

Multi-function steering wheel

CAUTION!

***Before working on the electrical system:
Disconnect the battery Ground (GND) strap.***

Notes:

- ◆ *Obtain radio code before disconnecting battery.*
- ◆ *Be sure to activate vehicle features (radio, clock, electric window regulator, engine) according to owner's manual when the battery is re-connected.*

General description

System includes:

- ◆ Six illuminated function buttons in steering wheel
- ◆ Steering wheel-incorporated wiring
- ◆ Steering wheel-incorporated electronics
- ◆ Vehicle-incorporated control module

◆ Vehicle-incorporated wiring

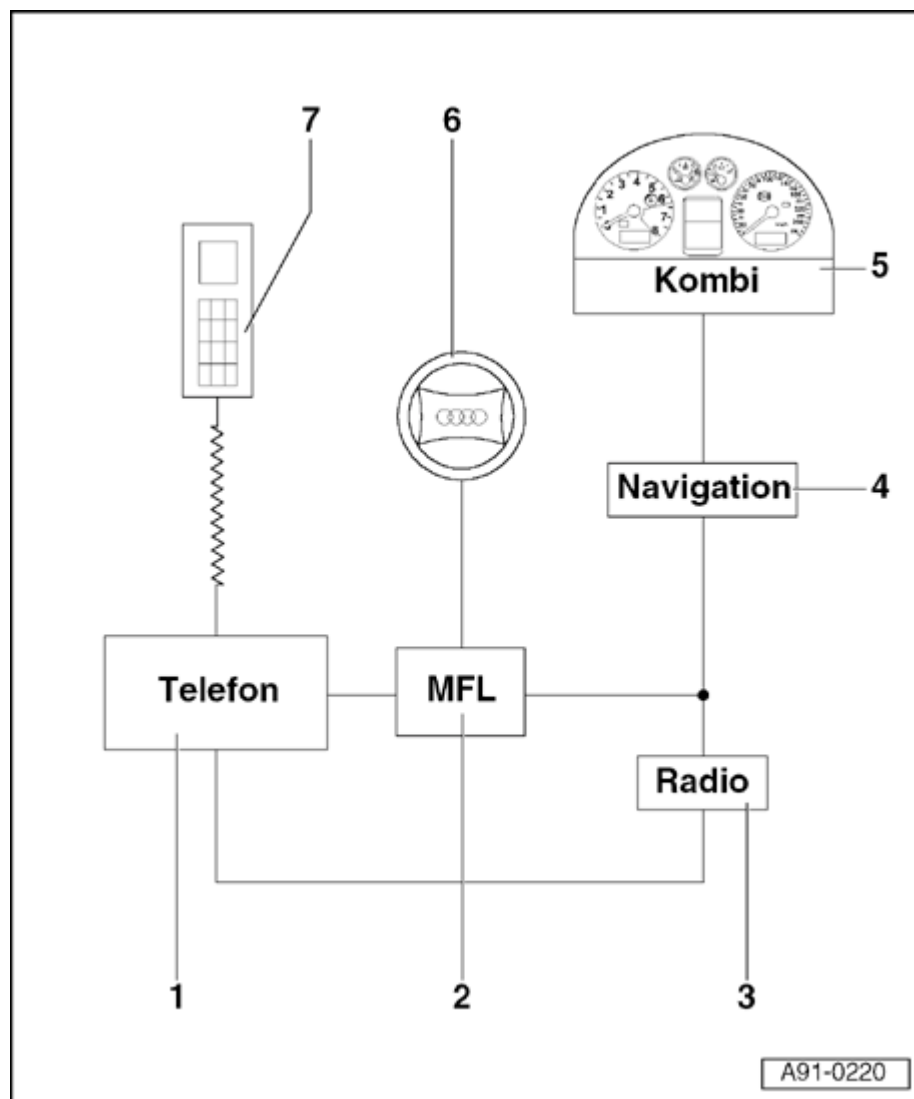
Function description:

For better operation of radio and telephone system while driving, six function keys are integrated into the steering wheel. In addition, the multi-function steering wheel is electrically heated.

The electronics in the steering wheel take over the regulation of the steering wheel heating, transmission of the six function buttons to CAN-bus and dimming of the function buttons. The electronics in the steering wheel cannot be replaced individually, the entire steering wheel must be replaced in case of a malfunction.

The control module of the multi-function steering wheel takes over control of the radio (or radio/navigation system), telephone system, instrument cluster, and steering wheel heating.

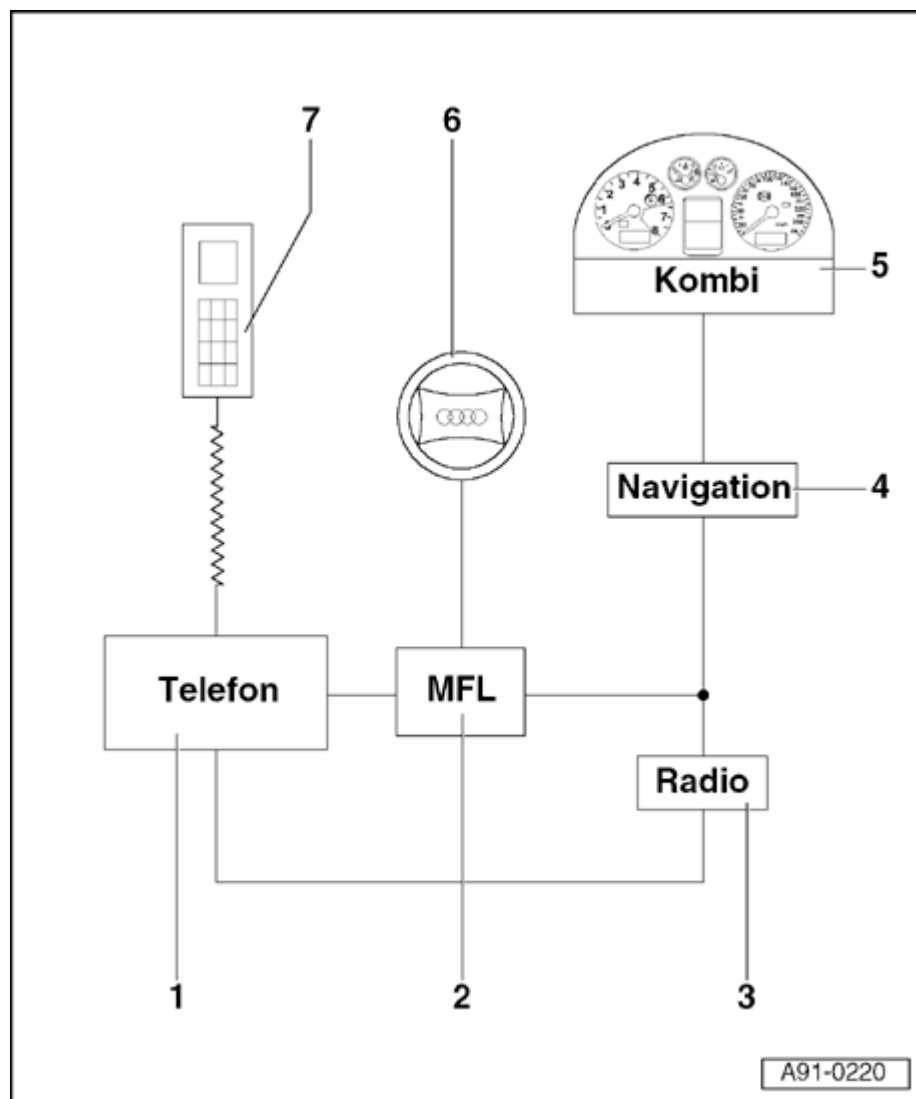
In the center display of the instrument cluster, the selected station appears during radio operation and the name and telephone number of the dialogue partner from the telephone memory appears during telephone operation. If a cassette is inserted during radio operation, the message "TAPE < >" appears and for CD-operation, CD-number "CD 02" and the respective title (track) "TR 09" appears on the center display.



Multi-function steering wheel, overview

- 1 - Operating electronics and telephone control module -J412- (Handy) or telephone transceiver -R36-**
- 2 - Control module for multi-function steering wheel -J453-**
 - ◆ At 13-pin relay carrier below the driver's side storage compartment
 - ◆ Removing and installing ⇒ [page 91-75](#)
- 3 - Radio**
 - ◆ Installed in center console
- 4 - Control module for operating electronics, navigation -J402-**
 - ◆ Installed in center console
 - ◆ Either a radio system is installed, or a control module for operating electronics and navigation

91-72

**5 - Instrument cluster**

- ◆ Installed in instrument panel

6 - Multi-function steering wheel

- ◆ With integrated operation switches
- ◆ With steering wheel-integrated electronics

7 - Handset for telephone or Handy

Operating switch on multi-function steering wheel, removing and installing

Removing

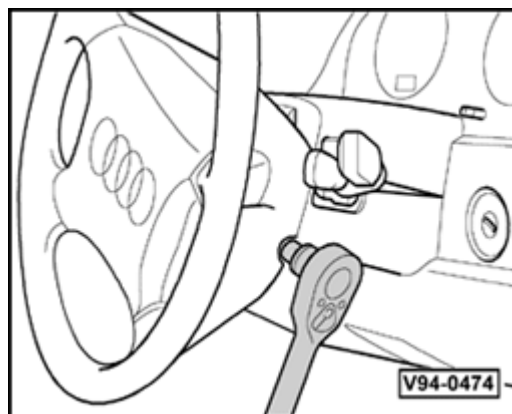
- Disconnect battery ground (GND) strap.

Note:

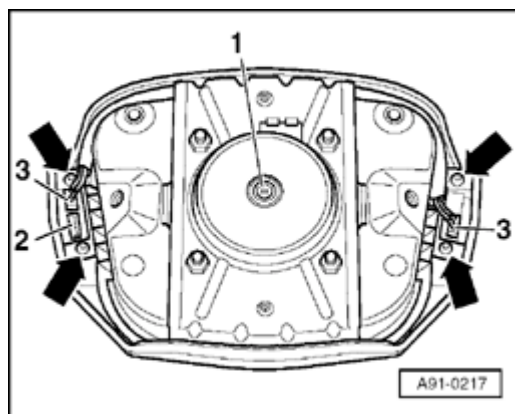
Always observe airbag safety precautions when working on airbag system components

⇒ [Repair Manual, Body Interior, Repair Group 69; airbag safety precautions](#)

- Release steering column adjustment. Pull steering wheel as far out and up as possible.
- A**
- Remove airbag unit by removing screws at left and right of steering wheel using a T30 TORX bit. Tightening torque: 6 Nm



91-74



- Carefully flip airbag unit forward.
- A**
- Disconnect harness connectors -1- and -2- at airbag unit.
 - Remove airbag unit.
 - Disconnect harness connector -3- and remove both T10 TORX screws at left or right of operating switch.
 - Remove operating switch toward front.

Installing

Note:

During installation, make sure that the wires of connector -3- are in the guides and are not pinched.

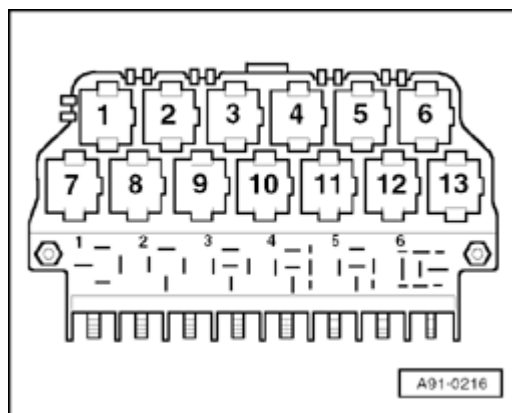
- Install in reverse order of removal.

Control module for multi-function steering wheel -J453-, removing and installing

Removing

- Remove driver's side storage compartment

⇒ [Repair Manual, Body Interior, Repair Group 68; storage bin on driver's side, removing](#)



Control module for multi-function steering wheel -J453 is housed in a double-relay box and located in positions -2- and -3- of the 13-pin relay carrier via the central electronics

- Remove control module for multi-function steering wheel from relay socket.

Installing

- Install in reverse order of removal.