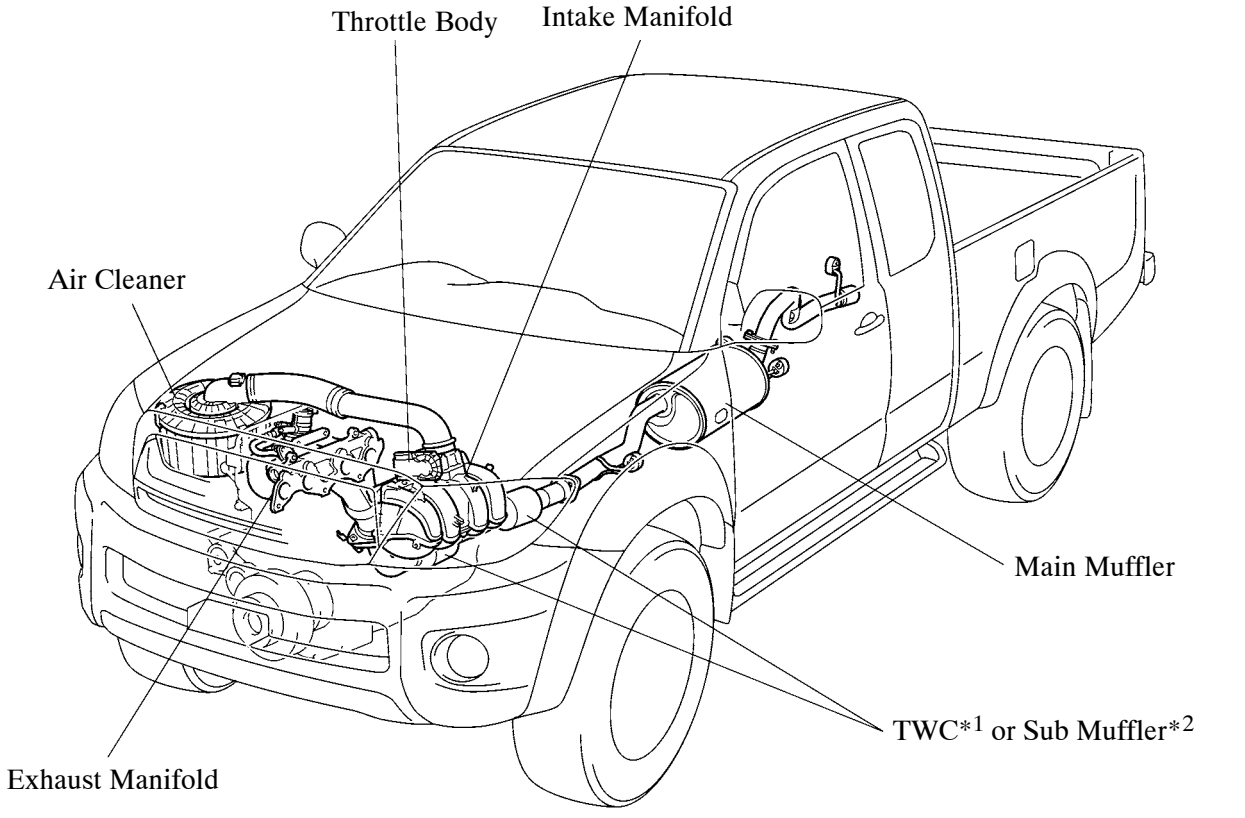
■INTAKE AND EXHAUST SYSTEM

1. General

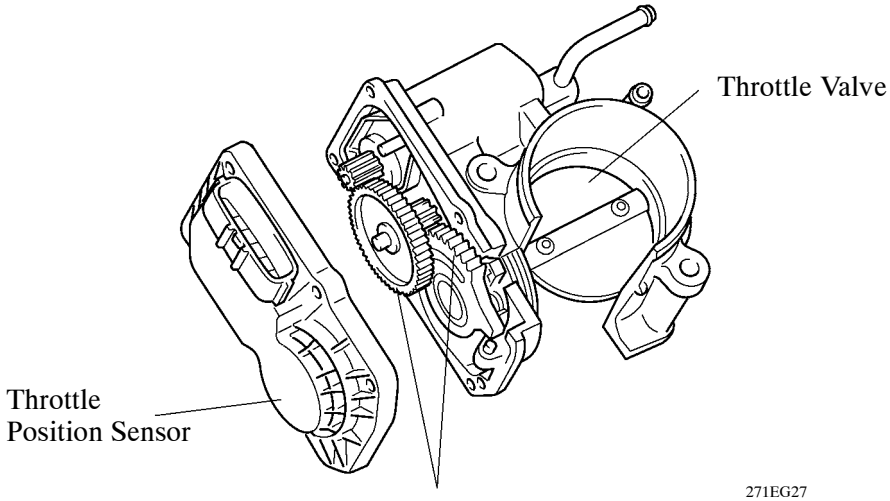
- A plastic intake manifold is used for weight reduction.
- The linkless-type throttle body is used.
- A stainless steel exhaust manifold and exhaust pipe are used for weight reduction and rust resistance.
- 2 TWCs (Three-Way Catalytic converters) have been provided in the exhaust pipe of all models with the unleaded gasoline engine.
- The ETCS-i (Electronic Throttle Control System-intelligent) is used to ensure excellent throttle control in all operating ranges. For details of ETCS-i control, see page EG-49.
- An air injection system is used on the models compliant with EURO III, EURO IV and Tier 1 emission regulations to ensure the proper warm-up performance of the TWC when starting a cold engine. For details of air injection system control, see page EG-58.



*1: Models with unleaded gasoline engine
*2: Models with leaded gasoline engine

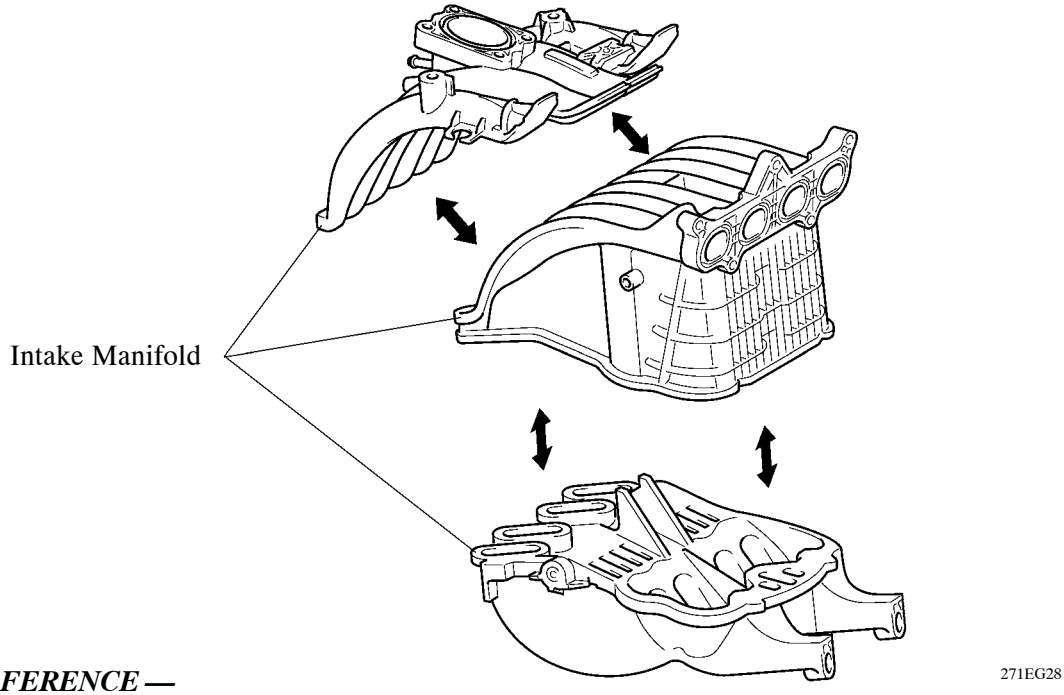
2. Throttle Body

- A DC motor with excellent response and minimal power consumption is used for the throttle control motor. The ECM performs the duty cycle control of the direction and the amperage of the current that flows to the throttle control motor in order to regulate the opening angle of the throttle valve.
- The linkless-type throttle body is used and it provides excellent throttle control.



3. Intake Manifold

- The intake manifold has been made of plastic to reduce the weight and the amount of heat transferred from the cylinder head. As a result, it has become possible to reduce the intake air temperature and improve the intake volumetric efficiency.
- This intake manifold consists of three parts, which are integrated through vibration welding.



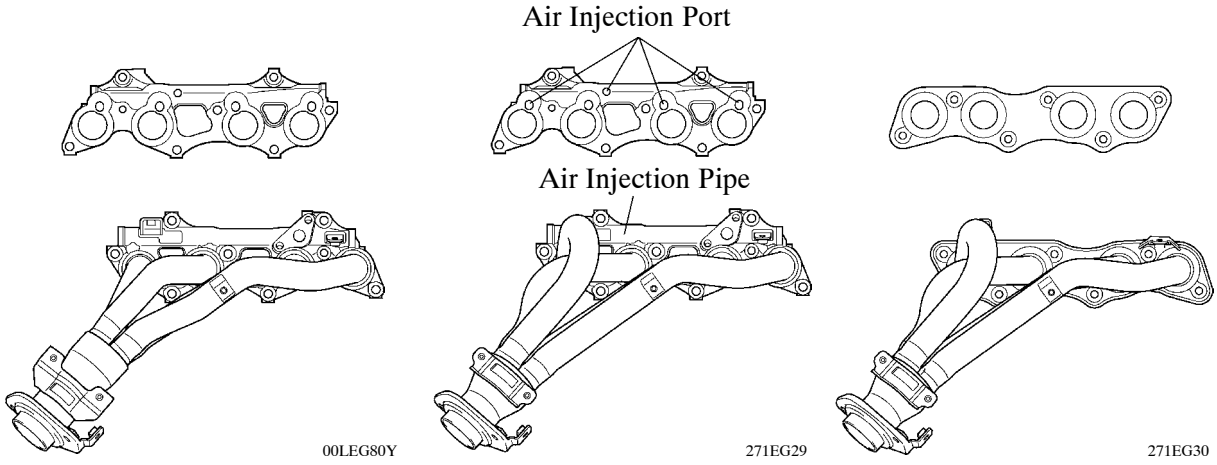
— REFERENCE —

Vibration Welding:

Vibration welding is a type of friction welding. In this process, one part of the work to be welded remains stationary while vibration and pressure are applied to the other part, thus causing the joining surfaces to melt and become welded. This method creates a joint that is stronger than other joining methods, such as those using adhesives.

4. Exhaust Manifold

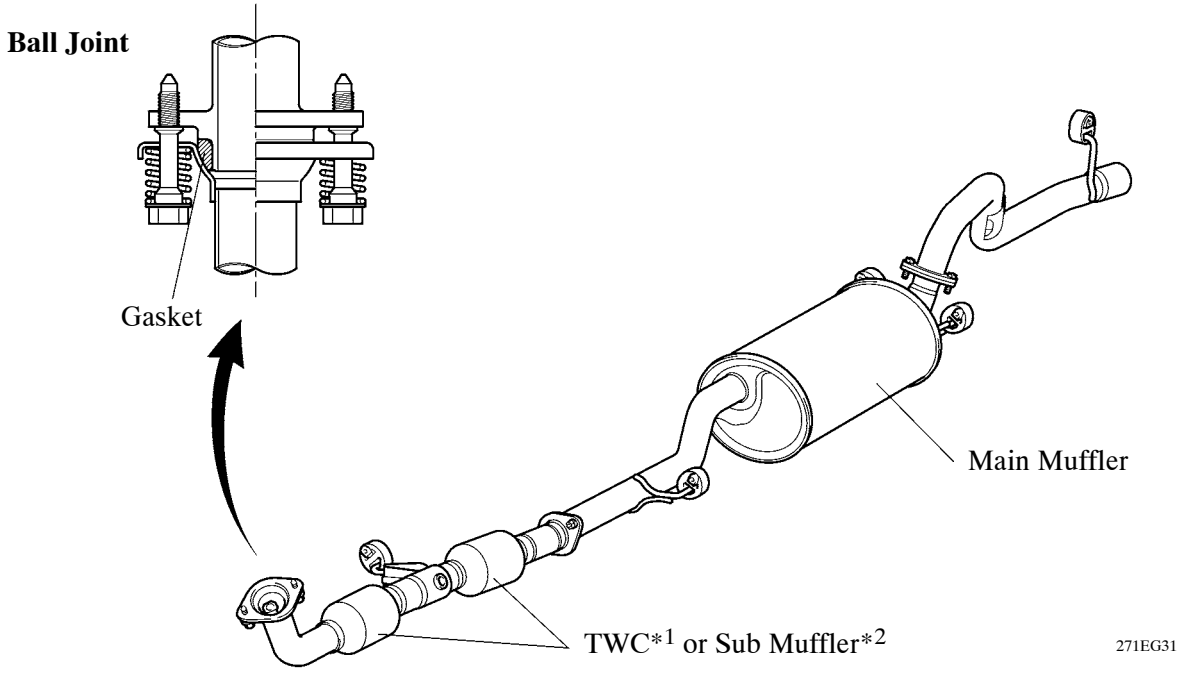
- A stainless steel exhaust manifold is used for weight reduction.
- An air injection pipe, which directs the air from an electric air pump to the air injection port on the cylinder head, has been provided on the models with the air injection system.



With Air Injection System (Models for Australia) | **With Air Injection System (Except models for Australia)** | **Without Air Injection System**

5. Exhaust Pipe

- 2 ceramic type TWCs have been provided in the exhaust pipe of all models with an unleaded gasoline engine. The exhaust emission performance of the engine is improved as a result of these TWCs. On the models with a leaded gasoline engine, a sub muffler is provided in place of the TWC.
- A stainless steel exhaust pipe is used for weight reduction and rust resistance.
- A ball joint is used to join the front exhaust pipe and exhaust manifold. As a result, a simple and reliable construction for reducing vibration has been achieved.



*1: Models with unleaded gasoline engine
*2: Models with leaded gasoline engine