

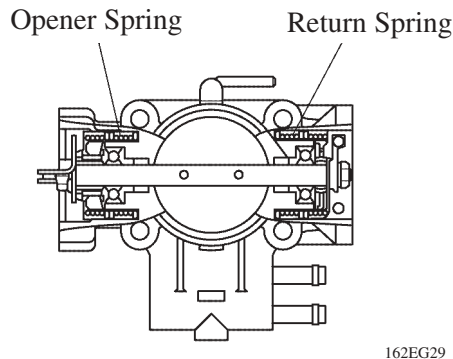
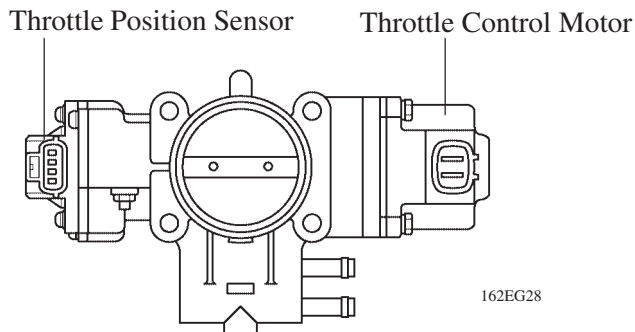
■ INTAKE AND EXHAUST SYSTEM

1. General

Two separate systems, each containing an air cleaner, throttle body, intake air chamber, etc., are provided for the right and left banks to accommodate the completely independent right-left bank intake system.

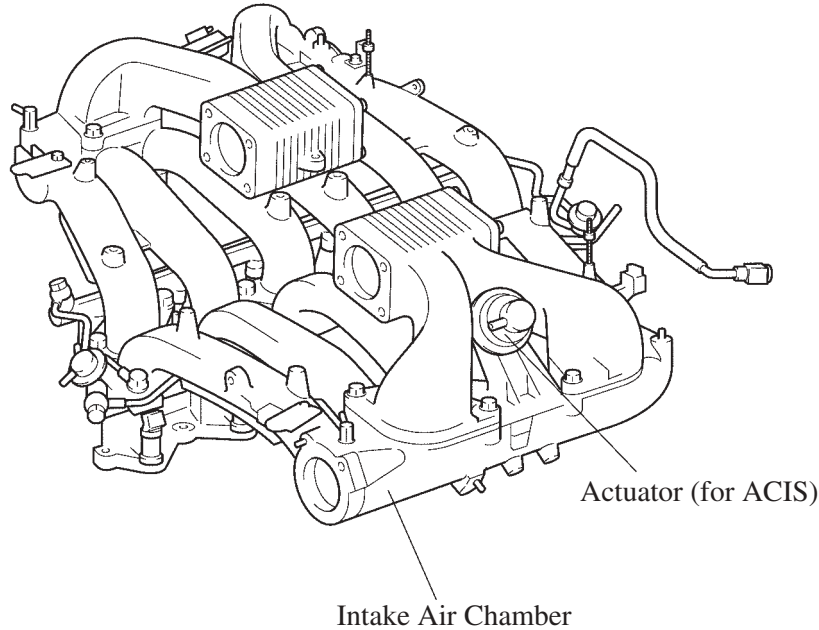
2. Throttle Body

- The right and left banks are each provided with a throttle body.
- The adoption of the ETCS-i has realized excellent throttle control.
- The ISC system and cruise control system are controlled comprehensively by the ETCS-i.
- The ETCS-i, which drives the throttle valve through a step motor that is controlled by the engine ECU, thus doing away with a throttle link or an accelerator cable to connect the accelerator pedal to the throttle valve, has been adopted.
- The throttle control motor is provided with a return spring that closes the throttle valve.
- An opener spring is provided on the throttle position sensor side. This spring opens the throttle valve slightly when the engine is stopped to prevent the throttle valve from sticking and to improve the engine's restartability.
- A warm coolant passage is provided below the throttle body to prevent the throttle valve from freezing during cold temperatures.



3. Intake Air Chamber

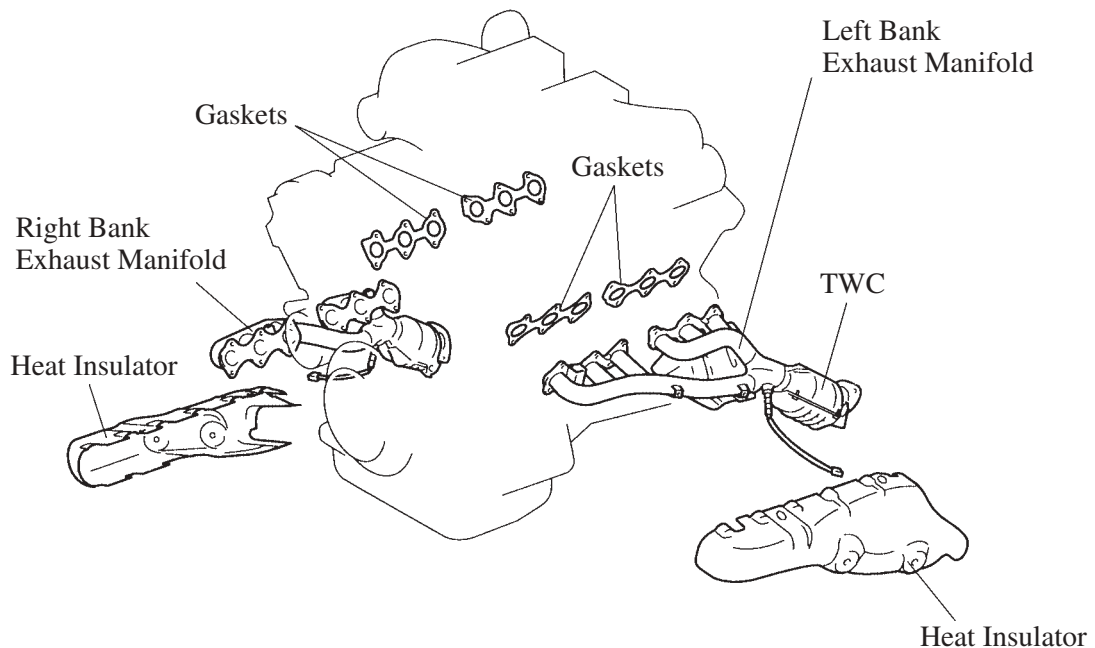
- The low-to mid speed range torque has been improved by increasing the length of the intake manifold port.
- To achieve completely independent right and left banks, each right and left bank is provided with an intake air chamber. Each intake air chamber contains an intake air control valve. This valve is activated by ACIS (Acoustic Control Induction System) and is used to alter the intake pipe length to improve the engine performance in all speed ranges.



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4. Exhaust Manifold

- The exhaust manifolds are made of stainless steel for weight reduction.
- By separating the exhaust manifolds between the 3 front and rear cylinders, their heat resistance and reliability have been improved.
- The exhaust manifold and the TWC (Three-Way Catalytic Converter) have been integrated to improve the TWC's warm-up performance and to reduce exhaust emissions during cold-temperature operation.



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5. Exhaust Pipe

- The exhaust pipe is made of stainless steel for improved rust resistance.
- A clamp type joint is used to join the front pipe and center pipe, and center pipe and tail pipe to realize weight reduction.

■ FUEL SYSTEM

- A compact 4-hole type injector has been adopted to improve the atomization of fuel.
- A quick connector is used to connect the engine side and the body side together to improve serviceability.
- Two compact fuel pumps have been adopted.
- For fuel pump control, 2 types of controls are effected: “fuel pump speed control” to increase the number of revolution the fuel pump during high-engine speed and high-load conditions, and “fuel pump select control” to switch the fuel pumps each time the engine is started. See page 73 for the details of the fuel pump control.