

AIR CONDITIONING

DESCRIPTION

1. General

The air conditioning system in the '03 4Runner has the following features:

- An automatic control air conditioning system comprising left / right independent temperature control has been adopted on Limited grade model as standard equipment.
- An automatic control air conditioning system is used on SR5 grade model as standard equipment.
- A semi-center location air conditioning unit, in which the evaporator and heater core are placed in the vehicle's longitudinal direction, has been adopted.
- A compact, lightweight, and highly efficient straight flow (full-path flow) aluminum heater core has been adopted.
- A revolutionary-slim structure evaporator has been adopted.
- A compact, lightweight, and low-noise swash plate type compressor has been adopted.
- The heat exchange efficiency has been improved through the adoption of the sub-cool condenser.
- A clean air filter that excels in removing dust has been adopted.
- A rear face duct and rear foot duct have been adopted to guide the airflow from the air conditioning unit to the rear seat area.
- The rear heater has been discontinued.
- The air conditioning ECU is equipped with a self-diagnosis function. If there is a malfunction in the system, it stores the DTCs (Diagnostic Trouble Codes) in its memory and blinks the air conditioning switch indicator.

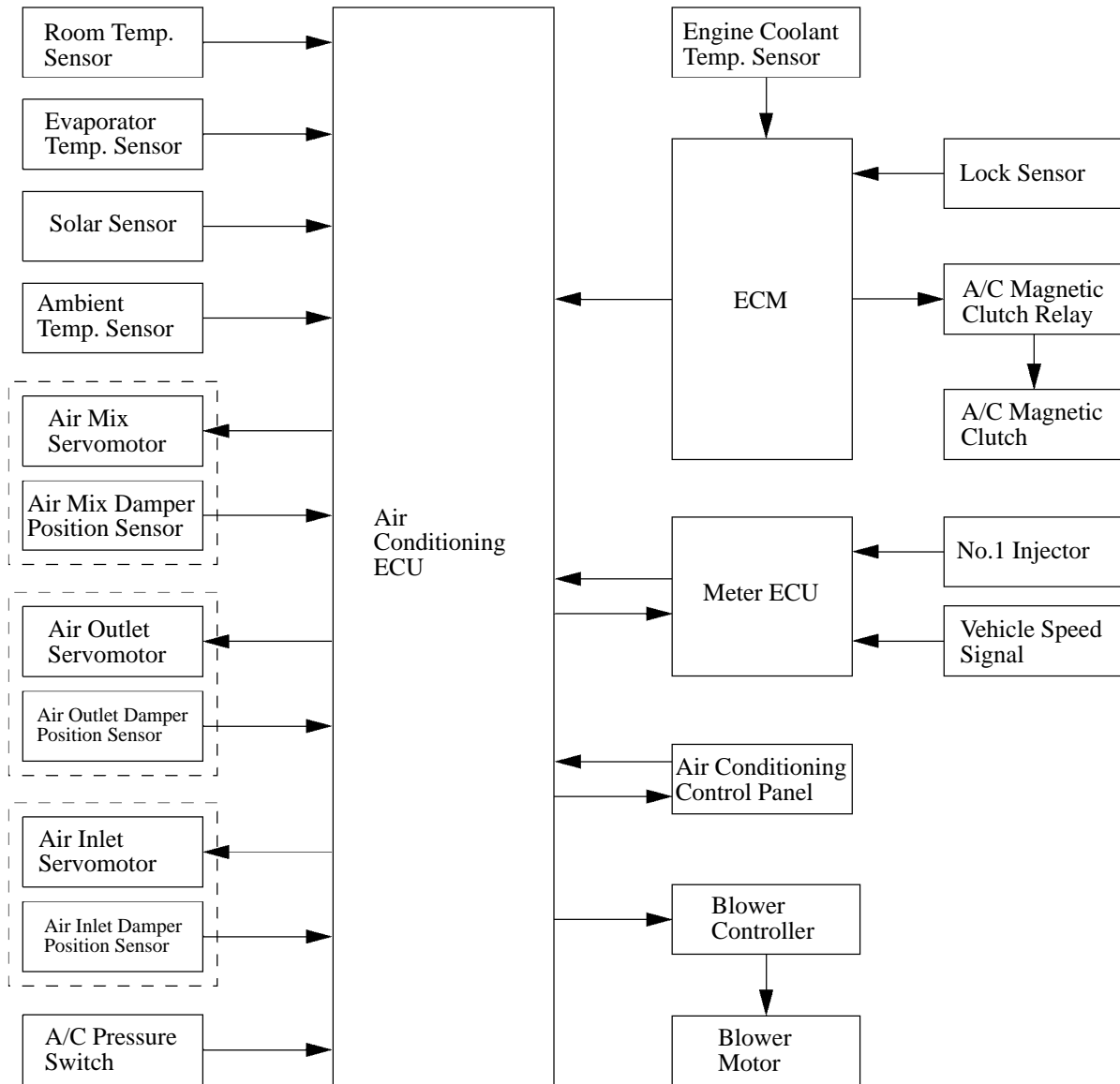
Performance

Model		'03 4Runner	'02 4Runner	
Heater	Heat Output	W (Kcal/h)	6350 (5460)	4500 (3870)
	Air Flow Volume	m ³ /h	380	280
	Power Consumption	W	260	180
Air Conditioning	Cooling Capacity	W (Kcal/h)	5800 (4990)	5500 (4730)
	Air Flow Volume	m ³ /h	550	525
	Power Consumption	W	300	250

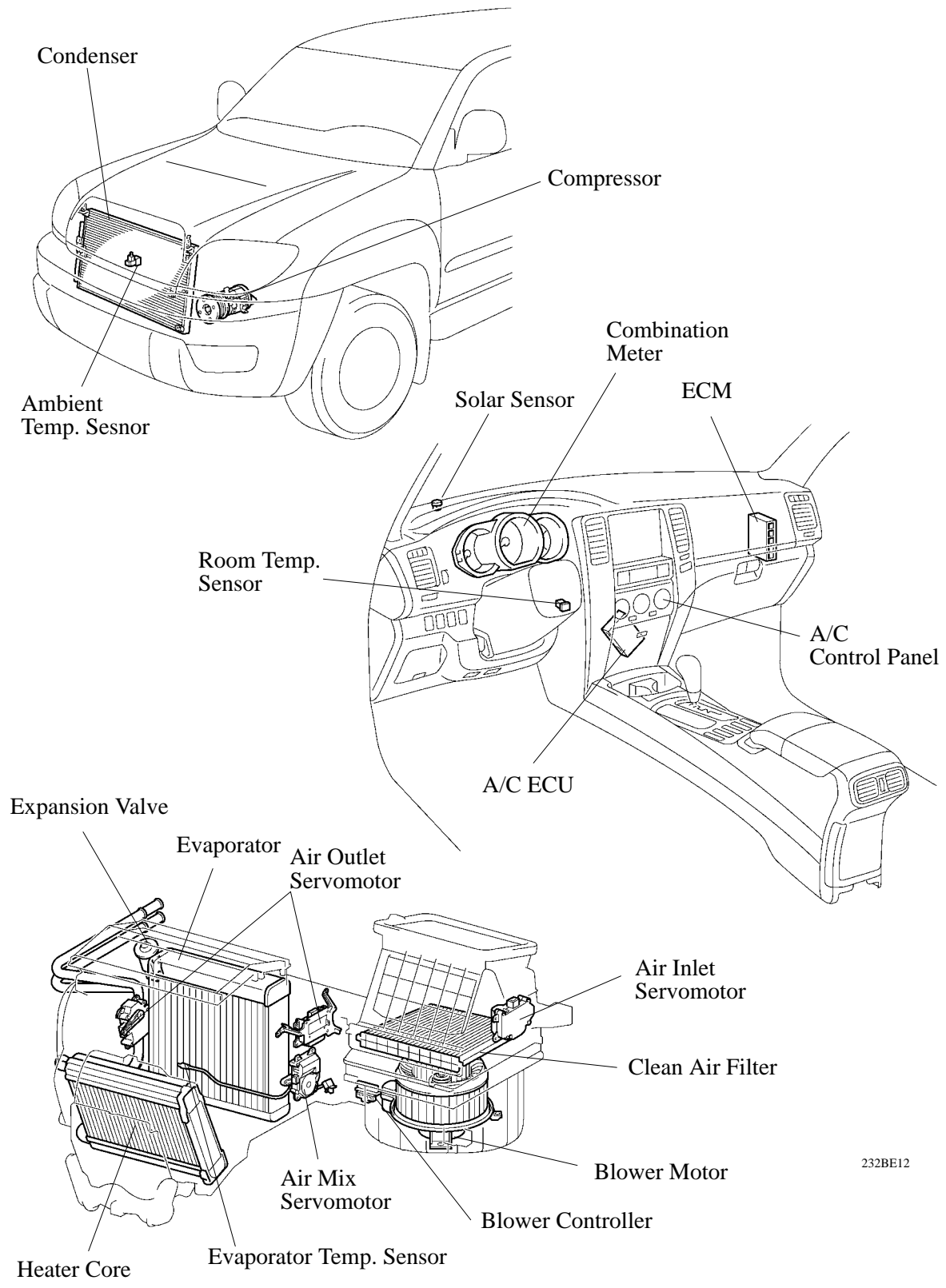
Specifications

Model		'03 4Runner	'02 4Runner		
Ventilation and Heater Core	Heater Core	Type	Straight Flow (Full-path Flow)	U-turn Flow	
		Size W × H × L	mm (in.)	284.8 × 120 × 27 (11.2 × 4.7 × 1.1)	155.7 × 220 × 27 (6.1 × 8.7 × 1.1)
		Fin Pitch	mm (in.)	1.5 (0.06)	1.6 (0.06)
	Blower	Motor Type	S80F-11T	S80F-12.5T	
		Fan Type	Semi Shroud Fan	Shroud Fan	
		Fan Size Dia. × H	mm (in.)	165 × 70 (6.5 × 2.8)	150 × 75 (5.9 × 3)
Air Conditioning	Condenser	Type	Multi-flow (Sub-cool)	Multi-flow	
		Size W × H × L	mm (in.)	600 × 485.4 × 16 (23.6 × 19.1 × 0.6)	570 × 444.8 × 16 (22.4 × 17.5 × 0.6)
		Fin Pitch	mm (in.)	3.0 (0.12)	3.2 (0.13)
	Evaporator	Type	Revolutionary-slim Structure	Drawn Cup	
		Size W × H × L	mm (in.)	279.7 × 211 × 38 (11 × 8.3 × 1.5)	264 × 210 × 90 (10.4 × 8.3 × 3.5)
		Fin Pitch	mm (in.)	3.0 (0.12)	3.5 (0.14)
	Compressor	Type	10S20	10PA17	

2. System Diagram

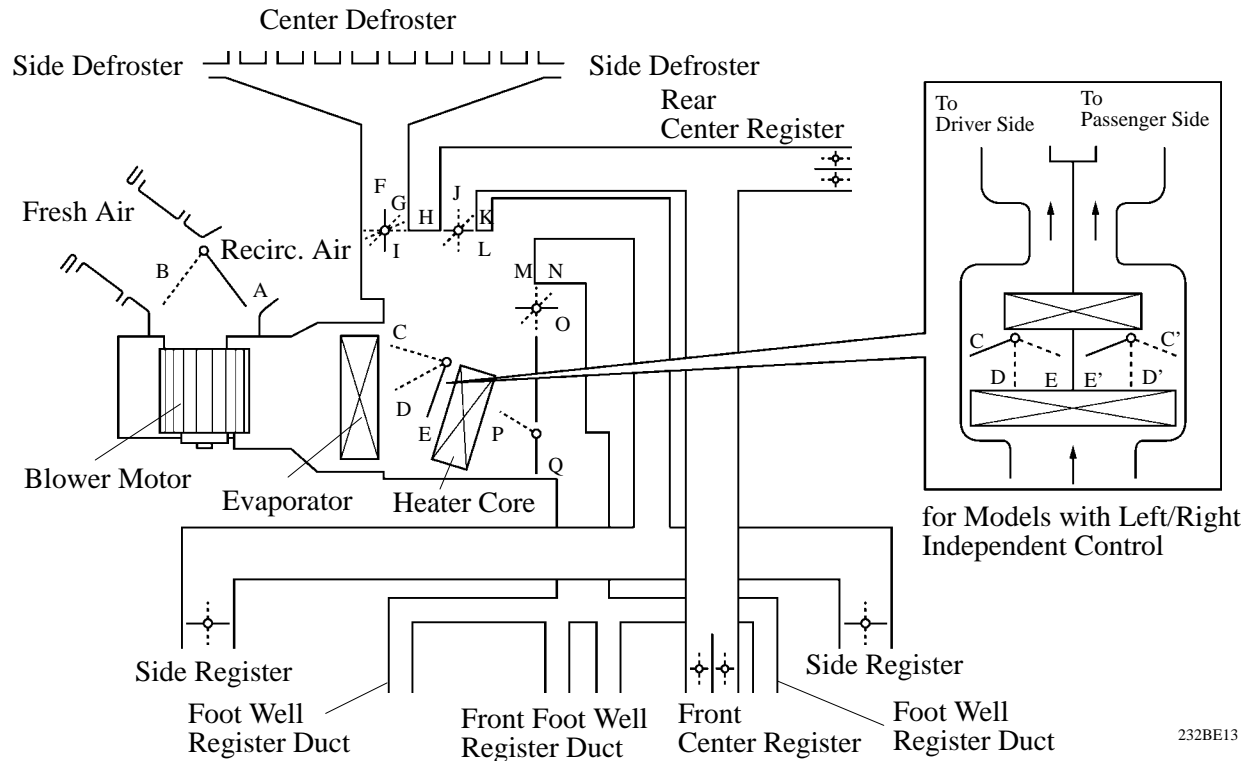


3. Layout of Main Component



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4. Model Position and Damper Operation



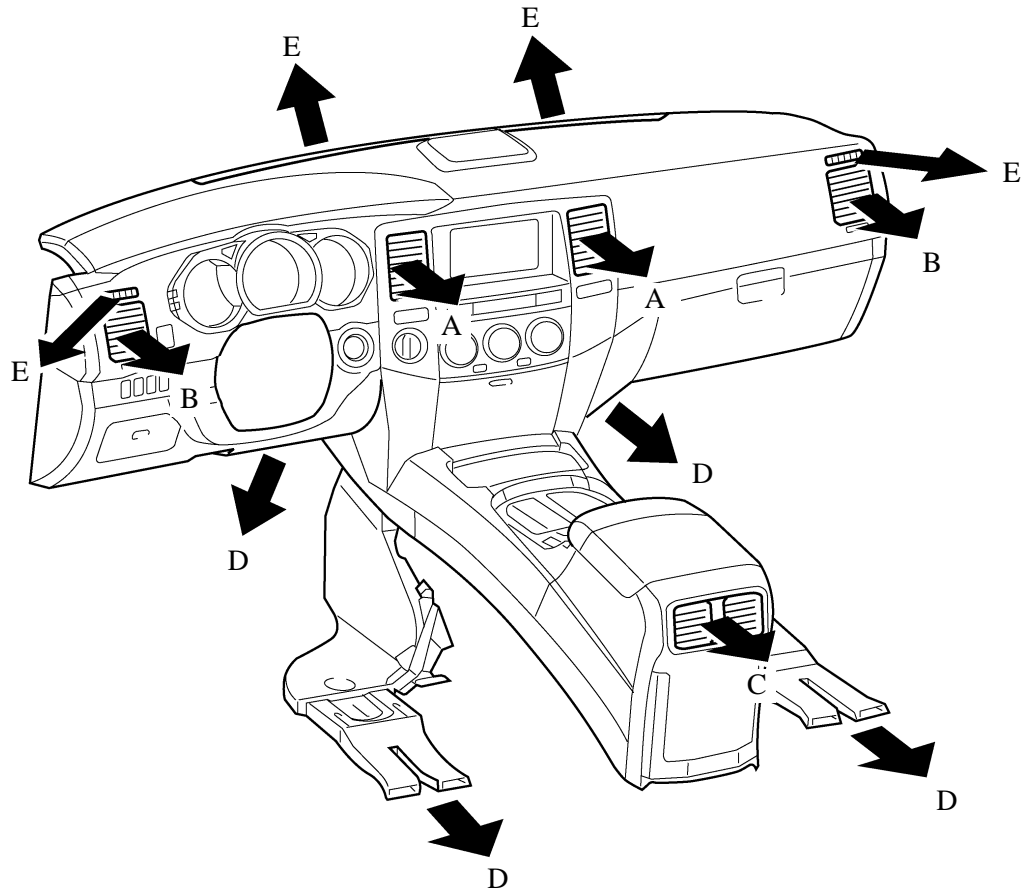
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► Function of Main Damper ◀






Control Damper	Control Position	Damper Position	Operation
Air Inlet Control Damper	FRESH 187BE23	A	Brings in fresh air.
	RECIRC 187BE41	B	Recirculates internal air.
Air Mix Control Damper (Left / Right Independent Control)*	MAX COLD – MAX HOT TEMP. SETTING { 18°C (65°F) – 32°C (85°F)}	E ~ D ~ C (E' ~ D' ~ C')*	Varies the mixture ratio of the fresh air and the recirculation air in order to regulate the temperature continuously from HOT to COLD.
Max Hot Damper	MAX HOT	P, Q	Full open in the MAX HOT position.
Mode Control Damper	DEF 187BE28	F, L, M	Defrosts the windshield through the center defroster, side defroster, and side register.
	FOOT/DEF 187BE27	G, L, N	Defrosts the windshield through the center defroster, side defroster, and side register, while air is also blown out from the front and rear foot well register ducts.
	FOOT 187BE26	H, L, O	Air blows out of the front and rear foot well register ducts, and side register. In addition, air blows out slightly from the center defroster and side defroster.
	BI-LEVEL 187BE25	I, K, N	Air blows out of the front and rear center registers, side registers, and front and rear foot well register ducts.
	FACE 187BE24	I, J, M	Air blows out of the front and rear center registers, and side register.

*: Only for Limited Grade Model

5. Air Outlets and Air Volume Ratios



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Air outlet Mode	A	B	C	D	E
	Center Face	Side Face	Foot	Foot	Defroster
FACE  187BE24	○	○	○	—	—
BI-LEVEL  187BE25	○	○	○	○	—
FOOT  187BE26	—	○	—	○	○
FOOT/DEF  187BE27	—	○	—	○	○
DEF  187BE28	—	○	—	—	○

The size of the circle ○ indicates the proportion of airflow volume.