

■ ACTIVE AIR SHUTTER SYSTEM [(E)]

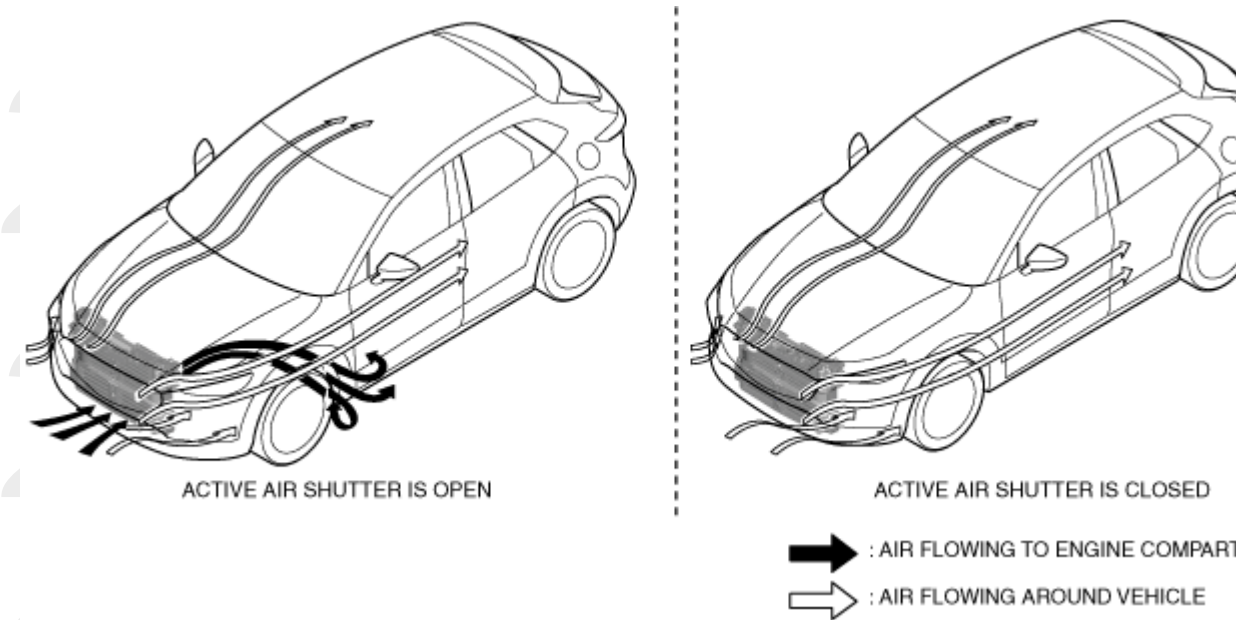
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Outline

- The active air shutter system controlled by the PCM reduces turbulent air*1 occurring around the vehicle which reduces air resistance. It does this by closing the active air shutter behind the front bumper mesh while the vehicle is being driven to control the air flowing into the engine compartment. In addition, by closing the shutter and blocking the airflow while the vehicle is driven during cold temperatures, the engine warms up more efficiently. By reducing the air resistance and improving the engine warm-up efficiency, the fuel economy has been improved.

*1 :The air flowing into the engine compartment from the front bumper mesh while the vehicle is driven flows underneath the floor and the tire housings. The air flowing underneath the floor and tire housings collides with the air flowing around the vehicle and creates turbulence.



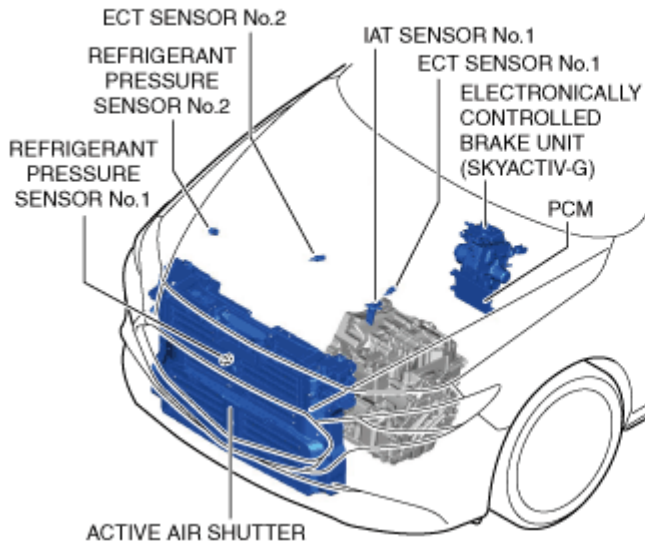
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Structural View

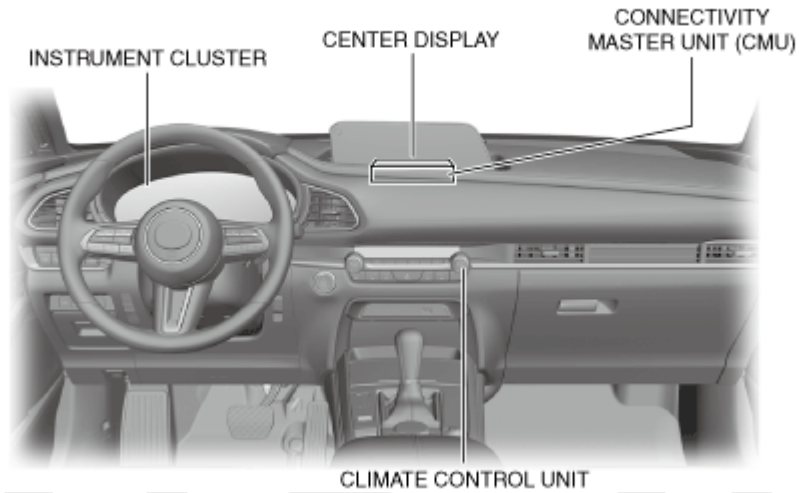
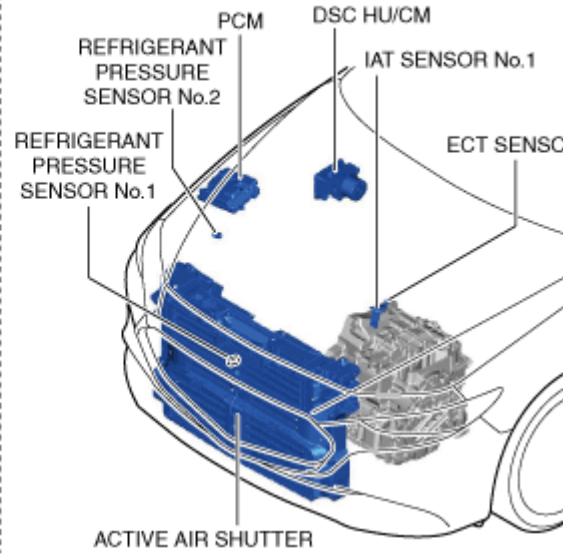
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SKYACTIV-G



SKYACTIV-D 1.8



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Component parts	Function
PCM	The PCM controls the actuator of the active air shutter according to the driving and engine conditions.
Active air shutter	The active air shutter opens/closes the shutter according to the request signal from the PCM.
DSC HU/CM	The DSC HU/CM sends the vehicle speed signal to the PCM.
Climate control unit	The climate control unit sends the A/C operation signal to the PCM.
IAT sensor No.1	IAT sensor No.1 detects the intake air temperature before it passes through the throttle body.
ECT sensor	ECT sensor detects the engine coolant temperature.
Refrigerant pressure sensor	The refrigerant pressure sensor detects the refrigerant pressure.
Instrument cluster	The instrument cluster turns on the master warning light when a system malfunction occurs.
Connectivity Master Unit	The connectivity master unit displays the warning screen in the center display based on the warning display request signal from the PCM.
Center display	The center display displays the warning screen when a system malfunction occurs.

- For the active air shutter system control, refer to ACTIVE AIR SHUTTER CONTROL. (SeeACTIVE AIR SHUTTER CONTROL [(E)].)
- For details on the active air shutter, refer to ACTIVE AIR SHUTTER. (SeeACTIVE AIR SHUTTER.)