

07.4–215 Removal and installation of injection valves

Installation survey of injection valves

Injection valves without protective sleeve

Engine	116	117
Bosch no.	0 280 150 013	0 280 150 015
Color code	black	blue

¹⁾ On engine 116 the injection valves can be provided with yellow protective sleeves starting production date 025.

Injection valves with protective sleeves

Engine	116	117
Bosch no.	0 280 150 022	0 280 150 024
Color code	yellow	blue

Injection valves with protective sleeve and double sealing edge connection

Engine	116	117
Bosch no.	0 280 150 034	0 280 150 036
Color code	yellow	blue

Protective sleeve

Engine	116	117
Part no.	000 987 18 45	000 987 19 45
Color code	yellow	blue

Note

To avoid damaging fuel hoses when mounting injection valves, remove the 4 injection valves of each cylinder bank **together with ring line**. Only then remove injection valves from ring line.

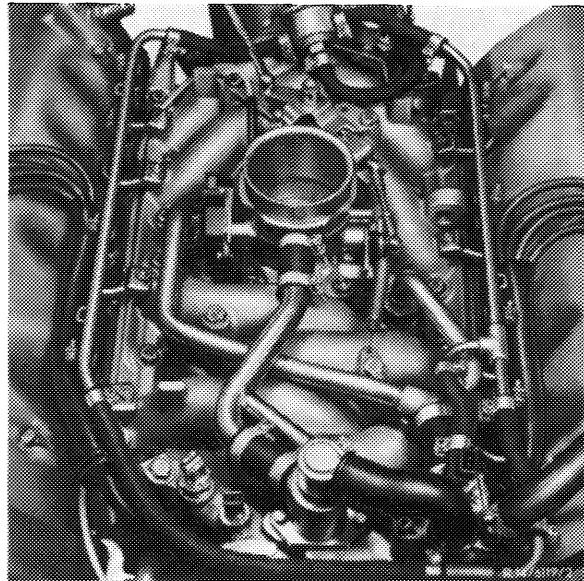
Removal

1 For **safety reasons**, reduce fuel pressure in ring line. For this purpose, pull electric plug connection from cold starting valve. Connect cold starting valve with separate cable to B+ and ground for approx. 20 seconds. Then return plug connection to cold starting valve.

2 Loosen all electric connecting cables and fuel connections.

3 Loosen fastening nuts on fasteners and **remove** injection valves **together with ring line**.

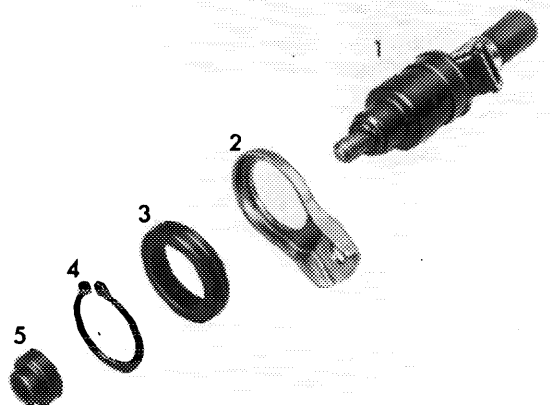
4 Test injection valves (07.4–135).



5 Renew defective injection valves. For this purpose, loosen hose clip on ring line and remove locking ring (4) from fastener (2).

Injection valve removed

- 1 Injection valve
- 2 Holder
- 3 Rubber ring
- 4 Locking ring
- 5 Rubber sealing ring



R-4713

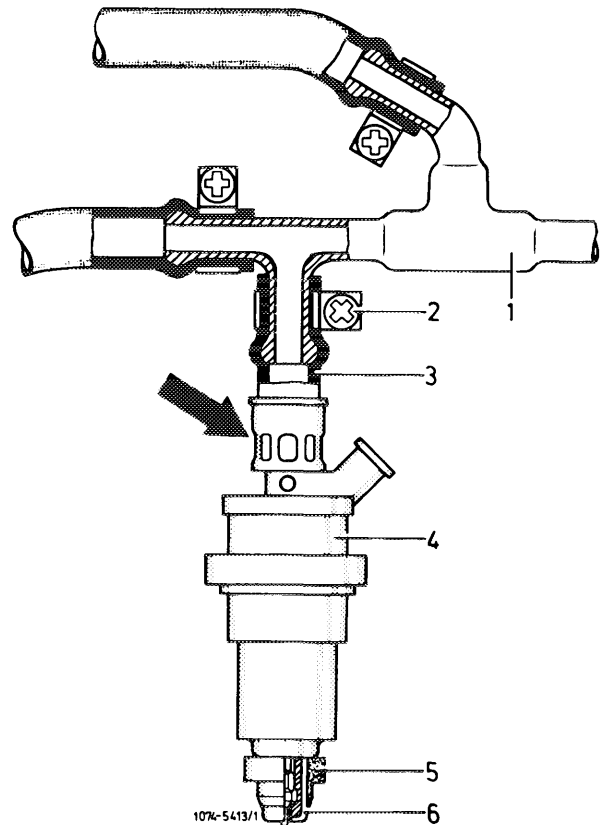
Installation

For installation proceed vice versa. Observe the following points:

6 Slip fuel hoses as far as possible on ring line and attach hose clips each time behind bead on ring line. Keep turning injection valves in such a manner that the electric connections on cylinders 1–7 are pointing toward the rear and on cylinder 8 to the front. Mount hose clips with screw head pointing toward cylinder head end. Do not tighten hose clips to limit. Distance approx. 2 mm.

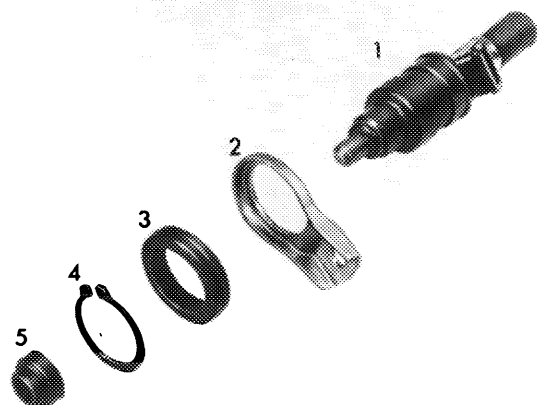
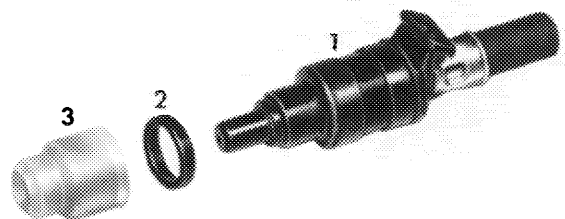
Injection valve with ring line ready for installation

- 1 Ring line
- 2 Hose clip
- 3 Fuel hose
- 4 Injection valve
- 5 Rubber sealing ring
- 6 Sleeve (color code engine 116 yellow, engine 117 blue)



7 On injection valves which are not yet provided with a protective sleeve, subsequently install protective sleeve with pertinent color code for respective injection valve. Slip-on protective sleeve manually up to stop.

8 Renew rubber sealing ring (2 or 5) and insert into cylinder head.



9 Mount injection valves together with ring line. Make sure that the valve needles of the injection valves are not breaking off.

10 Plug-on all electric connection cables and pull rubber caps over plug housing.

11 Slip fuel hoses as far as possible on ring line and position hose clips each time behind bead on ring line. Do not tighten hose clips to limit. Distance approx. 2 mm.

12 Run engine. Perform leak test **immediately** upon starting. Check hose connections for leaks, correct assembly and chafing by moving connecting points manually.