

Tips & Technology

Great to work with: High-pressure injection valves

Repair of high-pressure injection system components

Bosch supplies spare parts and special tools for the repair of the high pressure injection systems. ESI[tronic] 2.0 gives a complete diagnostic sequence to be followed with installation instructions including measurement values, fault patterns and even signal images. With this sort of help from Bosch's detailed instruction manual, spare parts and special tools, it is a relatively easy task to remove or replace high-pressure injection valves and combustion chamber seals.



Special tools

- For the removal of a high-pressure injection valve:
 - Spindle extractor 0 986 616 100
 - Impact extractor 0 986 616 101 (only use when valves are seized)
- Set 0 986 616 097 with assembly drift and adjustment ring for installation of the combustion chamber seal



Spare parts

- O-ring for high-pressure injection valve (HPIV)
- Combustion chamber seal (Teflon ring)
- Support shim
- Hold-down tool

Removal and installation of high-pressure injection valve (HPIV)

- Read ESI[tronic] 2.0 instructions carefully
- Use appropriate tools to remove HPIV and replace the combustion chamber seal
- Avoid damage to the valve tip (valve leakage)
- Prevent the ingress of foreign bodies and dirt during installation
- If the HPIV is to be reused, never use impact tools during the installation of the HPIV into the cylinder head
- Do not apply oil or grease to the white Teflon seal
- Apply a thin coat of clean, silicone-free engine oil to the blue seal before installing the fuel rail
- When removing and reusing the HPIV, always replace the specified spare parts (service kits)

Important Notices

- The engine must be cold during the repair work
- The Fuel high-pressure system must be depressurised when working on it
- Never disconnect fuel lines while the engine is running

'Step by step' removal and installation instructions for HPIV and HPP can be found on the Internet

- https://youtu.be/UIRQV_5T0PA
- https://youtu.be/DIOJQR9Ic_0