System Outline

1. Heater Blower Operation

Manual operation

When the blower speed is set to a certain level using the blower control SW, the A/C control assembly sends the signals to the blower control to control the blower motor speed.

Auto operation

When the auto SW is turned on, the A/C control assembly sends the signals from various sensors and temperature SW to the blower control to automatically control the blower motor speed.

2. Air Inlet Control Servo Motor Control

When the FRESH/RECIRC select SW is set to RECIRC, the motor in the air inlet control servo motor starts rotating to move the damper toward the RECIRC side. When the FRESH/RECIRC select SW is set to FRESH, the motor in the air inlet control servo motor starts rotating to move the damper toward the FRESH side.

3. Air Vent Mode Control Servo Motor Control

When the mode select SW is pushed, the ECU in the A/C control assembly activates the air vent mode control servo motor. This causes the servo motor to rotate to the position (FACE, BI–LEVEL, FOOT, FOOT/DEF, DEF) selected using the mode select SW, and moves the film damper.

4. Air Mix Control Servo Motor Control

When the temperature control SW is pressed, the ECU in the A/C control assembly sends a signal to the air mix control servo motor. This signal drives the motor to reach the temperature set by the temperature control SW, and moves the damper.

5. Air Conditioner Operation

The A/C control assembly receives various signals, I.E., the engine RPM from the engine and ECT ECU (A/T), engine ECU (M/T), out side air temperature signal from the A/C ambient temp. sensor, coolant temperature from the engine and ECT ECU (A/T), engine ECU (M/T) and the lock signal from the A/C compressor, etc.

When the engine is started and the A/C SW (A/C control assembly) is on, a signal is input to the A/C control assembly.

As a result, the ground circuit in A/C control assembly is closed and current flows from HTR (10A) fuse to TERMINAL 1 of the MG CLT relay to TERMINAL 3 of the diode to TERMINAL MGCL of the engine and ECT ECU (A/T), engine ECU (M/T) to TERMINAL PRE to GROUND, turning the MG CLT relay on, so that the magnetic clutch is on and the A/C compressor operates.

At the same time, the engine and ECT ECU (A/T), engine ECU (M/T). Detects the magnetic clutch is on and the A/C compressor operates.

If the A/C control assembly detects the following conditions, it stops the air conditioner:

* Evaporator outlet air is too low.
* There is a marked difference between the compressor speed and the engine speed.
* The refrigerant pressure is abnormally high or abnormally low.
* The engine speed is too low.
* Rapid acceleration occurs.

Service Hints

P2 Pressure SW

1–4 : Open with the refrigerant pressure at less than approx. 216 kpa (2.2 kgf/cm^2, 31 psi) or more than approx. 3138 kpa (32 kgf/cm^2, 455 psi)

A17 (A) A/C Control Assembly

B–Ground : Always approx. 12 volts
IG–Ground : Approx. 12 volts with ignition SW at ON or ST position
AIF–Ground : Approx. 12 volts with FRESH SW on
AIR–Ground : Approx. 12 volts with RECIRC SW on
GND–Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code		See Page
A1	36 (LHD 1MZ–FE)	A20	40 (LHD)	D1		36 (LHD 1MZ–FE)
	38 (*1)		50 (RHD)			38 (*1)
	46 (RHD 1MZ–FE)	A23	40 (LHD)			46 (RHD 1MZ–FE)
	48 (*2)		50 (RHD)			48 (*2)
A3	36 (LHD 1MZ–FE)	A24	40 (LHD)	E7	B	40 (LHD)
	38 (*1)		50 (RHD)			50 (RHD)
	46 (RHD 1MZ–FE)	A25	40 (LHD)	E8	C	40 (LHD)
	48 (*2)		50 (RHD)			50 (RHD)
A17	40 (LHD)	B3	40 (LHD)	J1		41 (LHD)
	50 (RHD)		50 (RHD)			51 (RHD)
A18	40 (LHD)	B4	40 (LHD)	P2		37 (LHD 1MZ–FE)
	50 (RHD)		50 (RHD)			39 (*1)
A19	40 (LHD)	C5	40 (LHD)			47 (RHD 1MZ–FE)
	50 (RHD)		50 (RHD)			49 (*2)

* 1 : LHD 2AZ–FE, 1AZ–FE * 2 : RHD 2AZ–FE, 1AZ–FE

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1H		
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
1L		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
3A	34 (LHD)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (RHD)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace LH)
3B	34 (LHD)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (RHD)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace LH)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF2	60 (LHD)	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
	72 (RHD)	Engine Room Main Wire and Instrument Panel Wire (Left Side of Steering Column Tube)
IF3	60 (LHD)	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
	72 (RHD)	Engine Room Main Wire and Instrument Panel Wire (Left Side of Steering Column Tube)
IF5	60 (LHD)	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
	72 (RHD)	Engine Room Main Wire and Instrument Panel Wire (Left Side of Steering Column Tube)
IG1	62 (LHD)	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
	74 (RHD)	Instrument Panel Wire and Engine Room Main Wire (Left Side of Steering Column Tube)
IH1	62 (LHD)	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
	74 (RHD)	
II1	62 (LHD)	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
	74 (RHD)	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement LH)
IJ1	62 (LHD)	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
	74 (RHD)	
IK2	62 (LHD)	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
	74 (RHD)	

: Ground Points

Code	See Page	Ground Points Location
EB	56 (LHD 1MZ–FE)	Right Fender
	58 (*1)	
	68 (RHD 1MZ–FE)	
	70 (*2)	
EC	56 (LHD 1MZ–FE)	Left Fender
	58 (*1)	
	68 (RHD 1MZ–FE)	
	70 (*2)	
EF	56 (LHD 1MZ–FE)	Rear Side of Surge Tank
	68 (RHD 1MZ–FE)	
EG	58 (*1)	Left Side of Cylinder Head
	70 (*2)	
II	60 (LHD)	Cowl Side Panel LH
	72 (RHD)	Instrument Panel Reinforcement LH
IN	60 (LHD)	Instrument Panel Reinforcement RH
	72 (RHD)	

* 1 : LHD 2AZ–FE, 1AZ–FE * 2 : RHD 2AZ–FE, 1AZ–FE

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	62 (LHD)	A/C Sub Wire	I5	74 (RHD)	A/C Sub Wire