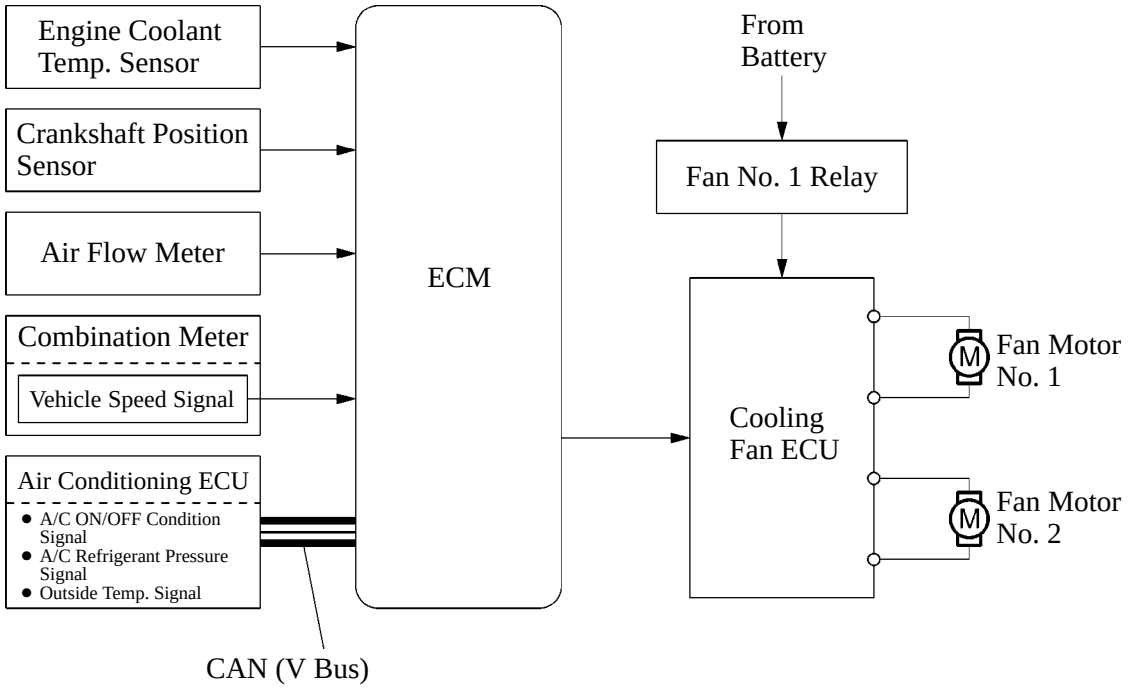
11. Cooling Fan Control System

General

- A cooling fan control system is used.
- To achieve an optimal fan speed in accordance with the engine coolant temperature, vehicle speed, engine speed, and air conditioning operating conditions, the ECM calculates the proper fan speed and sends the signals to the cooling fan ECU. Upon receiving the signals from the ECM, the cooling fan ECU actuates the fan motors.
- The ECM monitors the engine coolant temperature, outside temperature, and engine load (air flow meter signal and vehicle speed signal) while the vehicle is running. When the predetermined conditions are met, the ECM activates the cooling fan for 3 minutes after the engine has stopped.

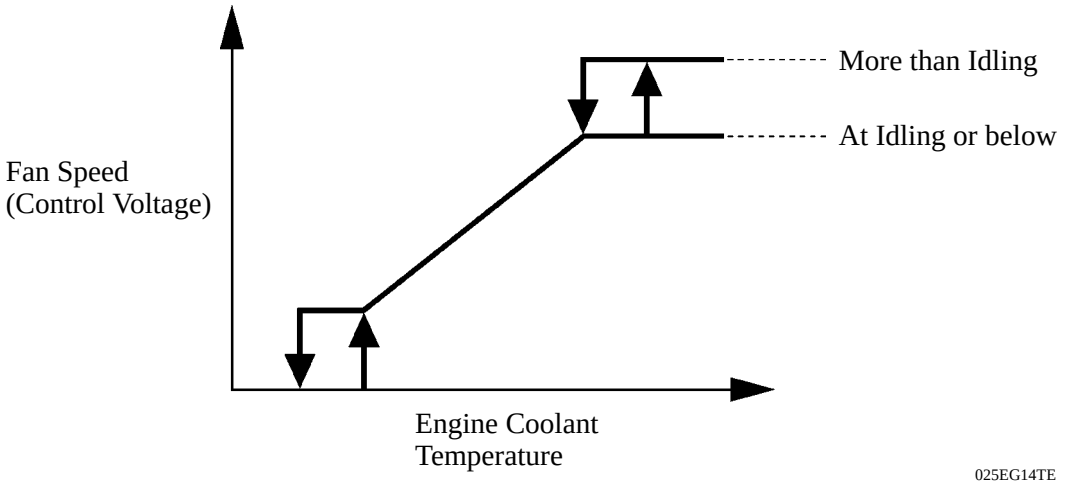
▶ Wiring Diagram ◀



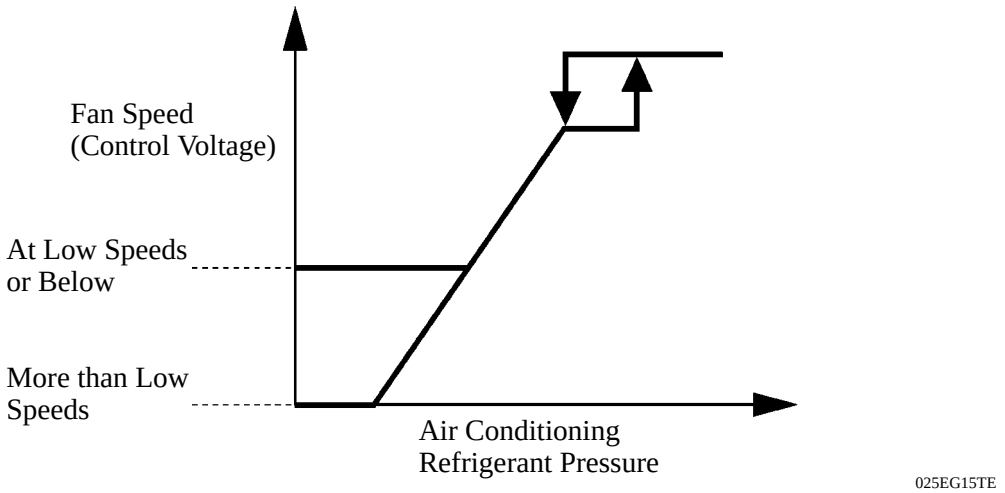
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Operation

- The ECM controls the cooling fan speed in accordance with the value of the engine coolant temperature, as shown in the graph below. When the engine coolant temperature is higher than a specific value, the control differs depending on whether the engine speed is at idling and below or more.



- The ECM controls the cooling fan speed in accordance with the value of the air conditioning refrigerant pressure, as shown in the graph below. When the air conditioning refrigerant pressure is higher than a specific value, the control differs depending on whether the engine speed is at low speeds and below or more.



- When all the conditions below are met while the vehicle is running, the ECM activates the fan motors via the cooling fan ECU for 3 minutes after the engine has stopped.
  - The engine coolant temperature is a predetermined value or more before the engine stops.
  - The outside temperature is a predetermined value or more before the engine stops.
  - The engine load, which exceeds a predetermined value, is applied.