HIGH PRESSURE PUMP

CHOOSING OUR GENUINE PARTS

PARTS & SERVICE

Genuine Parts

How High Pressure Pump works

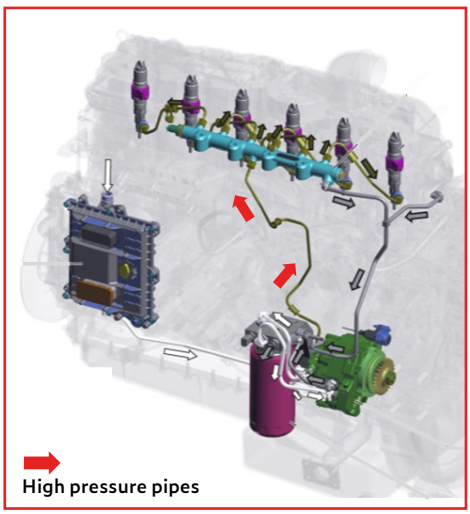
Very high fuel injection pressures are required to reduce particulate emissions. With the introduction of Common Rail systems in diesel engines, high pressure fuel pumps have become an indispensable part of the fuel supply system which consists of a low pressure and a high pressure circuit to reduce particulate emissions.

In the low pressure circuit, fuel is sucked from the tank via an electric fuel pump and transported to the high pressure pump which is used to generate the pressure while the injectors control the amount of fuel as a function of their opening time. Fuel is always available at the injector inlet at the injection pressure specified by the ECU.

The operating pressure is controlled in the following ways:
- electronically through a solenoid valve fixed on the pump body and controlled by the control unit
- by means of a control valve (PCV) mounted on the rail

The high pressure circuit consists of the following pipes:
- pipes connecting the high pressure pump outlet to the common rail
- common rail
- common rail injector supply pipes

The system is completed by the return circuit of the excess flow of fuel from the common rail and injectors to the tank.


High pressure pipes

Main functions:

1. FUEL DELIVERY AT THE OPTIMUM PRESSURE LEVEL
2. ALLOW A MULTIPLE NUMBER OF INJECTIONS PER CYCLE
3. CO_2, NOX, PM EMISSION REDUCTION

MAXIMUM ENGINE PERFORMANCE MINIMIZING FUEL CONSUMPTION AND EMISSIONS

Genuine High Pressure Pump Performance

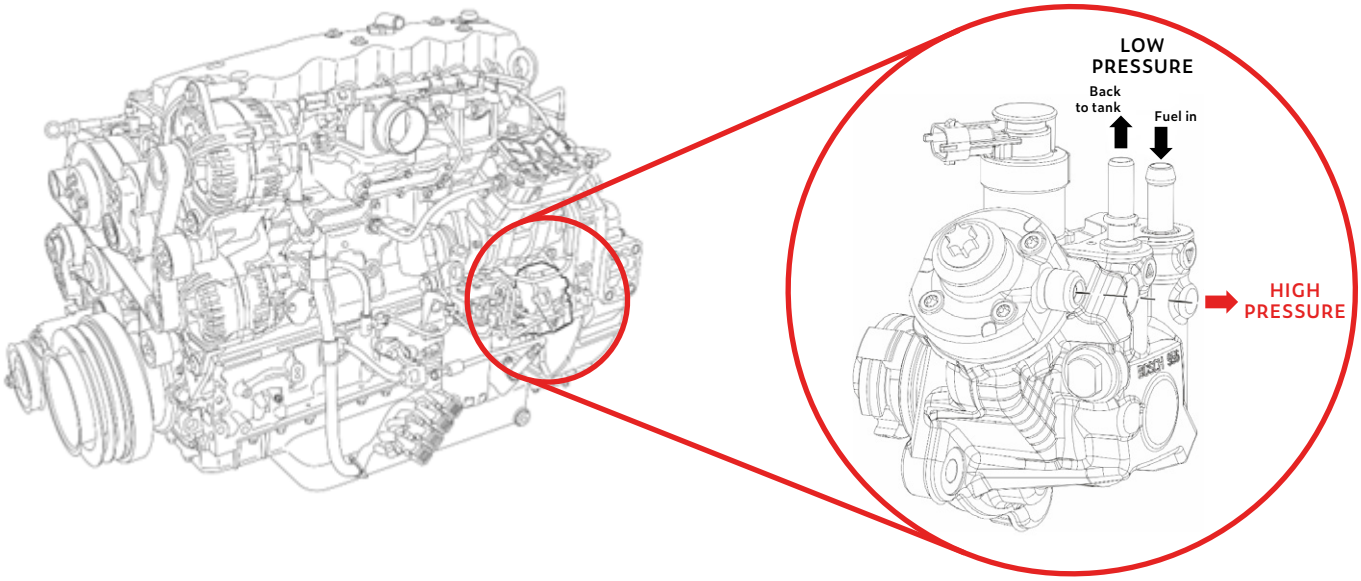
To produce the very high operating pressure, a mechanical pump with radial or in-line pistons is used, driven by the kinematics of the distribution.

A fuel pump extracts the fuel from the tank and sends it to the high pressure pump which, regardless of the type, is responsible for compressing the fuel to the pressure required for the injectors and sending it pressurized into the common duct (rail). The feed pump is equipped with a flow regulator controlled by the control unit that allows to dose the amount of diesel to be sent to the high pressure pump.

Since the pressure increase is not related to the engine speed, the required pressure is therefore available even at low engine speeds. Most common rail systems are equipped with radial piston pumps (Radialjet):

- discharge pressure to the rail is modulated between 250 bar and 2,000 bar by the electronic control unit, through the solenoid valve of the pressure regulator. The pump is lubricated and cooled by the fuel itself;
- decoupling and reattachment time of radialjet pump on the engine is significantly reduced compared to conventional injection pumps.

HIGH RADIAL PRESSURE PUMP



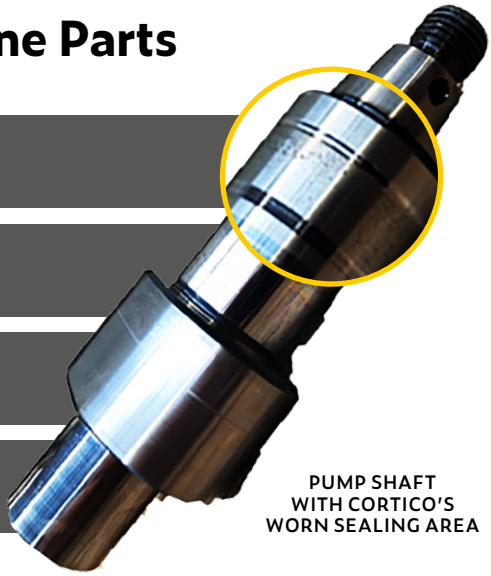
HIGH PRESSURE MAINTENANCE FREE

Why choose a Genuine FPT High Pressure Pump



- HIGH ENGINE PERFORMANCE AND FUEL SAVING
- HIGH EFFICIENCY AT LOW SPEEDS
- FLUIDITY, DRIVING COMFORT AND RELIABILITY

Potential risks of not using FPT Genuine Parts



PUMP SHAFT WITH CORTICO'S WORN SEALING AREA

- INCREASED FUEL CONSUMPTION
- NO GUARANTEE PRODUCT FOR FPT ENGINE
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- LOSS OF POWER AND REDUCED ENGINE LIFE



Oil/fuel leakage and poor cleanliness affect performance and can cause damage to other components.

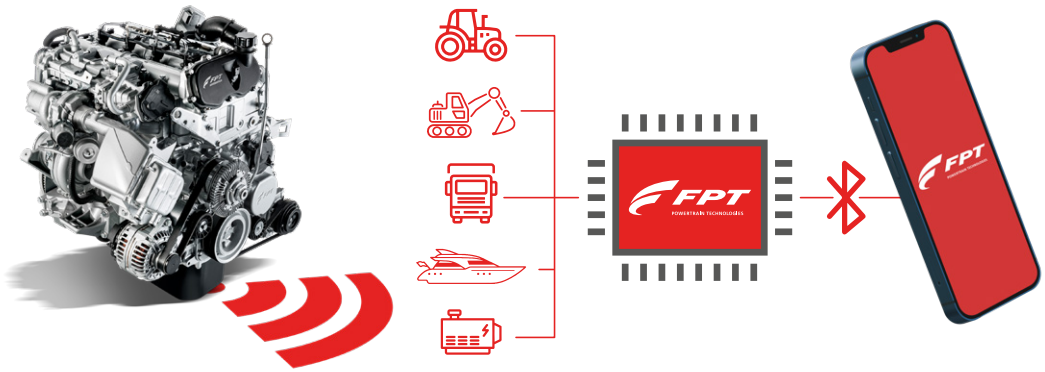
ONLY GENUINE PARTS ENSURE SERVICE LIFE AND GENERATE TCO REDUCTION

Get the most from your High Pressure Pump

Using the vehicle on a daily basis we demand a reliable performance: this is the reason that FPT builds its engines to the highest standard levels, which meet the latest environmental and legal requirements.The core of this technology is the fuel injection system that ensures the engine runs at peak efficiency. In particular, the high pressure pump has a high technological components' content to ensure the constant flow of fuel at the high pressures for which it was designed. The moving parts must work reliably at any temperature also to avoid oil leakage and even worse fuel.

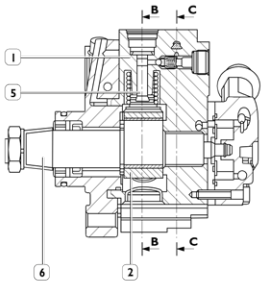
Only original FPT high pressure pumps offer the best power performance, constant high torque values and maximum driving comfort while minimizing its carbon footprint, true to our commitment to sustainability.

As the world of engines is constantly evolving, so does FPT : being always one step ahead means to guide customers towards an innovative digital experience through a vaste range of Connected Services. In addition to our Genuine Parts offer it is possible to integrate telematic services to support your mission; in this way you can avoid any premature wear and damage, ensuring maximum engine performance and minimum emissions.



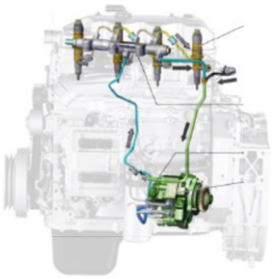
If you want to take care of your vehicle, always ask for original FPT high pressure pumps: they are an essential part of the engine that guarantees the best performance.

DESIGN



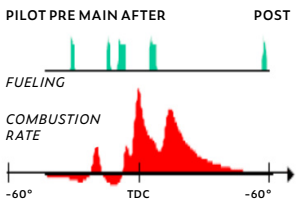
Full compliancy with technical specification

RELIABILITY



Stringent quality checks to grant functionality and duration

PERFORMANCE



Materials and technology that meet strict quality standards for best engine efficiency

Genuine Parts Benefits

FPT is the only one who can guarantee the original quality and performance of your engine. By using Genuine parts, made by those who built your engine, you ensure long-lasting performance and over-time value of your investment.

- ACHIEVING THE MAINTENANCE INTERVAL DECLARED BY FPT
- PERFECT FIT FOR SYSTEM EFFICIENCY OF THE ENTIRE ENGINE
- COMPLIES FULLY WITH FPT SPECIFICATIONS
- ALL GASKETS SUPPLIED HAVE ACCURATE PROFILES TO PROVIDE PERFECT SEAL
- MAXIMIZING PRODUCTIVITY BY REDUCING TURNAROUND TIME AT DEALER WORKSHOP
- ANTI-COUNTERFEITING TEXT ON LABEL
- COMPLETE PRODUCT RANGE COVERING RUNNING PARC
- 12 MONTHS WARRANTY

Wherever you are, you can have access to a vast selection of Genuine Parts for your engine. This means enhanced performance and minimal downtime to maintain high levels of productivity.

TOP QUALITY AND PERFORMANCE ARE REACHED ONLY BY USING FPT GENUINE PARTS.

Contact us

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fptindustrial.com