

AIRFLOW MODE CONTROL [FULL-AUTO AIR CONDITIONER]

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Purpose

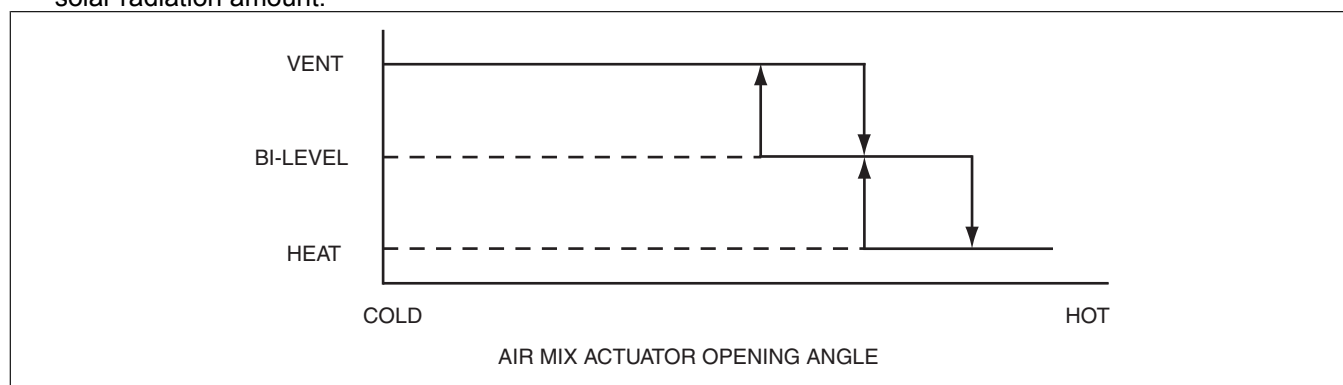
- The airflow mode control changes the airflow mode according to the vehicle environment.

Function

- The airflow mode control drives the airflow mode actuator according to the mode switch, defroster switch, and the vehicle environment and switches the position of the airflow mode door.
- The airflow mode control has automatic and manual controls.
- The airflow mode automatic control performs the following correction:
 - Engine coolant temperature correction (warm-up correction)

Airflow mode automatic control

- The climate control unit determines the airflow mode based on the current air mix actuator opening angle and solar radiation amount.



- Determined value used for the airflow mode is changed according to the signal from the solar radiation sensor.

Airflow mode manual control

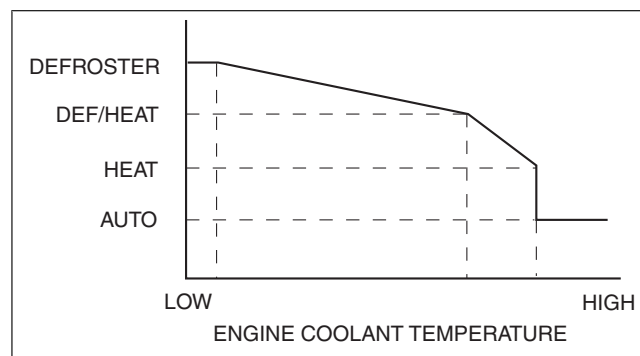
- The climate control unit switches the airflow mode based on the MODE switch operation.

Airflow mode	Operation switch	Air vent
VENT	Mode switch	CENTER VENT, SIDE VENT
BI-LEVEL		CENTER VENT, SIDE VENT, FRONT HEAT, REAR HEAT
HEAT		FRONT HEAT, REAR HEAT, SIDE DEMISTER (low volume), DEFROSTER (low volume), SIDE VENT (low volume)
DEF/HEAT		FRONT HEAT, REAR HEAT, SIDE DEMISTER, DEFROSTER, SIDE VENT (low volume)
DEFROSTER	DEFROSTER switch	SIDE DEMISTER, DEFROSTER, SIDE VENT (low volume)

Correction

Engine coolant temperature correction (warm-up correction)

- The engine coolant temperature correction (warm-up correction) prevents cold air from coming out of the lower vents after engine start in winter.
- The engine coolant temperature correction (warm-up correction) switches the airflow mode according to the increase in the engine coolant temperature.



Construction

- The airflow volume control consists of the parts indicated in the following table:

Input device	Control part	Output device
<ul style="list-style-type: none"> Defroster switch (climate control unit) Mode switch (climate control unit) Cabin temperature sensor Solar radiation sensor Air mix actuator Engine coolant temperature sensor 	<ul style="list-style-type: none"> Climate control unit PCM Instrument cluster 	<ul style="list-style-type: none"> Airflow mode actuator Airflow mode door

Operation

1. The climate control unit determines the airflow mode based on the operations of the mode and defroster switches and signals from each sensor which changes according to the vehicle environment.
2. The climate control unit drives the airflow mode actuator according to the results of the airflow mode determination and corrections.

