

46-640 Removal and installation of steering lock

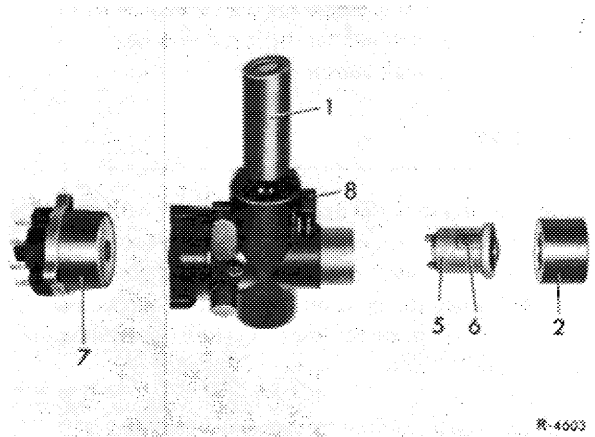
The steering lock comprises the three main components:

- A. Steering lock starter switch (electrical section)
- B. Locking cylinder
- C. Steering lock (mechanical section)

The steering lock starter switch and the locking cylinder can be removed without removing steering lock.

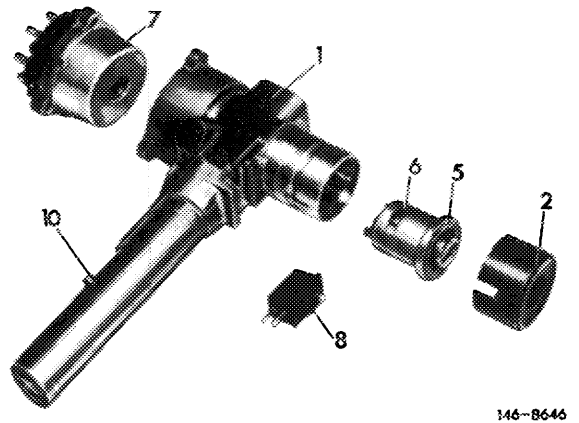
Steering lock 1st version (plug-type cover)

- 1 Steering lock
- 2 Cover (chrome-plated)
- 5 Locking cylinder
- 6 Detent
- 7 Steering lock starter switch
- 8 Contact switch (USA version only)



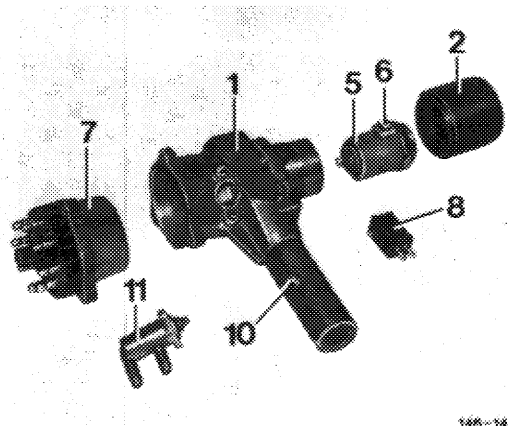
Steering lock 2nd version (plug-type cover)

- 1 Steering lock
- 2 Cover (plastics)
- 5 Locking cylinder
- 6 Detent
- 7 Steering lock starter switch
- 8 Contact switch (USA version only)
- 10 Locking pin



Steering lock 3rd version (screw-type cover)

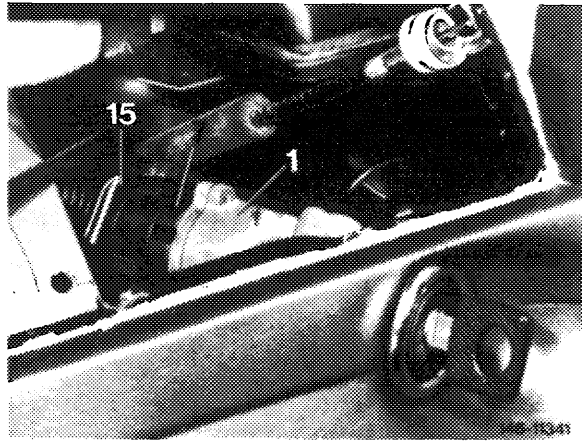
- 1 Steering lock
- 2 Cover
- 5 Locking cylinder
- 6 Detent
- 7 Steering lock starter switch
- 8 Contact switch
- 10 Locking pin
- 11 Vacuum valve (vehicles with diesel engine and key starting only)



A. Removal and installation of steering lock starter switch

Removal

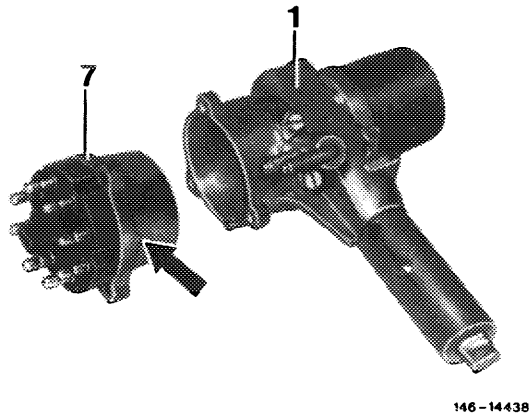
- 1 Remove steering wheel (46–610).
- 2 Disassemble instrument cluster by pulling out instrument cluster as much as possible and loosening speedometer shaft, all electric plug connections and oil pressure line.
- 3 Remove plug connection (15) from steering lock starter switch.
- 4 Unscrew fastening screw for starter switch from steering lock by means of a short screw driver and remove steering lock starter switch.



Installation

Note: Starting mid-1978, a starter switch with modified start repeat lock is installed. With this starter switch, the time limit prior to a restart, if any, is extended, since the ignition key must be turned back to position "0" prior to repeating start (up to now up to position "1" only).

- 5 Attach starter switch to steering wheel lock and plug-on plug connections, while making sure that the switch is inserted with the fixing lug (arrow) into recess of the steering wheel lock.
- 6 Install instrument cluster.
- 7 Install steering wheel.
- 8 Check steering wheel lock starter switch for function.



B. Removal and installation of locking cylinder

Removal

Steering lock 1st version (plug-type cover chrome-plated)

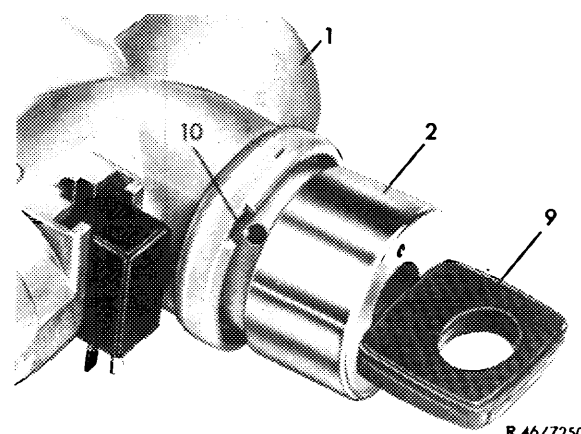
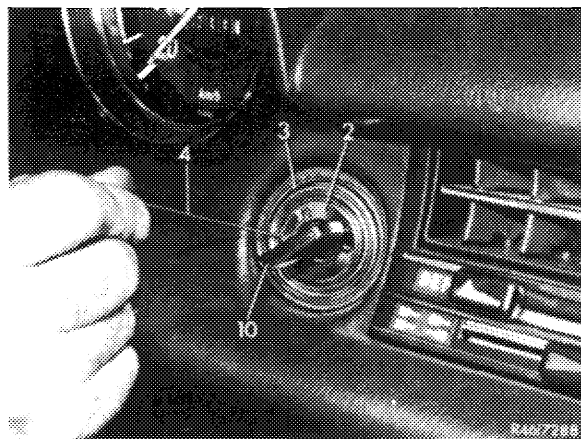
1 Turn key into position "1", the so-called assembly or radio position.

2 Lift cover (2) up to bottom edge of key. If required, pull cover out of steering lock up to bottom edge of key by means of a pulling hook made of steel wire (4) 1 mm thick. Introduce pulling hook between rosette (3) and cover.

3 Turn key to position "0" and remove together with cover.

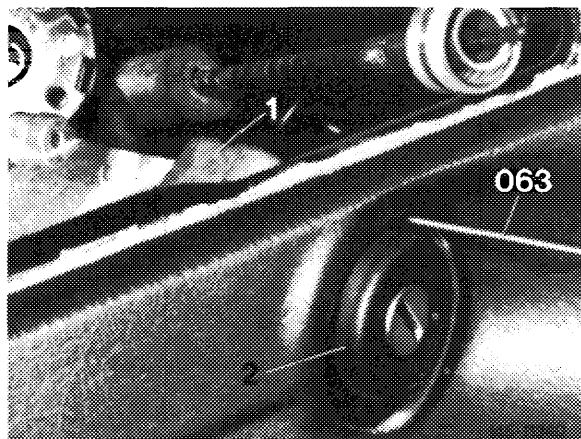
4 Put key back into locking cylinder and turn to position "1" (90° to the right). Push against detent and remove locking cylinder.

Note: Detent is on the right and can be pushed in only in position "1".



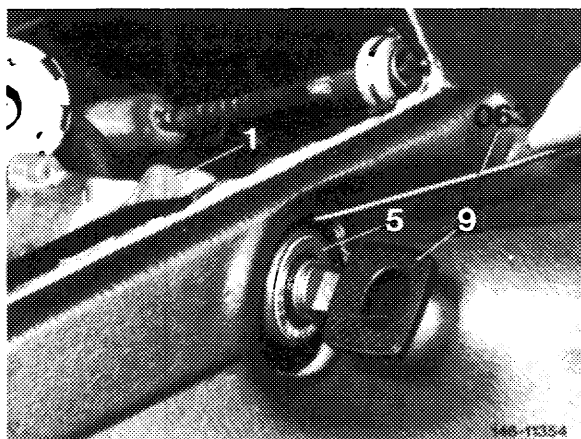
Steering lock 2nd version (plug-type cover made of plastic)

5 Remove key and pull cover from steering lock with a steel wire 1 mm thick angled off to approx. 1.5 mm at one end.



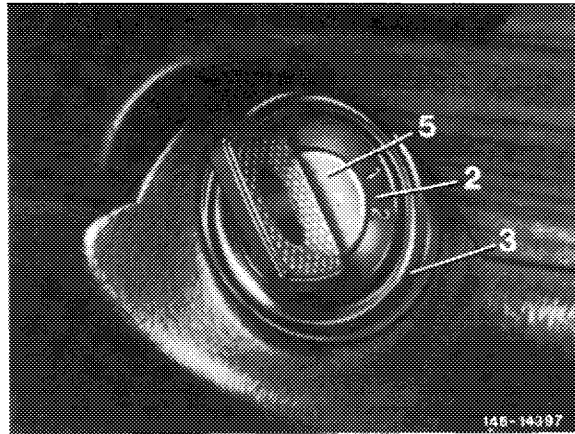
6 Put key back into locking cylinder and turn into position "1" (90° to the right). Push down on detent and remove locking cylinder.

Note: Detent is at the right and can be pushed only in position "1".

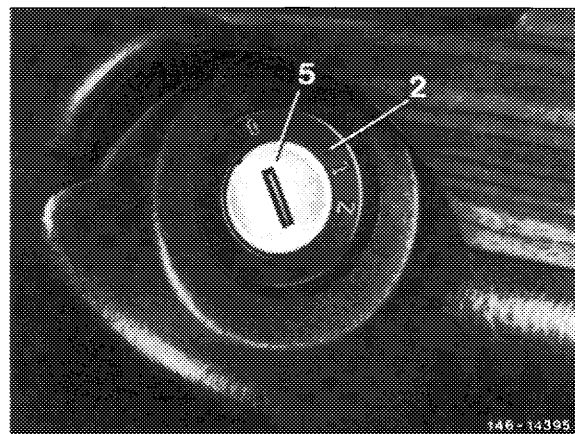


Steering lock 3rd version (screw-type cover)

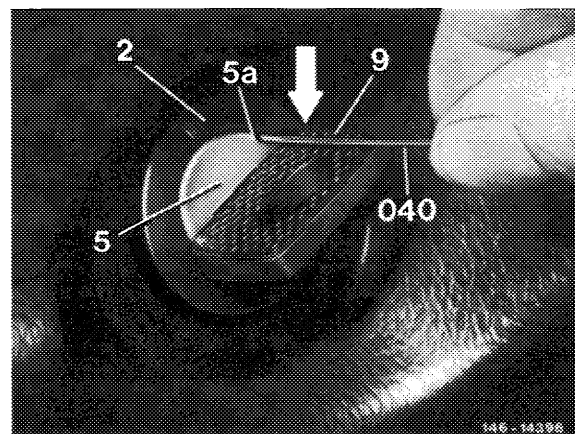
7 Remove rosette (3) from instrument panel.



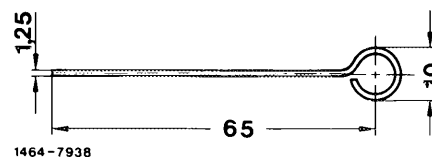
8 Turn locking cylinder with ignition key into position "1".



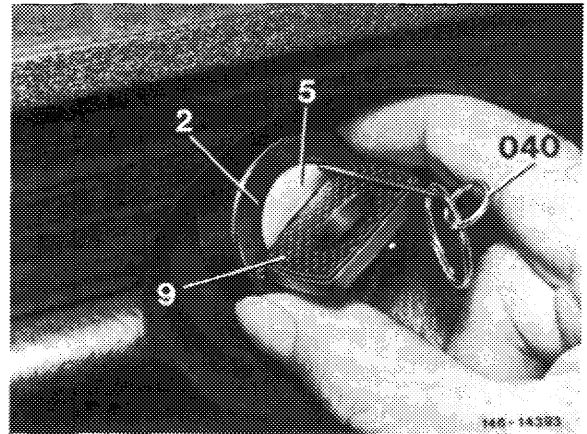
9 Introduce releasing wire (040) through bore (5a) in locking cylinder. Then push releasing wire in and unlock detent of locking cylinder by overcoming resilient resistance.



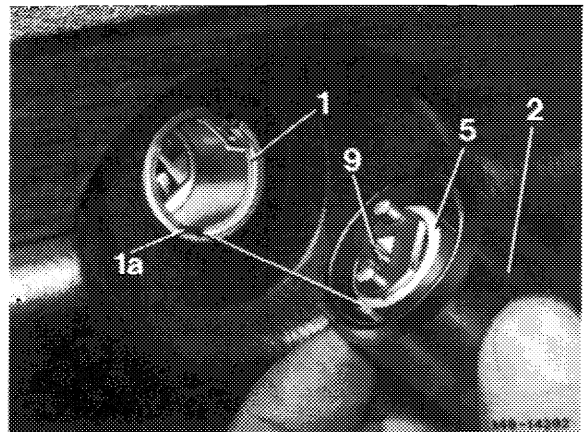
Note: The releasing wire is self-made from steel wire 1.25 mm thick according to adjacent drawing.



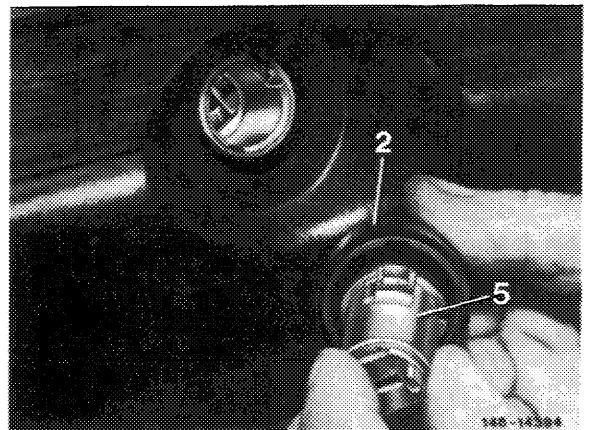
10 Unscrew cover from steering lock with detent unlocked.



11 Remove cover including locking cylinder from steering lock. Pull releasing wire out of locking cylinder. Set ignition key to position "0" and pull out.



12 Remove locking cylinder from cover.



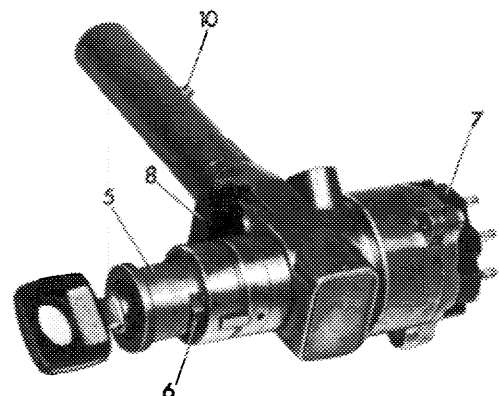
Installation

Steering lock 1st version (plug-type cover chrome-plated)

13 Turn locking cylinder to position "1" and insert into steering lock making sure that detent (6) engages.

14 Turn key to position "0" and pull out.

15 Place cover on steering lock, insert key and turn to position "1". Push cover completely down.



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16 Check locking cylinder for function.

Steering lock 2nd version (plug-type cover made of plastic)

17 Turn locking cylinder to position "1" and insert into steering lock making sure that detent engages.

18 Turn key to "0" and pull out.

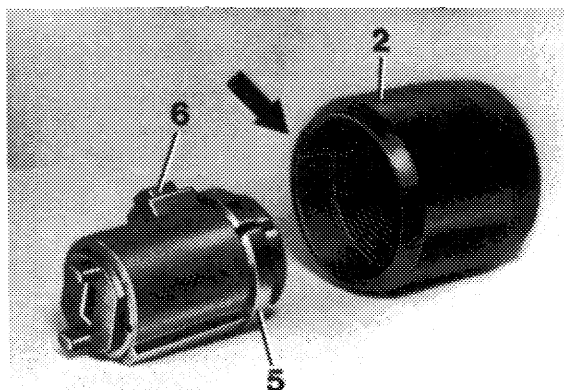
19 Place cover in correct position on steering lock paying attention to recesses on cover.

Check locking cylinder for function.

Steering lock 3rd version (screw-type cover)

20 Coat threads in cap or threads of steering lock lightly with Anticorit PRC II or anti-friction bearing grease.

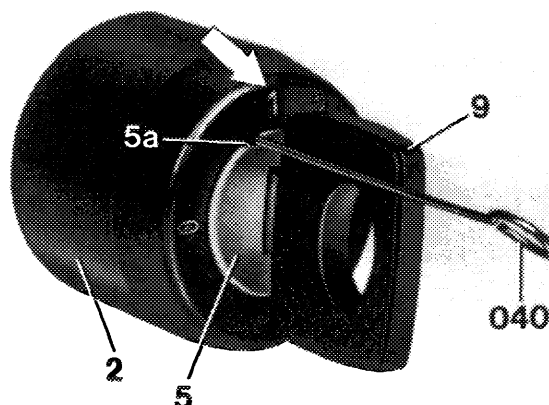
21 Insert locking cylinder into cap in such a manner that detent (6) enters into groove of cap (arrow).



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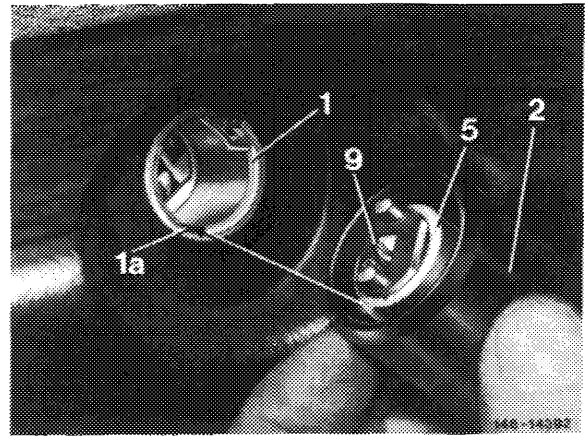
22 Insert ignition key into locking cylinder and turn to position "1".

23 Unlock detent with releasing wire (040) through bore (5a) in locking cylinder.

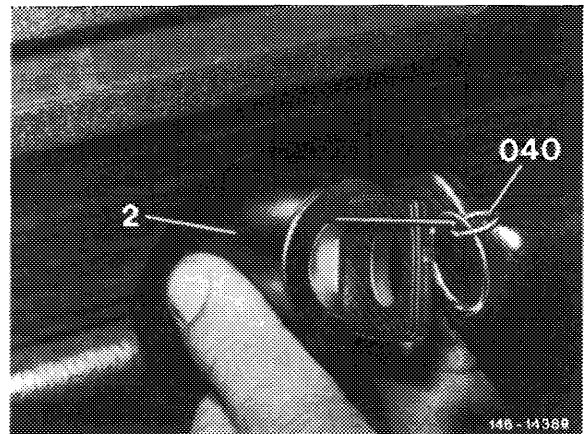


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24 Position cover including locking cylinder on steering lock in such a manner that the elevation on locking cylinder enters groove of steering lock (arrow).

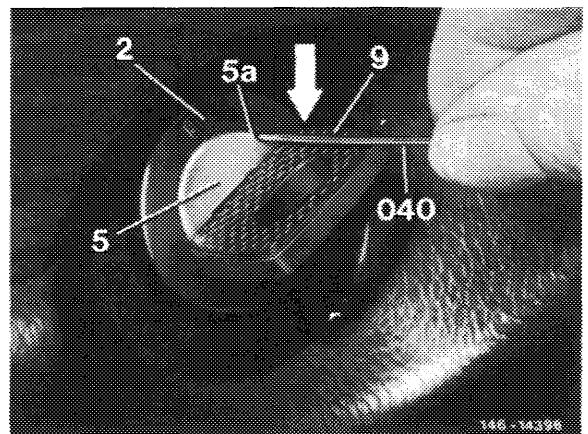


25 Screw cover complete on steering lock.



26 Pull releasing wire out of locking cylinder. Turn cover to the left (max. 1 turn) until detent of locking cylinder engages in groove of cover.

27 Check locking cylinder for function.

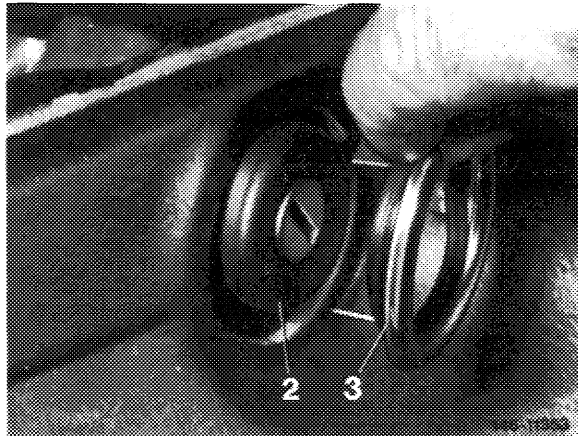


C. Removal and installation of complete steering lock

Note: If a defective locking cylinder cannot be turned to position "1", the locking pin cannot be pushed in. For removal of steering lock, remove locking pin after center punching by means of an angle drilling machine, making sure that the jacket tube is not damaged. To remove steering lock from jacket tube and instrument panel, loosen jacket tube on cross member and cover plate.

Removal

- 1 Remove steering wheel (46–610).
- 2 Disassemble instrument cluster while pulling instrument cluster out as far as possible, loosen speedometer shaft, all electrical plug connections and oil pressure line.
- 3 Remove rosette (3) from instrument panel by unbending holding plates slightly.

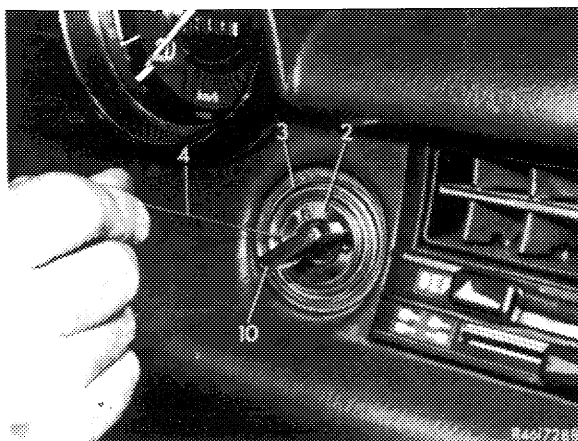


- 4 Remove cover of steering lock.

Note: The cover must be removed so that the steering lock can be turned for further disassembly.

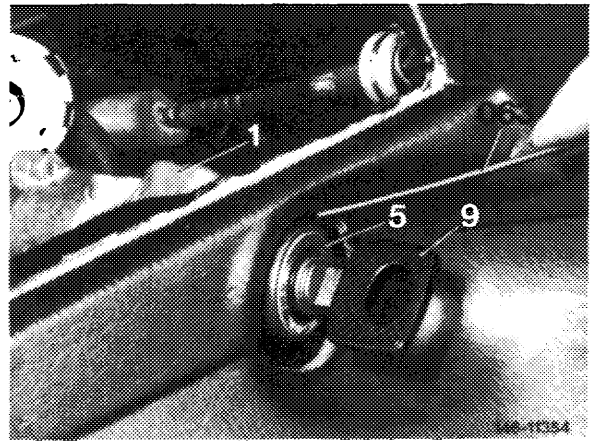
Steering lock 1st version (plug-type cap, chrome-plated)

- 5 Turn key to position "1", the so-called assembly or radio position.
- 6 Lift cap (2) up to bottom edge of key. If required, pull cap up to bottom edge of key out of steering lock by means of a pulling hook made of steel wire (4) 1 mm thick.
- 7 Turn key to position "0" and remove together with cap.



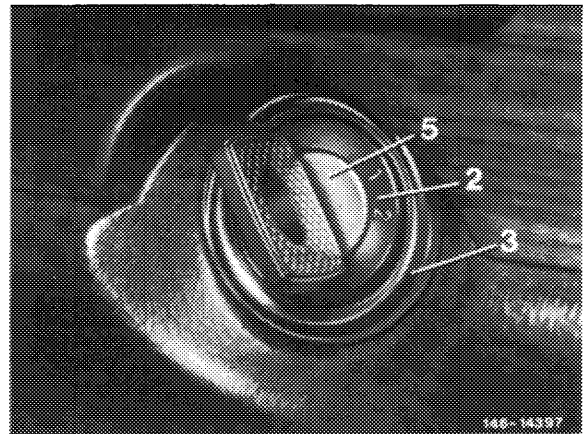
Steering lock 2nd version (plug-type cap made of plastics)

8 Pull out key and pull cap from steering lock by means of a steel wire 1 mm thick, which is bent to an 1.5 mm angle at the end.

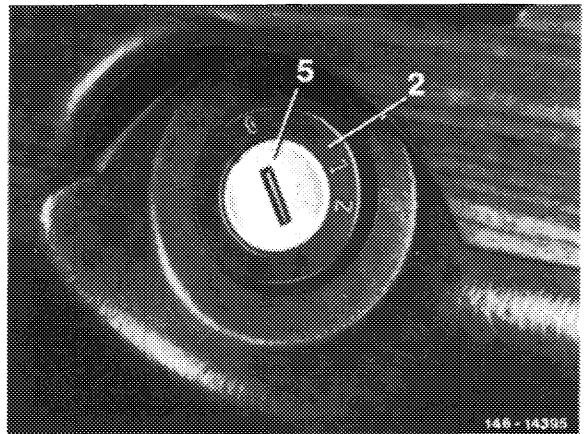


Steering lock 3rd version (screw type cap)

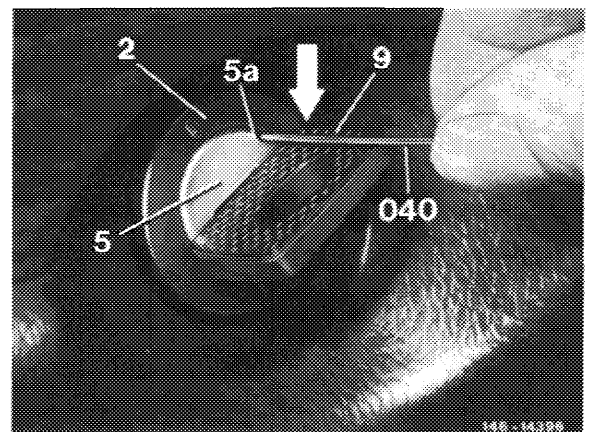
9 Take collar (3) from instrument panel.



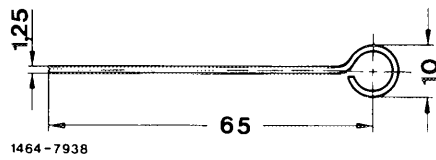
10 Turn locking cylinder into position "1" with ignition key.



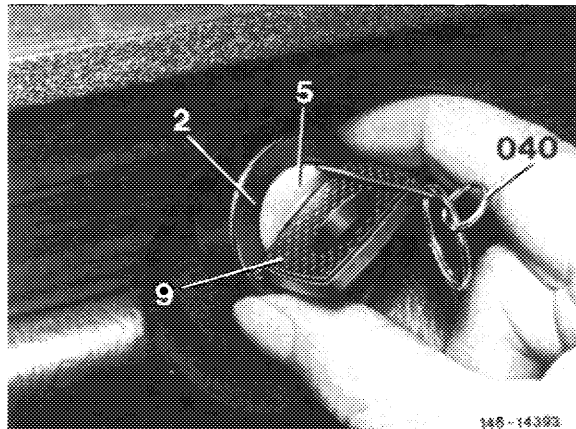
11 Introduce releasing wire (040) through bore (5a) in locking cylinder. Then insert releasing wire and unlock detent of locking cylinder by overcoming resilient resistance.



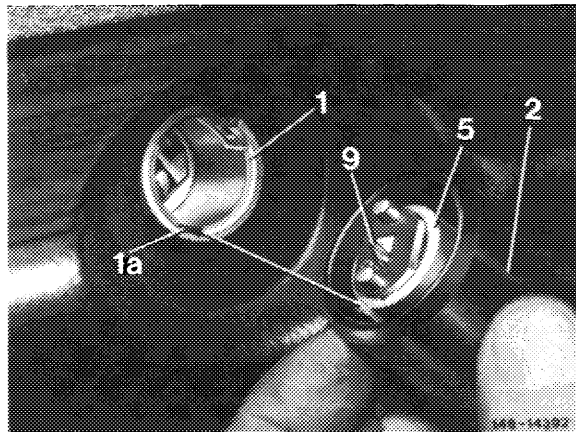
Note: The releasing wire is self-made of steel wire 1.25 mm thick according to adjacent drawing.



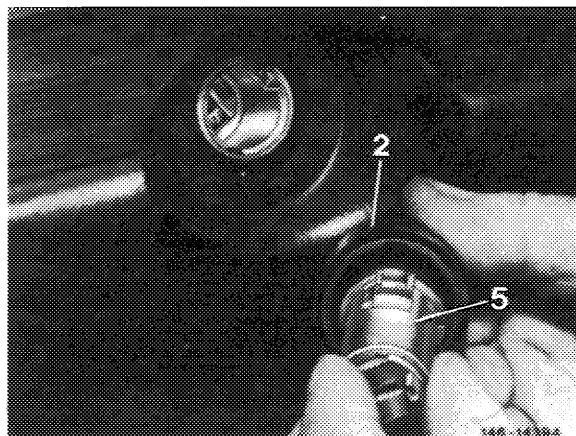
12 Unscrew cap from steering lock with detent unlocked.



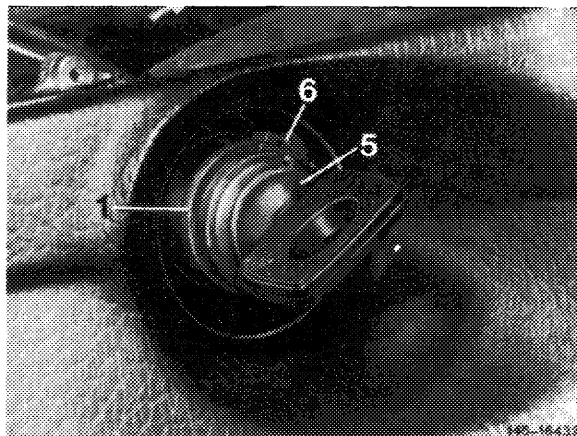
13 Remove cap including locking cylinder from steering lock. Pull releasing wire out of locking cylinder. Turn ignition key to position "0" and pull out.



14 Remove locking cylinder from cap.



15 Turn locking cylinder into position "1", push-in detent and insert locking cylinder without cap into steering lock.

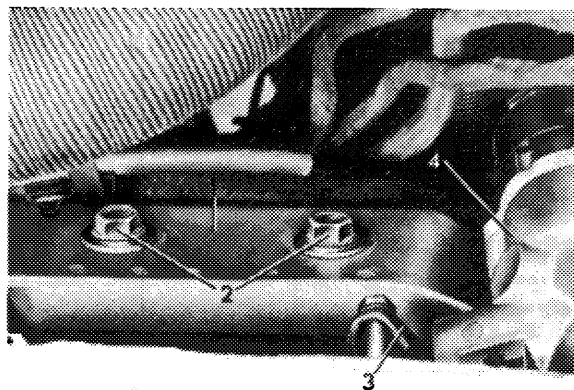


16 Loosen clamping screw on fastening clip (3).

17 Remove plug connection from ignition starting switch.

18 On diesel vehicles with key starting system, pull both vacuum lines from connecting hoses of vacuum valve.

19 Turn locking cylinder into position "1". Push-in locking pin (7) for steering lock (6) by means of a punch approx. 3 mm thick (refer to arrow). Turn steering lock slightly, turn ignition key into position "0" and pull out. Remove steering lock from holder (8) of jacket tube and instrument panel.



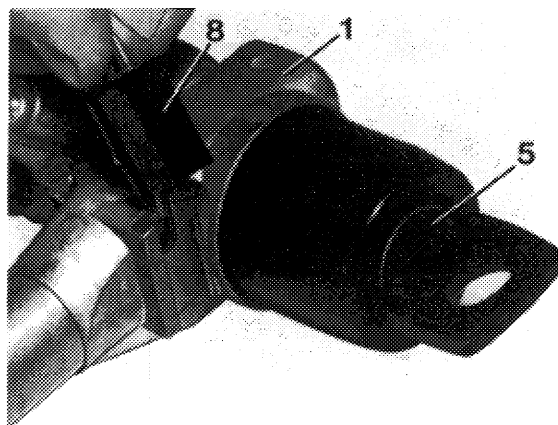
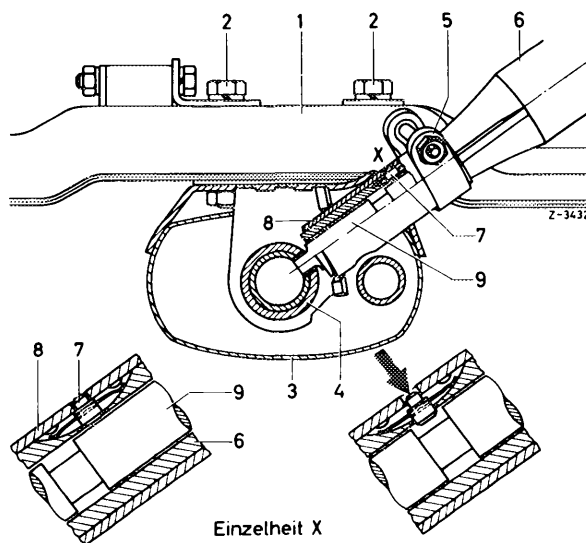
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Attention!

The locking pin can be pushed in only in position "1" of steering lock. The pin is an additional insurance against theft.

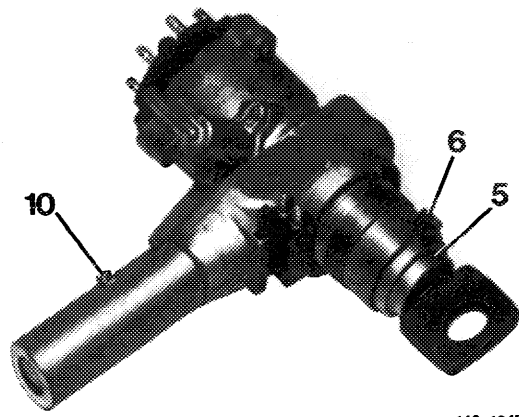
20 Pull plug connection from contact switch for warning buzzer.

Note: Remove and install contact switch for warning buzzer only in position "1" of so-called assembly or radio position with steering lock removed. For this purpose, pull switch out of mounting groove of steering lock.



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21 On steering lock 3rd version, unlock detent (6) in position "1" and remove locking cylinder from steering lock.



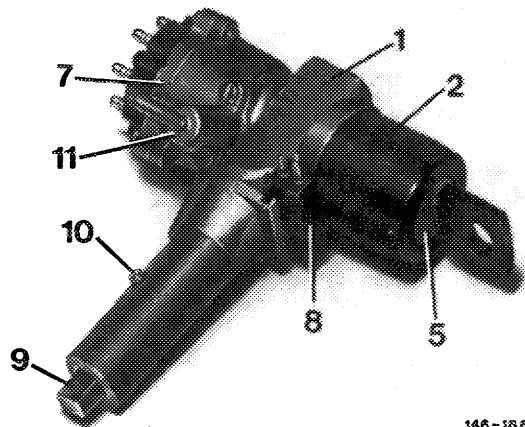
146-16475

Installation

Note: When steering locks of 1st and 2nd version are used up, only the steering lock 3rd version (with screw-type cover) will be available as a spare part.

If instead of a steering lock of the 1st or 2nd version a steering lock of the 3rd version is installed, the cutout in the instrument panel for the cover must be enlarged by cutting out some of the panelling. In addition, a rosette of larger diameter is required.

Steering lock 1st and 2nd version (plug-type cap chrome plated or made of plastics).



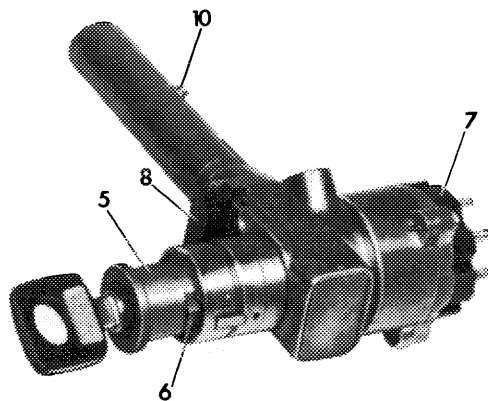
146-18848

22 Push locking pin inside in position "1". Pull out ignition key. Insert steering lock into holder of jacket tube with locking pin pushed. Turn steering lock until locking pin engages in bore of holder.

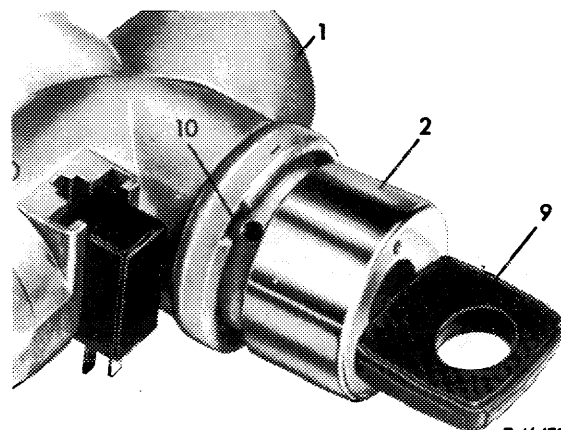
23 On 1st version, plug cap on steering lock, insert key and turn to position "1". Push cap completely down.

24 On 2nd version, plug cap in correct position on steering lock, pay attention to cutouts on cap.

25 On both versions, check locking cylinder for function.



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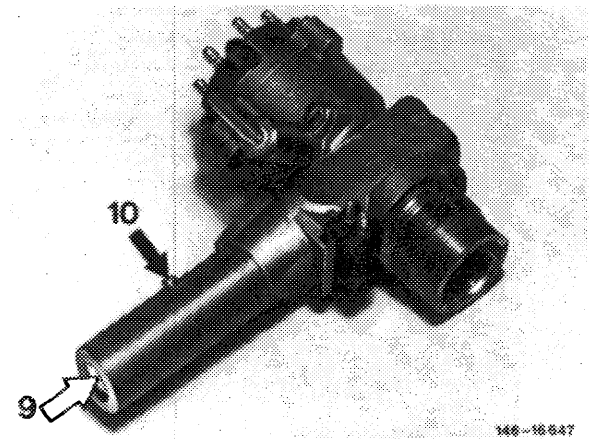


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Steering lock 3rd version (screw-type cap)

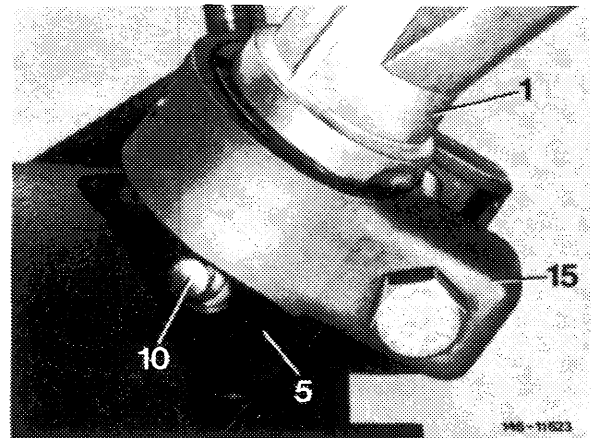
26 Push closing pin (9) into steering lock until locking pin (10) is no longer blocked.

27 Push locking pin (10) into steering lock and insert steering lock into holder of jacket tube.

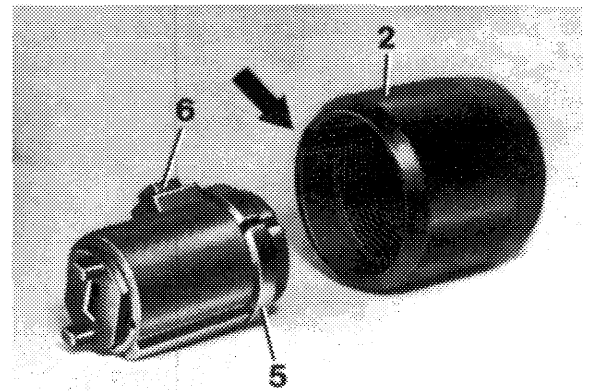


28 Turn steering lock until locking pin (10) enters bore of holder.

29 Coat threads in cap or threads of steering lock lightly with Anticorit PRC II or anti-friction bearing grease.

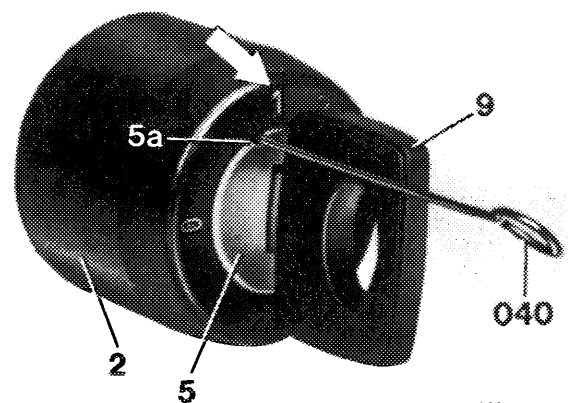


30 Insert locking cylinder into cap in such a manner that detent (6) enters groove of cap (arrow).

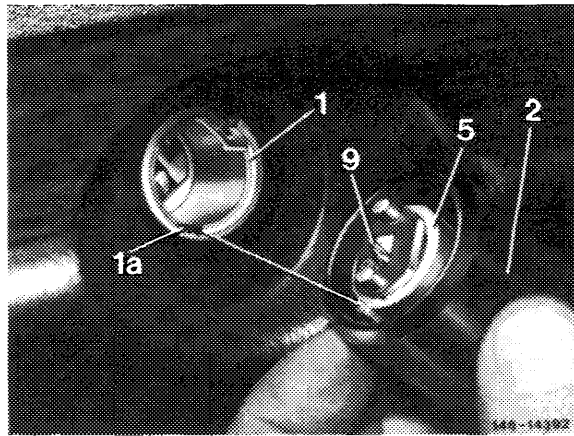


31 Insert ignition key into locking cylinder and turn into position "1".

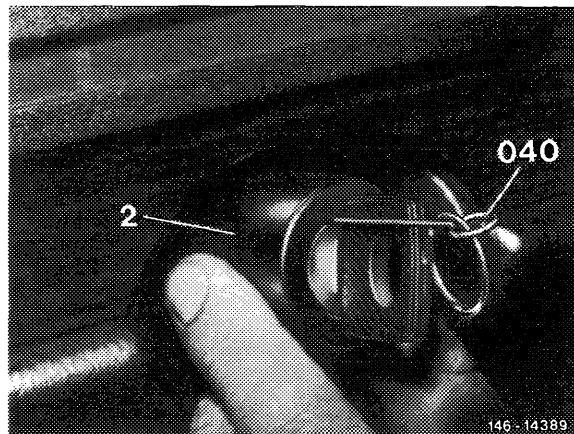
32 Unlock detent by means of releasing wire (040) through bore (5a) in locking cylinder.



33 Position cap including locking cylinder on steering lock in such a manner that the raised portion of locking cylinder enters groove of steering lock.

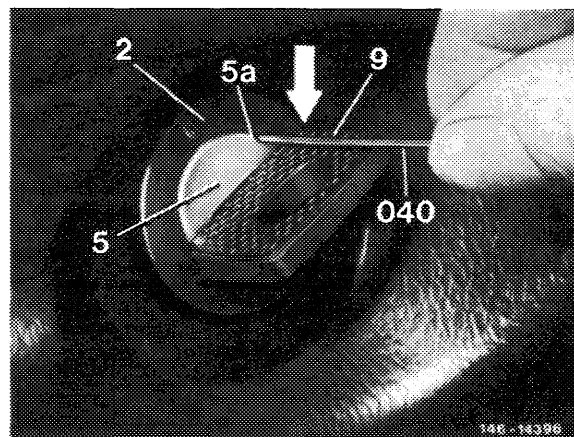


34 Screw cap completely on steering lock.

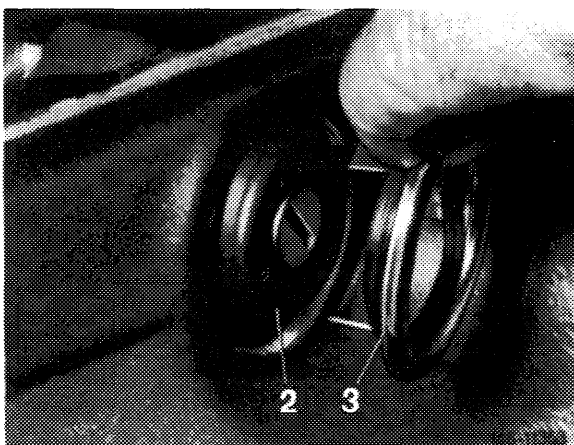


35 Pull releasing wire out of locking cylinder. Turn cap to the left (max. 1 turn) until detent of locking cylinder enters groove of cap.

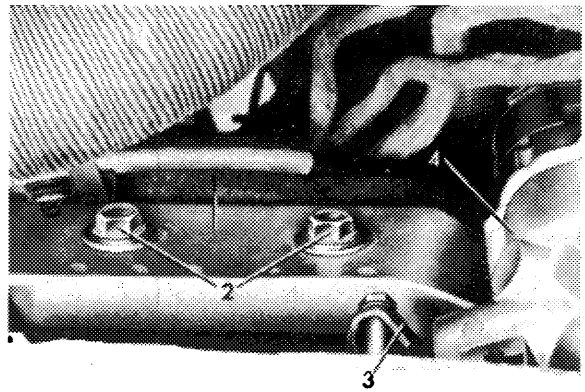
36 Check locking cylinder for function.



37 On all versions, insert collar into instrument panel.



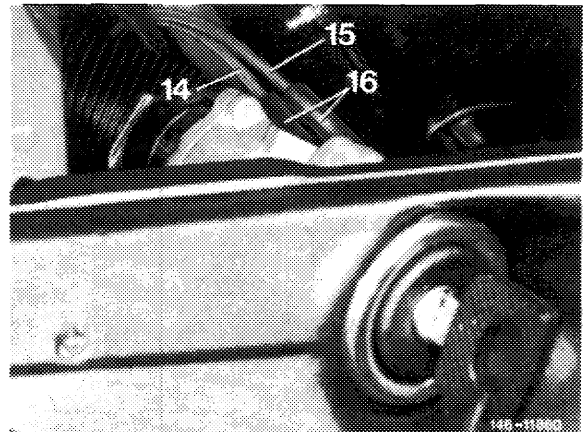
- 38 Connect plug to contact switch.
- 39 Tighten clamping screw of fastening clamp.
- 40 Attach plug connection to ignition starter switch.



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- 41 On vehicles with diesel engine, connect vacuum lines (14) and (15) to valve of steering lock.

Note: The brown line (15) comes from vacuum pump and is connected to upper connection, the brown/blue line (14) leads to vacuum control unit of injection pump and is connected to lower connection (to steering lock). Minimum insertion depth of lines into connections (16) 12 mm. Make sure that the connections are slipped in up to stop of vacuum valve.

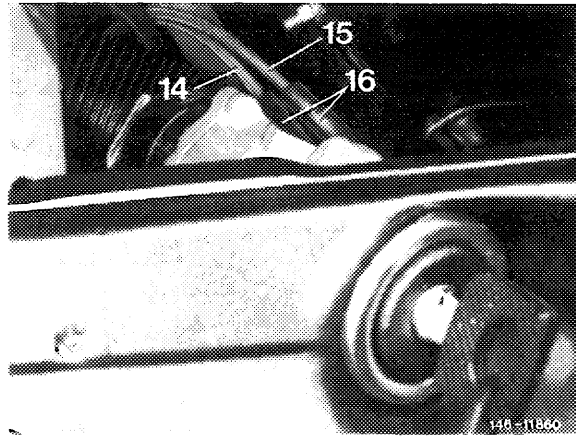


- 42 Install instrument cluster.
- 43 Install steering wheel (46-610).
- 44 Check operation of steering lock.

D. Removal and installation of vacuum valve Model 116.120

Removal

- 1 Remove instrument cluster. While pulling instrument cluster as far as possible in outward direction, disconnect tachometer shaft, both electric plug connections and oil pressure line.
- 2 Loosen both vacuum lines (14) and (15) from vacuum valve.
- 3 Completely remove steering lock (section C).
- 4 Unscrew both slotted screws from steering lock and remove vacuum valve.



Installation

- 5 Attach vacuum valve (11) to steering lock.
- 6 Slip both connections up to stop on connecting pipes of valve.
- 7 Install steering lock (46-640), section c).
- 8 Connect both vacuum lines to connections.

Note: The brown line (15) comes from vacuum pump and is connected to upper connection "A", the brown/blue line (14) leads to vacuum control box of injection pump and is connected to lower connection "B". Minimum insertion depth of lines into connections (16) 12 mm. Make sure that the connections are inserted up to stop of vacuum valve.

- 9 Install instrument cluster, while connecting both electric plug connections, oil pressure line and tachometer shaft.
- 10 Check vacuum valve for function by starting and stopping engine several times.

