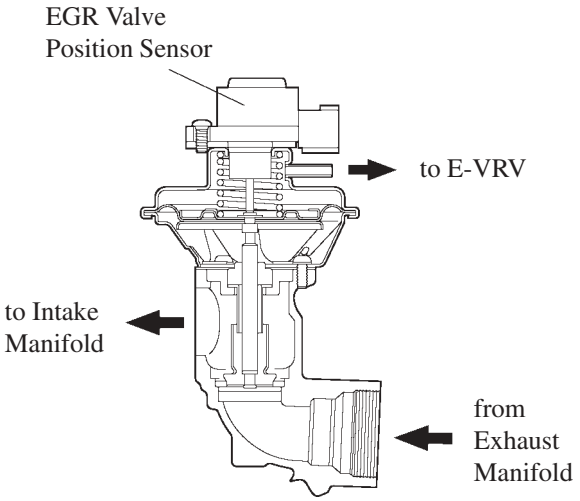
2. EGR System

General

This system is designed to help reduce and control NOx formation due to a slight reduction of peak temperature in the engine combustion chamber, which is accomplished by introducing a small amount of inert gas into intake manifold.

EGR Valve

An EGR valve position sensor has been provided in the EGR valve in order to directly measure the actual amount of the valve opening. This measurement is then input into the engine ECU in order to improve the precision of EGR control.



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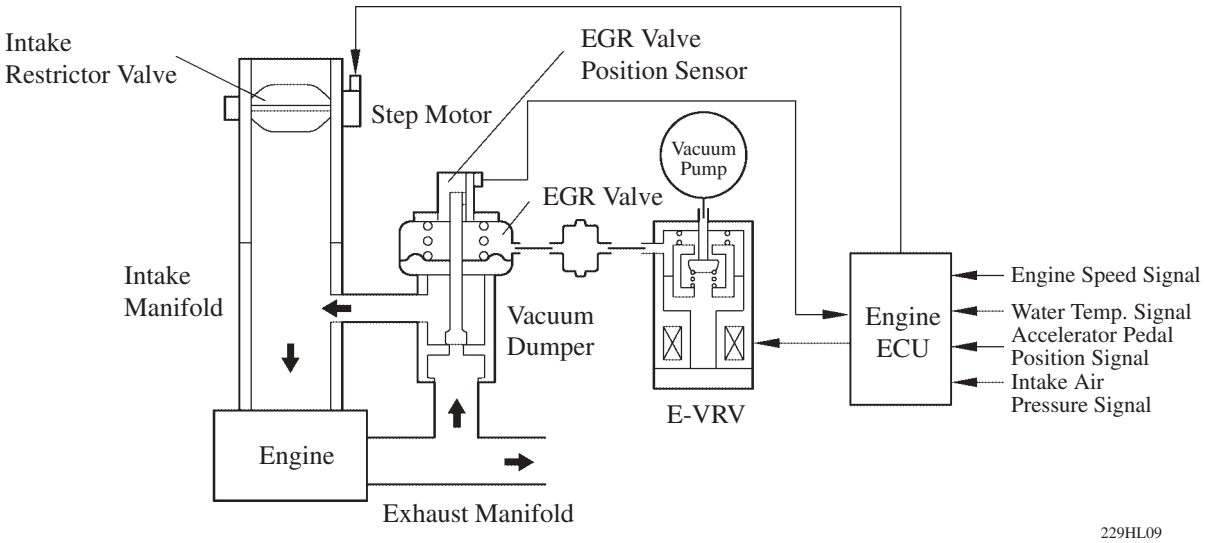
EGR Control

- By sensing the engine driving condition and actual amount of the EGR valve opening, the engine ECU electrically operates the E-VRV, which controls the magnitude of vacuum introduced into diaphragm of EGR valve and intake restrictor valve opening position with stepping motor and the amount of recirculating exhaust gas is regulated. EGR valve opening lift is controlled by modulated negative pressure.
- When the Engine ECU detects a malfunction in the EGR valve position sensor, the engine ECU illuminates the check engine warning light and outputs diagnostic trouble code (96).
- The EGR function is stopped under the conditions given below to ensure drivability and to reduce diesel smoke.
  1) The water temperature is below 30°C (86°F).
  2) The vehicle is driven under high load conditions.
  3) During deceleration.



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