

> GKN installation instructions

Steering column with electric servo-steering OPEL CORSA C

Safety instructions

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.
Observe disposal regulations!

Work on restraint systems must be carried out by qualified personnel in possession of certificate of specialist knowledge.
Repair work on components of the restraint system is not allowed, new parts must always be used.
Open these components by force or modifying them is prohibited.
Never carry out any measurements on pyrotechnic components using a multimeter or a test lamp.
Always store airbag unit with the padded side pointing upward.
Do not use oils, fats, chemicals and cleaners not approved by the manufacturer on airbag units.
Never leave pyrotechnical components lying around without supervision.

Required special tools



Socket and bit set
AUT (MKM-604-D)

Required Labour times/torques

scheduled times

Replace the steering column	1,30 h
-----------------------------	--------

Tightening torques

Self-locking screws and nuts must always be replaced.

Intermediate steering spindle screw (1)	(see Figure7)	Use screw-locking compound.	24 Nm + 60°
Steering column screw(s). (1)	(see Figure8)		22 Nm
Steering column nut(s) (2)	(see Figure8)		22 Nm
Tilt adjustment handle screw(s)			1,8 Nm
Driver airbag screw(s)			8 Nm
Steering wheel nut(s)		Use screw-locking compound.	30 Nm



Remove:

Disconnect battery (negative terminal).

Keep waiting time of min. 1 min.

Remove driver's airbag.

Required special tools:

Socket and bit set **AUT (MKM-604-D)**

- Bit socket **AUT (MKM-604-29)**

Set steering wheel to straight-ahead position.

Demount steering wheel.

Remove tilt adjustment handle from steering wheel. **(if present)**

Unscrew and remove steering wheel height adjustment handle screw(s). **(1)**

Remove height adjustment handle from steering wheel. **(2)**

Unlock steering column shroud upper engagement pins. **(3)**

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

Unscrew and remove steering column shroud(s) lower screw(s). **(5)**

Remove lower steering column shroud. **(6)**

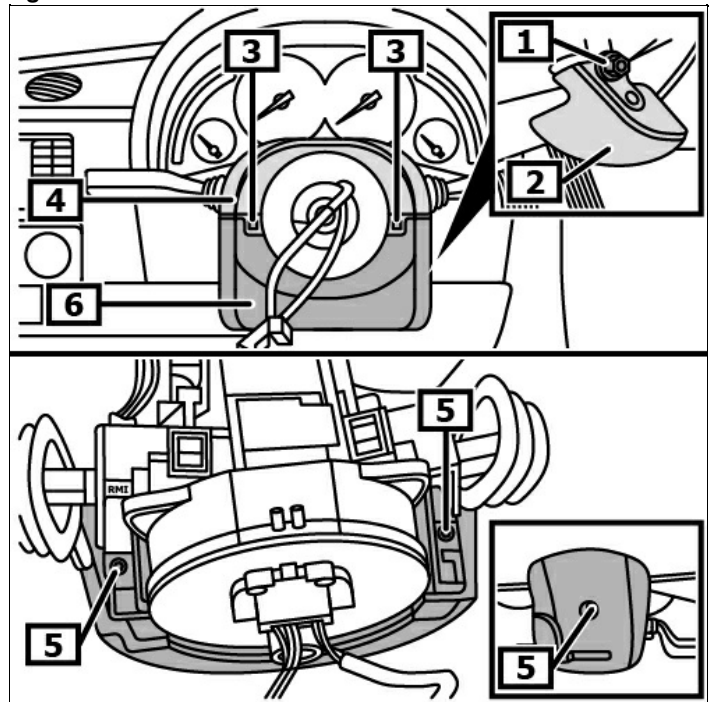
(see Figure1)

Loosen slip ring electric plug connection. **(1)**

Remove slip ring. **(2)(3)**

(see Figure2)

Figure 1

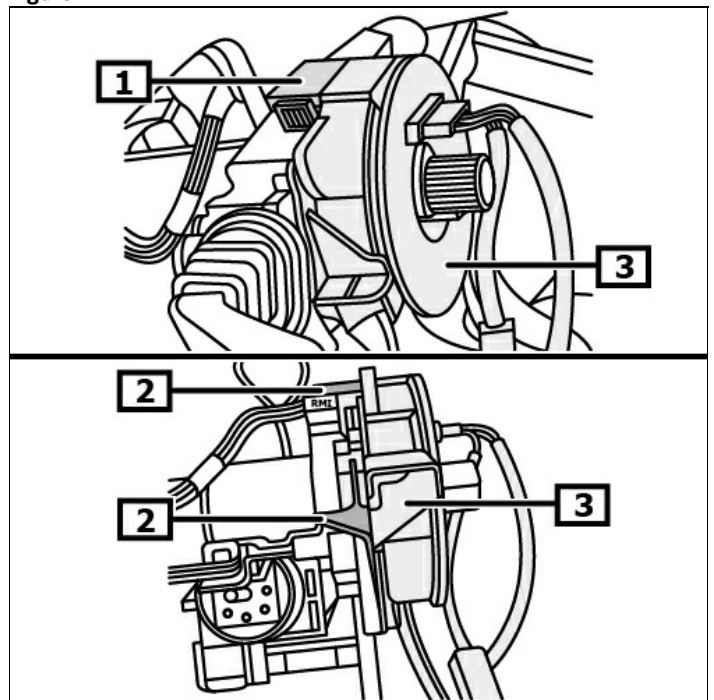


1 Steering wheel height adjustment handle **2** Height adjustment handle screw(s)

3 Engagement pins **4** Upper steering column shroud

5 Steering column shroud(s) screw(s) **6** Lower steering column shroud

Figure 2



1 Electrical connection(s)

2 Engagement pins

3 Slip ring

Perform following workflow on both sides.

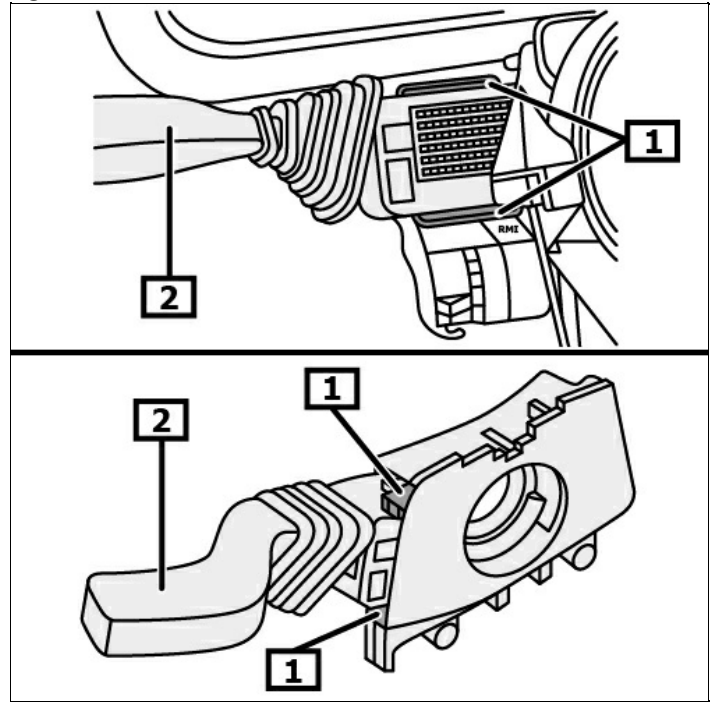
Unlock steering column switch engagement pin using suitable tool. **(1)**

(1)

Remove steering column switch from steering column module. **(2)**

(see Figure3)

Figure 3



1 Engagement pins

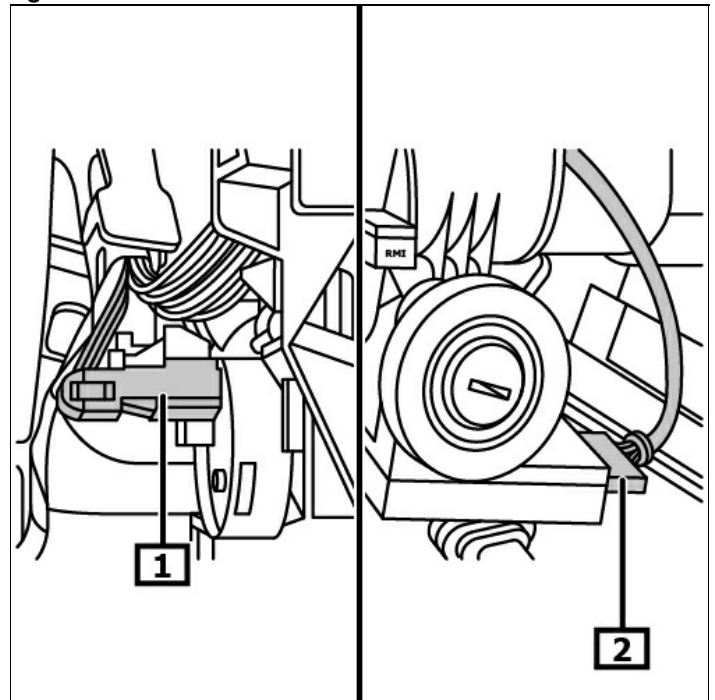
2 Steering column switch

Disconnect electric plug connection(s). **(1)(2)**

(see Figure4)

Remove steering column module.

Figure 4



1 Electrical connection(s)

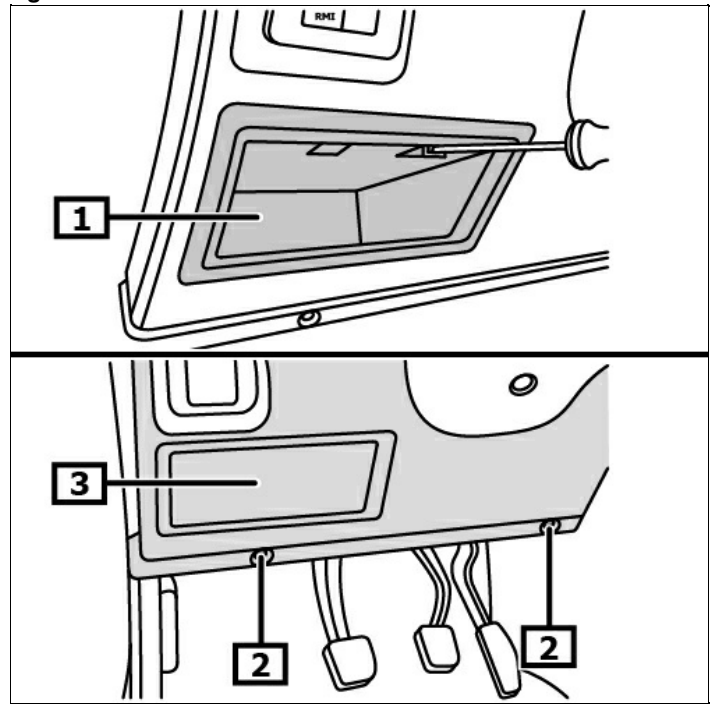
2 Electrical connection(s)



- Remove storage box. **(1)**
- Unscrew screw(s). **(2)**
- Remove trim(s). **(3)**
- (see Figure5)**

Unscrew and remove driver's side footwell paneling screw(s).
 Remove the footwell panelling.
 Remove driver's side footwell air duct.

Figure 5



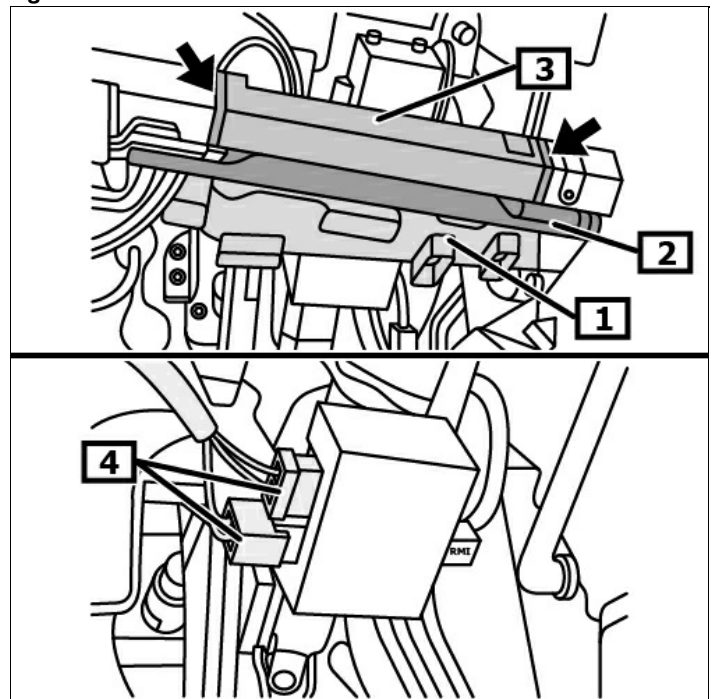
1 Parcel tray

2 Screw(s)

3 Trim

- Remove driver's side footwell air duct. **(1)**
- Remove dashboard bracket in footwell. **(2)**
- Cut out footwell paneling bracket. **(3) (Arrows)**
- Remove electric plug connection from electric power steering control unit. **(4)**
- (see Figure6)**

Figure 6



1 Driver's side footwell air duct

2 Dashboard bracket in footwell

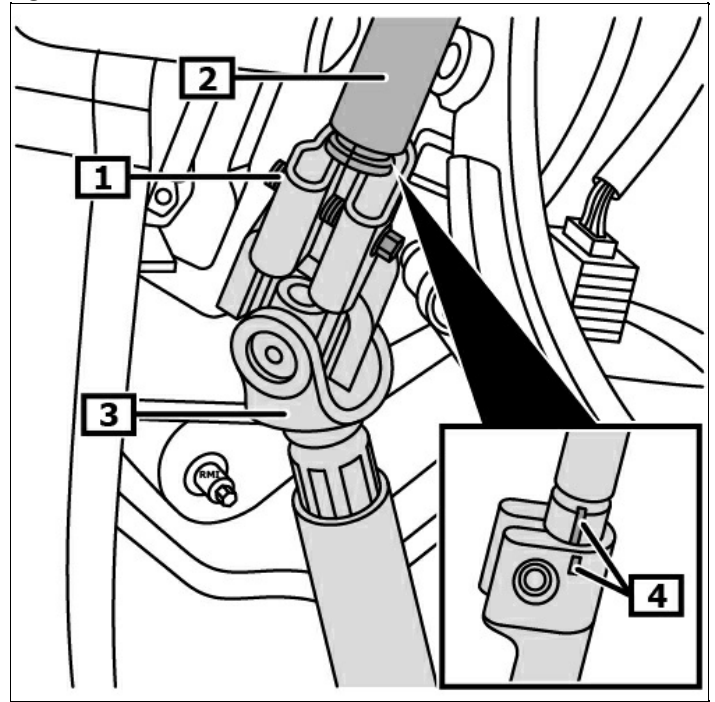
3 Footwell paneling bracket

4 Electrical connection(s)



Unscrew and remove intermediate steering spindle screw. (1)
 Loosen intermediate steering spindle from steering spindle. (2)(3)
 (see Figure7)

Figure 7



- | | |
|---------------------------------------|--------------------|
| 1 Intermediate steering spindle screw | 2 Steering spindle |
| 3 Intermediate steering spindle | 4 Mark(s) |

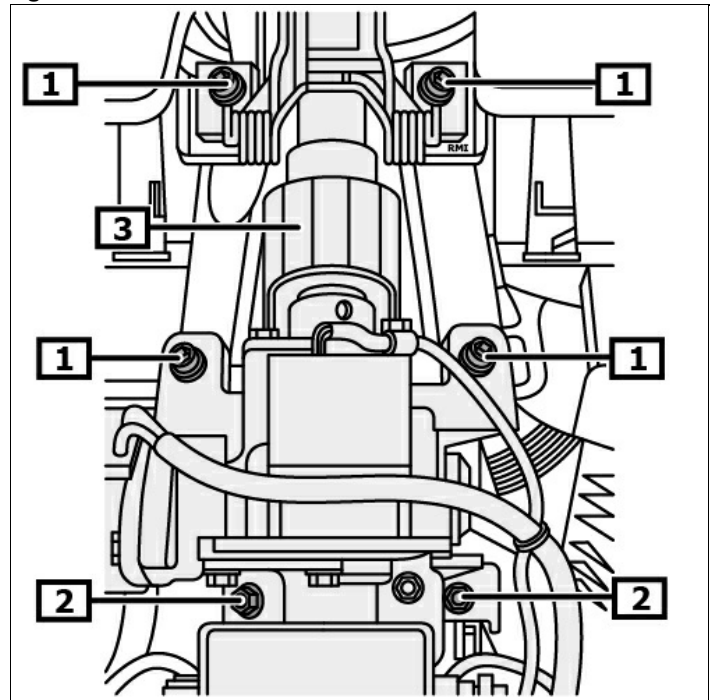
Steering column tilt adjustment must be locked!

Unscrew the steering column screw(s). (1)
 Unscrew and remove steering column nut(s). (2)
 Remove the steering column. (3)
 (see Figure8)

Convert following components when replacing the steering column.

- Electric power steering control unit
- Immobilizer control unit
- Ignition starter switch
- Ignition lock

Figure 8



- | | |
|-----------------------------|--------------------------|
| 1 Steering column screw(s). | 2 Steering column nut(s) |
| 3 Steering column | |



Install:

Steering column tilt adjustment must be locked!

Installation in reverse order of removal.

Screw in but do not tighten steering column screw(s) and nut(s). **(1)**
(2)
Tighten steering column nut(s). **(2)**
Tighten steering column screw(s). **(1)**
(see Figure8)

The markings must flush when installing the steering spindle and intermediate steering spindle! **(4)**
(see Figure7)

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. **(1)**
- Put the slip ring into center position as follows if the slip ring markings do not flush. **(1)**

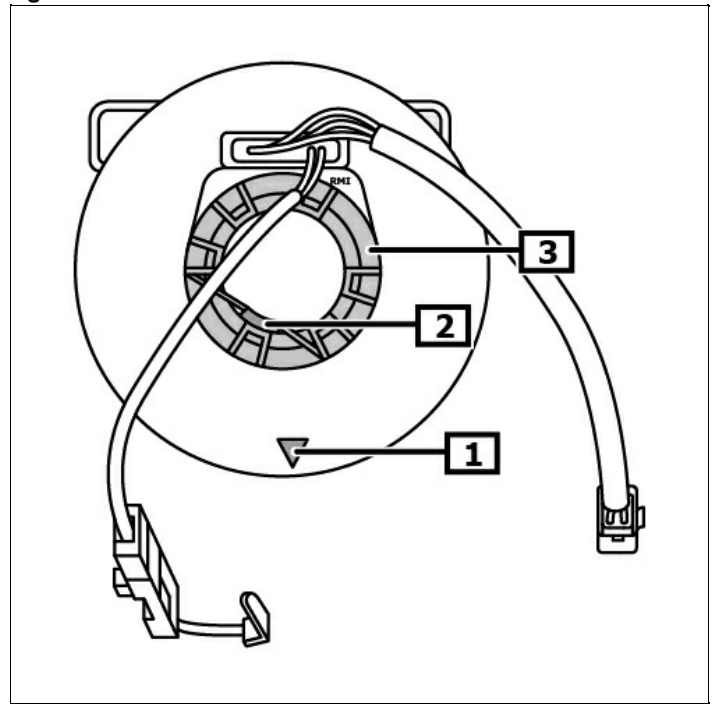
Press and keep slip ring retaining device depressed. **(2)**
Turn slip ring internal part counterclockwise up to first resistance. **(3)**
Turn back slip ring internal part clockwise by 2,5 turns.
Keep on turning slip ring internal part until markings flush. **(1)(3)**
(see Figure9)

Continue assembly in reverse order of removal.

Code radio and reprogram vehicle settings if required.
Check electrical system for function.
Teach the steering angle sensor.

Check driving position to the front, adjust if needed.

Figure 9



1 Mark(s)

2 Slip ring internal part retaining device

3 Slip ring internal part

