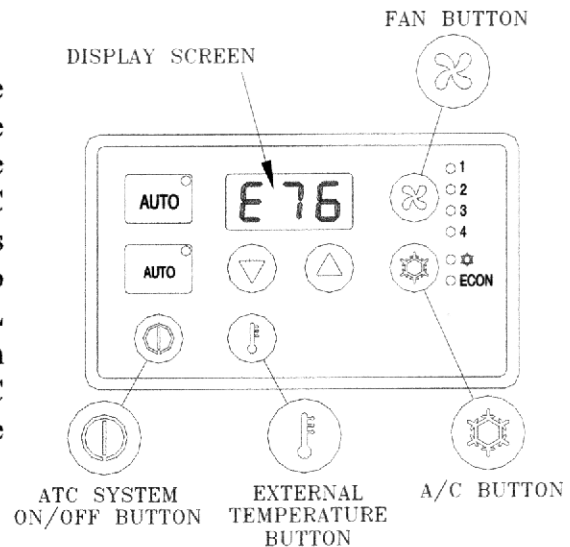
The microcomputer can be placed in a diagnostic mode to independently exercise each system component for operation to verify proper function or help troubleshoot problems.

NOTES:

- All tests should be performed with the vehicle running.
- The fan will not operate until the Coolant Temperature Threshold Thermostat located in the Heater Valve has opened, signaling the system that the coolant is warm enough to provide heat.
- **AUTO** buttons are not used during Systems Diagnostics.
- For diagnostics and troubleshooting, it may be beneficial to change the program code setting for **Function 16** to **1**. In this setting, the high bar of the hundreds digit will be illuminated when the coolant valve is allowed to pass engine coolant into the heater core. The bottom bar of the hundreds digit will illuminate when the AC is on. These illuminated bars are merely an indicator that a signal is being sent to the valve or condenser, but do not mean the device is functioning correctly. Physical verification that the device is operating is still necessary (See Power Module Programming).

1. TO ENTER DIAGNOSTICS (MANUAL) MODE:

Turn on power to the unit and press the **EXTERNAL TEMPERATURE** button. While the external temperature is being displayed on the control module screen, press the **FAN** and **A/C** buttons at the same time. All display segments and lamps will illuminate as a test pattern to verify proper operation. Press the **EXTERNAL TEMPERATURE** button again to proceed with the Diagnostic program. Press the **ATC SYSTEM ON/OFF** button to exit the Diagnostics Mode at any time.



2. INTERNAL TEMPERATURE SENSOR:

The display screen will now show the Interior Temperature Sensor reading instead of the pre-set temperature. This may be used to verify that the sensor is functioning properly. Blowing hot or cold air into the sensor grill should cause the displayed temperature to go up or down. Place a piece of tissue paper over the sensor grill (which should remain in place after you let go of it) to verify that the aspirator fan is drawing air in through the sensor housing.

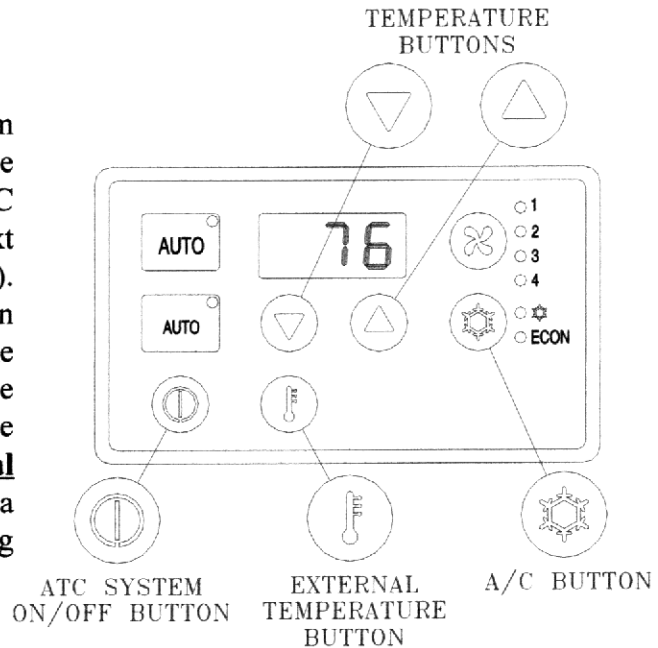


3. FAN SPEEDS:

Press the **FAN** button sequentially to manually drive the blower fan through all sixteen fan speeds. the operating speed will be displayed on the display screen. See note at beginning regarding Coolant Temperature Threshold Thermostat.

4. AIR CONDITIONER DIAGNOSTICS:

Press the **A/C** button to turn the A/C system on (light next to the small snowflake symbol will be illuminated). Press the **A/C** button to turn the A/C system off (light next to the word "ECON" will be illuminated). Press the **TEMPERATURE DOWN** button to insure heater valve is closed. Confirm the A/C system is operating by observing the temperature of the air from the discharge vents. Refer to **Section IX Functional Testing and Diagnostics Procedure** for a more detailed operational check and testing of the A/C system.



5. HEATING SYSTEM DIAGNOSTICS:

The **TEMPERATURE UP** and **DOWN ARROW** buttons are used to control the Heater Valve in Diagnostics Mode. Press the **TEMPERATURE UP** button to open the Heater Valve (hot coolant is permitted to flow into the heater core). Verify proper operation of the Heater Valve by observing the rise in the temperature of the air from the discharge vents. Press the **TEMPERATURE DOWN** button to close the Heater Valve (coolant bypasses the heater core). Verify proper operation of the Heater Valve by observing the change in the temperature of the air from the discharge vents. Remember, it takes a short period of time for the residual heat in the heater core to dissipate once the Heater Valve is closed.

6. EXTERNAL TEMPERATURE SENSOR:

Pressing the **EXTERNAL TEMPERATURE** button will momentarily display the outside temperature. Verify that the temperature is reasonably accurate.

- In a stationary idle test, it is not unusual for the temperature reading to be significantly higher than the expected outside ambient temperature when testing the External sensor because hot air from the engine may flow over the sensor if the vehicle is not moving.

PRESS THE ON/OFF BUTTON TO RETURN TO NORMAL OPERATION.