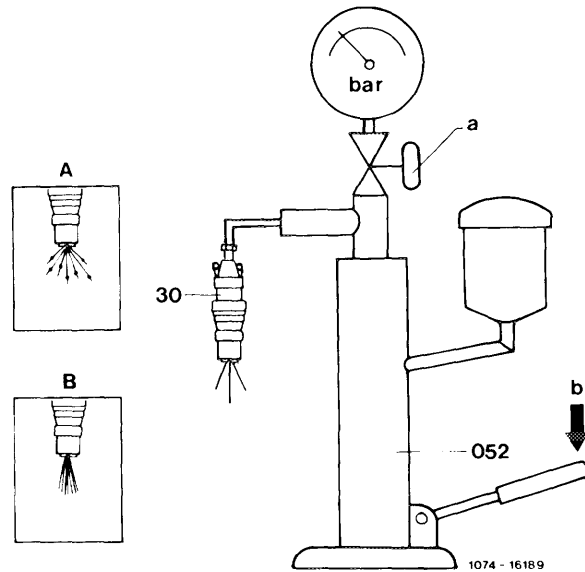


## 07.1-231 Checking injectors

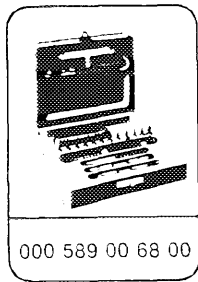
Injection nozzles removed ..... 07.1-230

- A. Facet-type pintle nozzle
- B. Hole-type pintle nozzle



Injection nozzle (30) .....	on tester (052) vigorously pump through 5 times, while keeping valve "a" closed.
Buzzing test .....	slowly actuate hand lever "b" approx. 1 stroke per second.
Spray pattern test .....	With rapid short strokes, approx. 2 strokes per second, the spray pattern should be closed and should break off well. A - Spray pattern frayed "poor" B - Spray pattern closed "good"
Pre-spray .....	check (only with hole-type pintle nozzles).
Shut-off pressure or opening pressure .....	check by opening valve "a" and slowly operating hand lever "b" at least 1 stroke per second. <b>Set value:</b> 115-125 bar with new nozzles, min. 100 bar with used nozzles.

## Special tool



## Commercially available tools

Tester EFEP 60 H	e.g. Bosch, D-7000 Stuttgart Order no. 0 681 200 502
Cleaning needle 0.18 mm dia.	e.g. Bosch, D-7000 Stuttgart Order no. KDEP 2900/4

### Warning

Use only clean test oil or filtered diesel oil for testing. On no account should the hand be brought in contact with the spray of a nozzle during testing. The spray enters deeply and destroys the tissue. The fuel entering the blood stream may lead to blood poisoning.

## Production breakpoint: August 1989

Model	Engine	Engine end no. Manual transmission	Engine end no. Automatic transmission
201.126	602.911 <sup>1)</sup>	082780	016395
Identification	1) 2 green color dots 2) 2 violet color dots		

Since August 1989 engine 602 has been equipped with finely ground injection nozzles.

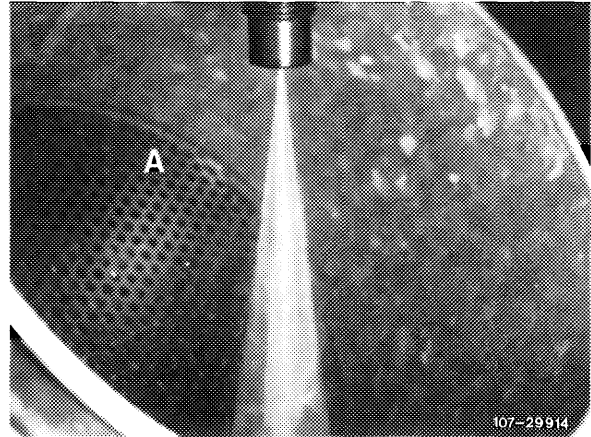
## A. Facet-type pintle nozzle

## Checking

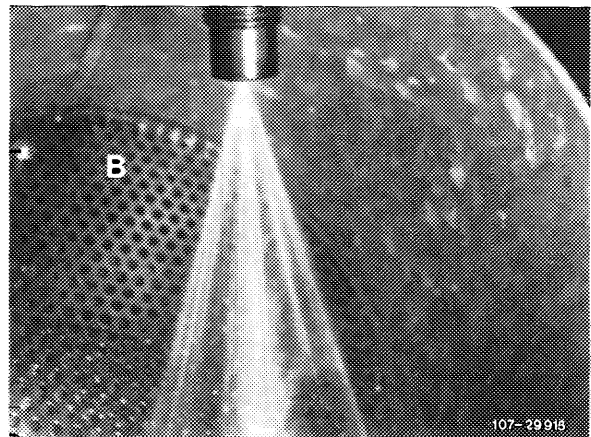
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1 Vigorously pump injection nozzle 5 times with the tester. Then **check buzzing of the nozzle** by slowly actuating the hand lever (approx. 1 stroke per second).

2 **Checking spray:** With short rapid part strokes (at least 2 strokes per second) the spray pattern should be rather closed and break off well.



A Closed spray pattern, well atomized



B Broken spray pattern, too wide and frayed

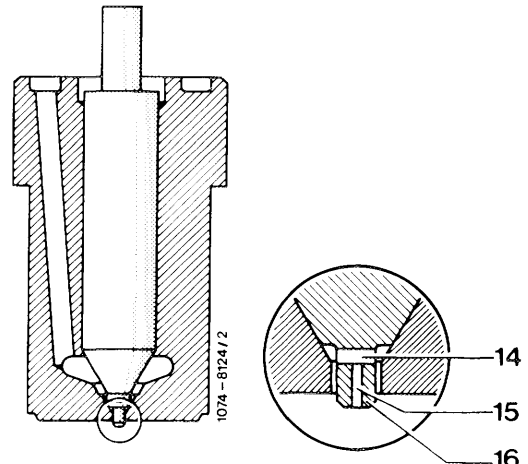
3 **Checking injection pressure:** Set value 115-125 bar with new nozzle, at least 100 bar with used nozzles.

Slowly move down the hand lever (at least 1 stroke per second) and read injection pressure off pressure gauge.

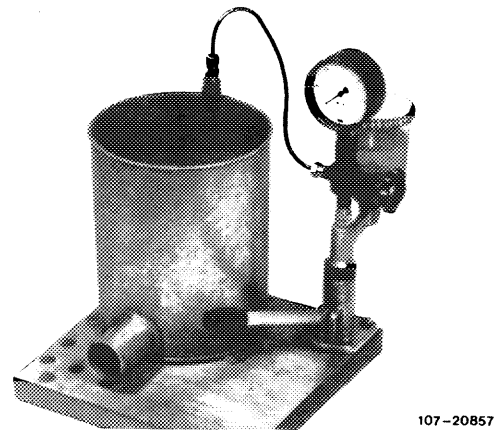
Shut-off valve must be open for this test.

## B. Hole-type pintle nozzle

1 Before checking: Ensure that the longitudinal bore (15) is unobstructed by means of a cleaning needle 0.18 mm dia.

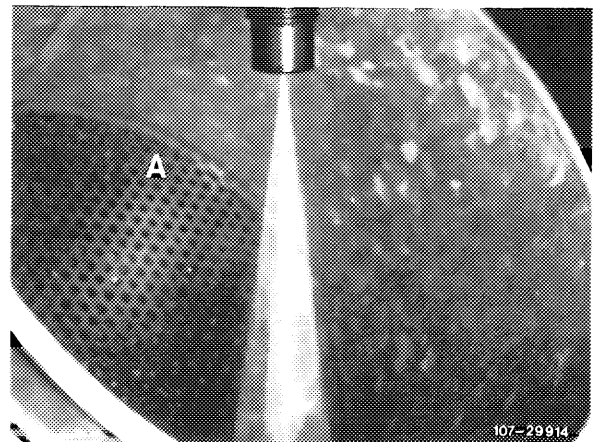


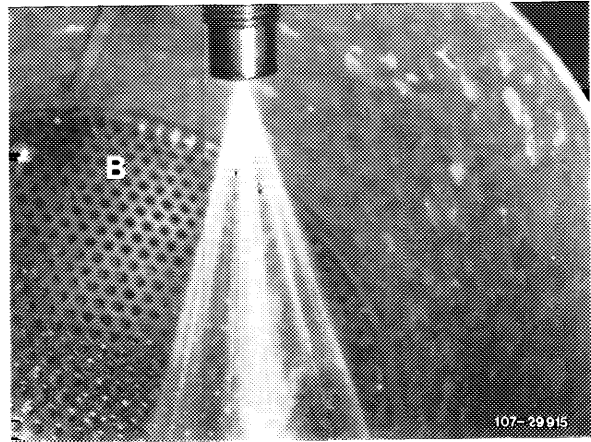
2 Vigorously pump injection nozzles 5 times on tester. After this carry out **buzzing** test by slowly actuating hand lever (at least 1 stroke per second).



3 **Spray test:** With short rapid part strokes (approx. 2 strokes per second) the spray should be rather closed and break off well.

A Closed spray pattern, well atomized





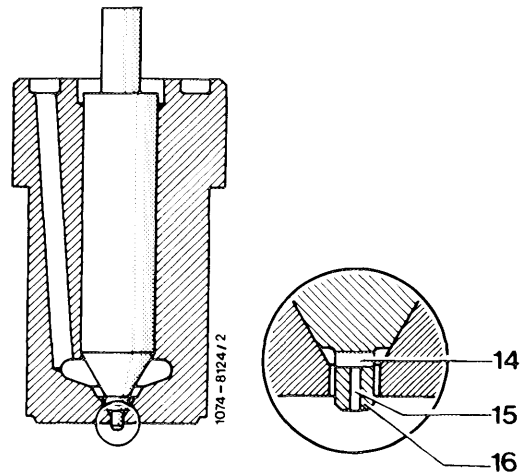
B Broken spray pattern, too wide and frayed

4 Create **pre-spray** by slowly moving the hand lever down (1 stroke 4-6 s).

A vertical string-type spray pattern should emerge from the center bore (15).

**Note**

On new nozzles the pre-spray is very difficult to create, therefore check longitudinal bore with cleaning needle 0.18 mm dia. for open passage.



5 **Checking injection pressure:**

**Set value:** 115-125 bar with new nozzle, at least 100 bar with used nozzle.

Slowly move hand lever down (approx. 1 stroke per second) and read injection pressure off pressure gauge.

Shut-off valve must be open for testing.