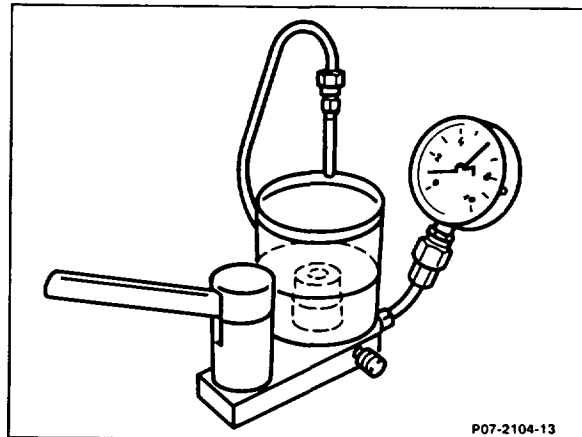
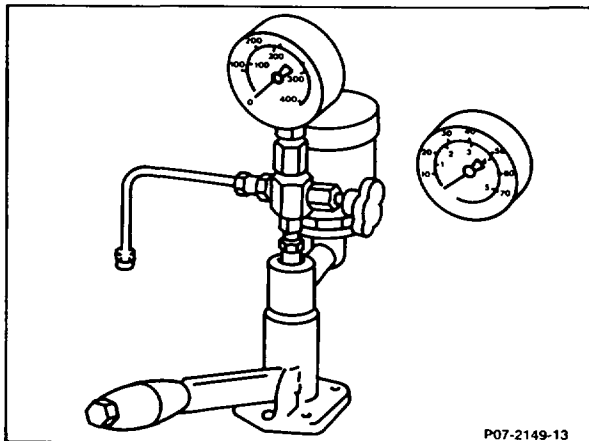


07.3-6500 Testing injection valves

Preceding work:
Removing and installing injection valves (07.3-6520).

Operation no. of operation texts and work units or standard texts
and flat rates:
07-6500.



Injection valves
Rough test of leaktightness

test.

- a) Connect removed injection valves to tester. Bleed pressure line with shutoff cock open and union nut open. Then, tighten union nut.
- b) Shutoff cock open, operate hand lever slowly (4s/stroke) and build up pressure to max. 1.5 bar. If a leak is found in the injection valve, the valve must be replaced.

Testing opening pressure

Opening pressure: new injection valves, see table of test data.

Opening pressure: used injection valves, see table of test data.

Close shutoff cock. Flush through injection valve by operating hand lever rapidly several times.

Open shutoff cock and check opening pressure by moving hand lever slowly.

Fine test of leaktightness	close shutoff cock. Flush through injection valve by operating hand lever rapidly several times. Open shutoff cock and slowly increase pressure up to 0.5 bar below previously determined opening pressure and hold. No drop must form at the injection valve within 15 sec.
Chatter test, assessing spray	close shutoff cock and flush through valve by operating lever several times (0.5 s/stroke). Then, reduce lever speed to approx. 1 s/stroke. The valve must chatter when this is done. No drop must form at mouth of valve. No pencil-like spray must form. Single-sided, atomized spray pattern within a total spray angle of approx. 35° is permissible. See figs for assessing spray.

Test data

Engine		103 up to 07/88	103 as of 08/88
Opening pressure of injection valves	New valves	3.5–4.1 bar	3.7–4.3 bar
	Used valves	at least 3.2 bar	at least 3.2 bar

Commercially available testers and accessories (see Workshop Equipment Manual)

Designation	e.g. Make, order no.
Bosch KDJE-P 400 valve tester	Bosch, KDJE-P 400
Nozzle tester EFEP 60 H ¹⁾	Bosch, 0 684 200 700
0–6 bar pressure gauge, housing dia. 100 mm, quality class 1.0	Bosch, 1 687 231 000
Pipe	Bosch, 1 680 750 001

¹⁾ Corresponds to previous nozzle tester. For testing the injection valves, use the listed pressure gauge or the pressure gauge of pressure measuring device 100 589 13 21 00 .

Note

The nozzle or valve tester is used for testing the opening pressure, chatter, spray and leaktightness of the injection valves.

Before beginning with the test of the injection valves, the vessel of the tester must be filled and the tester bled. Use only petroleum for testing.

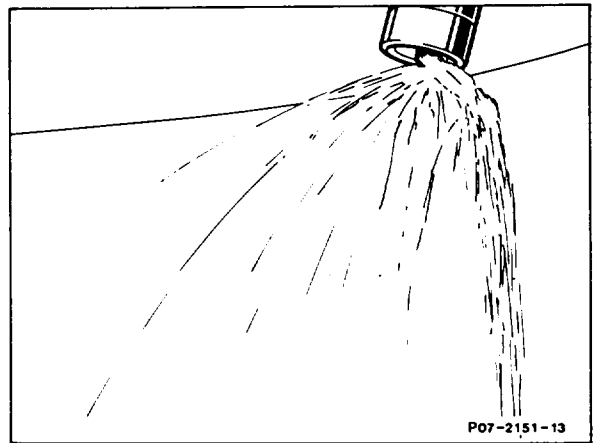
Replace injection valves which are not within the tolerance range.

The injection valves can be replaced individually within a set.

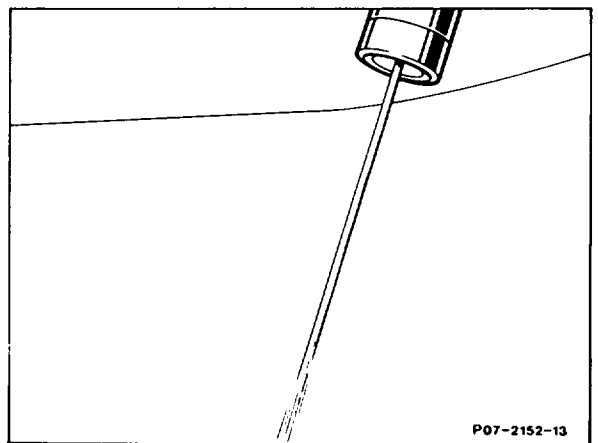
Assessing spray

Damaged injection valves

Formation of drops

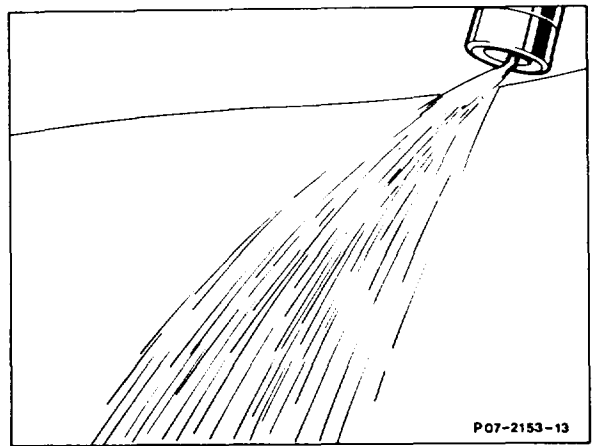


Pencil-like spray

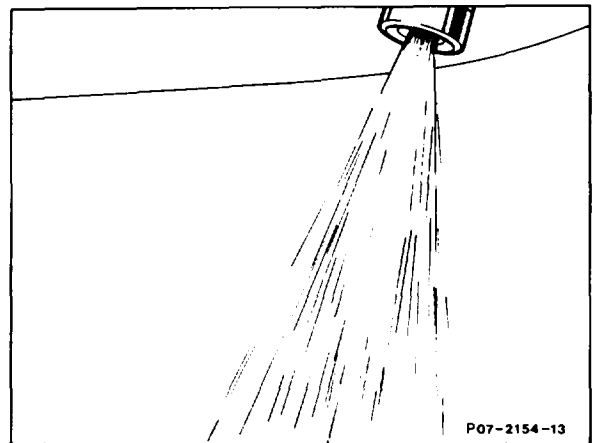


Good injection valves

Stringy spray



Good spray formation



Slightly one-sided atomization

