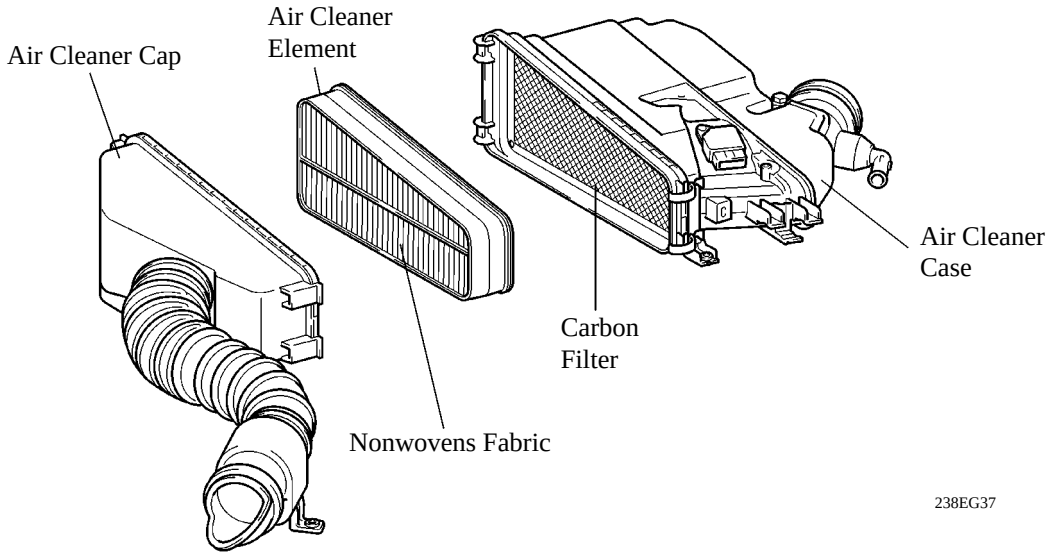
■INTAKE AND EXHAUST SYSTEM

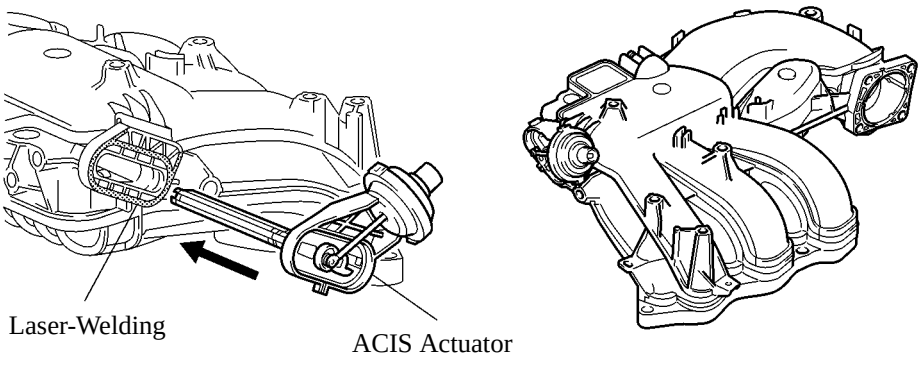
1. Air Cleaner

- A nonwovens full-fabric type air cleaner element has been adopted.
- A carbon filter, which adsorbs the HC that accumulates in the intake system when the engine is stopped, has been adopted in the air cleaner case in order to reduce evaporative emissions.
  This filter is maintenance-free.
- A resonator has been provided in the air cleaner case to reduce the amount of intake air sound.



2. Intake Air Chamber

- The intake air chamber is made of plastic to realize lightweight.
- The air intake chamber consists of upper and lower section and 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 range. For details, refer to ACIS section on page 59.
- The ACIS actuator is laser-welded onto the intake air chamber. Many of the components are made of plastic for weight reduction.



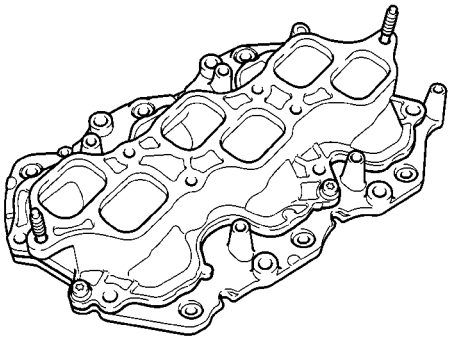
– REFERENCE –

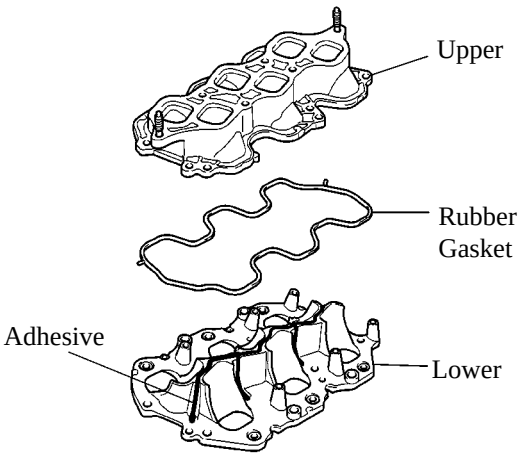
Laser-Welding:

In laser-welding, a laser-absorbing material (for the intake air chamber) is joined to a laser-transmitting material (for the ACIS actuator). Laser beams are then irradiated from the laser-transmitting side. The beams penetrate the laser-transmitting material to heat and melt the surface of the laser-absorbing material. Then, the heat of the laser-absorbing material melts the laser-transmitting material and causes both materials to become welded.

3. Intake Manifold

- Light weight aluminum alloy is used for the intake manifold.
- This intake manifold consists of two pieces, the upper and lower, which are sealed with a rubber gasket and adhesive.





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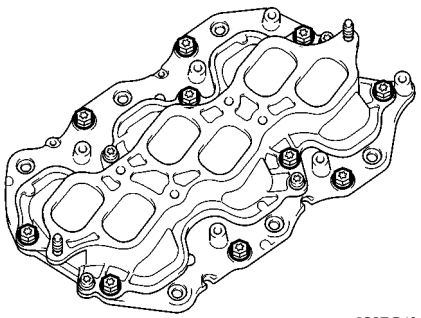
Service Tip

- Do not disassemble the upper and lower portions of the two-piece intake manifold, which are sealed with a rubber gasket and adhesive. To remove the intake manifold, remove the 10 bolts that are shown in the illustration.
- These bolts have the head of hexagon shape.



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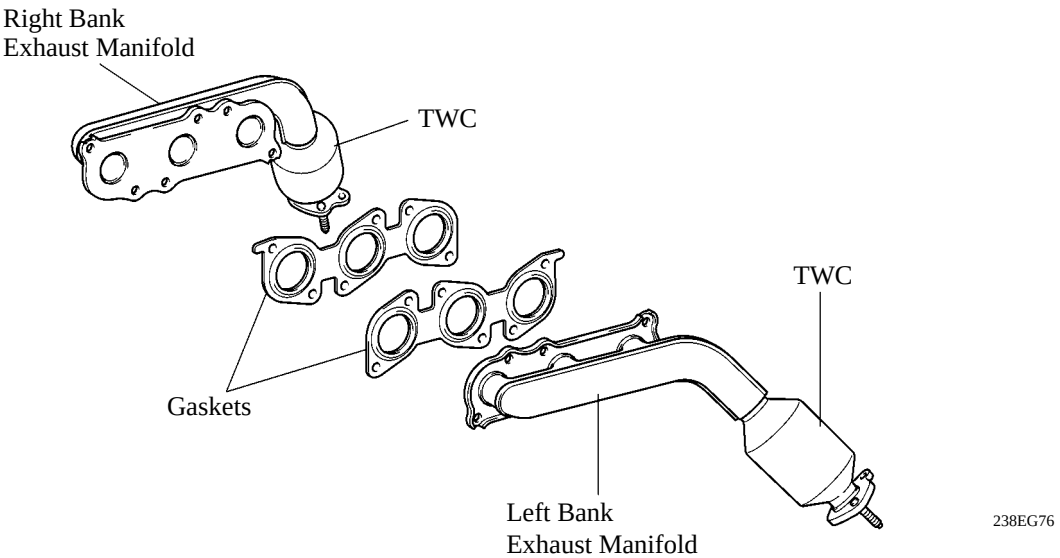
4. Exhaust Manifold

General

- The exhaust manifolds are made of stainless steel for weight reduction.
- An ultra thin-wall, high-cell density, ceramic type TWC (Three-Way Catalytic Converter) has been adopted. This TWC is incorporated on each of the right and left banks.



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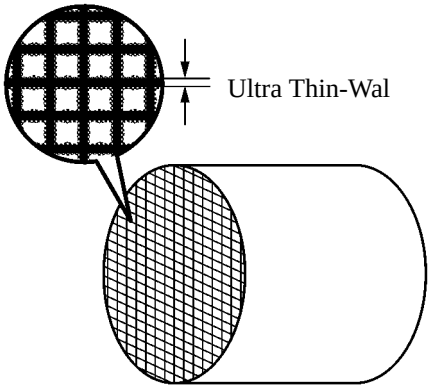
Three-Way Catalytic Converter

This TWC enables to improve exhaust emissions by optimizing the cells density and the wall thickness.



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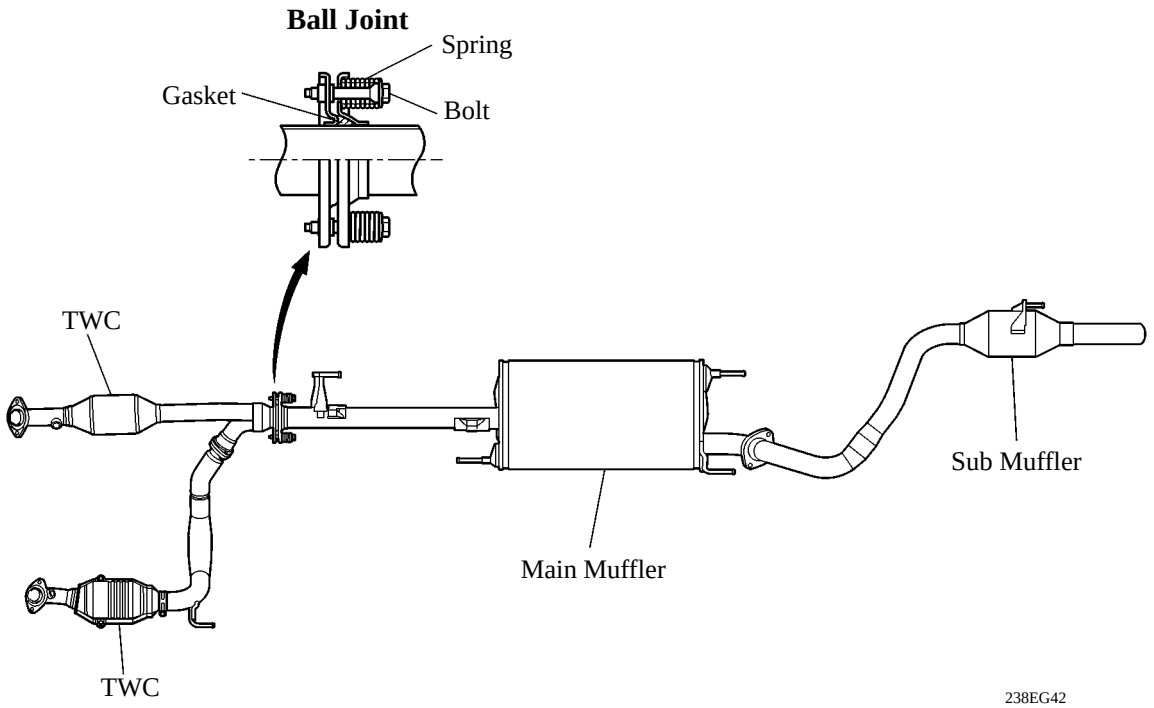
5. Exhaust Pipe

- The exhaust pipe is made of stainless steel for improved rust resistance.
- A ball joint is used to join the exhaust front pipe and exhaust center pipe. As a result, a simple construction and improved reliability have been realized.
- A thin-wall, ceramic type TWC has been adopted.



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