

Caution

- Vehicle specifications differ depending on the vehicle identification number (VIN).

- Type A VIN:

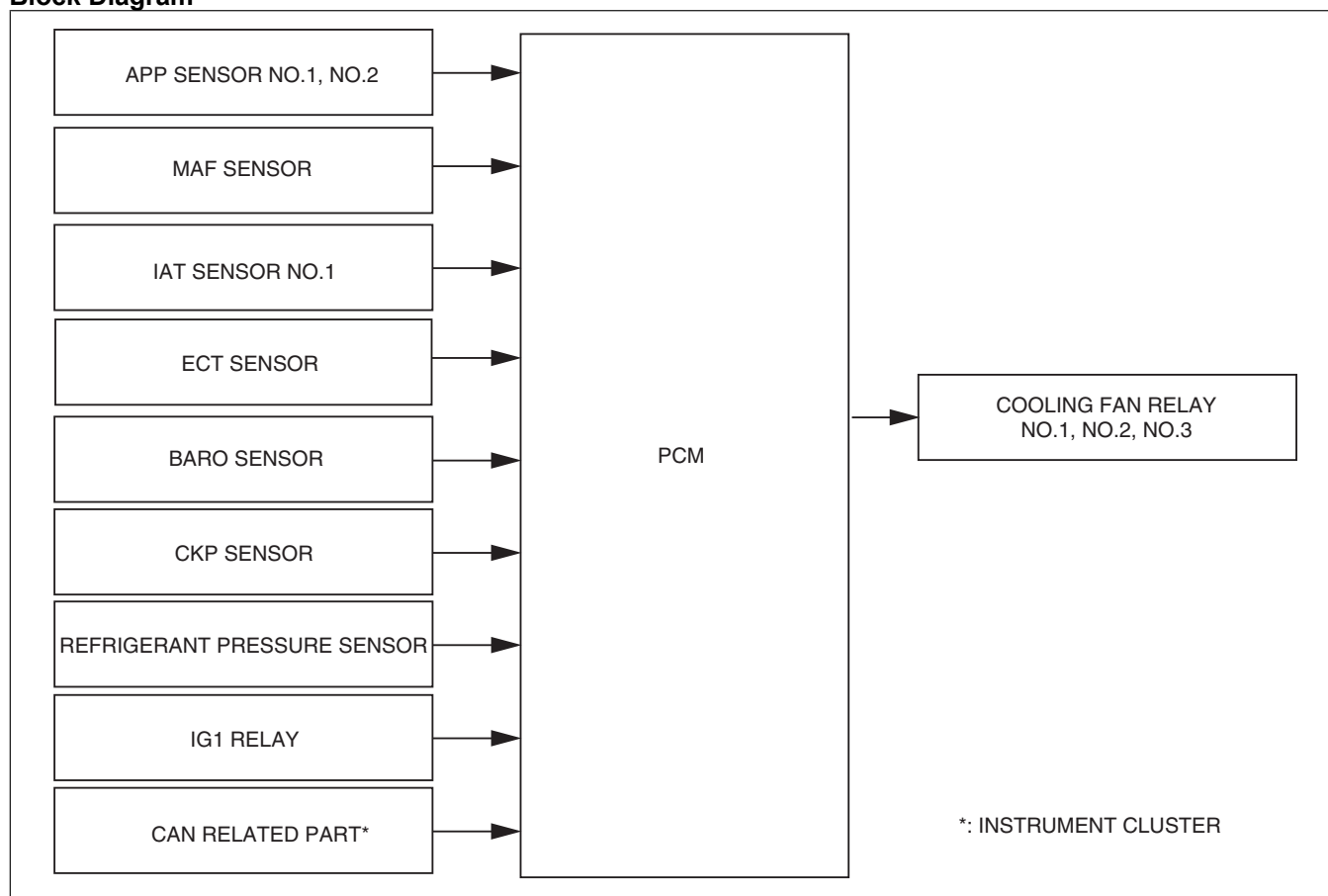
JM0 KE***** 100001-
 JM6 KE***** 100001-
 JM7 KE***** 100001-
 JM8 KE***** 100001-
 JMZ KE***** 100001-
 KE10** 100001-

- Type B VIN:

JM0 KE***** 200001-
 JM6 KE***** 200001-
 JM8 KE***** 200001-
 JMZ KE***** 200001-
 KE10** 200001-

Outline

- Through cooling of the radiator and condenser by operation of the cooling fan according to vehicle conditions, engine reliability and cooling performance have been improved.

Block Diagram

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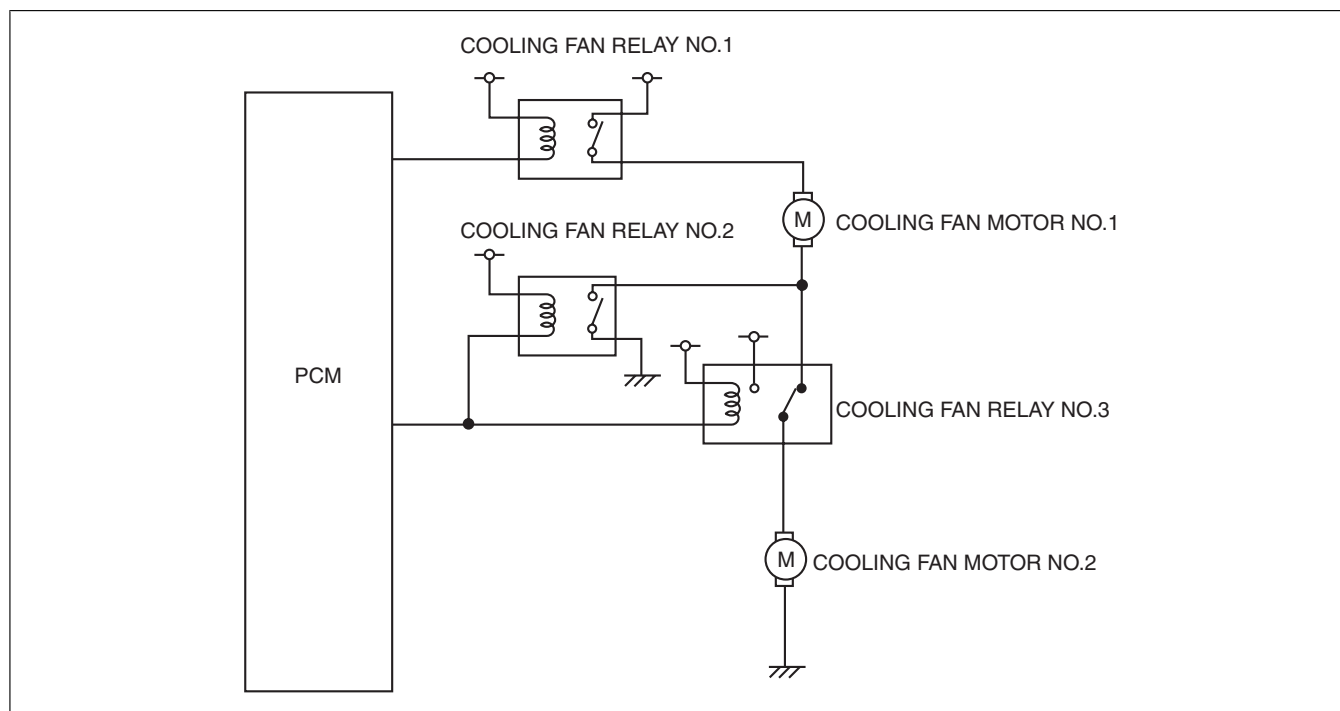
Operation (Type A VIN)

- The PCM determines the demand airflow volume by the following conditions.

Operation Pattern

Demand airflow volume	Cooling fan relay		Cooling fan motor	
	No.1	No.2/No.3	No.1	No.2
No airflow	OFF	OFF	Stop	Stop
Small	ON	OFF	Low-speed	Low-speed

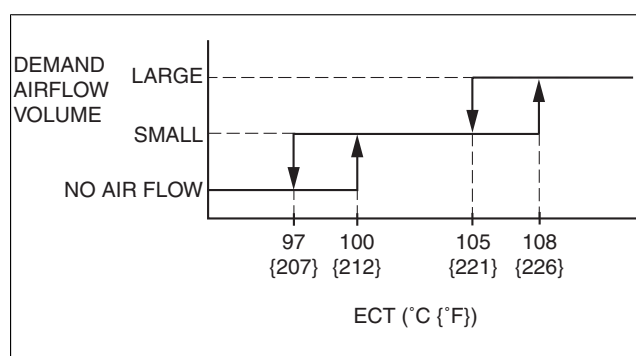
Demand airflow volume	Cooling fan relay		Cooling fan motor	
	No.1	No.2/No.3	No.1	No.2
Large	ON	ON	High-speed	High-speed



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Engine coolant temperature condition

- Controls the PCM output duty ratio according to the engine coolant temperature.
- The control temperature while the engine coolant temperature is decreasing is controlled differently than when it is increasing.



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A/C operation condition

- Controls the demand airflow volume depending on the refrigerant pressure and vehicle speed when the A/C switch is on.

Operation condition	Demand airflow volume
<ul style="list-style-type: none"> When all of the following conditions are met. <ul style="list-style-type: none"> Refrigerant pressure: 1.3 MPa {13 kgf/cm², 189 psi} or less, vehicle speed: 45 km/h {28 mph} or more Refrigerant pressure: 2.2 MPa {22 kgf/cm², 319 psi} or less, vehicle speed: 85 km/h {53 mph} or more 	No airflow
<ul style="list-style-type: none"> When all of the following conditions are met. <ul style="list-style-type: none"> Refrigerant pressure: 1.3 MPa {13 kgf/cm², 189 psi} or less, vehicle speed: 45 km/h {28 mph} or less Refrigerant pressure: 1.3—1.5 MPa {14—15 kgf/cm², 189—217 psi}, vehicle speed: 85 km/h {53 mph} or less Refrigerant pressure: 1.5—2.2 MPa {16—22 kgf/cm², 218—319 psi}, vehicle speed: 65—85 km/h {41—52 mph} 	Small

Operation condition	Demand airflow volume
<ul style="list-style-type: none"> When all of the following conditions are met. <ul style="list-style-type: none"> Refrigerant pressure: 1.5—2.2 MPa {16—22 kgf/cm², 218—319 psi}, vehicle speed: 65 km/h {40 mph} or less Refrigerant pressure: 2.2 MPa {22 kgf/cm², 319 psi} or more 	Large

After Cooling Control

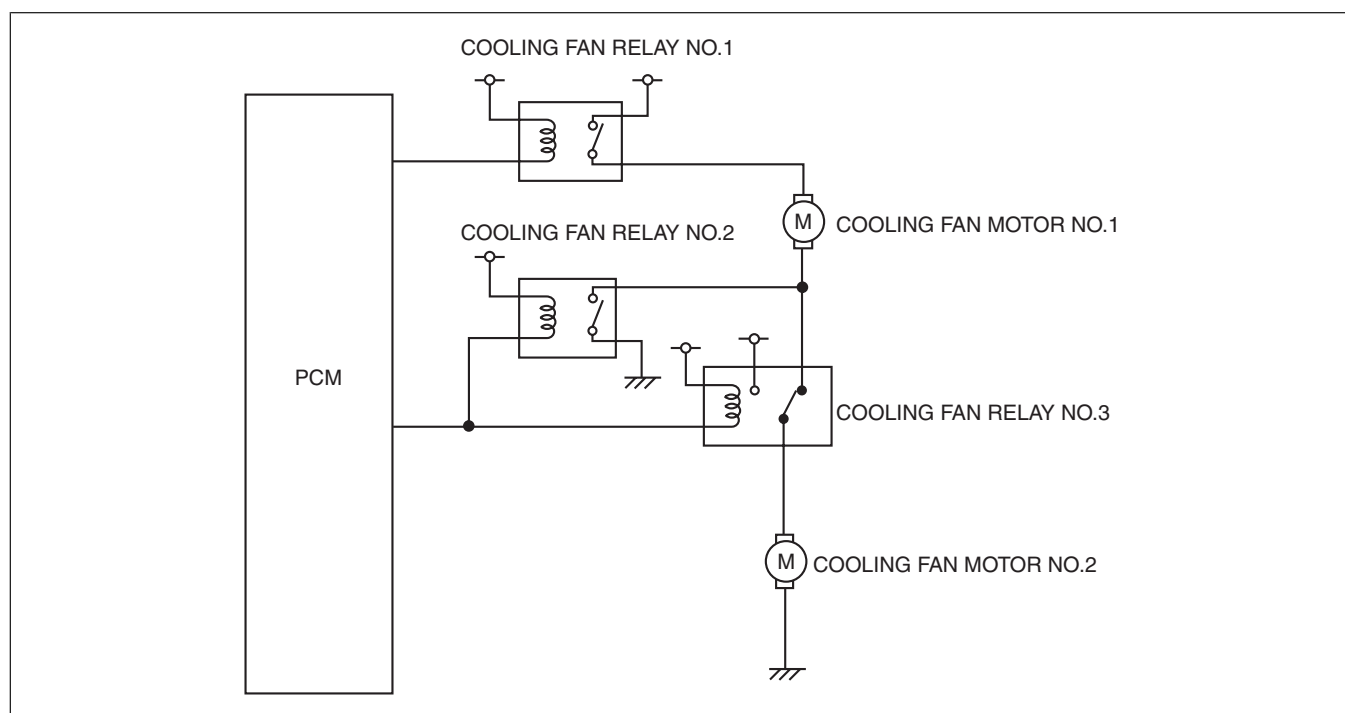
- If the ignition is switched off directly after continuous high engine-load travel, the PCM operates (demand airflow volume: low) the cooling fan for a maximum of 9 minutes when all of the following conditions are met due to the possibility that the engine may not restart as a result of a fuel supply malfunction caused by the high temperature.
 - Engine coolant temperature: 90°C {194 °F} or more
 - Accumulated amount of engine heat is extremely large
 - Driving record for vehicle speed of 25 km/h {16 mph} or more available

Operation (Type B VIN)

- The PCM determines the demand airflow volume by the following conditions.

Operation Pattern

Demand airflow volume	Cooling fan relay		Cooling fan motor	
	No.1	No.2/No.3	No.1	No.2
No airflow	OFF	OFF	Stop	Stop
Small	ON	OFF	Low-speed	Low-speed
Large	ON	ON	High-speed	High-speed

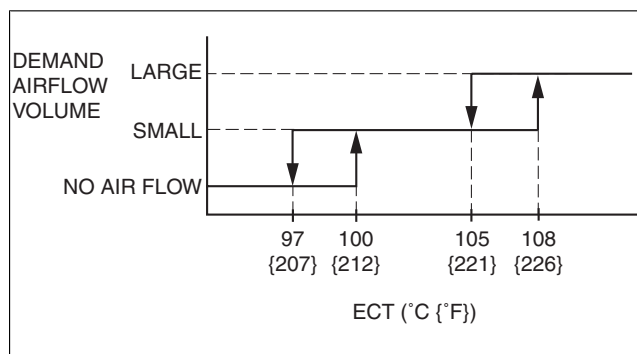


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Engine coolant temperature condition

- Controls the PCM output duty ratio according to the engine coolant temperature.
- The control temperature while the engine coolant temperature is decreasing is controlled differently than when it is increasing.

- If high-load driving continues with low wind blowing against the vehicle, air bubbles in the fuel line could occur by the rise in the fuel temperature from the heat of the engine. To prevent poor engine starting performance by air trapped in the fuel line from the occurrence of air bubbles, if the following conditions are met, the PCM operates the cooling fan (Demand airflow volume: Low).
 - Accumulated heat in engine compartment is extremely high
 - During travel (vehicle speed 10 km/h or more)
 - Engine coolant temperature: 90 °C {194 °F} or more



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A/C operation condition

- Controls the demand airflow volume depending on the refrigerant pressure and vehicle speed when the A/C switch is on.

Operation condition	Demand airflow volume
<ul style="list-style-type: none"> • When all of the following conditions are met. <ul style="list-style-type: none"> — Refrigerant pressure: 1.3 MPa {13 kgf/cm², 189 psi} or less, vehicle speed: 45 km/h {28 mph} or more — Refrigerant pressure: 2.2 MPa {22 kgf/cm², 319 psi} or less, vehicle speed: 85 km/h {53 mph} or more 	No airflow
<ul style="list-style-type: none"> • When all of the following conditions are met. <ul style="list-style-type: none"> — Refrigerant pressure: 1.3 MPa {13 kgf/cm², 189 psi} or less, vehicle speed: 45 km/h {28 mph} or less — Refrigerant pressure: 1.3—1.5 MPa {14—15 kgf/cm², 189—217 psi}, vehicle speed: 85 km/h {53 mph} or less — Refrigerant pressure: 1.5—2.2 MPa {16—22 kgf/cm², 218—319 psi}, vehicle speed: 65—85 km/h {41—52 mph} 	Small
<ul style="list-style-type: none"> • When all of the following conditions are met. <ul style="list-style-type: none"> — Refrigerant pressure: 1.5—2.2 MPa {16—22 kgf/cm², 218—319 psi}, vehicle speed: 65 km/h {40 mph} or less — Refrigerant pressure: 2.2 MPa {22 kgf/cm², 319 psi} or more 	Large

After Cooling Control

- If the engine is stopped directly after driving continuously at high load, air bubbles could occur in the fuel line due to the increase in the fuel temperature by the engine heat. To prevent poor engine starting performance by air trapped in the fuel line from the occurrence of air bubbles, if the following conditions are met, the PCM operates the cooling fan for a maximum period of 9 min (demand airflow volume: Low).
 - Engine coolant temperature: 90°C {194 °F} or more
 - Accumulated heat in engine compartment is extremely high

Conditions during collision

- If a collision signal from the SAS control module is received, the PCM stops the engine cooling fan to avoid use of battery voltage.