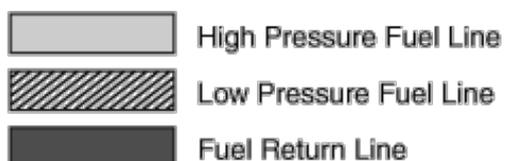
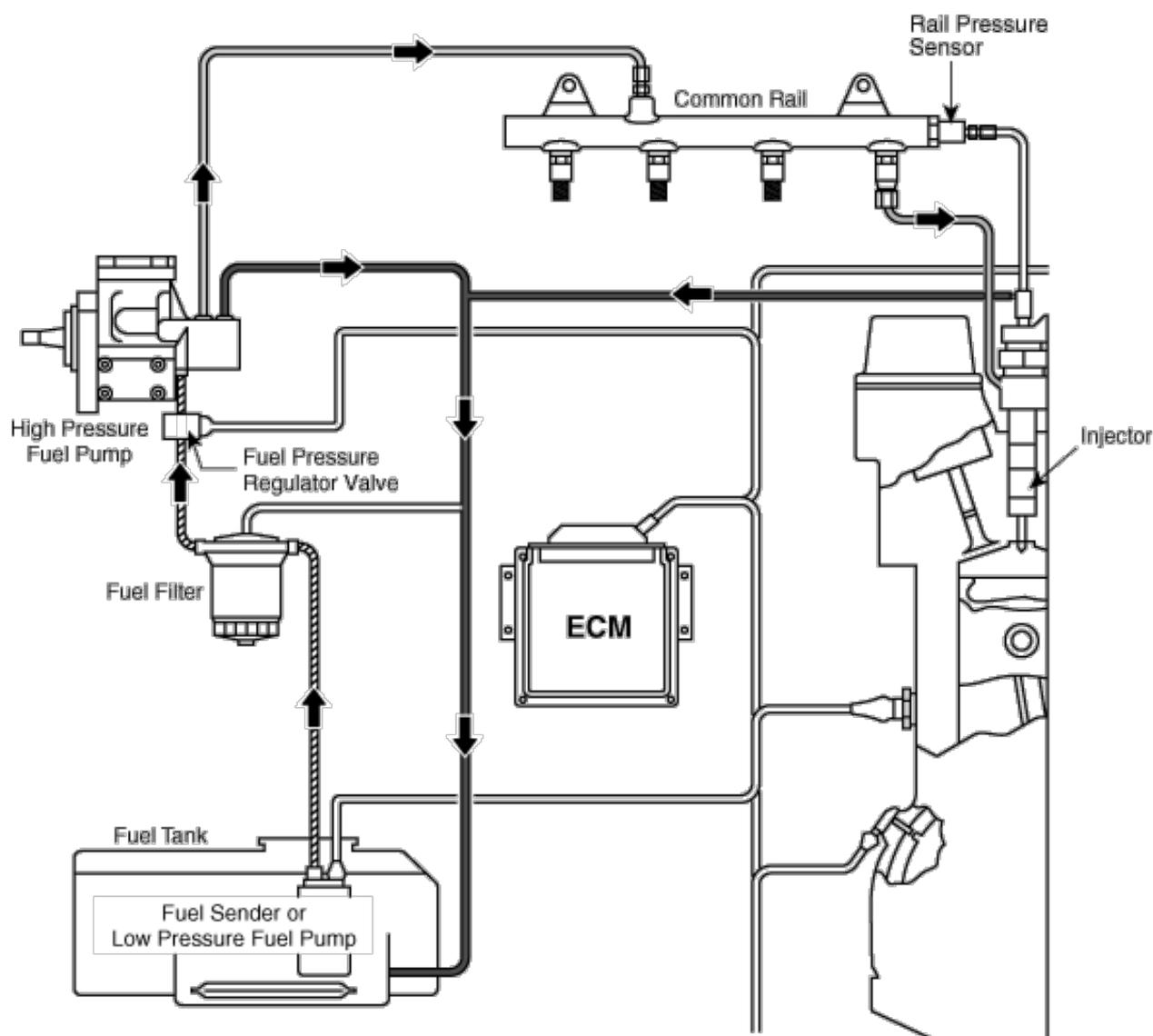




## Common Rail Fuel Injection System (CRDI)



### • Low Pressure Fuel Circuit

#### Low Pressure Fuel Pump

The low pressure fuel pump is either an electric fuel pump with pre-filter, or a gear-type fuel pump. The pump draws the fuel from the fuel tank and continually delivers the required quantity of fuel in the direction of the high pressure fuel pump (via fuel filter).

## **Fuel Sender**

The fuel sender is located into the fuel tank and measures amount of fuel contained in fuel tank.

## **Fuel Filter**

The fuel filter is located in between the low pressure fuel pump and the high pressure fuel pump and filters the fuel delivered from the fuel tank.

### **● High Pressure Fuel Circuit**

## **High Pressure Fuel Pump**

The high pressure fuel pump compresses fuel up to 1,600 bar and delivers the compressed fuel to the common rail.

## **Common Rail**

The common rail is connected with the high pressure fuel pump and the injectors by the high pressure fuel pipes. This rail stores the fuel compressed in the high pressure fuel pump. The ECM controls the fuel pressure of the common rail by using the rail pressure sensor and the rail pressure regulator valve installed on the common rail.

## **Injector**

The injector injects the high pressure fuel stored in the common rail into the cylinder by the ECM control signal.

## **High Pressure Fuel Pipe**

The high pressure fuel pipe is a channel in high pressure fuel circuit consisting of the high pressure fuel pump, common rails, and injectors. It is a steel tube which can withstand high frequency generated when the fuel pressure reaches the maximum pressure or fuel injection stops.

The differences in length between the common rail and the individual injectors are compensated for by using slight or pronounced bends in the individual lengths of tubing. Nevertheless, the injection lines should be kept as short as possible.