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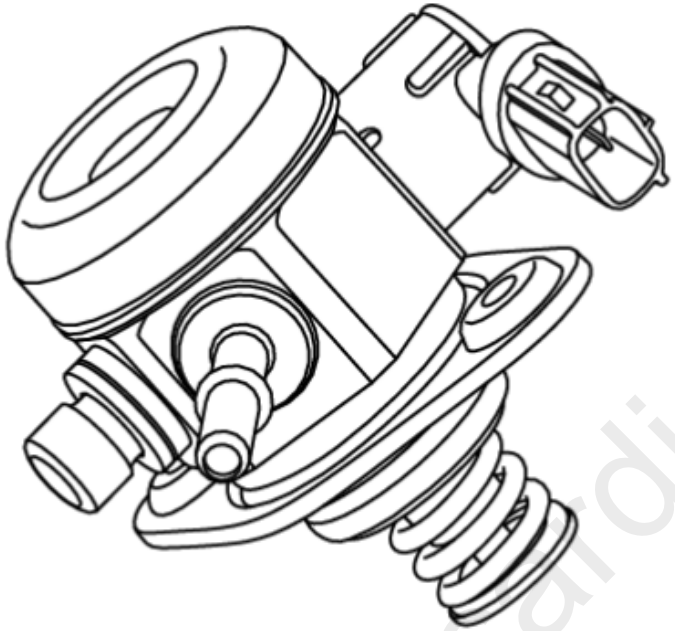
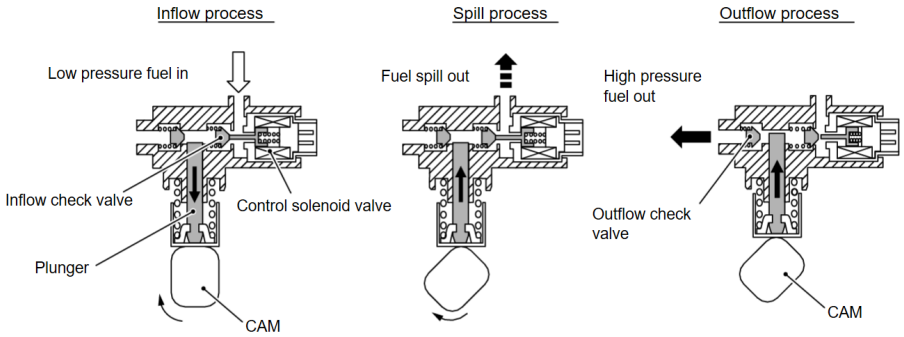
High Pressure Fuel Pump

- Balanced flow volume control type single cylinder high pressure fuel pump, which approximately equalize the amount of injection and pump output, is adopted.



- The high pressure fuel pump is activated by the exhaust camshaft. ECM controls the high pressure fuel pump control solenoid valve built into the high pressure fuel pump and adjusts the amount of discharge by changing the suction timing of the low pressure fuel.
  - Inflow process: Cam driven lowering plunger let the fuel from low pressure fuel pump induced into high pressure fuel pump.
  - Spill process: Although the cam driven plunger start moving upward, inflow check valve still at open position due to the control solenoid valve, so the fuel is not pressurized and spilled out to low pressure fuel pump side. By changing the amount of this spill out volume changes the amount of injection.
  - Outflow process: When the control solenoid valve turns ON, the inflow check valve is closed, fuel is pressurized and when the pressure exceeds certain point discharge check valve is pushed open to discharge fuel into fuel rail.

Operating Description



Operating Chart