■INTAKE AND EXHAUST SYSTEM

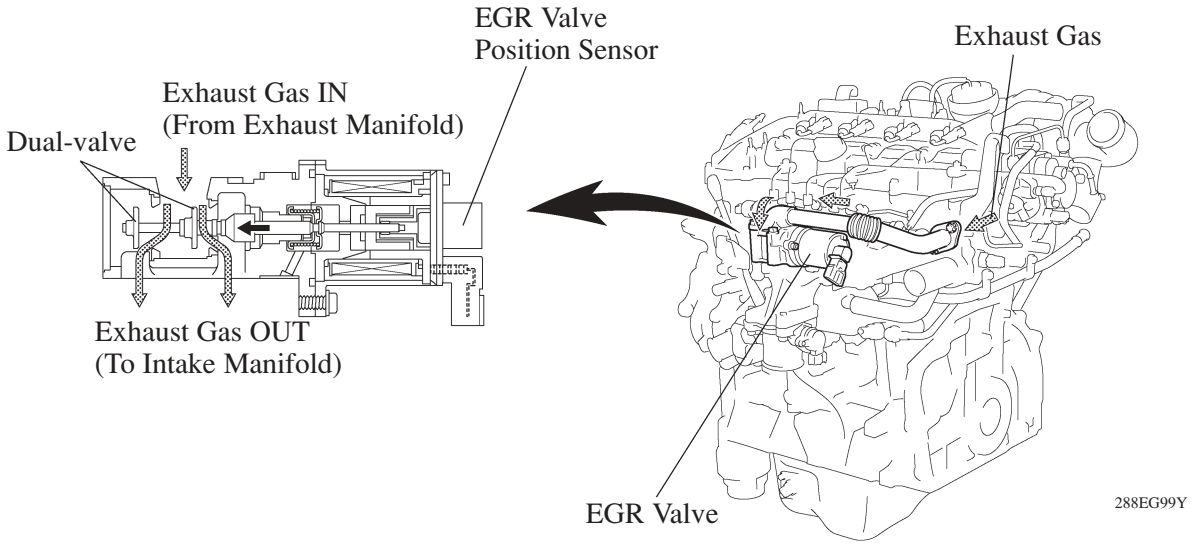
1. General

- A bypass passage with a switching valve is added to the EGR cooler.
- A water-cooled type turbocharger is used.
- NSR (NOx Storage Reduction) and DPNR (Diesel Particulate-NOx Reduction) catalysts are used in the exhaust manifold converter.

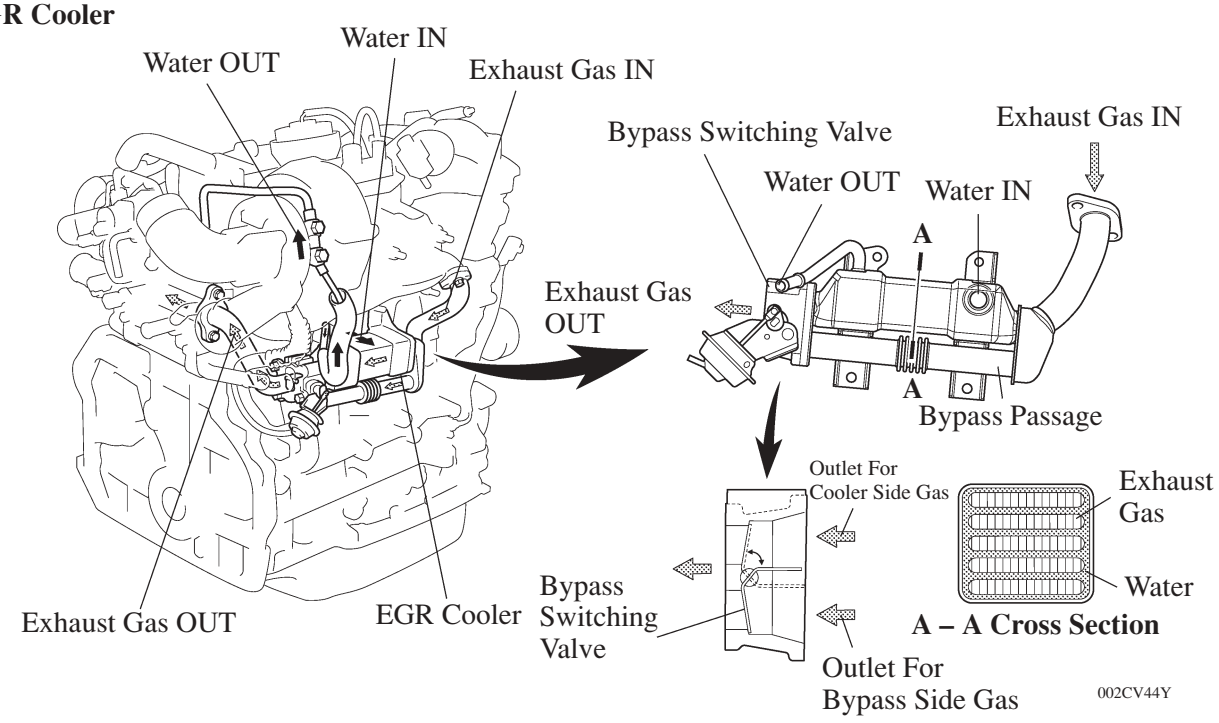
2. EGR Valve and EGR Cooler

- A bypass passage with an EGR cooler bypass switching valve is added to the EGR cooler.
- If EGR gas is cooled down in the EGR cooler with light engine load, compression air temperature decreases. To prevent this, the EGR gas passage is switched by the EGR cooler bypass switching valve.

EGR Valve

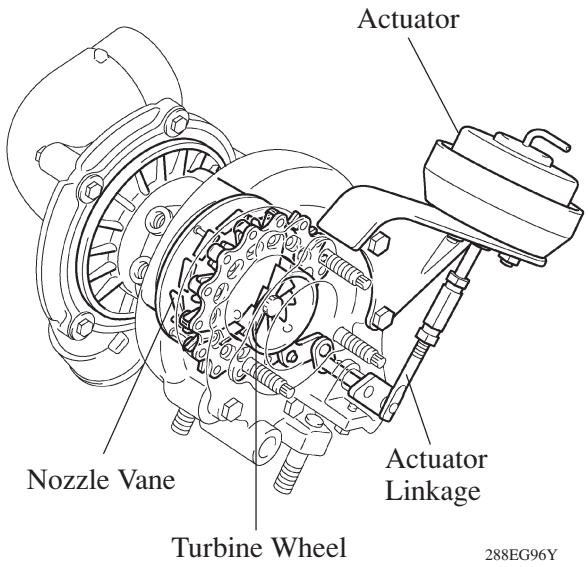


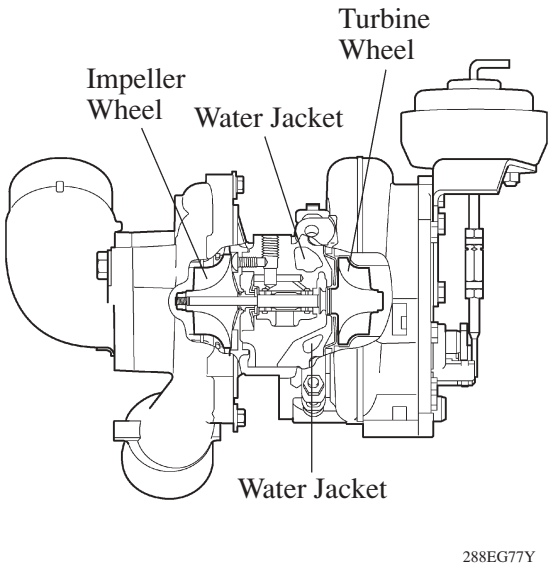
EGR Cooler



3. Turbocharger

- The variable nozzle vane type turbocharger drives the vacuum type actuator according to engine condition, and controls the nozzle vane in order to realize high engine output, low fuel consumption and low emissions.
- The turbocharger is cooled with engine coolant.
- The basic operation is the same as that of the 2AD-FTV turbocharger. For details, see page EG-81.





4. Exhaust Manifold Converter

The exhaust manifold converter consists of the NSR (NOx Storage Reduction) and DPNR (Diesel Particulate-NOx Reduction) catalysts. Pt (Platinum) is included on the NOx storage layer of the converter.

- The NSR catalyst purifies the NOx, HC (hydrocarbon), and CO (carbon monoxide).
- The DPNR catalyst purifies the PM (Particulate Matter = Carbon), NOx, HC, and CO.

