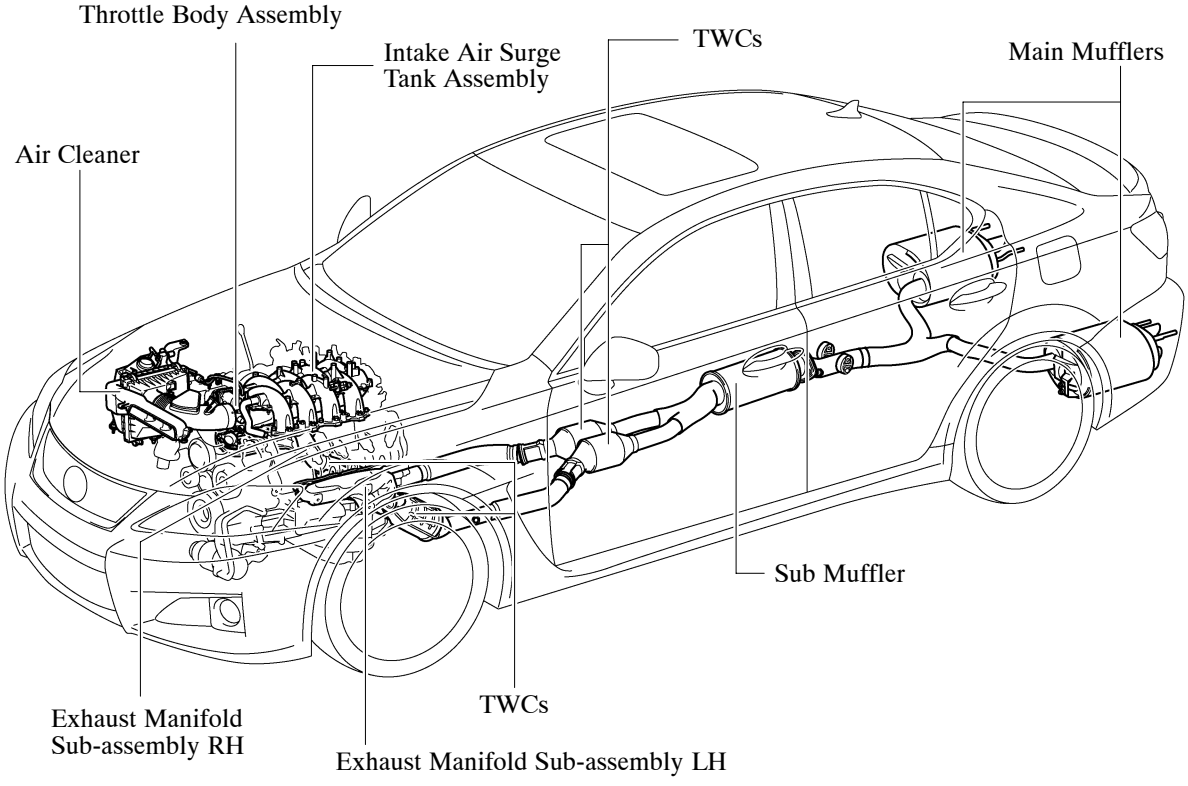
■INTAKE AND EXHAUST SYSTEM

1. General

- A link-less type throttle body assembly is used and it realizes excellent throttle control.
- The ETCS-i (Electronic Throttle Control System-intelligent) is used to ensure excellent throttle control in all operating ranges. For details, see page EG-88.
- An aluminum alloy intake air surge tank assembly is used.
- An air intake control system is used to improve engine output. For details, see page EG-104.
- A stainless steel exhaust manifold sub-assembly and exhaust pipes are used.
- TWCs (Three-Way Catalytic Converters) are provided in the exhaust manifold sub-assembly of each bank and also in the front exhaust pipe.
- The exhaust pipe diameter is increased to improve engine output.
- Four tailpipes are used to allow for the exhaust diffusers integrated with the rear bumper, reducing losses due to pressure.



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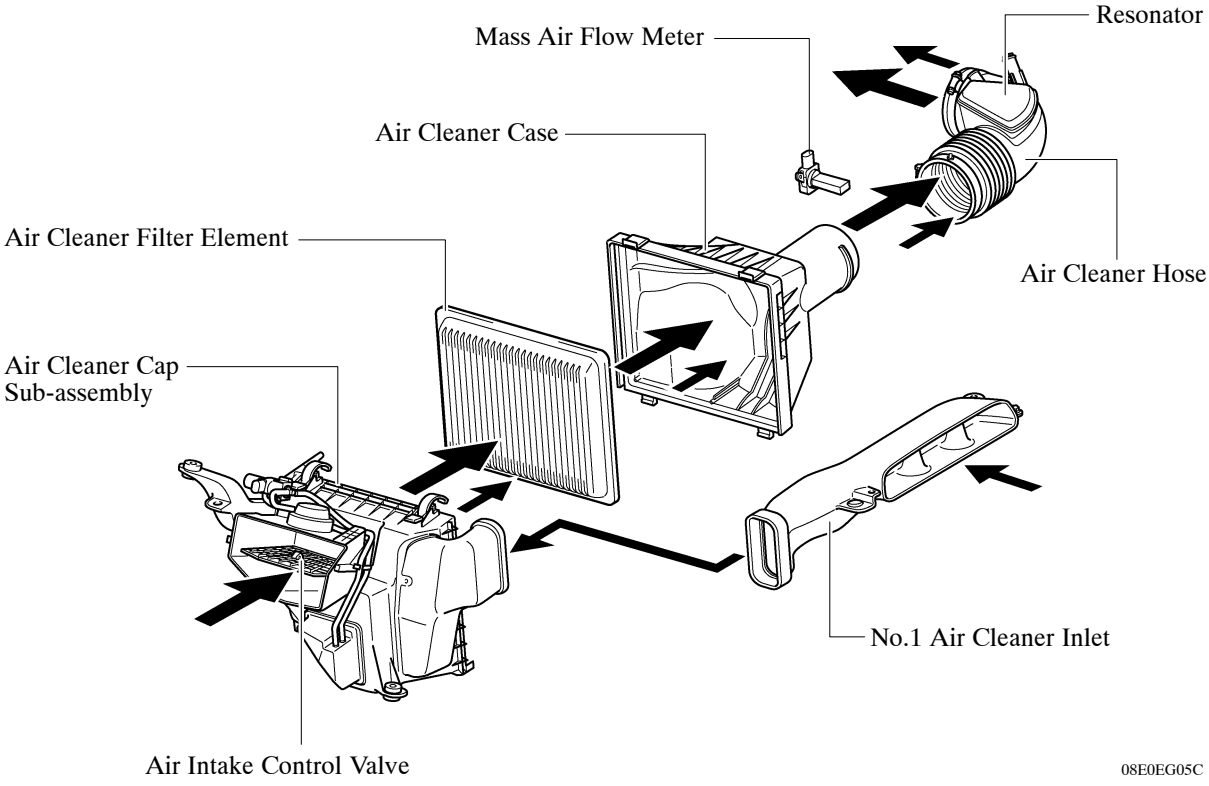
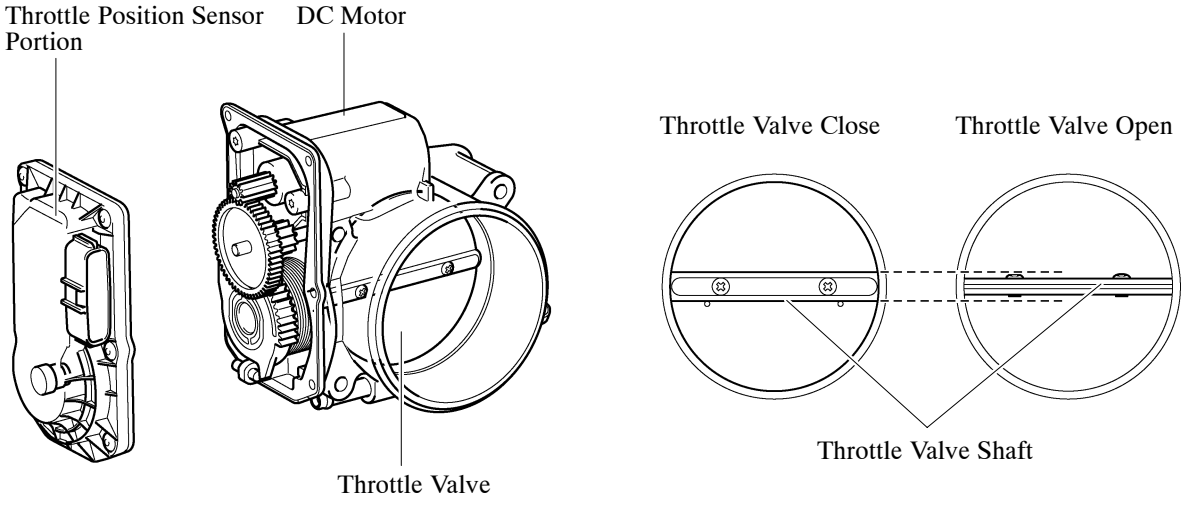
2. Air Cleaner

- Along with the use of the air intake control system, an air intake control valve is provided on the air cleaner case. For details, see page EG-104.
- The air cleaner filter element uses a filter paper that ensures a high level of filtering performance while reducing pressure loss.
- A resonator is provided on the air cleaner hose connection, reduce the sound level of the intake air.



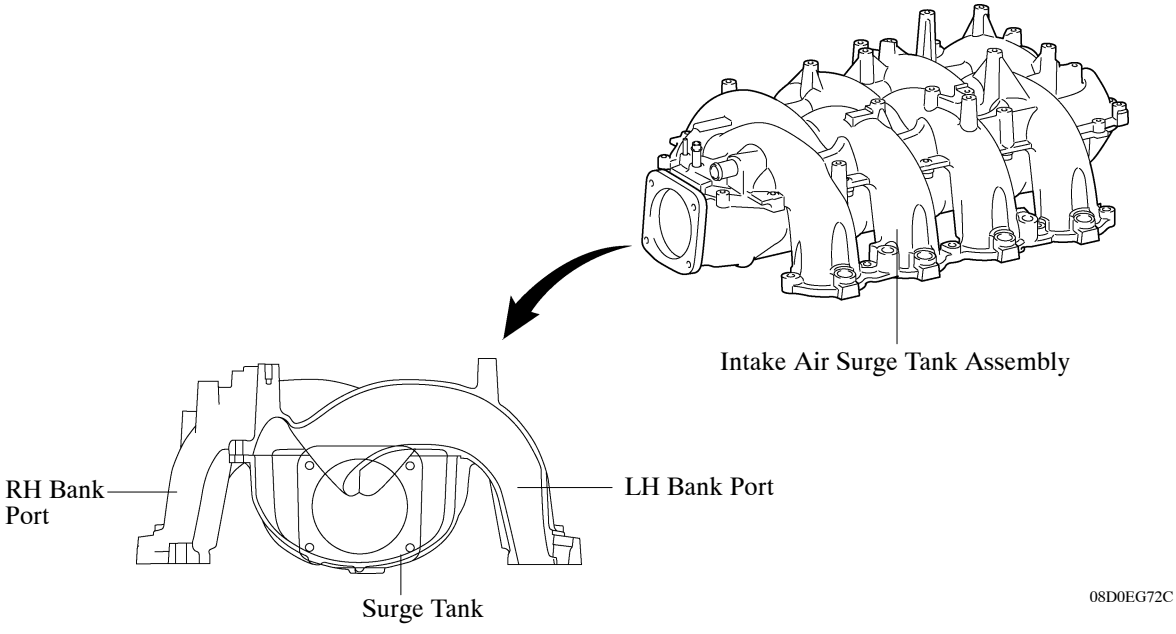
3. Throttle Body

- A link-less type throttle body in which the throttle position sensor and the throttle control motor are integrated is used. It realizes excellent throttle valve control.
- In the throttle control motor, a DC motor with excellent response and minimal power consumption is used. The ECM performs the duty ratio control of the direction and the amperage of the current that flows to the throttle control motor in order to regulate the throttle valve angle.
- The throttle valve shaft has been machined down, increasing the passage area to decrease intake resistance.



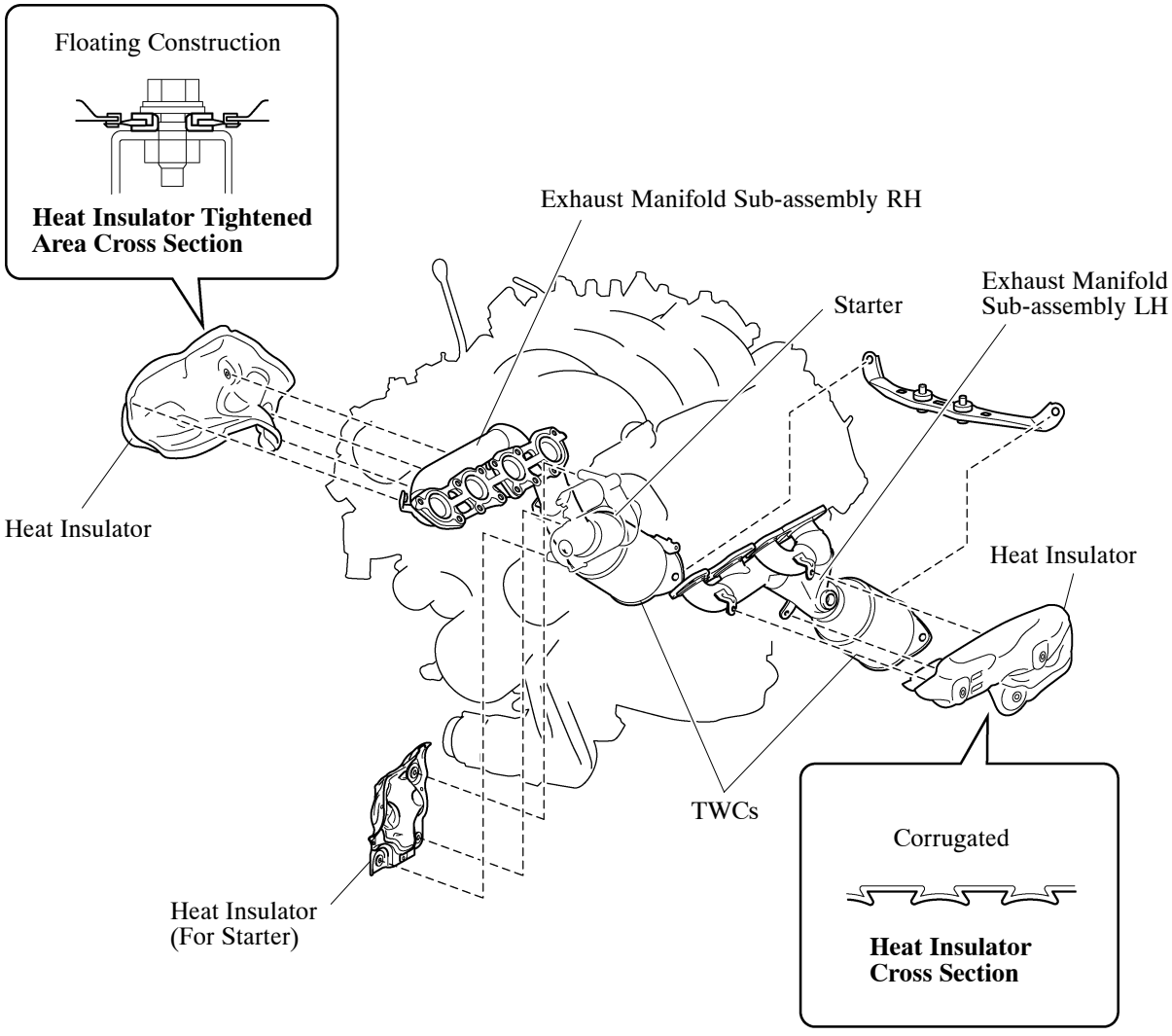
4. Intake Air Surge Tank Assembly

- The port diameter and length were optimized to improve maximum power.
- The volume of the surge tank was reduced to enhance response.
- The structure is set so that the intake air enters from the front of the engine in order to ensure that it is equally distributed to both the right and left banks.



5. Exhaust Manifold

- Stainless steel exhaust manifolds with integrated ceramic type TWCs (Three-Way Catalytic Converters) are used for warming up the TWCs, reducing weight, and resisting rust.
- The exhaust manifold sub-assembly LH is a semi-dual type, and the exhaust manifold sub-assembly RH is a semi-semi dual type, used to enhance the manifold configuration in consideration of mounting clearance, and enhance vehicle performance characteristics.
- The heat insulator is made of corrugated aluminum. This ensures rigidity, and at the same time, increases the surface area to improve heat dissipation. Furthermore, a floating construction is used at the tightened area to reduce the transfer of heat and vibration to the heat insulator and improve reliability.



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6. Exhaust Pipe

- The exhaust pipes are made of stainless steel for improved rust resistance.
- Ceramic type TWCs in the front exhaust pipe are used.
- It arranged mufflers a dual, and advanced the engine output by the decrease of pressure loss.
- A ball joint is used to join the exhaust front pipe and exhaust tail pipe. As a result, in-vehicle sound has been muffled, vibration has been minimized, and weight reduction has been realized.
- Stainless wool and roving wool are used as sound absorption materials for the sub muffler in order to ensure durability and reduce exhaust noise in the high-frequency range.