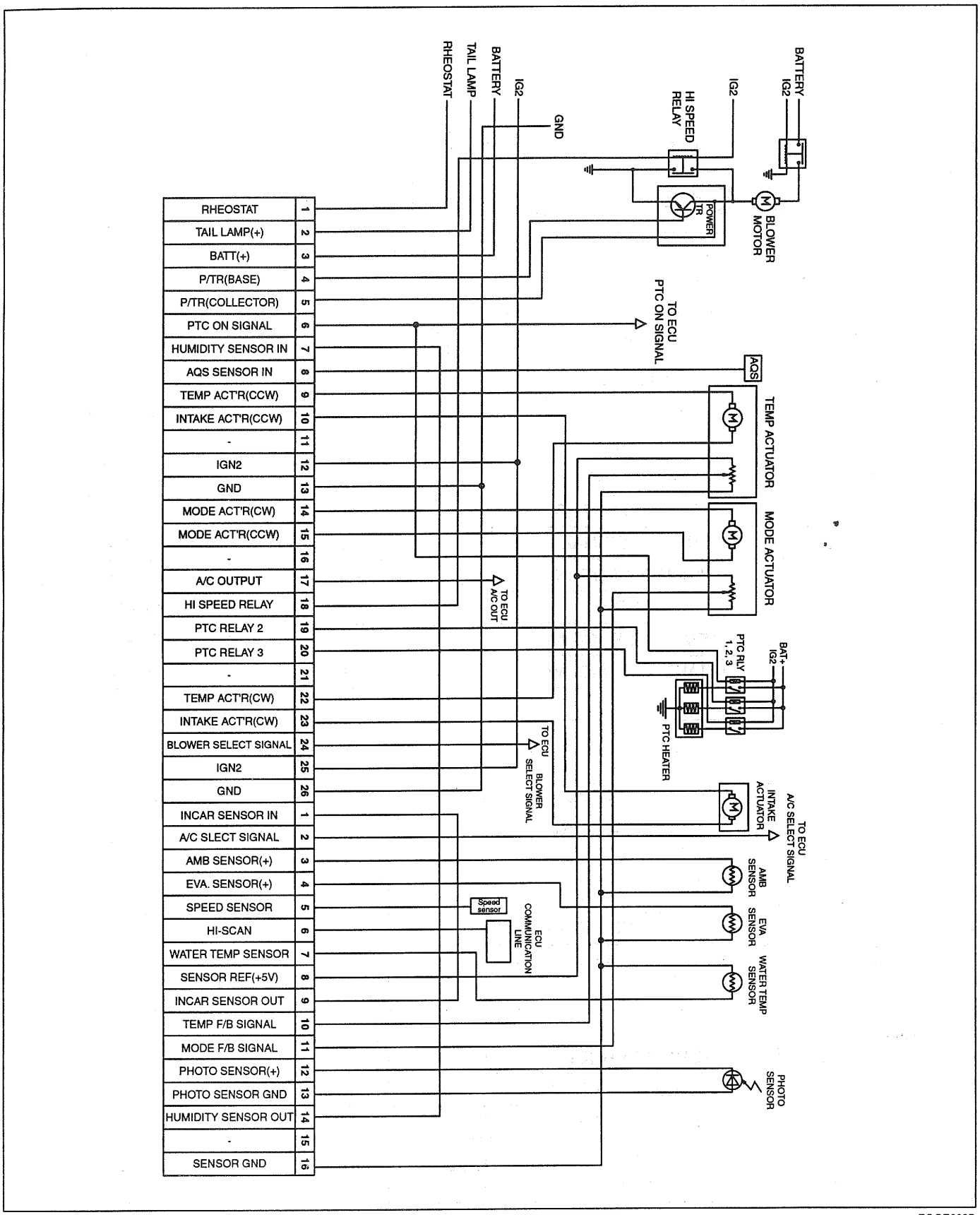
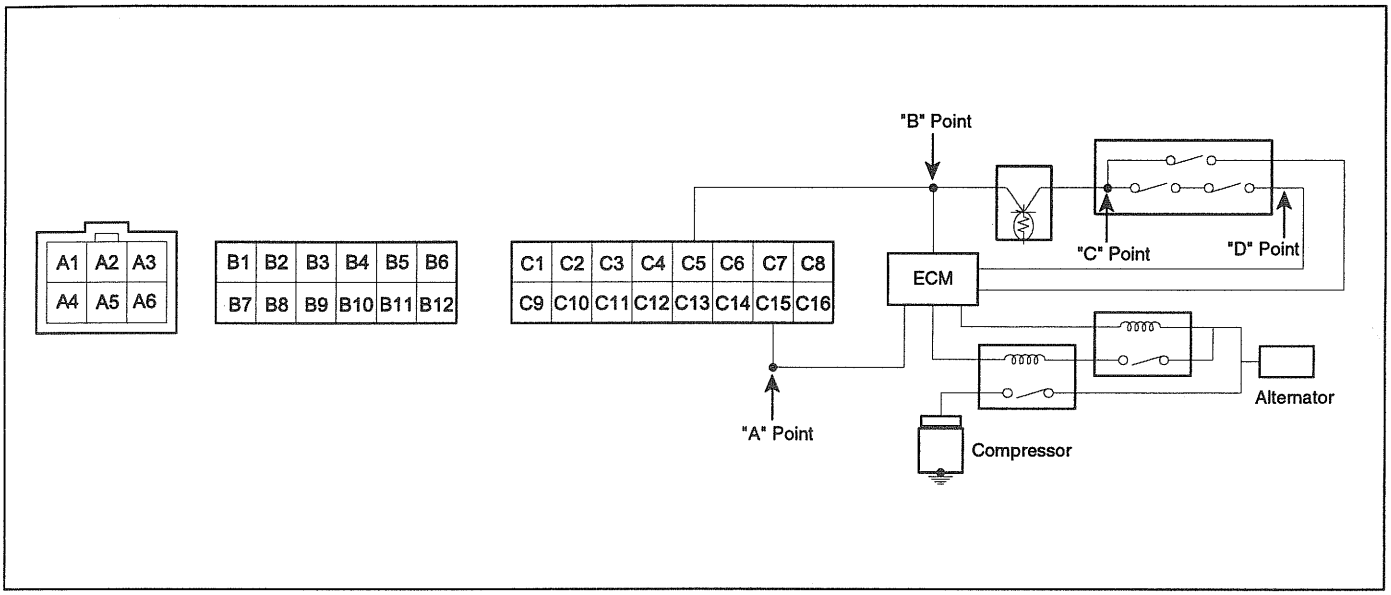
CIRCUIT DIAGRAM E1D106AC



EQQE602B

A/C CHECK



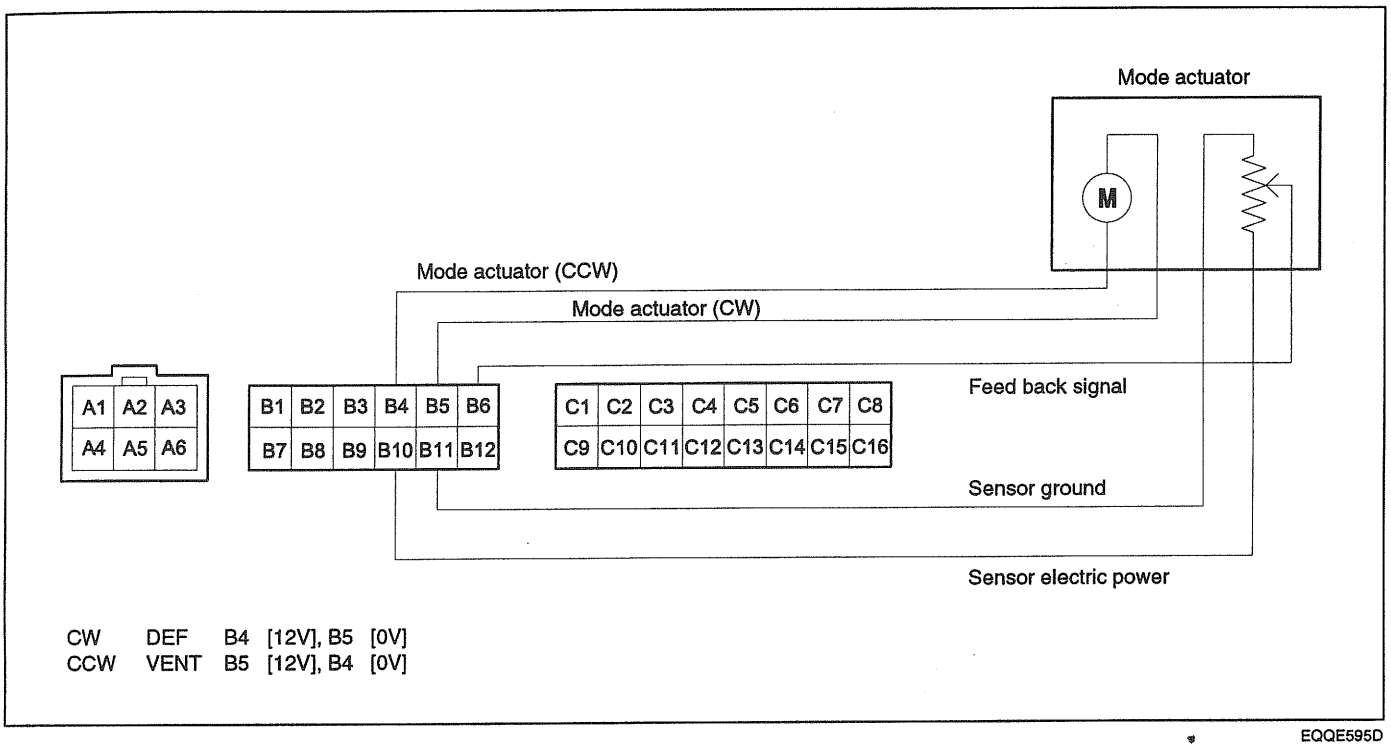
EQQE595B

For A/CON output, blower must be basically operated. When blower speed 1 is selected, blower relay is turned ON and voltage is supplied to point "A".
When the supplied voltage at point "A" is entered into control connector C15 and at this moment when A/CON switch is turned ON, voltage is supplied to connector C5 at 9V or more.
Thermistor value determines whether the input power at point "B" is supplied to point "C".
The state of ON/OFF of triple switch determines whether the input power at point "C" is supplied to point "D".
Finally when the voltage is supplied to point "D", engine ECU determines whether A/CON and CONDENSER FAN turned ON/OFF.

TROUBLESHOOTING

Symptoms	Possible causes	How to check
Wind of A/CON isn't discharged into in-car despite switching OFF of A/CON	Signal output error of A/CON	With switch OFF of A/CON, and measure voltage of connector C5 as shown in the above figure. If the voltage is 9V or more, check the triple switch, ENG ECU, and wires.

MODE CHECK



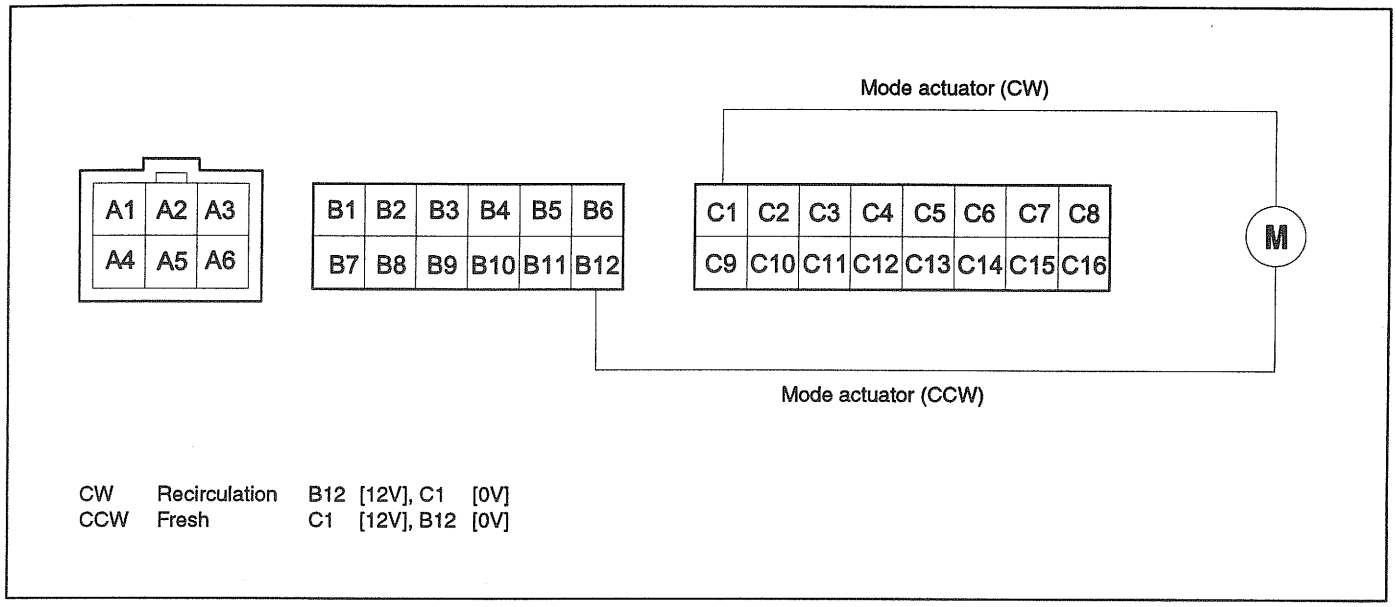
EQQE595D

As shown in the above figure, in adjusting mode switch from VENT to DEF, 12V is outputted from connector B4, 0V is supplied for B5 and mode motor works in direction of DEF. In adjusting mode switch from DEF to VENT, 12V is outputted from connector B5, 0V is supplied for B4 and mode motor works in direction of VENT. When mode actuator has to move to a certain location for its automatic control, mode feedback signal terminal moves equally in mode actuator and informs controller of location of mode actuator through mode connector B6. Comparing original value with the inputted value, it works until they are same.

TROUBLESHOOTING

Symptoms	Causes	How to check
Mode actuator running error	Power supply error in mode actuator	After altering VENT to DEF, measure voltage of connector B4, and after altering DEF to VENT, measure voltage of connector B5. If both of them are 9V and more, check mode actuator and peripheral wiring state and if one or both of them are 9V and less, its cause is internal failure of control.

INTAKE CHECK



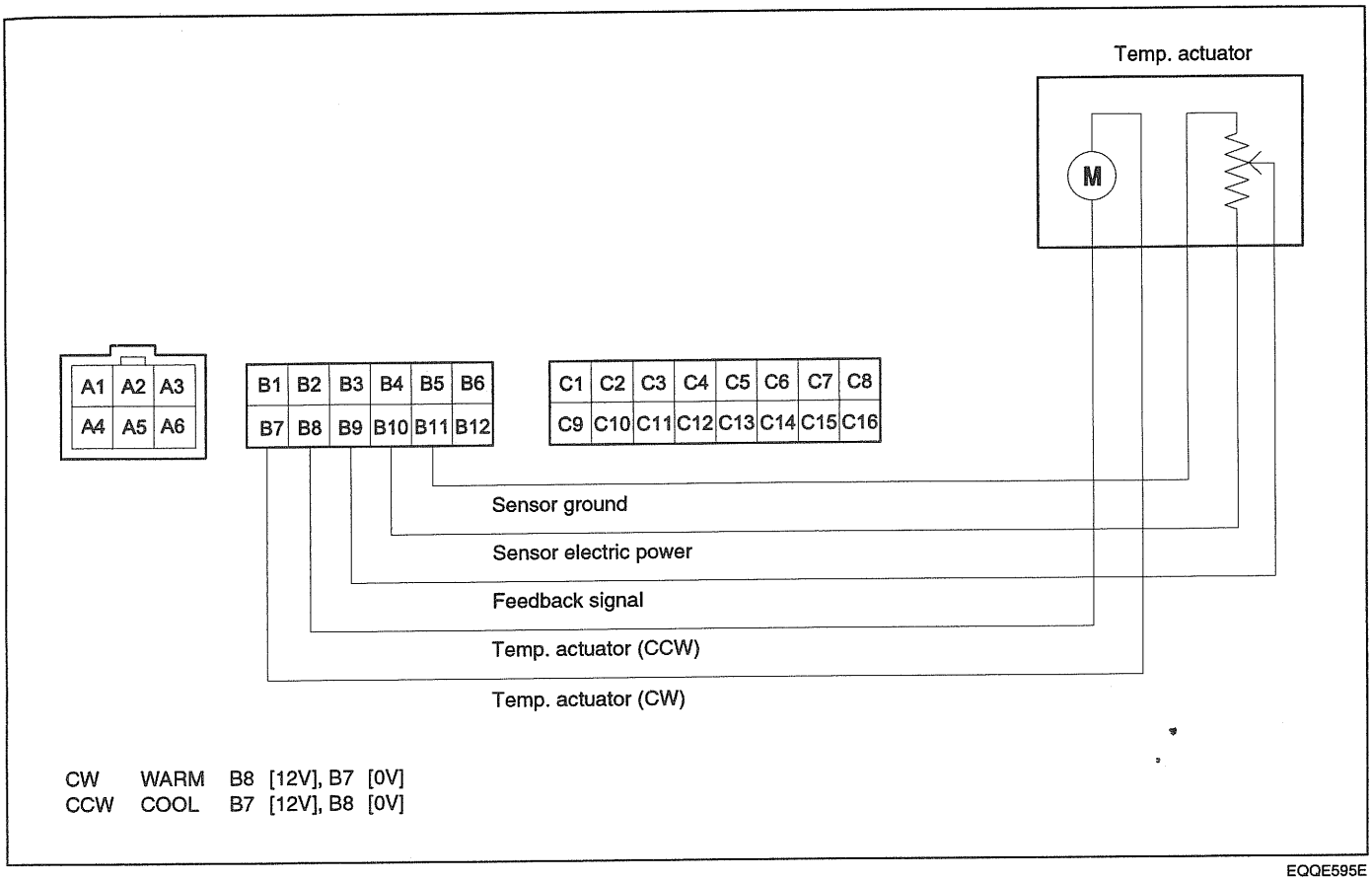
EQQE595C

In turning on IG and selecting indoor mode with indoor switch, 12V is outputted from connector B12, 0V is supplied for C1 and motor works in direction of indoor. In selecting outdoor mode with indoor switch, 12V is outputted from connector C1, 0V is supplied for B12 and motor works in direction of outdoor.

TROUBLESHOOTING

Symptoms	Causes	How to check
Indoor mode running error	Power supply error in actuator	Separate connector linked with actuator, select indoor mode with indoor switch and measure voltage of connector B12. If 9V and more, check actuator or wiring state and if 9V and less, check the inside of controller.
Outdoor mode running error	Power supply error in actuator	Select outdoor mode in the above method and measure voltage of connector C1. If 9V and more, check actuator or wiring state and if 9V and less, check the inside of controller.

TEMP.CHECK



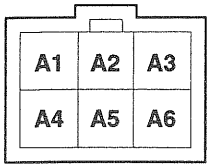
EQQE595E

As shown in the above figure, in adjusting temp. switch from WARM to COOL, 12V is outputted from temp. connector B7, 0V is supplied for B8 and temp. motor works in direction of COOL. In adjusting temp. switch from COOL to WARM, 12V is outputted from temp. connector B8, 0V is supplied for B7 and temp. motor works in direction of WARM. When temp. actuator has to move to a certain location for its automatic control, temp. feedback signal terminal moves equally in temp. actuator and informs controller of location of temp. actuator through temp. connector B9. Comparing original value with the inputted value, it works until they are same

TROUBLESHOOTING

Symptoms	Causes	How to check
Temp actuator running error	Power supply error in temp actuator	After altering COOL to WARM, measure voltage of B7, and after altering WARM to COOL, measure voltage of B8. If Both of them are 9V and more, check temp actuator and peripheral wiring state and if one or both of them are 9V and less, its cause is internal failure of control.

CONNECTOR E2E93DBB



A

B1	B2	B3	B4	B5	B6
B7	B8	B9	B10	B11	B12

B

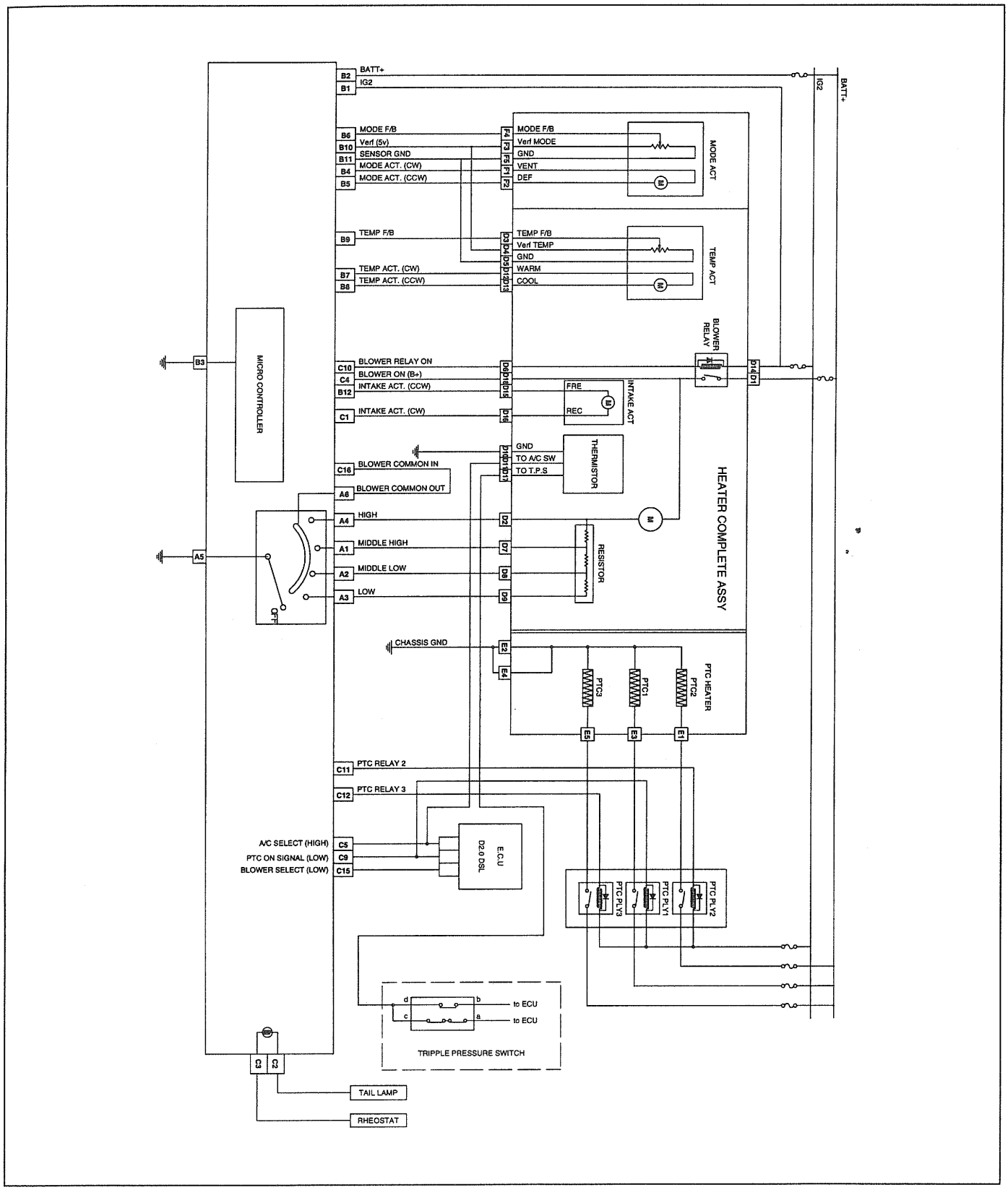
C1	C2	C3	C4	C5	C6	C7	C8
C9	C10	C11	C12	C13	C14	C15	C16

C

KQQE501C

Connector	Pin No.	Circuit	Connector	Pin NO.	Circuit
A	1	MIDDLE HIGH	C	1	REC
	2	MIDDLE LOW		2	ILL +
	3	LOW		3	ILL -
	4	HIGH		4	BLOWER ON (+)
	5	GND		5	A/C OUTPUT
	6	BLOWER COMMON OUT		6	-
B	1	IGN		7	-
	2	BAT +		8	-
	3	GND		9	PTC ON SIGNAL
	4	MODE ACTUATOR (VENT)		10	BLOWER RELAY ON
	5	MODE ACTUATOR (DEF)		11	PTC RELAY 2
	6	MODE F/BACK		12	PTC RELAY 3
	7	TEMP ACTUATOR (WARM)		13	-
	8	TEMP ACTUATOR (COOL)		14	-
	9	TEMP F/BACK		15	BLOWER SELECT SIGNAL
	10	VCC		16	BLOWER COMMON IN
	11	SENSOR GND			
	12	FRE			

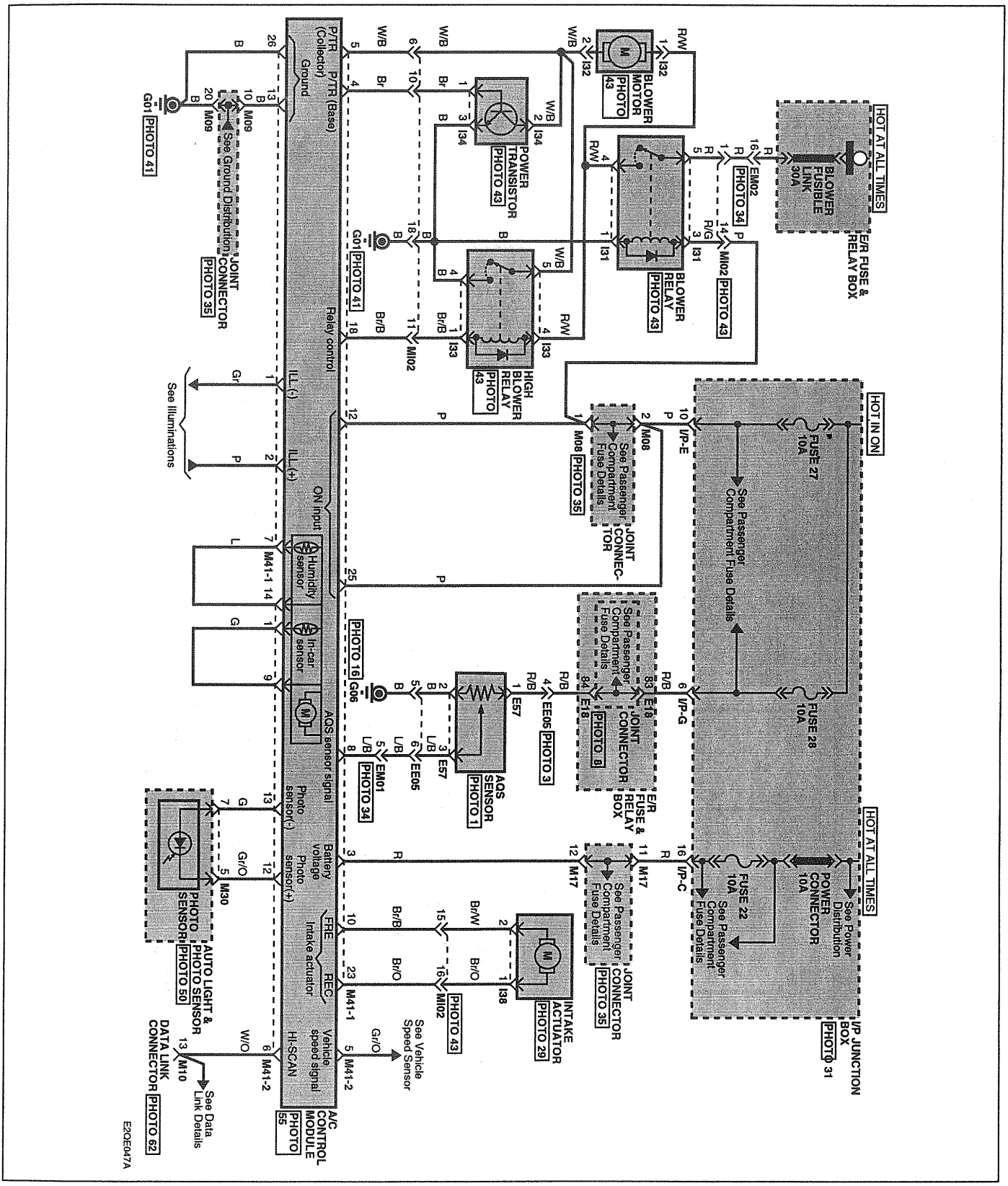
CIRCUIT DIAGRAM E940FBBC

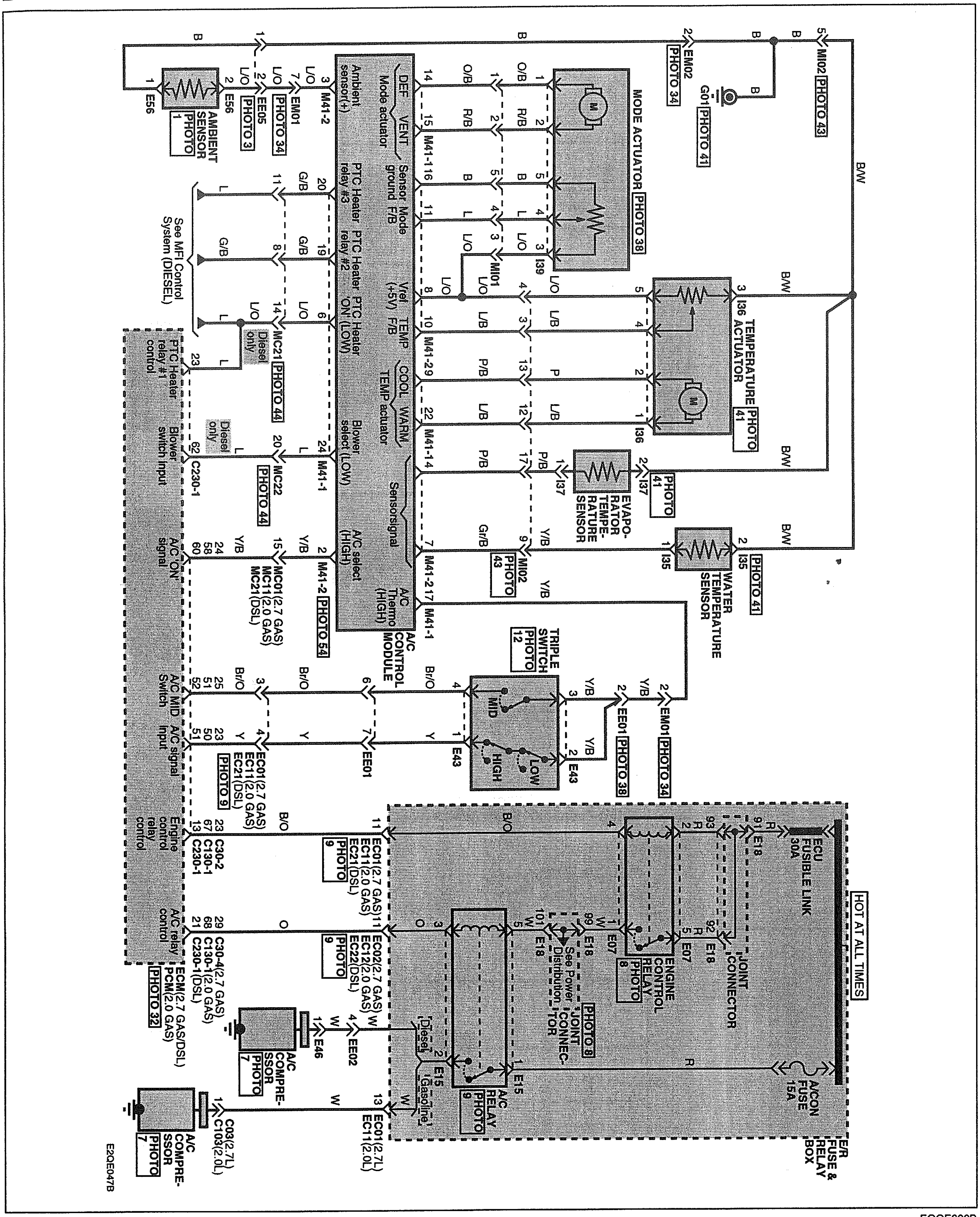


KQQE502B

BLOWER AND A/C CONTROLS (AUTOMATIC)

CIRCUIT DIAGRAM EA0581BE

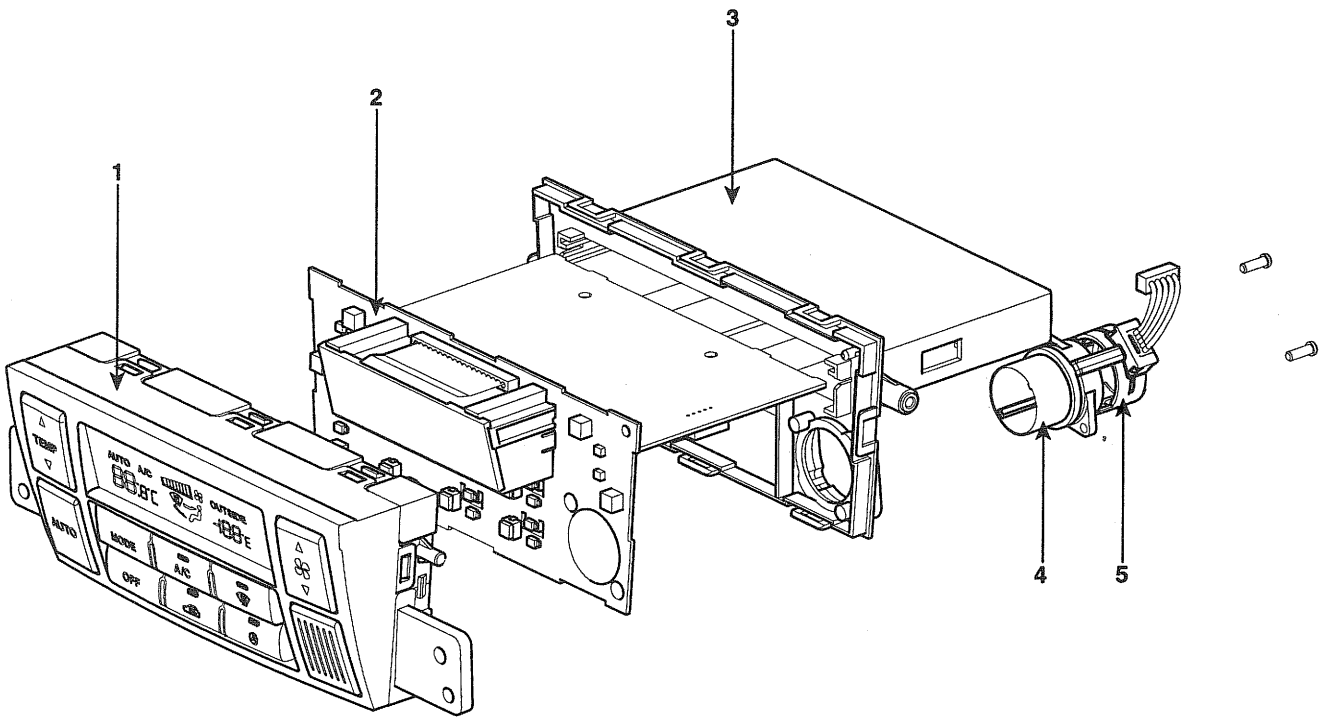



MODE ACTUATOR PHOTO 38
TEMPERATURE ACTUATOR PHOTO 41
EVAPORATOR TEMPERATURE SENSOR
WATER TEMPERATURE SENSOR
AMBIENT SENSOR PHOTO 1
A/C CONTROL MODULE
TRIPLE SWITCH PHOTO 12
HOT AT ALL TIMES
ECU FUSIBLE LINK 30A
JOINT CONNECTOR
ENGINE CONTROL RELAY PHOTO 8
A/C RELAY PHOTO 9
A/CON FUSE 15A
E/R FUSE & RELAY BOX
A/C COMPRESSOR PHOTO 7
ECM(2.7 GAS/DSL) PCM(2.0 GAS) PHOTO 32
See MFI Control System (DIESEL)
See Power Distribution
E2QE047B

EQQE600B

CONTROL PANEL

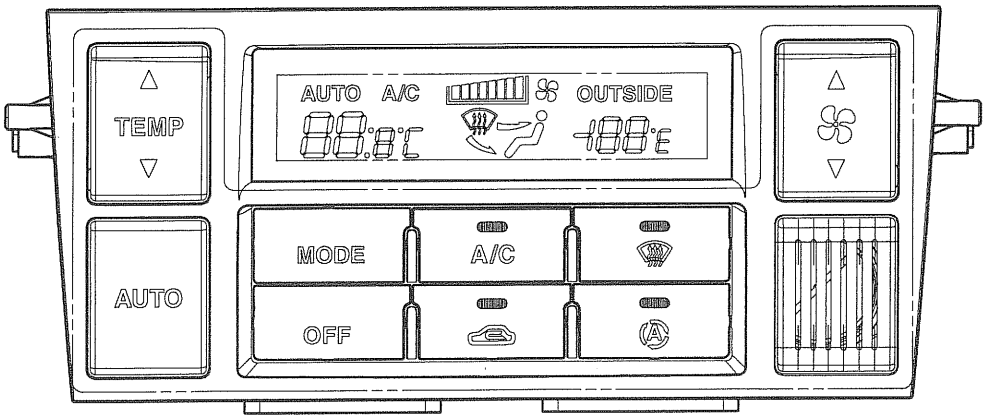
COMPONENTS EEF94B96



1. Front panel
2. Inlet panel
3. Case
4. Incar sensor
5. Incar/humidity sensor

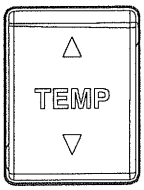
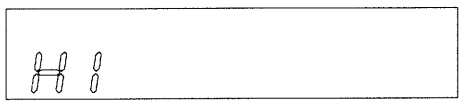
EQQE601A

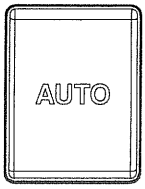
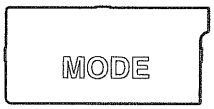
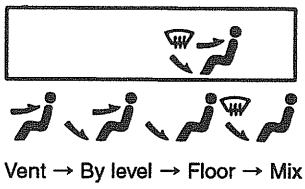
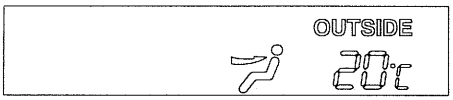
DESCRIPTION EB79FCF1

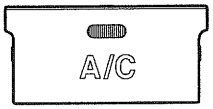
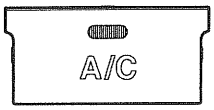
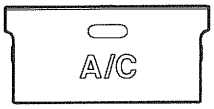
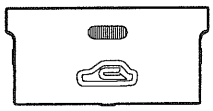
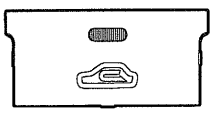
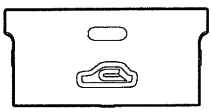


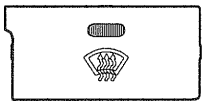
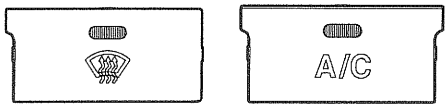
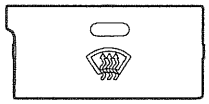
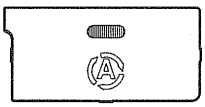
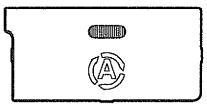
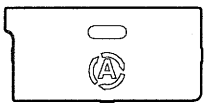
KQQE601B

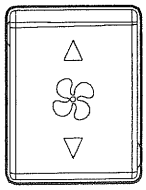
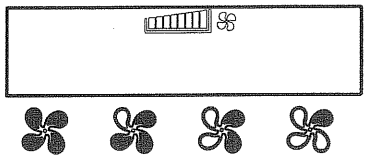
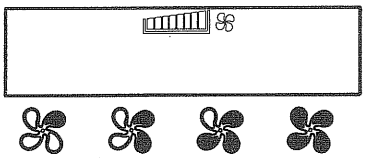
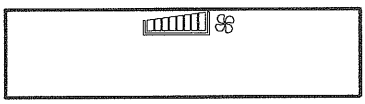
SWITCH OPERATION AND FEATURES

Switch	Feature	Switch selection	Function
Temp switch	 KQQE690A	Push DOWN button at set temperature of 25°C while operating	Select at intervals of 0.5°C from 17°C to 25°C
		Indication screen	 KQQE693A
		Push DOWN button at set temperature of 25°C while operating	Selecte at intervals 0.5°C from 17°C to 25°C
		Indication screen	 KQQE693B

Switch	Feature	Switch selection	Function
AUTO switch	 KQQE690B	Push AUTO switch under system OFF or manual opeation	Control automatically all outlet by input value of each sensor
		Indication screen	 KQBC026E
		Push AUTO switch under automatic operation	Unchanged
		Indication screen	 KQBC026E
MODE switch	 KQQE690C	Push MODE switch while operating	Indicate the followings repeatedly wheneverpushing the switch under set condition. Vent → By level → Floor → Mix
		Indication screen	 Vent → By level → Floor → Mix EQQE692A
		Push MODE switch under system OFF	Release AUTO mode and keep system OFF
OFF switch	 KQQE690D	Push OFF switch while operating	System OFF (keep TEMP and MODE intake in original condition and turn OFF blower and compressor
		Indication screen	 EQQE693C

Switch	Feature	Switch selection	Function
A/C switch	 KQQE690E	When air conditioner is OFF, push A/C switch under system OFF or operating	Turn ON air conditioner outlet
		 KQQE690E	 KQQE691B
		Push A/C switch under air conditioner ON	Turn OFF air conditioner outlet
		 KQQE691A	 KQBC026G
Air intake switch	 KQQE690F	When system is OFF, push intake switch under air outlet condition	Keep system OFF na intake door turn to air intake mode
		When system OFF, push intake switch under air intake condition	Keep ststem OFF and intake door turn to air outlet mode
		Push intake switch under air outlet when operating	Air intake mode
		When operating, push intake switch under air intake condition	Air outlet mode
		Air outlet mode indicator condition	 KQQE690F
		Air intake mode indicator condition	 KQQE691F

<table>
<tr><th>Switch</th><th>Feature</th><th>Switch selection</th><th>Function</th></tr>
<tr><td rowspan="4">DEF switch</td><td> 
KQQE690H</td><td>Push DEF switch when operating DEF mode or system OFF</td><td>Mode door : to DEF mode
A/C : ON
Intake : Outlet mode
Others : Condition before OFF</td></tr>
<tr><td rowspan="3">Indicator and indication screen</td><td colspan="2"> 
KQQE691G</td></tr>
<tr><td>Push DEF switch when operating DEF mode</td><td>Return to the condition before DEF mode</td></tr>
<tr><td colspan="2"> 
KQQE691H</td></tr>
<tr><td rowspan="5">AQS switch</td><td rowspan="5"> 
KQQE690G</td><td>Push AQS switch under AQS stopped</td><td>Control intake door by AQS signal while turning on AQS indicator</td></tr>
<tr><td>Push AQS switch when operating AQS</td><td>Return to the state before selecting AQS while turning off AQS indicator</td></tr>
<tr><td rowspan="2">Push OFF switch when operating</td><td>Turn off indication screen and AQS indicator, and intake door fixes to air intake mode</td></tr>
<tr><td>Able to select AQS, air intake, and air outlet when system OFF</td></tr>
<tr><td>Indicator condition while operating AQS</td><td> 
KQQE690G</td></tr>
<tr><td>Indicator condition under AQS stopped</td><td> 
KQQE691I</td></tr>
</table>

Switch	Feature	Switch selection	Function
Blower switch	 KQQE690I	Push blower switch ▼ while operating	Voltage between both edges of blower motor goes down to 3.8V
		Indication screen	 Level 8,7 Level 6,5 Level 4,3 Level 2,1 EQQE691C
		Push blower switch ▲ while operating	Votage between both edges of blower motor goes up to Max high
		Indication screen	 Level 1,2 Level 3,4 Level 5,6 Level 7,8 EQQE691D
		Push blower switch under system OFF	Operate with 3.8V between both edges of blower motor.
		Indication screen	 KQQE691E

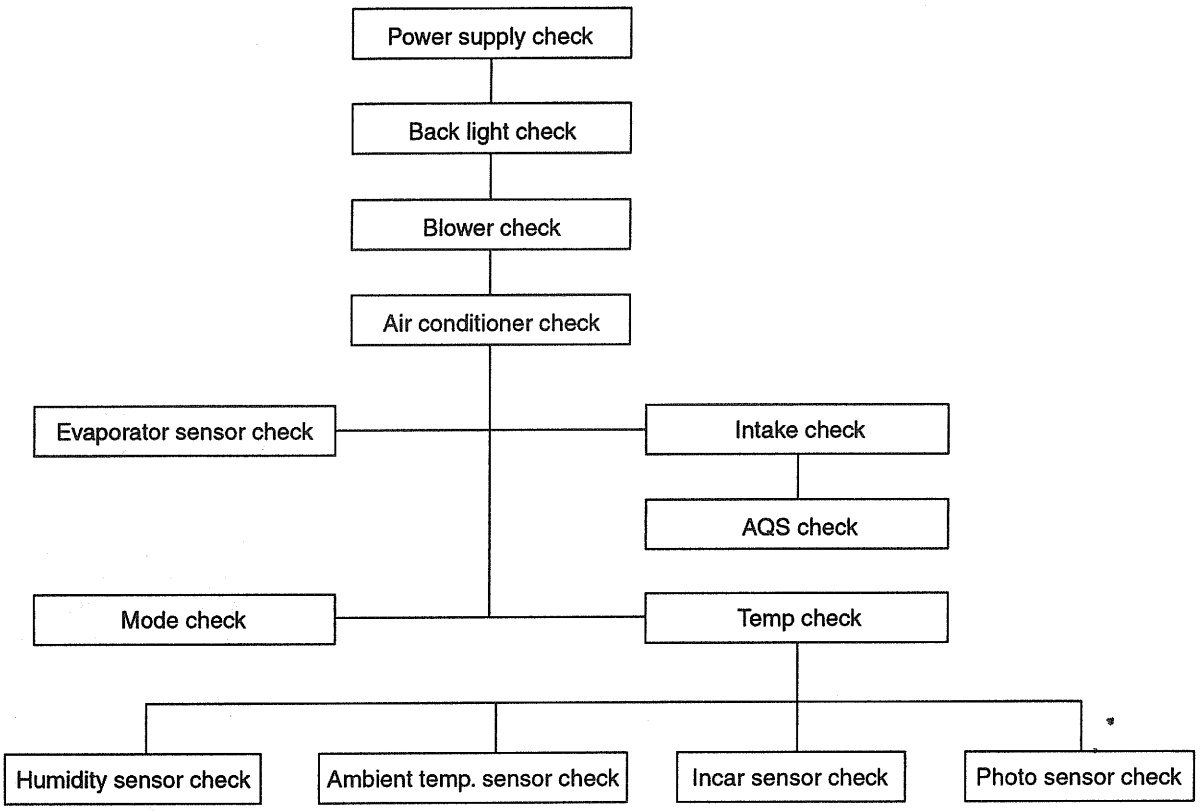
CONTROL SPECIFICATION

Control item	Control features	Remarks
Required discharge temperature	Required temperature determined by the set temperature and the inputted sensor value.	
Auto control	Required discharge temperature is determined by the set temperature and the inputted sensor value. The feature will use the required discharge temperature to perform the auto control of temp. actuator, mode actuator, intake actuator, blower motor and compressor, and maintain the set temperature stably.	
IN-CAR temperature correction	Upon detecting rapid changes of temperature from the INCAR sensor, it will gradually correct the incar temperature value.	- 1°C UP/4sec delay - 1°C DOWN/4sec delay
AMB temperature correction	Upon detecting rapid changes of temperature from the AMB sensor, it will gradually correct the ambient temperature value.	Logic of the correction speed sensor
Photo correction	Upon detecting rapid changes of photo intensity from the PHOTO sensor, it will gradually correct the photo intensity value.	- 350 → 1000(W/m²)/1min delay - 350 → 1000(W/m²)/5min delay
TEMP door control	It does the automatic control to maintain the optimum TEMP door opening (0%-100%). It will be computed by the temperature set and the input signal from each sensor.	The set temperature range 17°C→32°C, 0.5°C step (62°F→90°F, 1°F step)
Blower speed	Automatic control of the blower speed. The target value will be computed by the set temperature and the input signal from each sensor. (8 levels may be selected in case of manual selection.)	- Auto mode blower low voltage (Manual low voltage: 3.8) - Auto mode heater blower HI speed: 10.6V
Electro-motive mode control	During auto control, it will raise the permitted voltage of blower motor gradually in order to improve comfortability.	12 seconds for shifting LO→MAX HI
Photo compensation	During auto control, it will compensate the blower level and the discharge temperature according to the photo intensity detected from the PHOTO sensor. PHOTO compensation will begin after 5 seconds when ignition on.	
Mode door control	Automatic control of air discharge based on the required discharge temperature. It will be computed by the temperature setting and the input signal from each sensor. (VENT → B/L → FLOOR → VENT) In case of manual selection (VENT → B/L → FLOOR → MIX → VENT)	- At OFF, MODE door will fix the current condition. - At OFF in manual mode, MODE door will maintain the manual control condition.
MIX mode control (in auto control)	If the ambient temperature is -13°C or less in AUTO mode, discharge mode will be controlled at MIX. (When front window glass is defogged.)	Entering MIX mode, A/C will operate.
INTAKE door control	Auto control of intake mode based on the required discharge temperature that will be computed by the temperature setting and the input signal from each sensor.	- Shift to REC when selecting REC button at FRE condition (LED on). - Shift to FRE when selecting FRE button at REC condition (LED off).

Control item	Control features	Remarks
INTAKE control at OFF	The intake door will fix to the FRE. position when switching the system off.	- FRE./REC. manual selection will be enabled at OFF - REC indicator will come out at OFF.
Compressor auto control	Control automatically the compressor on/off state corresponding to the set temperature and the input signal from each sensor.	- When selection the AUTO SW, the compressor is controlled to ON/OFF. - When selection the DEF SW, the compressor is controlled to "ON".
Compressor clutch on/off control based on refrigerant temperature	If EVAP sensor temperature is below than 0.5°C, the compressor will be ON and the temperature is 3°C, or higher, with the compressor OFF.	
MAX HOT	When selecting the set temperature HI at AUTO mode, MAX HOT will be performed. It will prevail over MIX mode control.	- TEMP door: MAX HOT - MODE door: FLOOR mode - INTAKE door: FRE mode - Compressor: OFF - Blower speed: AUTO HI(10.6V)
MAX COOL	When selecting the set temperature LO at AUTO mode, MAX COOL will be performed.	- TEMP door: MAX COOL - MODE door: FLOOR mode - INTAKE door: REC mode - Compressor: ON - Blower speed: MAX HI
Electromotive heating control	If the ambient temperature is 5°C or more and the in-car temperature is 10°C or less than the ambient temperature at B/L or FLOOR in AUTO mode, it will effect the electromotive heating control to prevent outside cold air from flowing toward the feet of passengers.	- Blower speed: Controlled at AUTO LOW (4.5V)
	As the coolant temperature rises, the MODE door will shift to DEF → AUTO.	**Operation release** • In-car temp. > ambient +10°C • Max cool • In pressing MODE switch. • In pressing DEF switch.
	MODE: Manual selection is enabled. INTAKE door: At AUTO control or at manual selection mode.	
	Blower speed: Manual selection is enabled (No re-entry).	
Electromotive cooling control	In order to prevent hot air from the VENT or B/L in AUTO mode (A/C on mode blower auto), the blower speed will be operated at LOW for approx. 9 seconds before entering the AUTO control if the EVAP sensor detection is temperature 30°C or higher.	
MAX HOT	If the above condition is satisfied, electromotive cooling control will operate at any time.	

<table>
<tr><th>Control item</th><th>Control features</th><th>Remarks</th></tr>
<tr><td rowspan="5">Air Quality System (AQS)</td><td>The AQS system will detect the hazardous elements and odors contained in the air. If the harmful element concentration is higher than standard, the system will output a LOW signal (1.0V or less) to the FATC.</td><td>- When the initial battery connection and ignition is ON, it will operate at AUTO mode. (AQS will not operate.)</td></tr>
<tr><td>If the concentration is within the standard value, the system will output a HI signal (4V) the FATC.</td><td>- When IGN 2 ON, the AQS assembly will be preheated for 34.5±5seconds.</td></tr>
<tr><td>Corresponding to the signal from the AQS, it will control the INTAKE door as follows to prevent the inflow of harmful gas in FATC:</td><td>- IGN2 ON: It will check circuit break on the AQS assembly's signal line for approx. 7 seconds during the preheating, irrespective to the AQS switch condition.</td></tr>
<tr><td><table><tr><td>Condition</td><td>INTAKE door position</td></tr><tr><td>LOW</td><td>REC</td></tr><tr><td>HI</td><td>FRE</td></tr></table></td><td rowspan="2">- When AQS is selected prior to IGN2 OFF and IGN2 is turned OFF → ON: AQS indicator will come on, and the system will operate at AQS mode. (Store the previous condition before IGN 2 OFF)</td></tr>
<tr><td></td></tr>
<tr><td>Initialization Upon battery-on</td><td>When supplying the initial power, it will operate in the initial condition.</td><td>- When the initial ignition ON after battery connection, the system will operate at the set temperature 25°C and at AUTO mode.</td></tr>
<tr><td>Memory</td><td>When removing ignition key, it will store FATC'S operating condition.</td><td>- When IGN ON after IGN OFF during FATC operation, the system will operate at the previous before the ignition off.</td></tr>
</table>

CHECK POINT BY TYPE E5F4341B

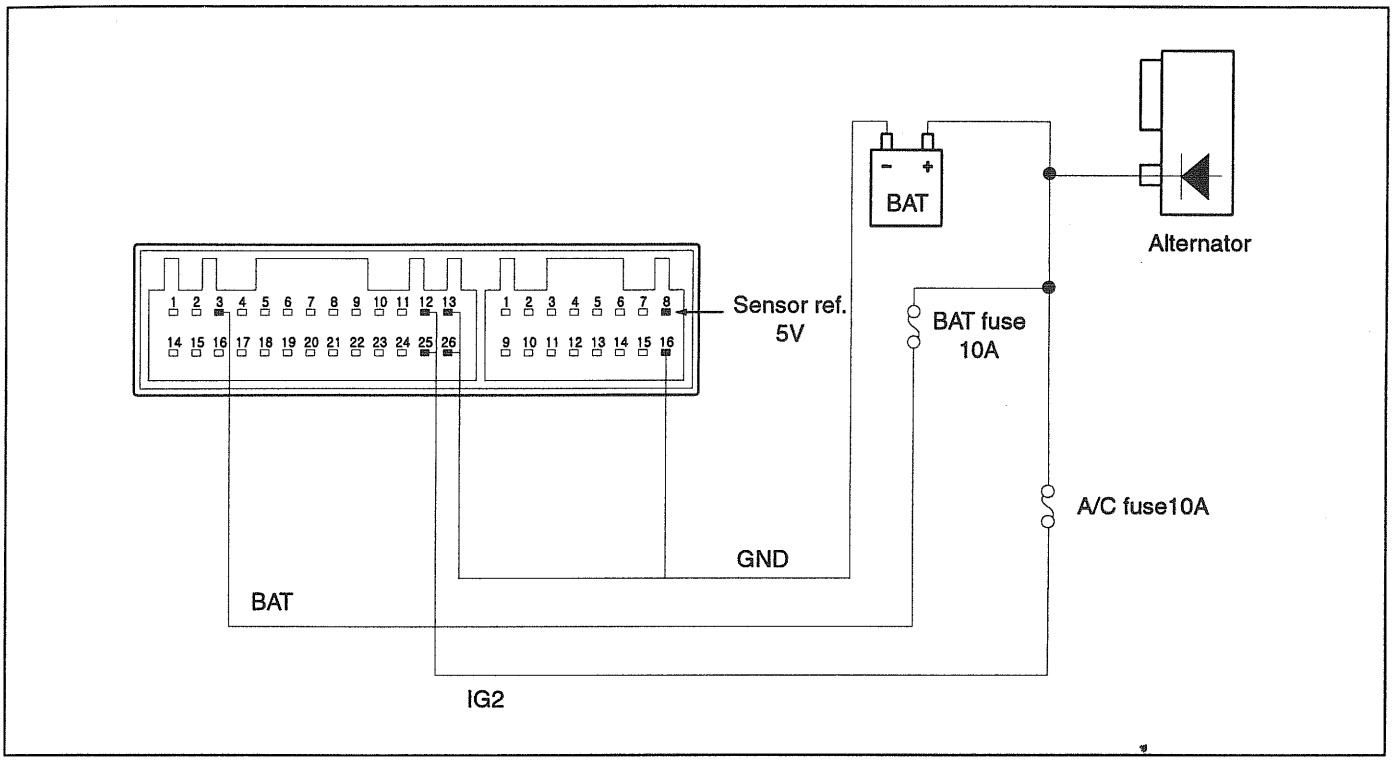


EQQE695A

Since FATC controller is complicated in functions as shown in the above chart, it is impossible to conclude its reason at the occurrence of failure.All possibilities of failure shall be considered for the purpose of efficient. How to check.

1. Power supply check
2. Back light check
3. Blower check
4. Air conditioner check
5. Intake check and AQS check
6. Mode check
7. Temp check
8. Sensor check

POWER SUPPLY CHECK

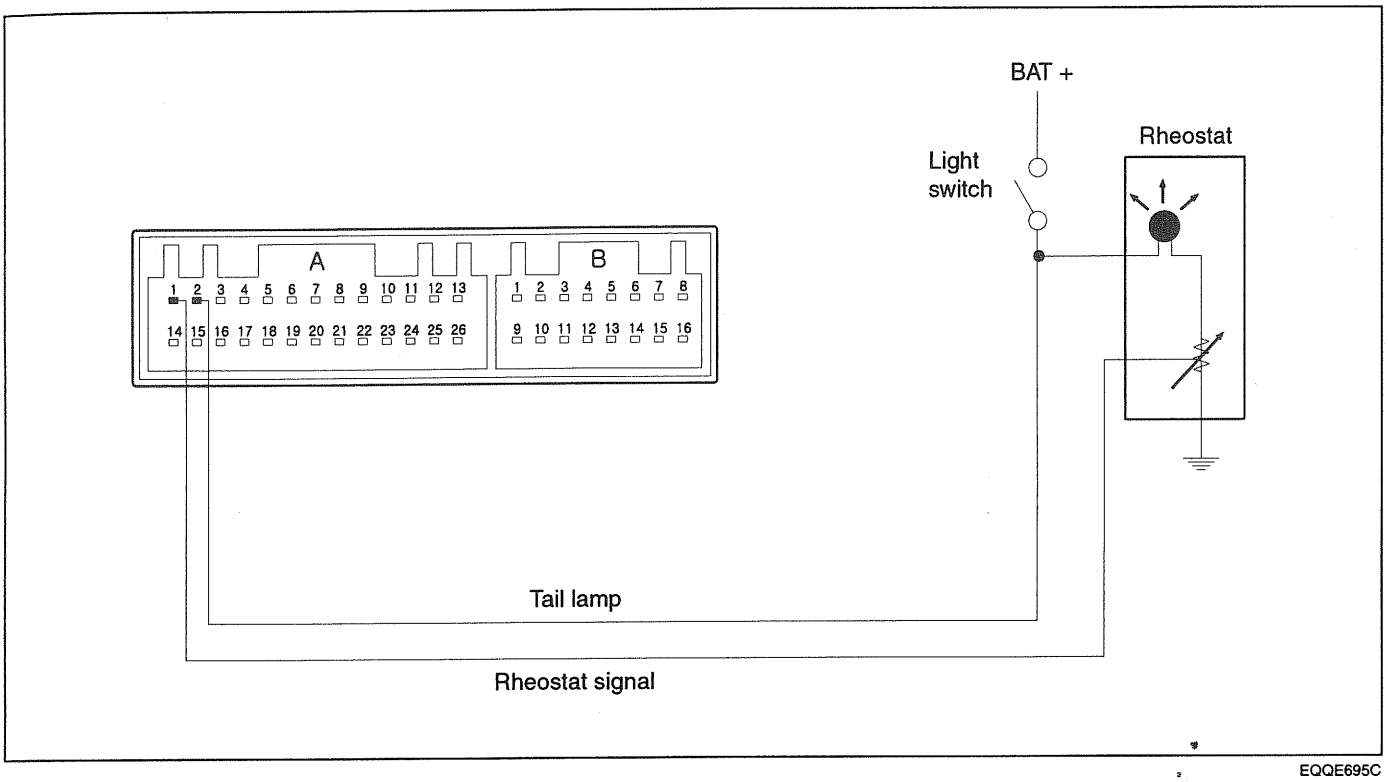


In turning off IGN, battery supplies power for ordinary power, FATC connector A3 through battery fuse. FATC performs memory function by means of battery power supplied as described above. In turning on IGN, alternator is driven. At this time, IG2 power generated in alternator FATC connector A12 and A25 terminal through IG2 fuse and air conditioner fuse 10A. FAT carried out actual system operation by means of IG2 power supplied as described above.

ERROR DIAGNOSTICS

Symptoms	Causes	How to check
When IG is ON, memory function error occurs	Battery power supply error	Check voltage of battery after turning off IG. If 10V and more, check FATC connector and if no problem, check the inside of controller. If 10V and less, check fuse or wiring state of battery power source.
When IG is ON, system running error occurs	IG2 power supply error	Check voltage of IG2 after turning on IG. If 10V and more, check FATC connector and if no problem, check the inside of controller. If 10V and less, check fuse or wiring state of IG2 power source.

BACK LIGHT CHECK



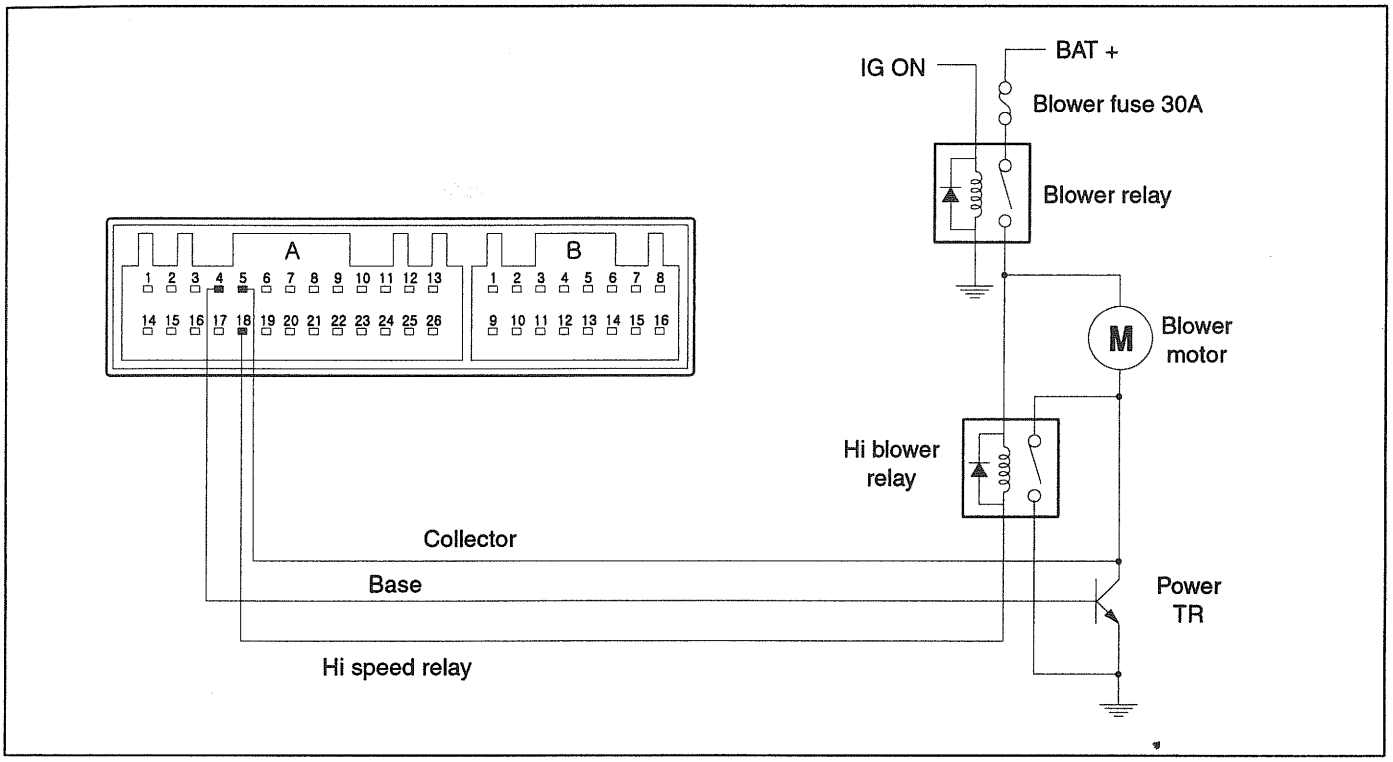
EQQE695C

In turning on IG and then light switch, battery power is supplied for FATC connector A2 terminal through wiring. The supplied power passes connector A1 terminal through light bulb in FATC and flows into reostart as shown in the above figure. The brightness is adjusted according to resistance value of reostart.

ERROR DIAGNOSTICS

Symptoms	Causes	How to check
When light switch is ON, partial error occurs in back light	Light bulb lighting error in FATC	
When light switch is ON, entire error occurs in back light	Light power supply error	Measure voltage of tail light shown in the above figure after switching on light. If 10V and more, check FATC connector and if no problem, measure signal voltage of reostart shown in the above figure. If 8V and more, check reostart wiring and reostart.
		If tail light is below 1V, check tail light wiring.

BLOWER CHECK



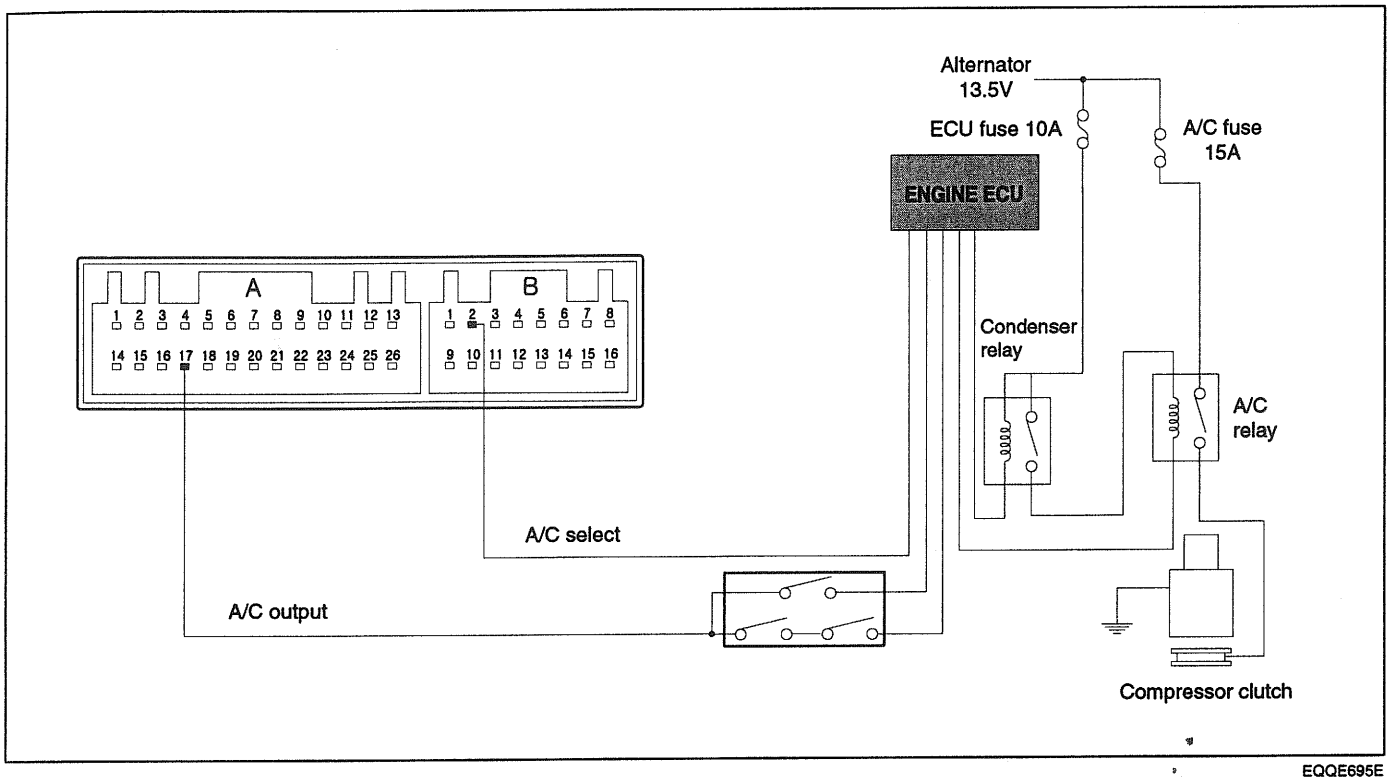
EQQE695D

Perform the blower check in manual blower running state because it is difficult to check blower at automatic control. Blower is controlled from level I to level 8 equally as in button operation and running logic. In turning on IG, blower relay is ON and voltage of 0.1 to 1.4V is transferred from FATC connector A4 terminal to base source of power TR according to FATC control (selectable from level 1 to level 8). At this time, voltage of blower motor's both ends is determined according to collector voltage of FATC connector A5 terminal. If FATC is controlled in level 8, GND(0V) is supplied for FATC connector A18 terminal and high blower relay is driven.

ERROR DIAGNOSTICS

Symptoms	Causes	How to check
Amount of wind is wrong at manual selection of blower	Power TR error	Check voltage of blower motor's both ends. (Level 1: 3.8V, Level 2: 5.2V, Level 3: 6.5V, Level 4: 7.9V, Level 5: 9.2V, Level 6: 10.6V, Level 7: 12.0V, Level 8: 13.5V [high-relay operation]) Measure voltage of each terminal and if there is difference more than ±0.6V, check power TR.
Blower wind is discharged despite pressing OFF switch	Power TR error	Power TR change

AIR CONDITIONER CHECK



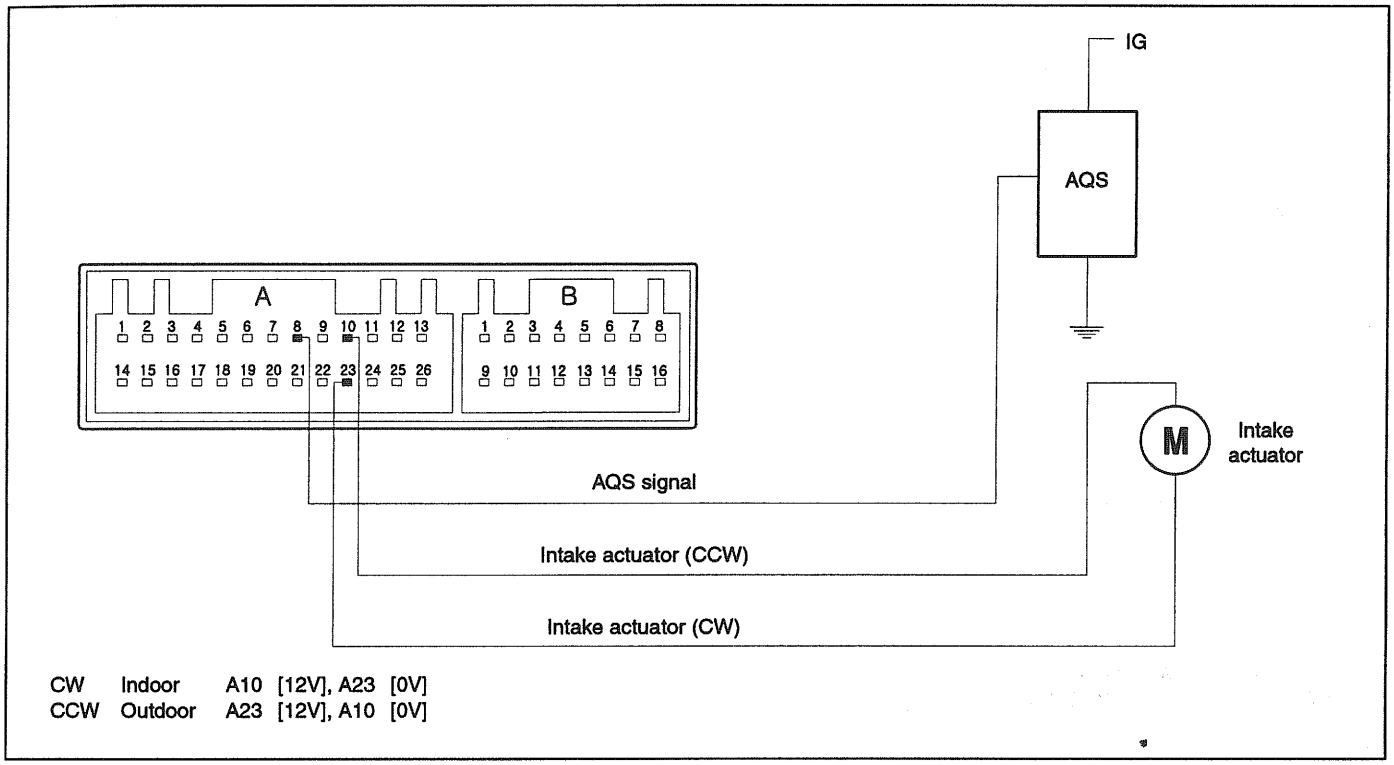
EQQE695E

11V is outputted from connector A17 terminal in turning on INSULATING and pressing air conditioner switch. However, although 11V is outputted from FATC connector A17 terminal, compressor clutch isn't driven. Wind of air conditioner is discharged if only compressor clutch works. Output signal from air conditioner is inputted in engine computer through triple switch. Then, the engine computer considers several conditions and when output of air conditioneris judged to be practical, it gives GND to signal terminal of air conditioner relay. Accordingly, relay of air conditioner is ON and compressor clutch works. Triple switch checks pressure of refrigerant flowing through pipe and turns on/off switches in it according to standard. So, it controls that output signalof air conditioner outputted from FATC is inputted into engine computer, and also speed of condenser fan according to pressure level. (For high pressure, high-speed and for low pressure, low-speed.

ERROR DIAGNOSTICS

Symptoms	Causes	How to check
Wind of air conditioner isn't discharged into vehicle despite switching on air conditioner.	Signal output error of air conditioner	Switch on air conditioner and measure voltage of FATC connector A17 terminal as shown in the above figure. If 9V and more, check triple switch,air conditioner relay and ECM.
		Switch on air conditioner and measure voltage of FATC connector A17 terminal as shown in the above figure. If 1V and less, check input value ofevaporator sensor.
	Input error of evaporator sensor	If evaporator sensor is disconnected or short or voltage of its inputsource is more than 3.0V (below 0.5°C), output of air conditioner isn't made.

INTAKE AND AQS CHECK



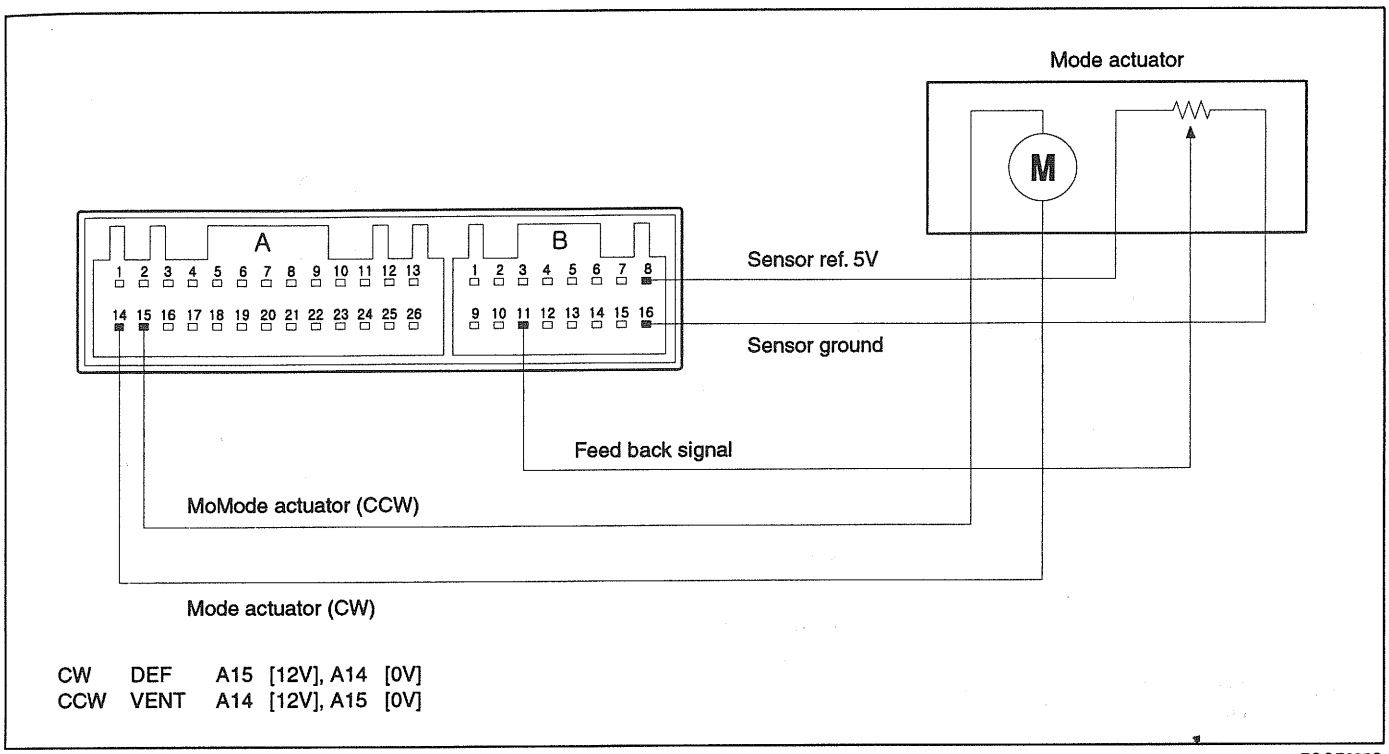
EQQE695F

In turning on IG and selecting indoor mode with indoor switch, 12V is outputted from FATC connector A23 terminal, 0V is supplied for A10 terminaland motor works in direction of outdoor. In selecting outdoor mode with indoor-switch, 12V is outputted from FATC connector A10 terminal, 0V is supplied for A23 terminal and motor works in direction of indoor.

ERROR DIAGNOSTICS

Symptoms	Causes	How to check
Indoor mode running error	Power supply error in actuator	Separate connector linked with actuator, select indoor mode with indoor switch and measure voltage of FATC connector A23 terminal. If 8V and more, check actuator or wiring state and if 9V and less, check the inside of controller.
Outdoor mode running error	Power supply error in actuator	Select outdoor mode in the above method and measure voltage of FATC connector A10 terminal. If 8V and more, check actuator or wiring state and if 9V andless, check the inside of controller
Fixed in outdoor or indoor mode at AQS selection	AQS signal terminal output error	Select AQS switch and measure AQS signal terminal as shown in the above figure. If there is no change of voltage over 10 min, check AQS.

MODE CHECK



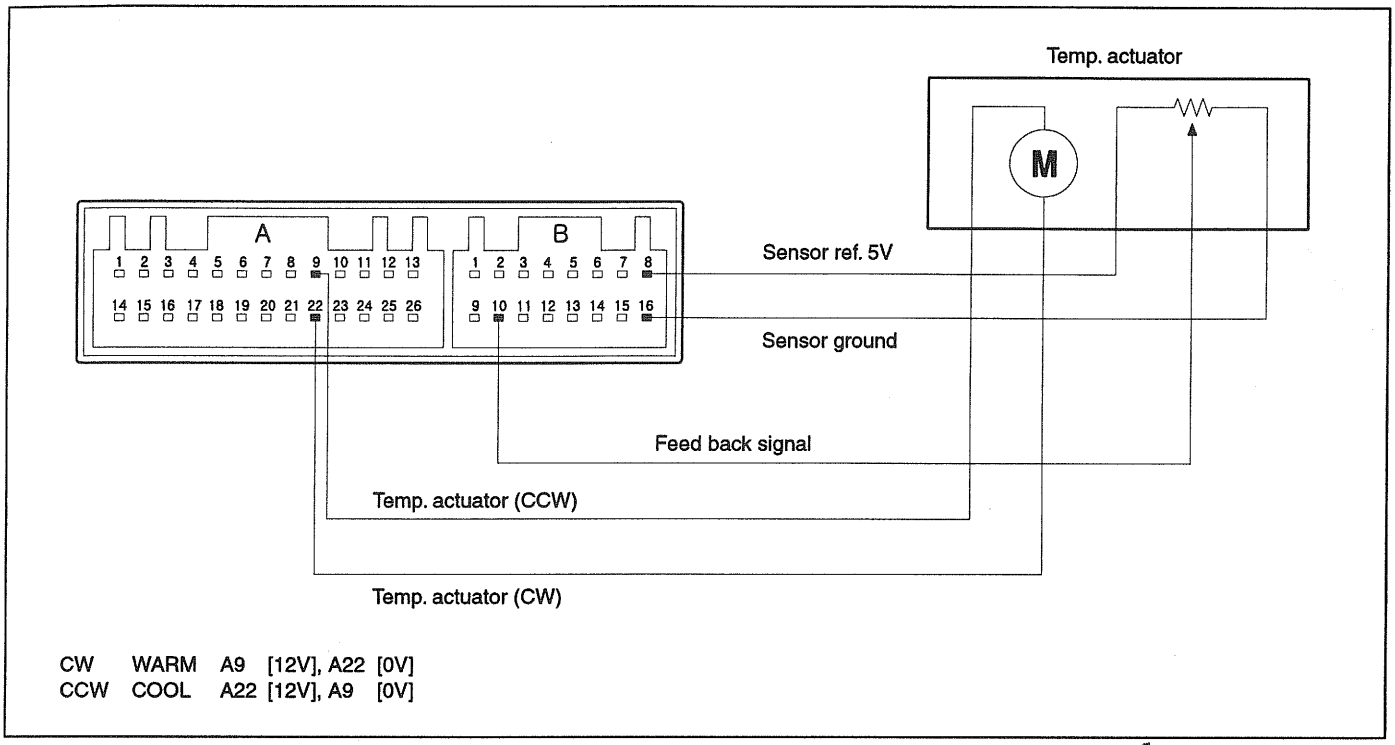
EQQE695G

In turning on IG and selecting mode switch, sequential operation begins in order of Vent → Bi-level → Blower → Mix. DIP mode works regardless of order at selecting it. As shown in the above figure, in adjusting mode switch from VENT to DEF, 12V is outputted from connector B4, 0V is supplied for B5 and mode motor works in direction of DEF. In adjusting mode switch from DEF to VENT, 12V is outputted from connector B5, 0V is supplied for B4 and mode motor works in direction of VENT. When mode actuator has to move to a certain location for its automatic control, mode feedback signal terminal moves equally in mode actuator and informs controller of location of mode actuator through mode connector B6. Comparing original value with the inputted value, it works until they are same.

ERROR DIAGNOSTICS

Symptoms	Causes	How to check
Mode actuator running error	Power supply error in mode actuator	After altering VENT to DEF, measure voltage of connector A15, and after altering DEF to VENT, measure voltage of connector A14. It both of them are 9V and move, check mode actuator an peripheral wiring state and if one or both of them are 9V and less, its cause is internal failure of control.
	Sensor(+5) power supply error	If automatic control isn't operated smoothly, measure voltage of FATC connector B8 terminal, If under 4.8V or over 5.2V, its cause is internal failure of FATC.
	Driver error of mode actuator	If NO.22 is outputted as result of self-diagnostic, check mode actuator driver.

TEMP CHECK



EQQE695H

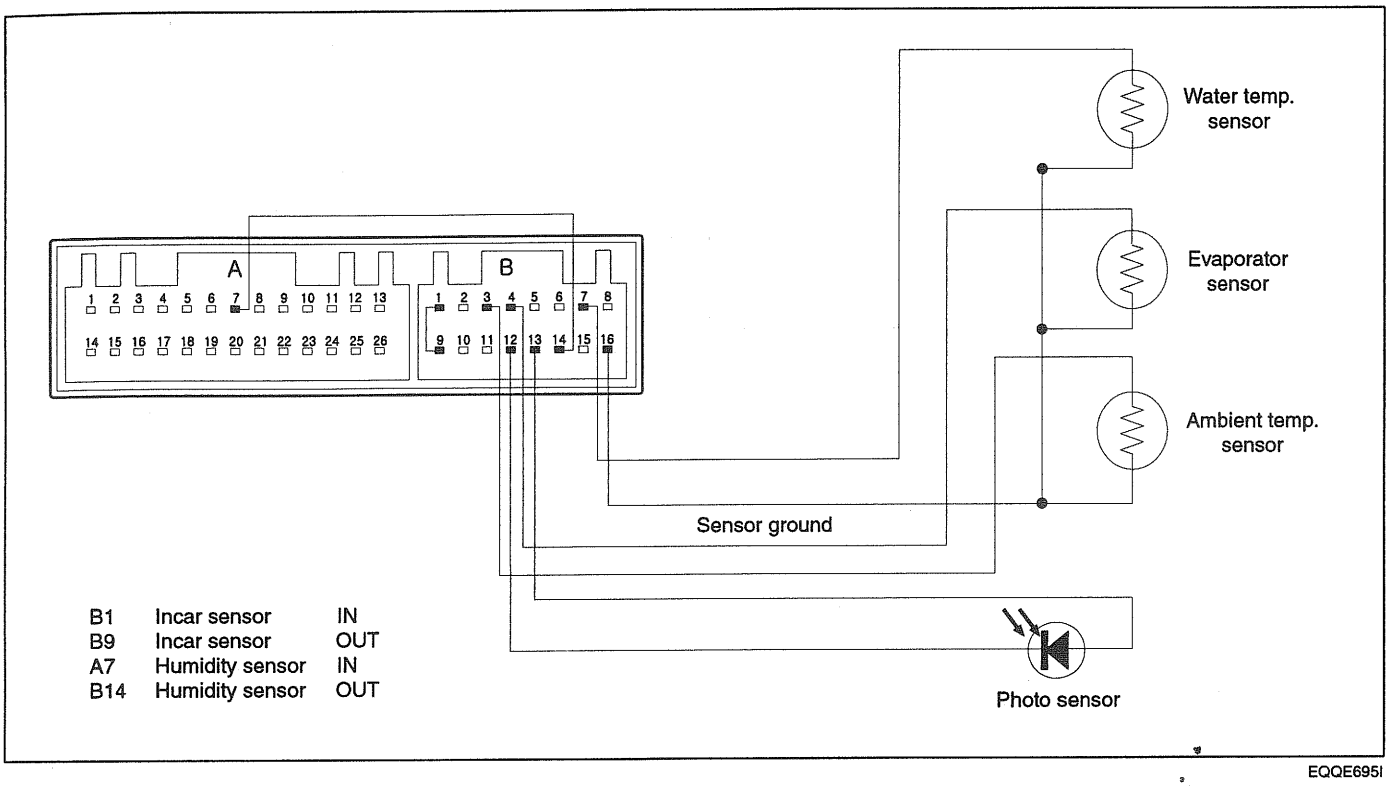
In adjusting temp switch from 32°C to 17°C, 12V is outputted from FATC connector A22 terminal, 0V is supplied for A9 terminal and temp motor works in direction of COOL. In adjusting temp switch from 17°C to 32°C, 11V is outputted from FATC connector A9 terminal, 0V is supplied for A22 terminal and temp motor works in direction of WARM. When temp actuator has to move to a certain location for its automatic control, temp feedback signal terminal moves equally in temp actuator and informs controller of location of temp actuator through FATC connector B10 terminal. Comparing original value with inputted value, it works until they are same. If 4.9V and more is inputted in B10 terminal, it is regarded as disconnection. If 0.1V and less is inputted in B10 terminal, it is regarded as short-circuit. In the case of disconnection or short-circuit as a result of self-diagnostic, substitute control is carried out as follows.

- If setup temperature is 17°C to 24.5°C, set to MAX COOL.
- If setup temperature is 25°C to 32.0°C, set to MAX WARM.

ERROR DIAGNOSTICS

Symptoms	Causes	How to check
Temp actuator running error	Power supply error in temp actuator	After altering 17°C to 32°C and adversely, measure voltage of A9 and after altering 32°C to 17°C and adversely, measure voltage of A22. If Both of them are 9V and more, check temp actuator and peripheral wiring state and if one or both of them are 5V and less, its cause is internal failure of FATC.
	Sensor (+5) power supply error	If automatic control isn't operated smoothly, measure voltage of FATC connector B8 terminal. If under 4.8V or over 5.2V, its cause is internal failure of FATC.
	Driver error of temp actuator	If No. 20 is outputted as a result of self-diagnostic, check temp actuatordriver.

SENSOR CHECK

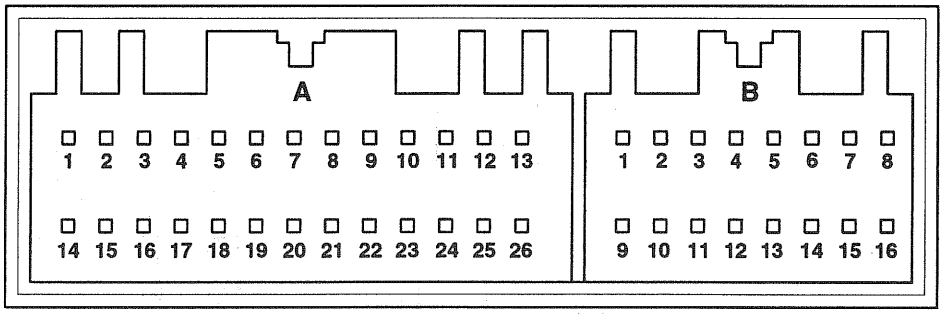


EQQE695I

Resistance value set according to temperature of each part is inputted in FATC controller.
Internal temperature of vehic is automatically controlled by operating the inputted values.
It is recommended to refer to resistance value and voltage value corresponding to each temperature and the followings explains essential functions of each sensor required for repair and self-diagnostics and substitute functions at disconnection or short-circuit.

- If 4.9V and more is inputted in connectors B1, B3, B4, B7, B12 terminal, it is regarded as disconnection.
- If 0.1V and less is inputted in connectors B1, B3, B4, B7, B12 terminal, it is regarded as short-circuit.

CONNECTOR ECFEA90E



KQQE601C

Connector	Pin No.	Circuit	Connector	Pin No.	Circuit
A	1	RHEOSTAT	B	1	INCAR SENSOR IN
	2	TAIL LAMP (+)		2	A/C SELECT SIGNAL
	3	BATT (+)		3	AMB SENSOR (+)
	4	P/TR (BASE)		4	EVA SENSOR (+)
	5	P/TR (COLLECTOR)		5	SPEED SENSOR
	6	PTC ON SIGNAL		6	HI SCAN
	7	HUMIDITY SNR IN		7	WATER TEMP SENSOR(+)
	8	AQS		8	SENSOR REF. (+5V)
	9	TEMP ACT'R (CCW)		9	INCAR SENSOR OUT
	10	INTAKE ACT'R (CCW)		10	TEMP F/B SIGNAL
	11	-		11	MODE F/B SIGNAL
	12	IGN2		12	PHOTO SENSOR (+)
	13	GND		13	PHOTO SENSOR (+)
	14	MODE ACT'R (CW)		14	HUMIDITY SENSOR OUT
	15	MODE ACT'R (CCW)		15	-
	16	-		16	SENSOR GND
	17	A/C OUTPUT			
	18	HIGH SPEED RELAY			
	19	PTC RELAY 2			
	20	PTC RELAY 3			
	21	-			
	22	TEMP ACT'R (CW)			
	23	INTAKE ACT'R (CW)			
	24	BLOWER SELECT SIGNAL			
	25	IGN2			
	26	GND			