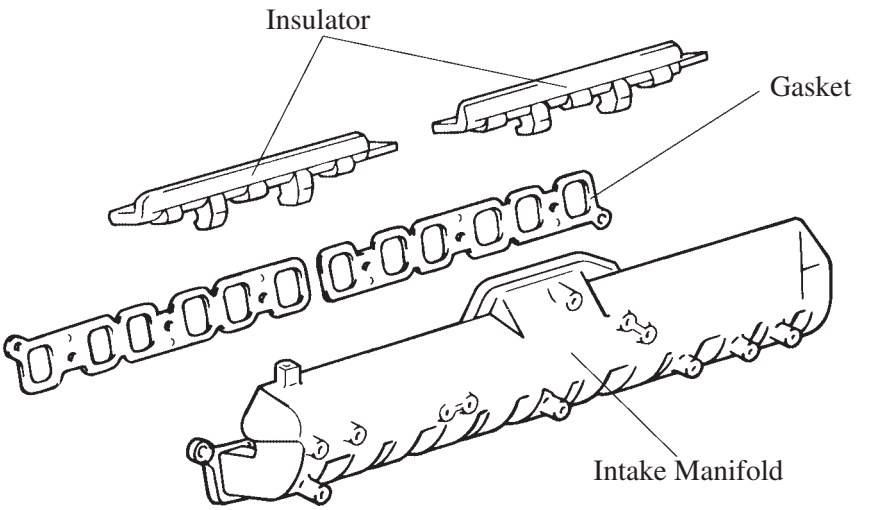
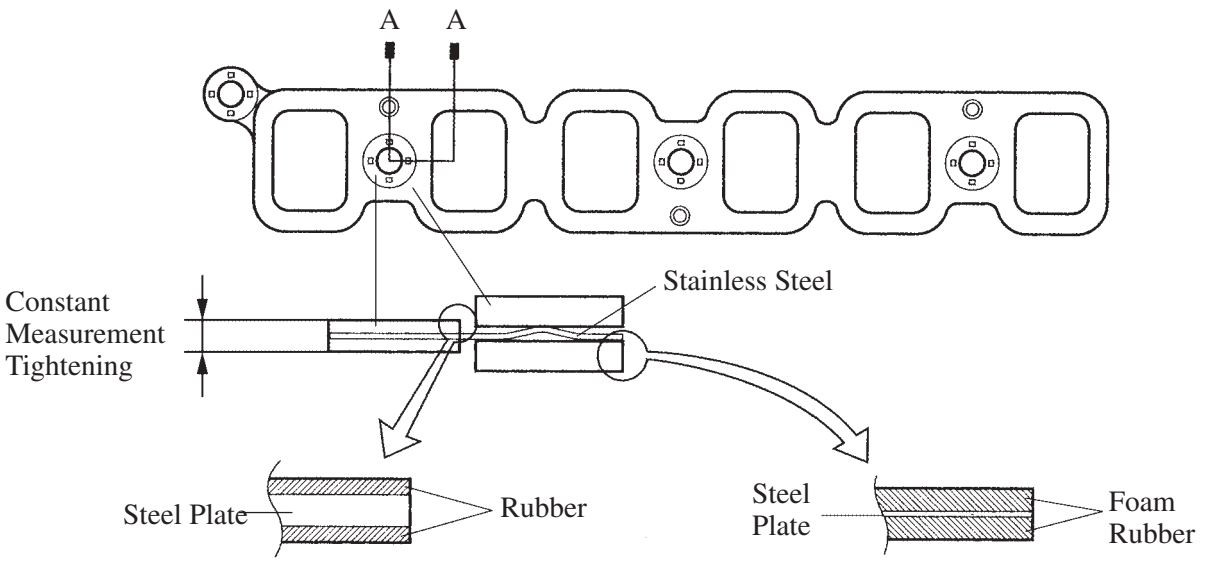
■INTAKE AND EXHAUST SYSTEM

1. Intake Manifold

- As in the previous engine, an intake manifold made of aluminum and integrated with the intake air chamber has been adopted. In addition, a large-capacity intake air chamber and isometric intake ports have been adopted to improve the engine performance.
- Insulators are provided at the area of the intake manifold that mounts onto the cylinder head for noise reduction.
- The intake manifold gasket is constructed of steel plates that are coated with foam rubber on both sides, then riveted to the both sides of a stainless steel substrate. A composite gasket cinched with layered washers is provided for the areas that are tightened with bolts to achieve a floating retaining construction of the intake manifold for noise reduction.
- Vibration isolating washers with a layered construction have been adopted for the washers used in installing the intake manifold.



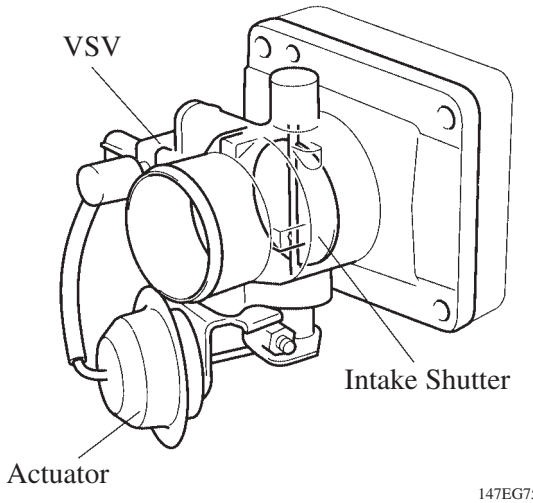
147EG73



Layered Washer Portion **Foam Rubber Portion** 147EG74

2. Intake Shutter

The intake manifold is provided with an intake shutter which shuts out air to reduce vibration when stopping the engine.



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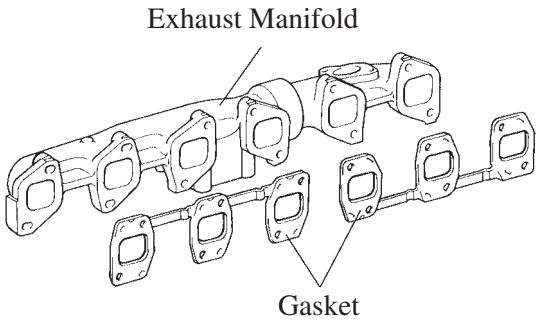
3. Exhaust Manifold

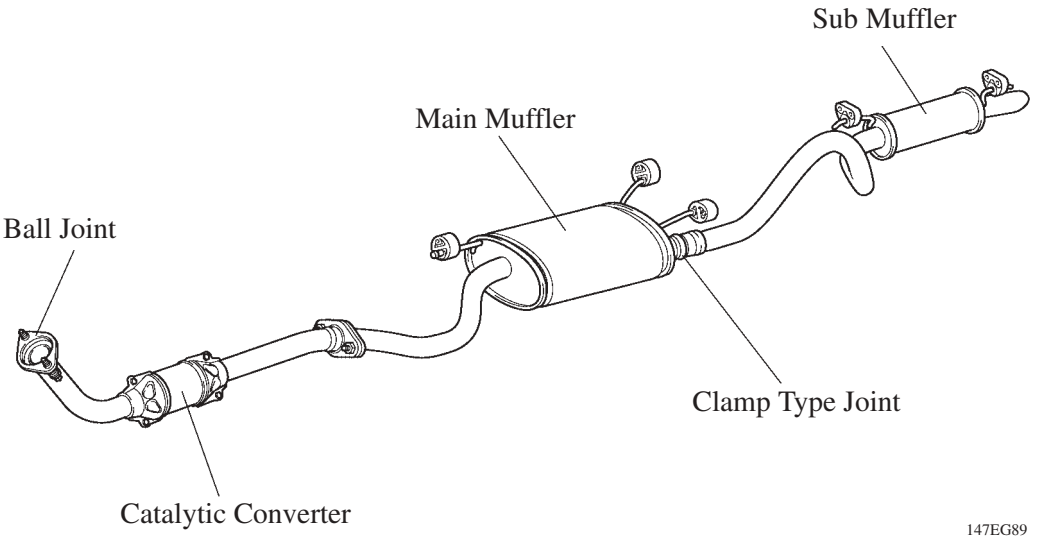
- As in the previous engine, an exhaust manifold made of cast iron has been adopted.
- A 5-layer steel laminate type exhaust manifold gasket has been adopted.

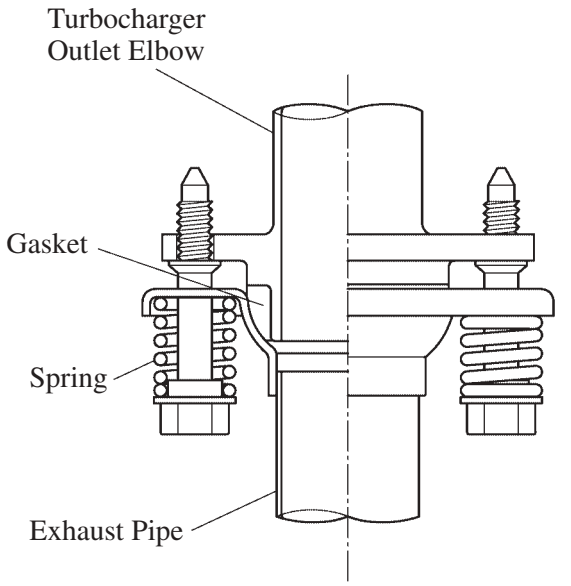


147EG76

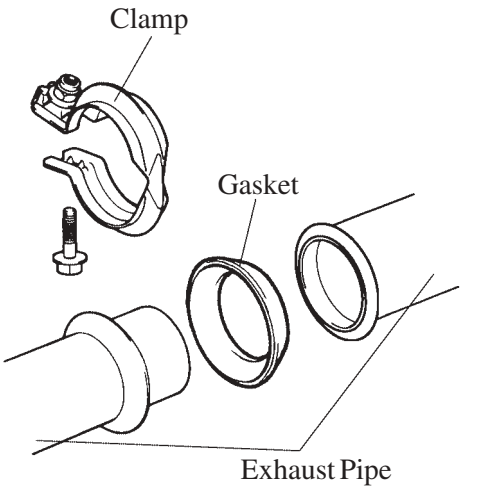
4. Exhaust Pipe

- The exhaust pipe is made of stainless steel for improved rust resistance.
- An oxidation catalytic converter has been adopted for the front exhaust pipe to reduce exhaust emissions.
- A ball joint has been adopted for joining the turbocharger and the front exhaust pipe for weight reduction and for reducing noise and vibration.
- A clamp type joint is used to join the center exhaust pipe and tail pipe to realize weight reduction.





Ball Joint 147EG58



Connecting Exhaust Pipe 156EG06