



Cross Section Of The Fuel Injection Pump Housing

(1) Fuel manifold. (2) Inlet passage. (3) Check valve. (4) Pressure relief passage. (5) Pump plunger. (6) Spring. (7) Gear. (8) Fuel rack (left). (9) Lifter. (10) Link. (11) Lever. (12) Camshaft.

The rotation of the lobes on the camshaft (12) cause lifters (9) and pump plungers (5) to move up and down. The stroke of each pump plunger is always the same. The force of springs (6) hold lifters (9) against the cams of the camshaft.

The pump housing is a "V" shape (similar to the engine cylinder block). The 3408C has four pumps on each side and the 3412C has six pumps on each side.

When the pump plunger is down, fuel from fuel manifold (1) goes through inlet passage (2) and fills the chamber above pump plunger (5). As the plunger moves up it closes the inlet passage.

The pressure of the fuel in the chamber above the plunger increases until it is high enough to cause check valve (3) to open. Fuel under high pressure flows out of the check valve, through the fuel line to the injection valve, until the inlet passage opens into pressure relief passage (4) in the plunger. The pressure in the chamber decreases and check valve (3) closes.

The longer inlet passage (2) is closed, the larger the amount of fuel which will be forced through check valve (3). The period for which the inlet passage is closed is controlled by pressure relief passage (4). The design of the passage makes it possible to change the inlet passage closed time by rotation of the plunger. When the governor moves fuel racks (8), they move gears (7) that are fastened to pump plungers (5). This causes a rotation of the plungers.

The governor is connected to the left rack. The spring load on lever (11) removes the play between the racks and link (10). The fuel racks are connected by link (10). They move in opposite directions (when