

Workshop Manual Audi A5 Coupé 2008 ➤

System description - Running gear, steering wheel

Edition 10.2011



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List of Workshop Manual Repair Groups

Repair Group

01 - Self-diagnosis, electrical checks



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Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.

Contents

01 - Self-diagnosis, electrical checks	1
1 General notes on steering wheel	1
2 Horns	2
2.1 Components used	2
2.2 Description of operation	2
3 Multi-function steering wheel	3
3.1 General notes	3
3.2 Components used	3
3.3 Description of operation	3
3.4 Example function: changing radio stations	5
3.5 Notes for service	6



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01 – Self-diagnosis, electrical checks

1 General notes on steering wheel

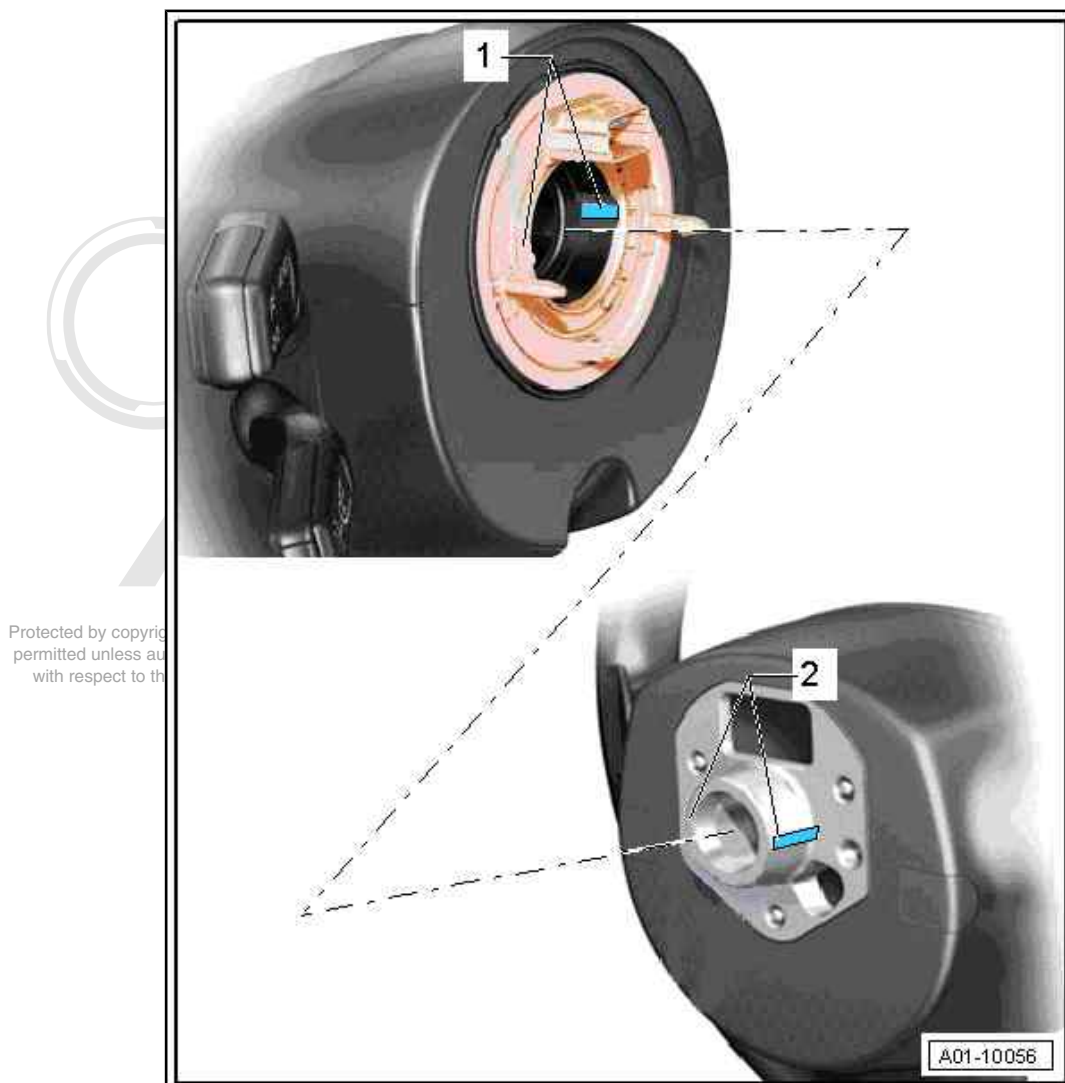
Steering movements are transmitted directly from the steering wheel to the encoder disc of the steering angle sender. The steering wheel hub has integral notches which fit into guide slots on the encoder disc of the steering angle sender.

This technique halves the tolerances for the detection of steering movements by the steering angle sender. Previously, steering movements were transmitted from the steering wheel to the steering tube and from there to the encoder disc of the steering angle sender.

The tolerances are minimised further by using a woodruff key to position the switch module with the steering column electronics control unit -J527- on the crash tube. The centre point of the steering is specified at the factory by markings on the steering wheel hub and steering tube.

1 - Guide slot

2 - Guide notch



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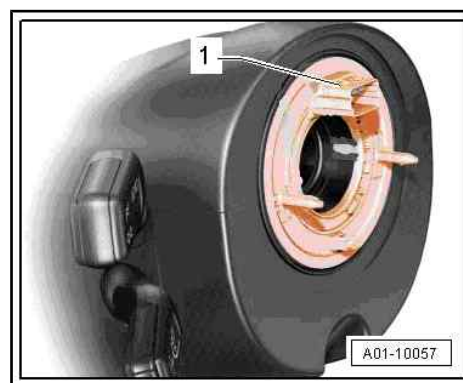
2 Horns

2.1 Components used

Component	Remarks
Horn plate -H-	
Airbag coil connector and return ring with slip ring -F138-	
Steering column electronics control unit -J527-	Addressable via diagnostic address 16.
Onboard supply control unit -J519-	Addressable via diagnostic address 09.
Horn relay -J413-	
Treble horn -H2-	
Bass horn -H7-	

2.2 Description of operation

- ◆ When the horn plate -H- is pressed, a signal is transmitted via the airbag coil connector and return ring with slip ring -F138- (1) to the steering column electronics control unit -J527- , which evaluates the signal.
- ◆ The steering column electronics control unit -J527- transmits the „horn activated“ signal across the convenience data bus to the onboard supply control unit -J519- .
- ◆ The onboard supply control unit -J519- activates the horn relay -J413- .
- ◆ The horn relay -J413- energises the treble horn -H2- and the bass horn -H7- .



3 Multi-function steering wheel

3.1 General notes

The multi-function steering wheel allows the driver to operate a number of functions while keeping both hands on the wheel. For instance, the driver can select a radio station, operate the CD changer, make a phone call or use the speech dialogue system. In addition, the multi-function steering wheel has all the advantages of a leather steering wheel.

Drivers can use the Audi speech dialogue system to control the main functions of the navigation system, car telephone, CD player and sound system without diverting their focus of attention from the road.

3.2 Components used

Component	Remarks
Multifunction buttons on left in steering wheel -E440-	
Multifunction buttons on right in steering wheel -E441-	
Multifunction steering wheel control unit -J453-	The multifunction steering wheel control unit -J453- is connected to the steering column electronics control unit -J527- via a LIN bus. The multifunction steering wheel control unit -J453- is accommodated underneath the multifunction buttons on right in steering wheel -E441- and these two components can only be replaced as a unit.
Airbag coil connector and return ring with slip ring - F138-	
Steering column electronics control unit -J527-	Addressable via diagnostic address 16.
Data bus diagnostic interface -J533-	Addressable via diagnostic address 19. Depending on the equipment fitted in the vehicle, the data bus diagnostic interface -J533- may have connections for the CAN Infotainment or MOST bus.

3.3 Description of operation

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No	Control/display element	Function	Remarks
1	MODE button	The driver can select each of the main function menus in turn by pressing the MODE button repeatedly.	The MODE button and the thumbwheel for selecting menu items are combined in the multifunction buttons on left in steering wheel -E440- unit and cannot be replaced individually.
2	Thumbwheel for selecting menu items	The driver selects the desired menu item by scrolling the thumbwheel. The selection is confirmed by pressing the thumbwheel.	
3	Thumbwheel for volume control/repeating navigation cues	The driver adjusts the volume by scrolling the thumbwheel. The last navigation cue is repeated if the thumbwheel is pressed.	The talk button and the thumbwheel for adjusting the volume/repeating navigation cues are combined in the multifunction buttons on right in steering wheel -E441- unit and cannot be replaced individually.
4	Talk button	The talk button switches the speech dialogue system on and off.	
5	Display in dash panel insert	Menus for selecting radio stations, CD tracks or numbers from the telephone directory are displayed each time the driver presses the corresponding button on the steering wheel. Navigation information is also shown in the display.	

- ### 3.4 Example function: changing radio stations

- 7 - The control unit in dash panel insert -J285- reads the information and displays the appropriate selection menu. Steps 1 to 7 are repeated each time the MODE button is pressed until the radio station menu appears in the display of the dash panel insert.**





8 - The driver selects the desired radio station by scrolling the thumbwheel for menu selection. The display in the dash panel insert is refreshed each time the thumbwheel is scrolled. The selection is confirmed by pressing the thumbwheel. Signals are transferred from the multifunction steering wheel control unit -J453- to the front information display and operating unit control unit -J523- and to the control unit in dash panel insert -J285- using the procedure described above.

9 - The front information display and operating unit control unit -J523- starts playing the selected radio station.

3.5 Notes for service

The functions of the multi-function steering wheel must be encoded in the steering column electronics control unit -J527- . The Software Version Management (SVM) must be used to encode the steering column electronics control unit -J527- .



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