



E69909

Item	Part Number	Description
A	-	High-pressure fuel to fuel rail
B	-	Fuel return
C	-	Fuel supply
1	-	High-pressure chamber outlet valve
2	-	High-pressure chamber inlet valve
3	-	Pump plunger
4	-	VCV return spring
5	-	VCV
6	-	Admission pressure control valve (pump internal pressure)
7	-	Transfer pump
8	-	Fuel inlet
9	-	Fuel filter
10	-	Eccentric cam ring
11	-	Eccentric cam
12	-	Drive shaft
13	-	Fuel tank
14	-	Fuel overflow valve

The transfer pump draws fuel out of the fuel tank through the fuel inlet (8). The pump internal pressure is adjusted through the admission-pressure control valve (6), ensuring that sufficient lubrication and cooling are always provided for the high-pressure pump components. The excess fuel is transferred to the inlet side of the transfer pump (7) through the admission-pressure control valve, with a portion of the fuel being transferred to the VCV (5) from the transfer pump. The fuel quantity delivered to the high-pressure chambers is determined by the opening cross-section of the VCV. The small restriction bore in the fuel overflow valve (14) provides for automatic bleeding of the high-pressure pump. The entire low-pressure system is designed to allow a defined quantity of fuel to flow back into the fuel tank through the overflow pressure regulator tube, which assists cooling of the high-pressure pump.

A total of 2 high-pressure chambers (1 and 2), each with a pump plunger (3), are used for high-pressure generation. The drive for the pump plungers is through an eccentric cam (11), which is in turn driven by the drive shaft (12). The high-pressure pump permanently generates the high system pressure for the fuel rail.

Principle of High-Pressure Generation