

Tips & Technology

For Bosch business partners

Current topics for successful workshops No. 69/2013

Diesel injection



BOSCH
Invented for life

Common rail injector seal

The injectors are crucial components of the common rail system. They contain a quick-acting valve (solenoid valve or piezo actuator) for opening and closing the nozzle, thus permitting individual injection control for each cylinder.

The injectors inject the fuel directly into the engine combustion chamber. They are supplied with fuel by way of short high-pressure pipes from the rail. The engine control unit actuates the switching valve integrated into the injector. This valve opens and then closes the nozzle. The injector opening time and the system pressure depend on the amount of fuel injected. Given constant pressure, this is proportional to the ON time of the switching valve and thus independent of the engine and pump speed (time-controlled injection).

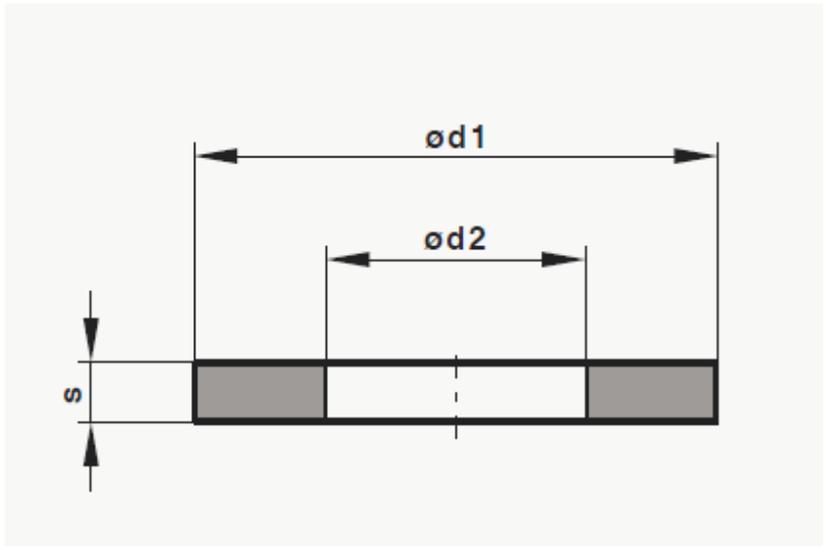
Replacing CR injector seal

The basic function of a seal is to separate two different functional areas in such a manner that no – or only the permissible – exchange of substances can take place between them.



The CR injector is usually supplied with a seal. To ensure proper engine operation it is essential to compare the thickness of the original seal to that of the new seal provided (dimension "s" in table on Page 2).

If the dimension "s" of the seal provided does not correspond to that of the original seal, a different suitable seal can be determined on the basis of the table. Occasionally use is made of seals with a specially shaped surface. In such cases, please select the appropriate seal in our information systems e.g. ESI[tronic] under Vehicle equipment or use the genuine item from the vehicle manufacturer.



d1 mm	d2 mm	s mm	Bosch
12,0	7,0	2,0	F 00V P01 008
13,0	7,0	1,5	F 00V P01 004
13,0	7,0	2,5	F 00V C17 505
13,2	7,0	2,5	F 00R J01 086
14,2	7,0	1,5	F 00R J02 175
15,0	7,0	1,5	F 00R J01 453
15,0	7,0	1,5	F 00V C17 503
15,0	7,0	2,0	F 00V C17 504

In the case of reworked injector seats in the cylinder head, thicker shims (dimension "s") are to be used to compensate for the material removed.

Advice to workshops

After replacing diesel components, we recommend changing the fuel filter as well so that the high-precision parts are protected by clean fuel right from the start.

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