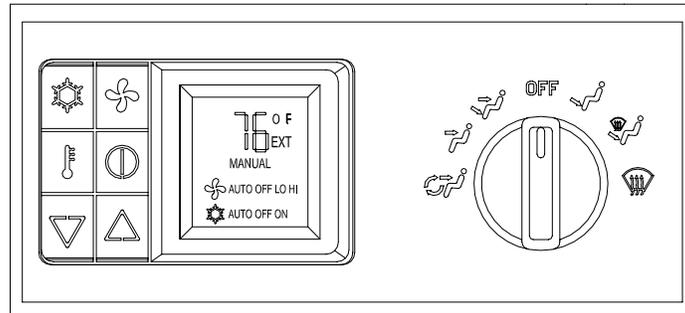


# OPERATING INSTRUCTIONS

## AUTOMATIC TEMPERATURE CONTROL OPERATION

The control panel enables the driver to preset the controls to a desired temperature and allow the system to automatically maintain that temperature. The system will automatically modulate the fan speed and temperature of the discharged air to maintain the preset control temperature.

### AUTOMATIC TEMPERATURE CONTROL PANEL



Keypad type buttons provide access to the various functions of the ATC system. The Mode Switch is used to turn the entire system on, as well as select the vents through which the air enters the passenger compartment: Defrost, Bi-Levels, Floor, Vent (Dash), Recirculation. All these functions are explained in greater detail later.

### TO USE THE AUTOMATIC TEMPERATURE (ATC) CONTROL SYSTEM, FOLLOW THESE SIMPLE STEPS:



**Turn the ATC On.** --With the vehicle running, place the Mode Switch in any position other than OFF. Press the On/Off button to turn the system on.



**Set the desired temperature.** --Use the Up/Down Arrow buttons to select the temperature you would like to maintain inside the vehicle. Holding the appropriate button down will cause the temperature to increase or decrease automatically.



**Select automatic fan operation.** --Depress the Fan Button until "Auto" appears on the display next to the fan symbol.



**Select automatic AC operation.** --Depress the AC Button until "Auto" appears in the display next to the snowflake symbol.

As set above, the system will automatically reach and maintain the desired temperature year round. You need only make changes if you want to modify the temperature (use Up/Down Arrow buttons to do this) or to change the air discharge mode (mode switch).

## IN ADDITION TO FULLY AUTOMATIC OPERATION, THE SYSTEM MAY BE SET AS FOLLOWS:



**Outside Air Temperature** -- Depressing the outside Air Temperature button will cause the Control Module to momentarily display the outside air temperature. This does not affect the system operation in any other way. The "EXT" symbol will appear in the display to indicate that the outside temperature is being displayed.

**Ice Warning** -- The "EXT" symbol will blink once every ten seconds when the outside air temperature is within  $\pm 6^{\circ}$  F /  $\pm 4^{\circ}$  C of freezing ( $32^{\circ}$  F/ $0^{\circ}$  C). This feature indicates the possibility of icy road conditions, and that care should be exercised while driving. It is only a warning and not an absolute indication of road condition. If the blinking "EXT" ice warning signal is distracting, it may be turned off as follows:

- 1) Press the Outside Air Temperature button, and
- 2) While the Outside Air Temperature is being displayed, press the Down Arrow button. This will turn off the ice warning feature until the vehicle is turned off and restarted. If you would like to turn the Ice Warning feature back on without having to turn off and restart the vehicle:
  - 1) Press the Outside Air Temperature button, and
  - 2) While the Outside Air Temperature is being displayed, press the Up Arrow button.

If you would like to permanently disable the Ice Warning feature (so that it will not reset each time the vehicle is started):

- 1) Press the Outside Air Temperature button, and
- 2) While the Outside Air Temperature is being displayed, press both the Up Arrow and the Down Arrow buttons simultaneously. This will turn off the ice warning feature until you reactivate it by repeating steps 1 and 2 above.



**Fan Speed Control** -- When the fan is in the "Auto" Mode, the system automatically varies the fan speed from low to high. Should you choose to limit the speed of the blower fan, the system offers the following options which are accessed by depressing the Fan button:

**Auto Lo** -- This is the most commonly used fan speed mode besides "Auto". As in "Auto" mode, the system automatically varies the fan speed to reach and maintain the desired cabin temperature but the maximum speed is slower than that in "Auto" mode, and the slowest speed is slower than the minimum attainable in "Auto" mode. "Auto Lo" is generally used to reduce the fan speed if the operator feels that the elevated air flow causes discomfort or too much noise.

**Hi** -- The "Hi" fan mode sets the blower fan to a constant maximum speed regardless of temperature conditions. Heat and air conditioning are still controlled automatically to maintain the desired cabin temperature. "Hi" is generally used when defrosting/defogging vehicle windows, or when maximum air circulation is desired.

**Lo** -- The "Lo" fan mode sets the blower fan to a constant low speed regardless of temperature conditions. Heat and air conditioning are still controlled automatically to maintain the desired cabin temperature. "Lo" is generally used when moderate air flow is desired.



**Automatic Air Conditioning** -- The Automatic Air Conditioning operation may also be overridden. In addition to "Auto" mode, you may also select:

**AC ON** -- Turns the AC on regardless of temperature conditions. However, the AC pressure safety switch will not allow the AC compressor to engage until outside air temperatures are approximately  $32^{\circ}$ F or higher. The temperature control remains automatic. Heating is still regulated by the system to

maintain the desired temperature; and the heat will overpower the AC when necessary. Because the AC removes moisture from the air, "AC ON" mode is used to dehumidify cabin air which will help prevent windows from fogging on rainy or humid days.

**AC OFF** -- Mode turns the AC off. The AC will not turn on even if cooling is required. This permits the flow of outside air only (no AC) when cooling is required and achieves the same results as "Vent" or "Econ" settings on some systems.

## AIR DIRECTION CONTROL

The key to optimal comfort and performance from your Automatic Temperature Control System is the selection of the appropriate air direction. Air direction is selected by turning the Mode Switch to one of the following positions:



**DEFROST** -- Outside air is drawn into the system and discharged through the defrost outlets.



**MIX** -- Outside air is drawn into the system and discharged through the floor and defrost outlets.



**FLOOR** -- Outside air is drawn into the system and discharged through the floor outlets. In some models a small amount of air is directed to the windshield for defrost.



**BI-LEVEL** -- Outside air is drawn into the system and discharged through the dash louvers, floor, and defrost outlets.



**VENT** -- Outside air is drawn into the system and discharged through the dash louvers. For enhanced passenger comfort, upper-level ventilation air is also discharged through the defrost outlets.



**PANEL** -- Outside air is drawn into the system and discharged through the dash louvers. These louvers can be adjusted for maximum comfort.



**RECIRCULATION** -- Air is drawn from the passenger compartment (Recirculated Air) and discharged through the dash louvers. This position is used to provide maximum heating or cooling, and is generally used during extremely hot or cold weather conditions. Because the RECIRCULATION mode does not allow fresh "outside" air into the passenger compartment, it may cause fogging of the windshield and stale air, when used for prolonged periods of time. Switch to PANEL mode periodically if these conditions occur. RECIRCULATION mode is recommended for initial cool-down or warm-up periods.

## IMPORTANT OPERATING INSTRUCTIONS

Research has shown that most people are comfortable in a vehicle which is between 73°F/23°C and 80°F/27°C. You will probably also find that your ideal temperature varies with conditions, such as time of

day (day or night ) and sunload (heating effects of the sun). In general, it is best to select a slightly warmer temperature at night than the temperature you find comfortable during the daytime. Experiment with different temperatures until you find your ideal comfort zone.

### **Winter Operation**

- The discharge air will heat up faster if the blower is operated on lower speeds until the engine is hot.

Note: There is a coolant temperature threshold thermostat located in the heater valve to monitor coolant temperature. This sensor notifies the microprocessor when the coolant is warm enough to supply heat to the passenger compartment. **UNTIL HEAT IS AVAILABLE, THE MICROPROCESSOR PREVENTS THE FAN FROM BLOWING, THUS AVOIDING DRIVER/PASSENGER DISCOMFORT.**

- For windshield de-icing, use **DEFROST** mode.

### **Summer Operation**

- Use **RECIRCULATION** and **HI** blower speed for a quick cool down.
- A lower blower speed produces cooler discharge air temperatures.
- Close all windows and vents to hot humid outside air.
- Close all curtains which do not obstruct the driver's vision.

### **CARE AND SERVICE**

- Keep the condenser and radiator free of bugs and debris.
- During periods of little use, operate the A/C system monthly to keep the compressor and seals lubricated.
- Periodically inspect the belts and hoses for wear and proper tension.
- Periodically check for proper coolant levels.