



Opel Combo (71\_), Corsa B (73\_, 78\_, 79\_, F35)



## DANGER

**Airbag unit can trigger unintentionally!**

**Airbag unit is a pyrotechnic component that can lead to death on improper handling!**

**Only specially trained employees may carry out any work on the airbag system.**

**Disconnect the battery.**

**Always store airbag unit with the padded side pointing upward.**

**Always transport airbag unit in appropriate packaging.**

**Never leave airbag unit unattended, but lock safely in an appropriate cabinet.**

**Do not open or repair airbag unit.**

**Only install airbag unit in undamaged condition.**

**Do not perform any measurements on the airbag unit using a test lamp or multimeter.**

**Wear protective gloves and safety goggles.**

**No person may stay inside the vehicle when re-connecting the battery.**

## NOTE

**Ensure proper cleanliness when working on the servo-steering.**

**Steering column adjustment must remain locked during steering column removal.**

**Generally replace self-locking as well as corroded screws and nuts.**

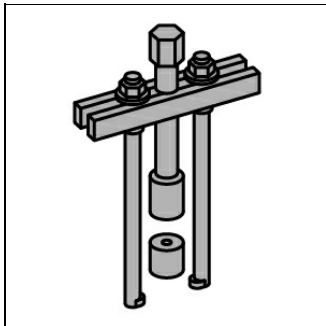
**Repair work of any kind on the electromechanical steering column is not permissible, it must basically be completely replaced.**

**Observe disposal regulations!**

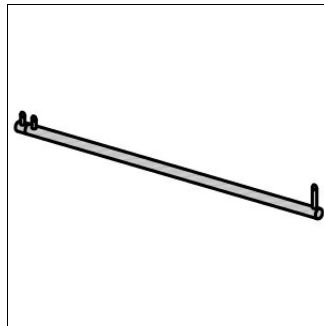
**Do not use oils, fats, chemicals and cleaners not approved by the manufacturer on airbag units.**

**The illustrations of these installation instructions are exemplary and are only intended for better understanding.**

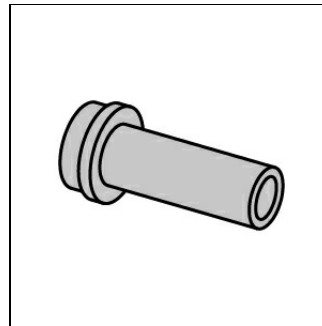
## Required special tools



Set of pull-off tools  
AUT (KM-210-B)



Test gauge  
AUT (KM-551-A)



Removal/installation tool  
AUT (KM-998)

## Torques

### Tightening torques

**Self-locking screws and nuts must always be replaced.**

Steering wheel nut(s) <b>(2)</b>	<b>(see Figure 2)</b>	<b>Replace safety plate(s).</b>	<b>20 Nm</b>
Intermediate steering spindle screw(s) <b>(3)</b>	<b>(see Figure 5)</b>		<b>at steering column 22 Nm</b>
Steering column			<b>Nut(s) 22 Nm; Screw(s) 20 Nm</b>
Driver airbag screw(s)			<b>10 Nm</b>

## **Remove:**

**Move steering wheel to the centre position and let steering lock engage.**

**Disconnect battery (negative terminal).**

**Keep waiting time of min. 1 min.**

**Remove driver's airbag. (If present)**

Unscrew and remove steering column shroud(s) upper screw(s). **(1)**

Remove upper steering column shroud. **(2)**

Unscrew and remove steering column shroud(s) lower screw(s). **(3)**

Remove lower steering column shroud. **(4)**

Unscrew and remove slip ring screw(s). **(5)**

Loosen slip ring electric plug connection.

**(see Figure 1)**

Bend up tab washer(s). **(1)**

Unscrew the steering wheel nut(s). **(2)**

Pull off steering wheel from steering spindle using puller. **(3)(4)**

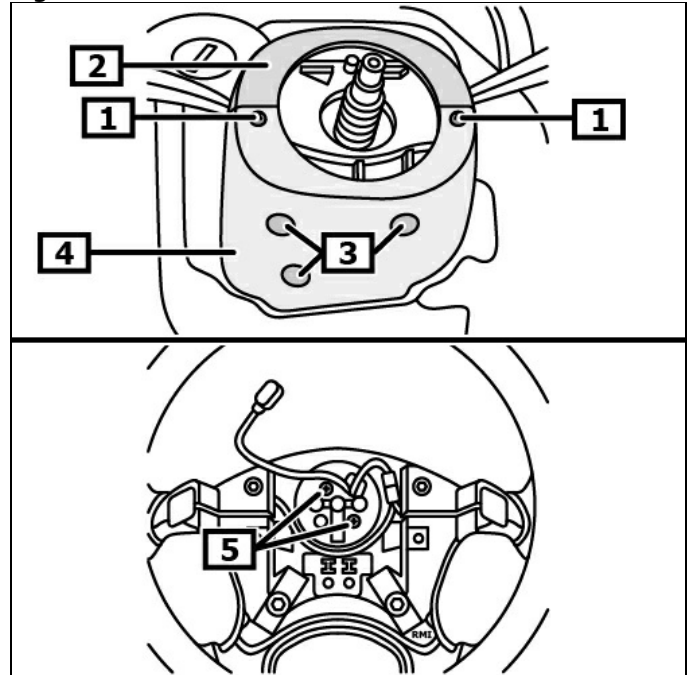
Remove contact unit.

**Required special tools:**

Set of pull-off tools **AUT (KM-210-B)**

**(see Figure 2)**

**Figure 1**

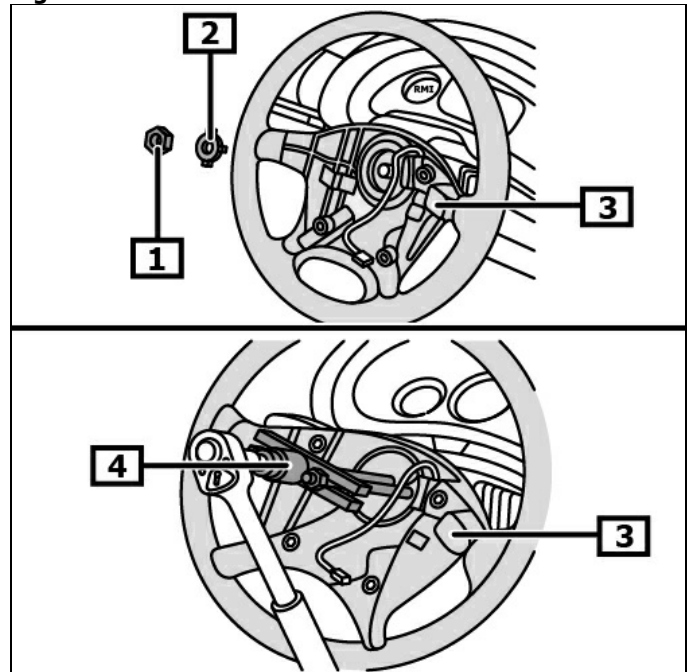


**1 Steering column shroud(s) upper    2 Upper steering column shroud screw(s)**

**3 Steering column shroud(s) lower    4 Lower steering column shroud screw(s)**

**5 Slip ring screw(s)**

**Figure 2**



**1 Safety plate(s)**

**2 Steering wheel nut(s)**

**3 Steering wheel**

**4 Set of pull-off tools**

Remove pressure spring(s). **(1)**

**Perform following workflow on both sides.**

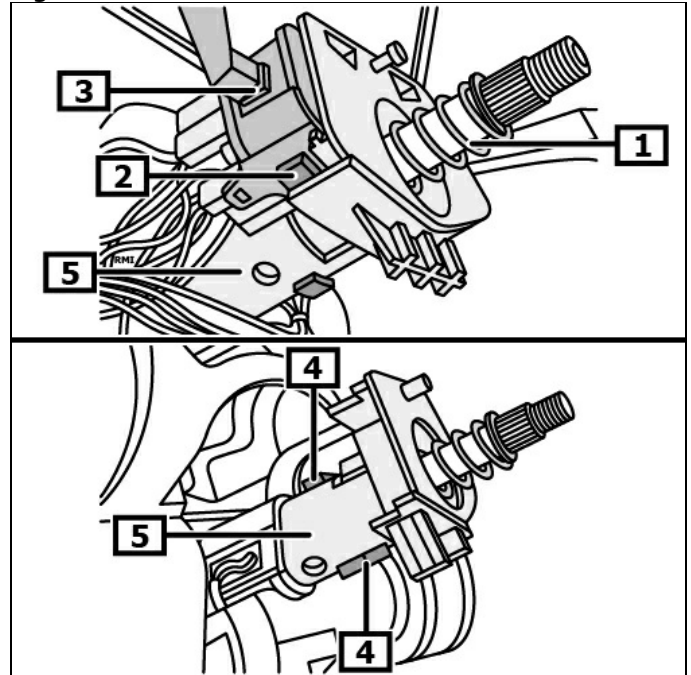
Unlock steering column switch engagement pin. **(2)**

Remove steering column switch from steering column module.

**(3)**

**(see Figure 3)**

**Figure 3**



**1** Pressure spring

**2** Engagement pins

**3** Steering column switch

**4** Retaining plug

**5** Steering column module

Disconnect ignition lock electric plug connection.

Turn the ignition key to the II position.

Loosen ignition lock retaining device using suitable tool. **(1)**

Demount ignition lock. **(2)**

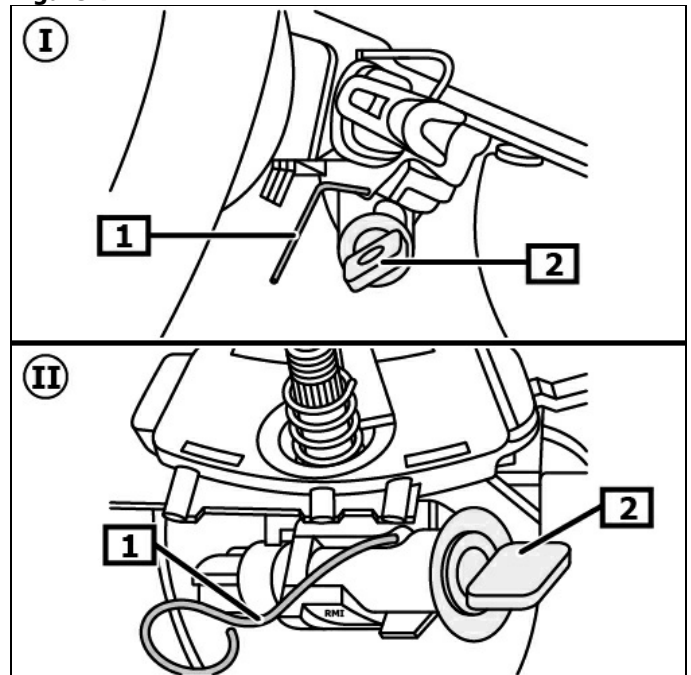
**(see Figure 4)**

Remove retaining plug. **(4)**

Slightly twist steering column module anti-clockwise and remove it. **(5)**

**(see Figure 3)**

**Figure 4**



**I** Vehicles with airbag

**II** Vehicles without airbag

**1** Tool(s)

**2** Ignition lock

Install removal/installation tool. **(1)**  
Screw in steering wheel nut(s) finger tight. **(2)**

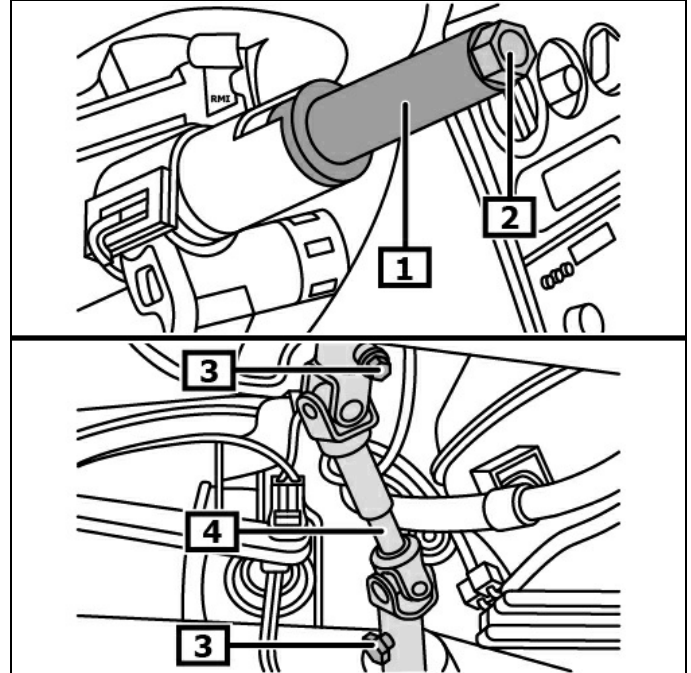
**Required special tools:**

Removal/installation tool **AUT (KM-998)**

Unscrew and remove intermediate steering shaft screw(s). **(3)**

Remove intermediate steering shaft. **(4)**  
**(see Figure 5)**

**Figure 5**



**1** Removal/installation tool

**2** Steering wheel nut(s)

**3** Intermediate steering shaft

**4** Intermediate steering shaft screw(s)

**Vehicles from model year 1999**

Remove footwell covering(s).

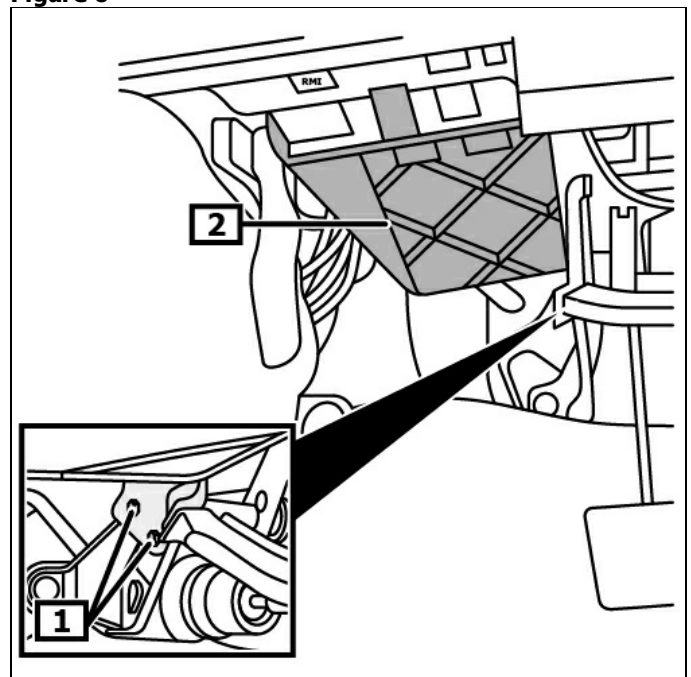
Unscrew and remove electric power steering control unit bracket screw(s). **(1)**

Unhook electric power steering control unit incl. bracket from the dashboard. **(2)**

Remove electric power steering control unit.

**(see Figure 6)**

**Figure 6**



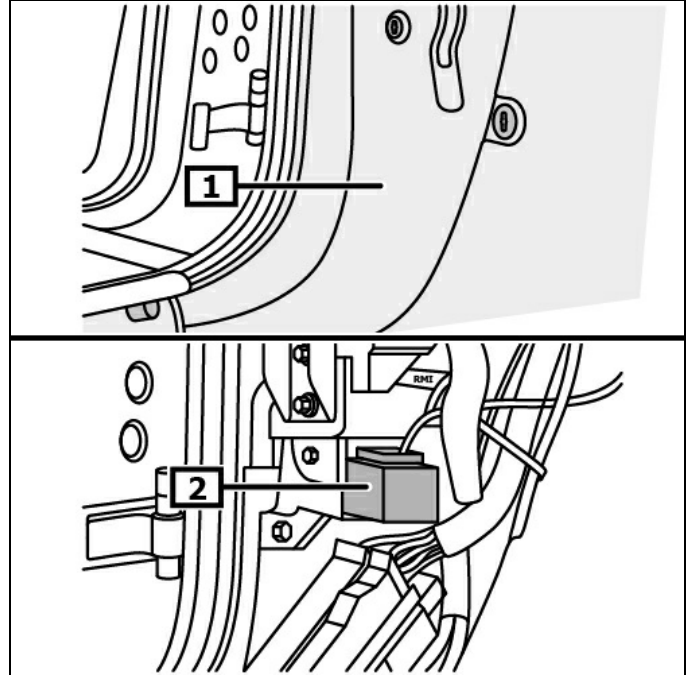
**1** Holder screw(s)

**2** Electric power steering control unit bracket screw(s)

**Vehicles up to model year 1999**

Remove A-pillar lower paneling. **(1)**  
Remove electric plug connection from electric power steering control unit. **(2piece) (2)**  
**(see Figure 7)**

**Figure 7**



**1 A-pillar lower paneling**

**2 Electrical connection(s)**

Cut through coolant temperature sensor electric line cable tie.  
Remove stop light switch.

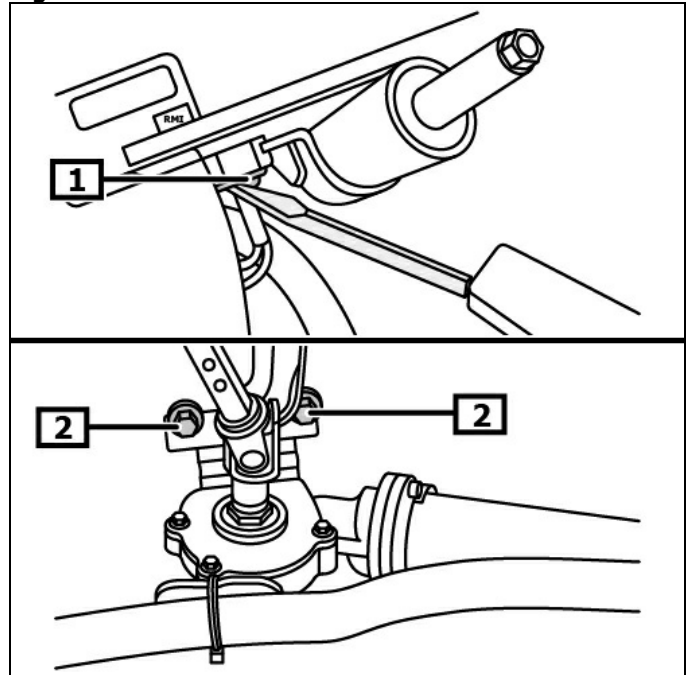
Chisel up and remove steering column shear-off screw(s). **(1)**  
Unscrew and remove steering column nut(s).  
Unscrew and remove bracket on steering column screw(s).  
Unscrew and remove bracket on bulkhead screw(s). **(2)**  
**(see Figure 8)**

Remove the steering column.

Convert following components when replacing the steering column:

- Ignition starter switch
- Ignition lock housing

**Figure 8**



**1 Steering column shear-off screw(s)**

**2 Bracket on bulkhead screw(s)**

## **Install:**

**Steering column tilt adjustment must be locked!**

**Installation in reverse order of removal.**

The removal/installation tool needs to be installed into the new steering column when it is being replaced. **(1)**  
**(see Figure 5)**

**Installation in reverse order of removal.**

Check before installation whether the slip ring is in center position.

- The slip ring can be installed when the slip ring is in center position and the markings flush.
- Put the slip ring into center position as follows if the slip ring markings do not flush.

Press and keep slip ring retaining device depressed.

Turn slip ring internal part counterclockwise up to first resistance.

Turn back slip ring internal part clockwise by 2,5 turns.

Keep on turning slip ring internal part until markings flush.

**Continue assembly in reverse order of removal.**

**Check driving position to the front, adjust if needed.**

**Straight-ahead driving position can only be checked with the axle geometry correctly adjusted.**

Turn the steering wheel to the central position.

Check to see whether the lower universal joint screw is horizontal on the steering gear. **(1)**

Determine A dimension as follows.

Check straight-ahead driving position using a test gauge between steering gear and tie rod end. **(2)**

Version	Dimension A
- with electric servo-steering - without power steering	420 mm $\pm$ 2 mm
- with hydraulic servo-steering	435 mm $\pm$ 2 mm

### **Required special tools:**

Test gauge **AUT (KM-551-A)**

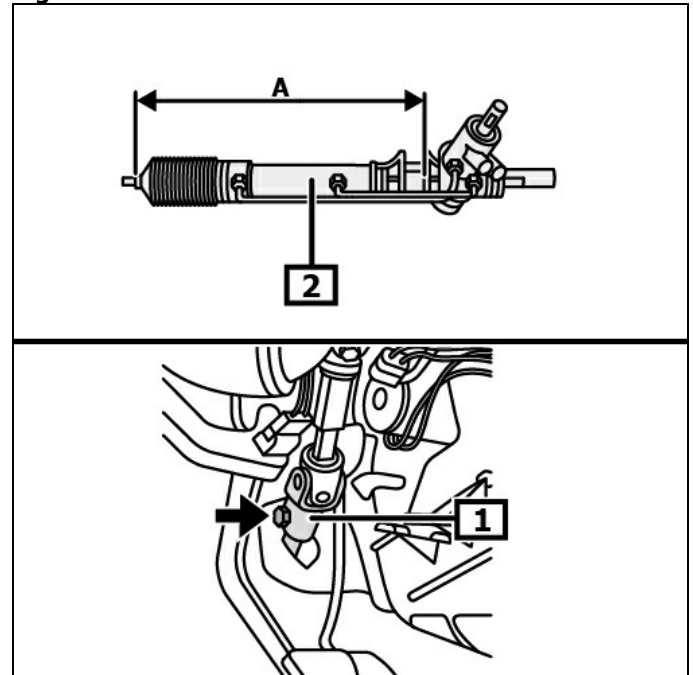
**(see Figure 9)**

**Continue assembly in reverse order of removal.**

Code radio and reprogram vehicle settings if required.

Check electrical system for function.

**Figure 9**



**1 Steering universal joint**

**2 Steering gear**

**Dimension A**