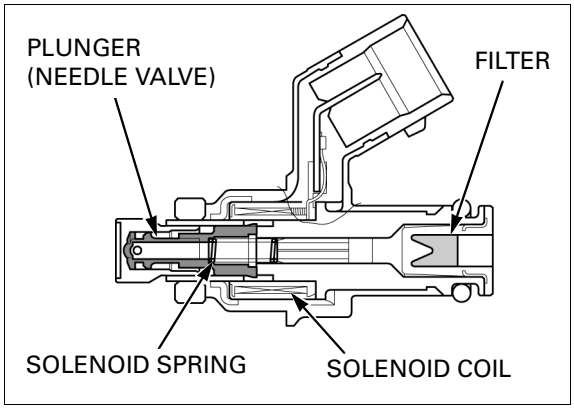
# INJECTOR

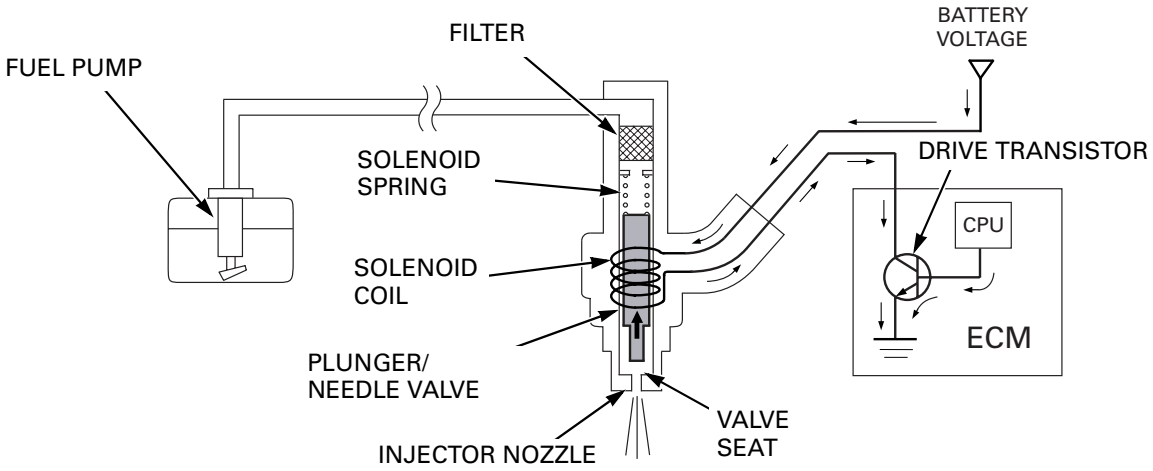
**SUMMARY**

- Fuel injector is a solenoid valve that consists of needle valve/plunger, solenoid coil, solenoid spring and filter.
- Constantly pressurized fuel (294 kPa (3 kgf/cm$^2$, 43 psi)) is supplied to the injector. It sprays the proper amount of fuel through idle to maximum engine revs.
- The injector is either fully closed or fully open with fixed stroke. The amount of fuel injected is dependent on how long the injector is kept open.
- The ignition switch supplies constant power for the injector. When ECM starts up the drive transistor, current flows through the solenoid coil and injector opens.




**OPERATION**

1. The fuel pressurized by the fuel pump is blocked at the injector nozzle that consists of plunger/needle valve and valve seat.
2. When ECM turns the drive transistor ON, current flows through the solenoid coil in the injector. The electromagnetized coil pulls up the plunger/needle valve while compressing the solenoid spring.
3. Nozzle opens as the plunger/needle valve lifts up. The fuel blocked at the injector nozzle passes the filter and then sprays into the intake manifold.




4. When ECM turns the drive transistor OFF, current no longer flows through the solenoid coil in the injector. The solenoid spring closes the nozzle and injecting stops in result.