

# Replacing steering column/steering shaft/boot and needle bearing/lower universal joint,. Cars with SRS

Special tools: [998 8695](#)

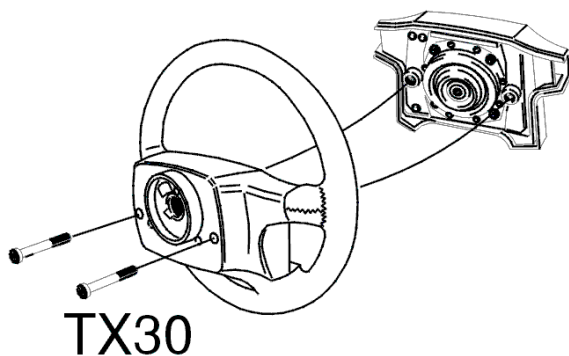
**Note!** The following procedure applies to cars with SRS.

The cars without SRS see [Steering column/steering shaft/boot and needle bearing/lower universal joint, replacement. Cars without SRS:](#) .

**Caution!** The battery must be disconnected when removing or installing the steering wheel airbag module.

**Disconnect battery ground cable**

**Insert ignition key and turn to position I to release steering lock**



## **Remove steering wheel airbag module**

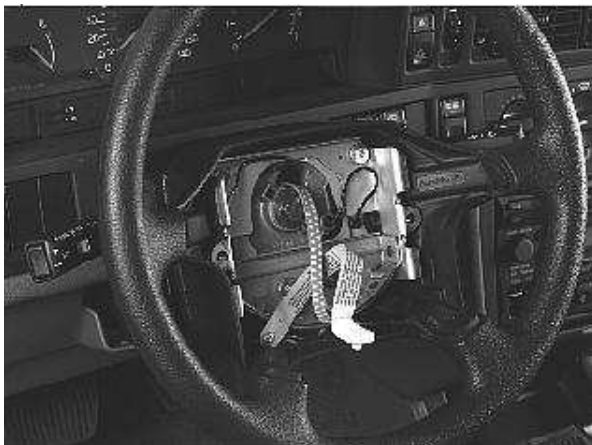
Undo two Torx screws at rear of steering wheel. Turn the steering wheel **90°** in both directions to access the screws.

Disconnect connector and lift out module.

**Remove screw from "parking hole" in steering wheel. Screw must remain attached to plastic strip**

**Remove steering wheel bolt. Ensure that front wheels and steering wheel are in straight-ahead position. Lift off wheel**

Take care to ensure that neither connector nor plastic strip and screw catch in steering wheel during removal.



## **Remove:**

- steering column covers. Use long Torx TX15 tool for upper cover. Use Torx TX 25 for the lower cover.
- panel under dashboard.



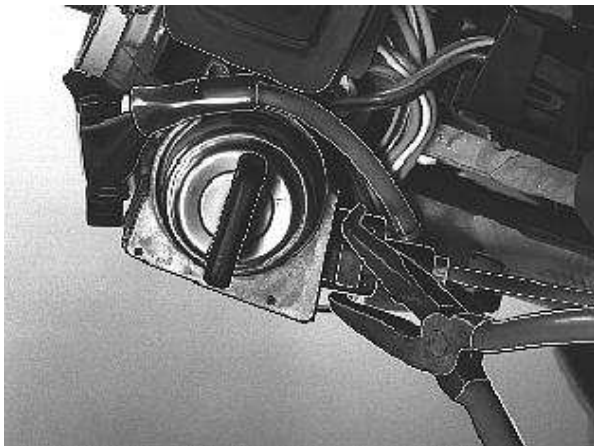
#### Remove knee bolster (certain variants)



#### Disconnect key lock cable (certain variants)

Move ignition key to position I.

Use flat nosed pliers. Press together the catches on the cable.

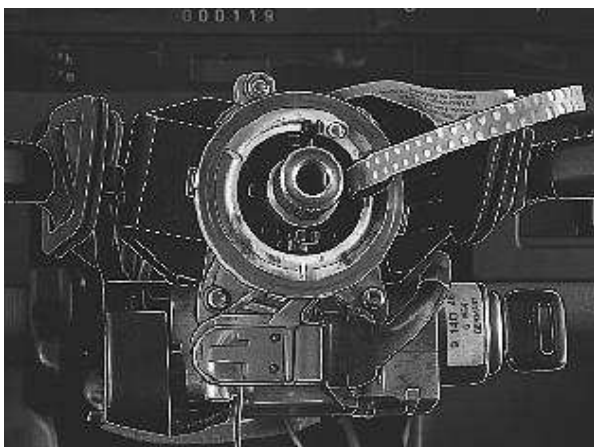


#### Remove SRS contact reel, fixed with three screws

Unhook SRS cable clip.

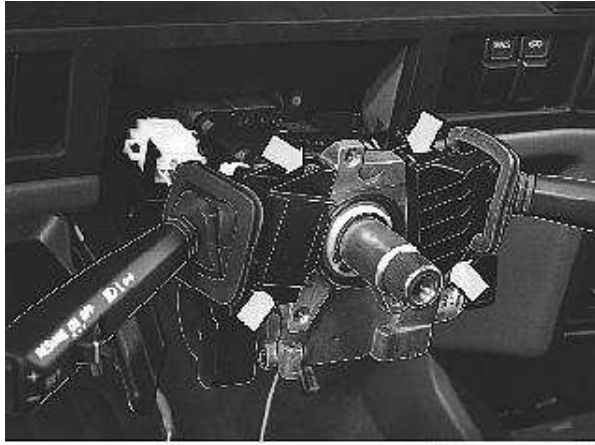
Disconnect cable from contact reel.

Place contact reel to one side.

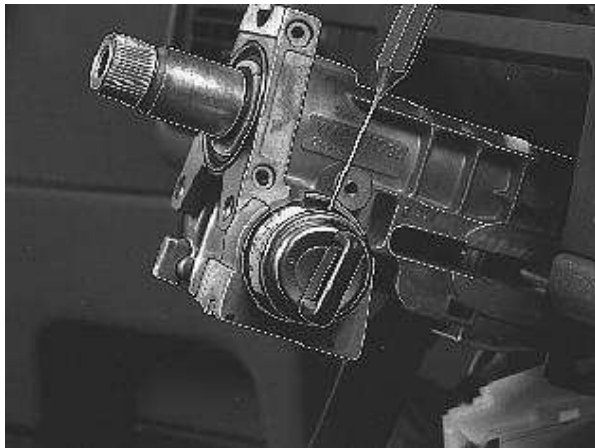


#### Remove:

- turn signal and windshield wiper levers
- ignition switch connector
- connector clip



- wiring harness at underside of steering column

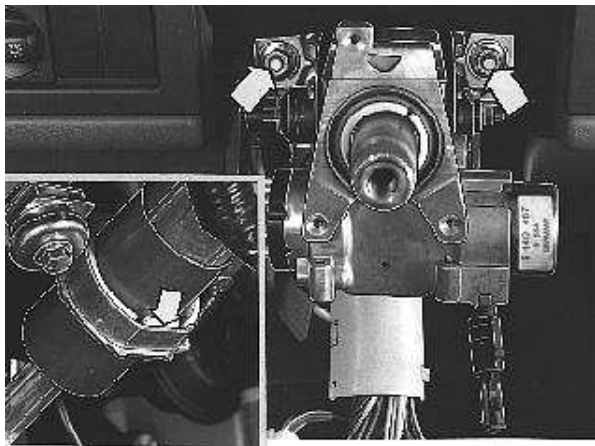


### Remove ignition switch

Insert ignition key in switch.

Turn key to position I.

Depress lug. Use a **2 mm** drift.



### Remove:

- the two nuts and washers from steering column adjuster bracket
- steering column from car.



### Replacing steering column/steering shaft/boot and needle bearing/lower universal joint

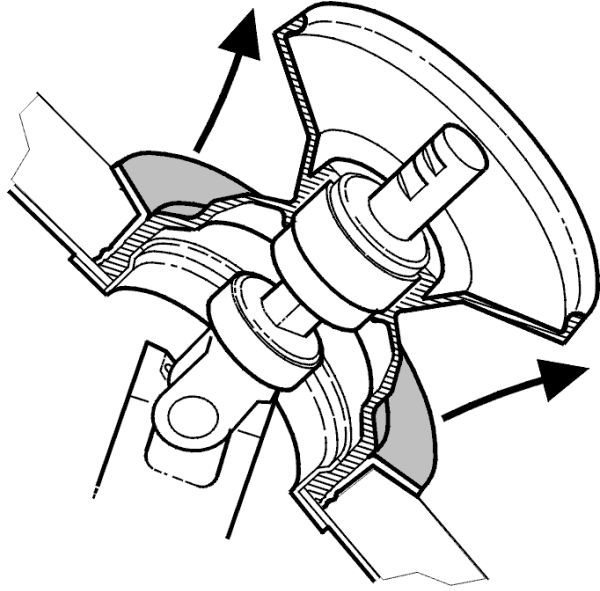
#### Remove:

- set bolt in lower half of upper universal joint (2)
- steering shaft
- steering column mounting screws (1).

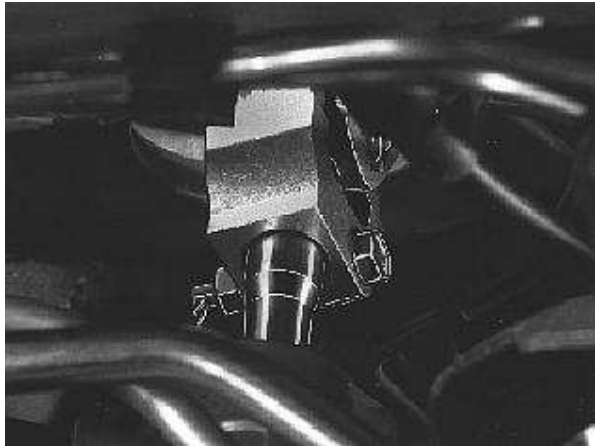
### Remove steering shaft boot (gaiter) and needle bearing

Fold back outer section of boot.

Remove locking ring and boot with bearing.



Disconnect lower universal joint from steering gear



## Installation

### Install:

- lower universal joint to steering gear. Tighten to **20 Nm**.
- locking spring.

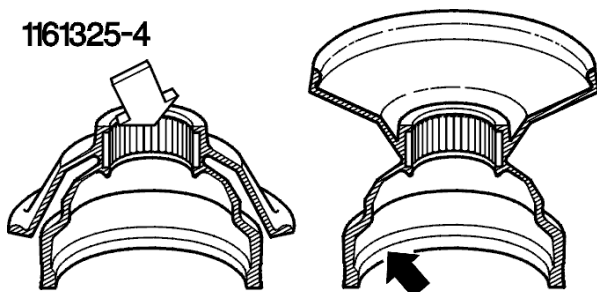
**Note!** Different pinion versions. See [Steering column/steering shaft/boot and needle bearing/lower universal joint, replacement. Cars without SRS:](#) .

### Install steering shaft boot

Lubricate needle bearing in boot with low-temperature grease, P/N **1161417-9(30 g)**.

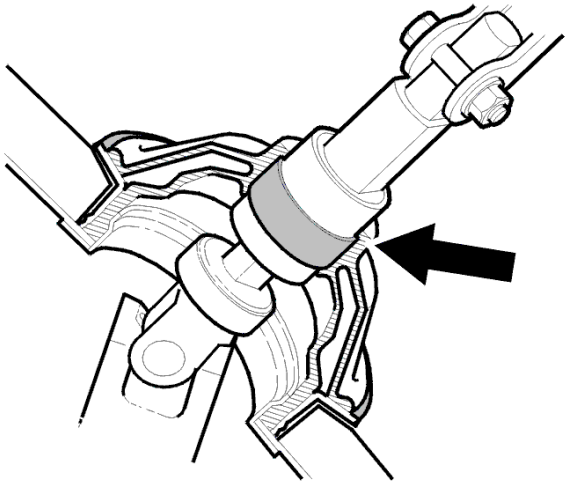
Fold back upper section of boot.

Lubricate the inside of the inner section of the boot with soapy water.



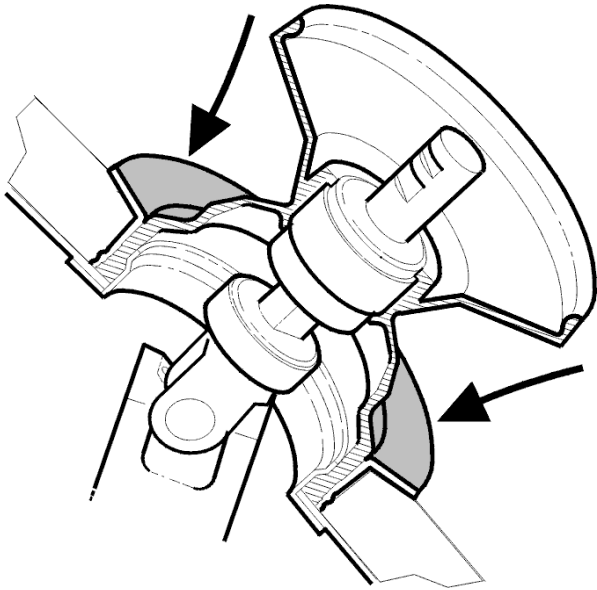
Thread the inner section of boot around metal collar in firewall panel, ensuring a good seal all round



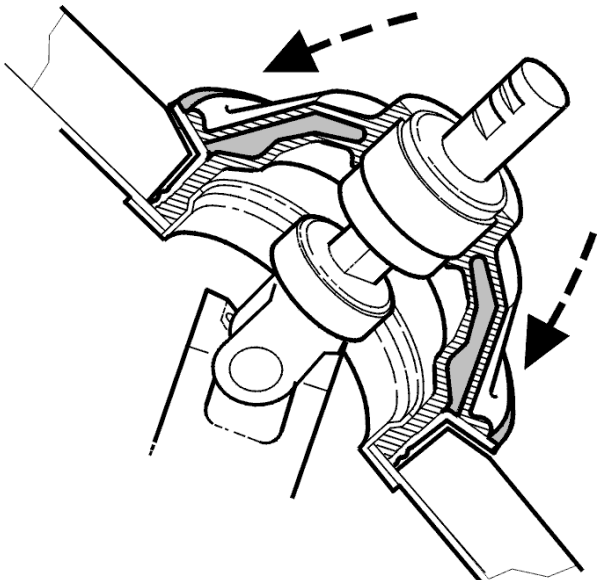


**Lubricate inner side of locking ring with soapy water**

**Press ring into position around inner section of boot. Upper section should remain folded back**



**Fold down upper section of boot to seat against locking ring flange, ensuring good contact all round**



**Install steering column mounting and steering shaft**

Install mounting (1). Tighten to **25 Nm**.

Ensure that steering shaft splines are clean.

**Note!** Lubricate steering shaft splines and steering column mounting with low-temperature grease, P/N 1161417-9 (30 g). Lubrication is important to avoid noise from the steering column.

Reconnect steering shaft to universal joint (2). Tighten to



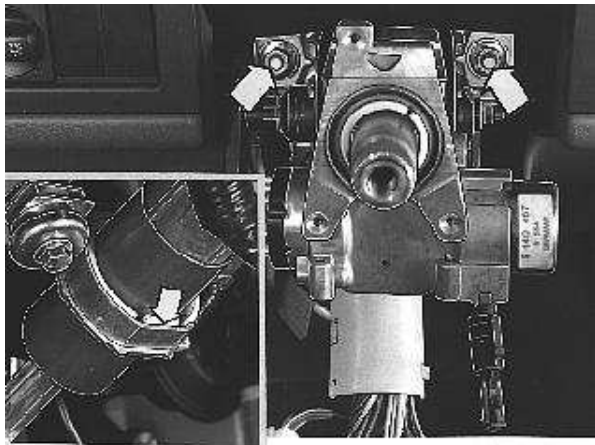
**20 Nm.** Install locking spring.

### Install steering column

Lubricate splines with low-temperature grease, P/N **1161417-9 (30 g)**.

Counterhold on the bearing. Guide steering column into mounting and onto steering shaft.

**Note!** Take care to ensure that spring clip in mounting is not displaced when installing column.

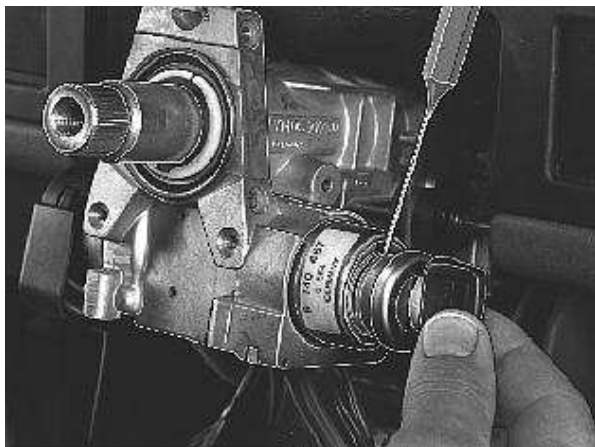


### Center column in dashboard opening

Install column adjuster bracket washers and nuts. Tighten to **25 Nm**.

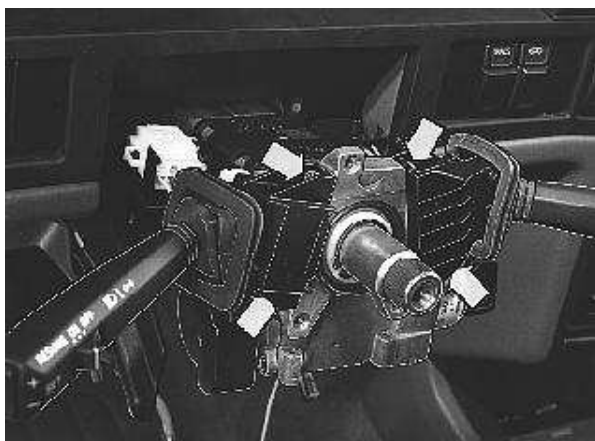
#### Install:

- ignition switch with key turned to position I. Depress locking tab and install switch
- connector to ignition switch

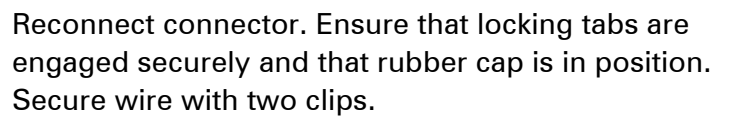


#### Install:

- turn signal and windshield wiper levers
- connector holder
- connectors
- wiring harness.

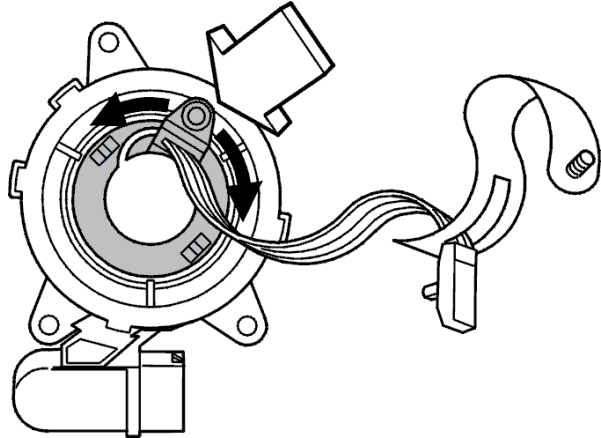


**Install contact reel, tighten to 2.5 Nm**



- panel under steering wheel
- steering column covers.

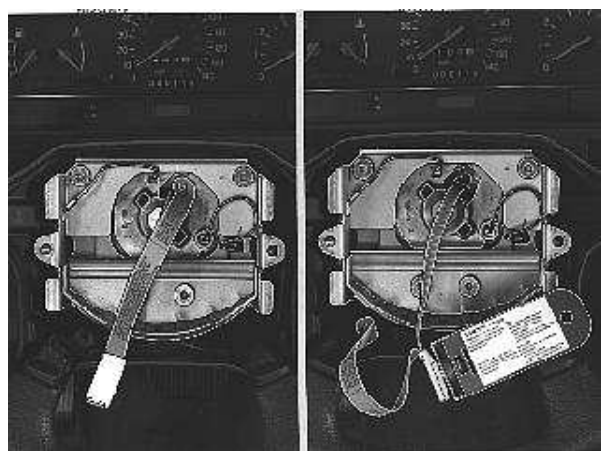
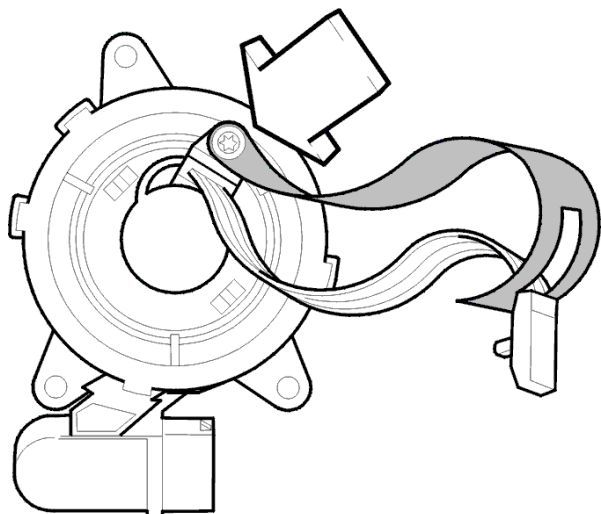
Rotate contact reel carefully to right-hand limit.  
Then turn 2 rotations to the left. Then continue to turn



until the contact reel can be locked in position at “1 o'clock”, see illustration.

### Lock contact reel in position with screw

Coat slip ring surface with thin layer of low-temperature grease, P/N **1161417-9**.



### Install steering wheel

**Hint:** Ensure that front wheels are pointing straight ahead.

Pass contact reel wire through steering wheel.

Install steering wheel carefully until both catches on contact reel are seated in recesses in steering wheel hub. Install and finger-tighten steering wheel bolt.

**Caution! Do not turn steering wheel when mounted on steering shaft.**

Since contact reel is locked, it will be damaged beyond repair if wheel is turned in this situation.

Remove contact reel locking screw. Install in the parking hole.

Connect tool **998 8695** to contact reel power supply.

**Reconnect battery ground cable. Drive car straight forward and check that steering wheel is in “straight-ahead” position**

**Proceed as follows if steering wheel alignment is incorrect;**

**Remove:**

- Tool **998 8695**
- steering wheel, carefully.

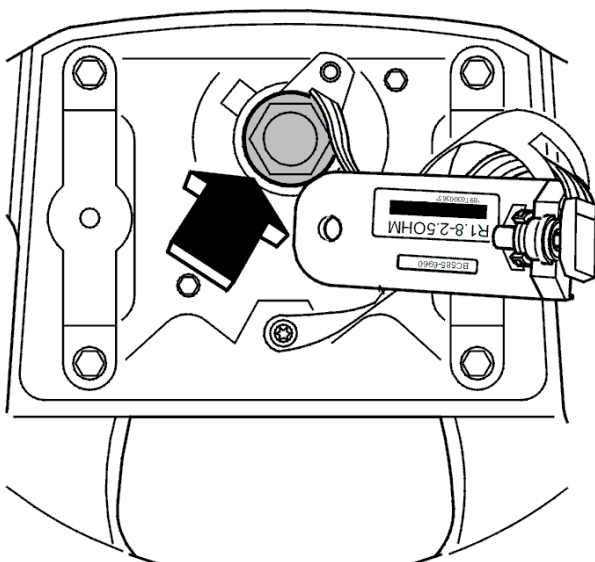
Reset and lock contact reel according to paragraphs **Reset contact reel** and **Lock contact reel in position with screw**.

Install steering wheel according to paragraph **Install**





steering wheel . Check according to above.



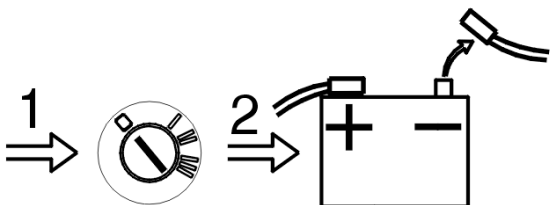
#### When steering wheel is correctly aligned:

Tighten center bolt to **40 Nm**.

Ensure that SRS lamp is extinguished (i.e. that no diagnostic trouble code (DTC) is present).

#### Switch off ignition

Remove battery negative lead and tool 998 8695



#### Install steering wheel airbag module

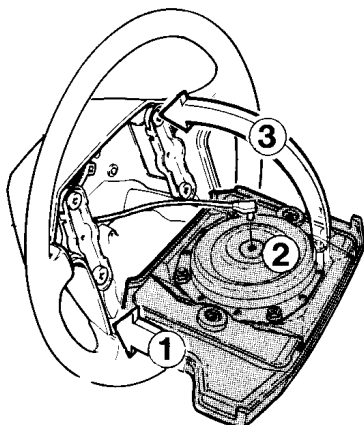
**Note! Battery ground cable must be disconnected**

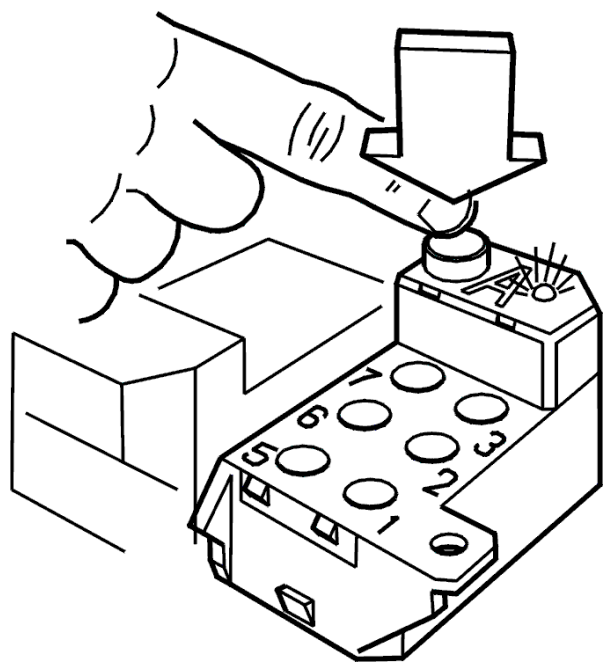
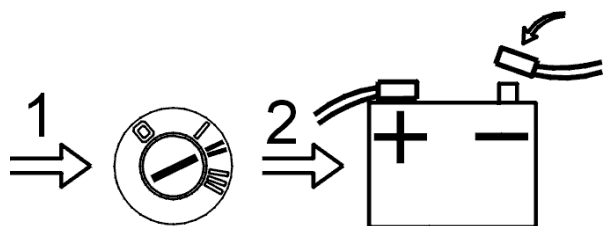
Turn ignition key to position I to release steering wheel.  
Position lower section of steering wheel module against wheel (1).

Reconnect connector (2).

Secure module by tightening Torx screws from rear.  
Insert right-hand screw first. Turn wheel to gain access to screws.

Tighten screws to **10 Nm**





### Check operation

Ensure that steering wheel turns easily and that steering lock is working properly.

### Final check

**Caution! Proceed as follows when all components have been installed and tightened in passenger compartment:**

Switch on ignition **first**. First switch on ignition, then reconnect battery ground cable.

**Caution! Ensure that nobody is in car when reconnecting battery.**

### Check any DTCs

Read off diagnostic trouble codes (DTCs). See [General Data link connector \(DLC\) and Diagnostic test modes \(DTM\)](#)

Note DTCs.

DTCs may be stored if steering wheel module was removed before ignition was switched on.

### Erase diagnostic trouble codes (DTCs)

Erase diagnostic trouble codes (DTCs) according to [Erase diagnostic trouble code \(DTC\)](#) .

Check that no new DTCs have been stored.

If necessary, remedy fault and erase DTCs according to [Erase diagnostic trouble code \(DTC\)](#)