



# Technical Service Bulletin

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## 91 Parking assistance provides false warnings

91 17 36 2024323/5 July 26, 2017. Supersedes Technical Service Bulletin Group 91 number 14-72 dated December 19, 2014 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
All	2005 - 2019	All	Not Applicable

## Condition

REVISION HISTORY		
Revision	Date	Purpose
5	-	Revised <i>Technical Background</i> (Added QR codes) Revised header data (Added model years) Revised <i>Warranty</i> (Added Claim Types and updated Labor Operation)
4	01/05/2015	Revised header data (Added models and model years)
3	02/05/2013	Revised header data (Added model years) Revised <i>Service</i> (Added info about stone chips)

Customer states one of the following:

- Parking aid sporadically warns of obstacles when none exist.
- Parking aid is inoperative or provides constant warning.

## Technical Background

- Various parking aid sensor fitting issues.
- Environmental conditions.



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Please review the informational video before attempting the repair procedure: <https://audi-external.kzoplatform.com:443/swf/player/342>



*Figure 1. False parking system warnings.*

Please review the informational video before attempting the repair procedure: <https://audi-external.kzoplatform.com:443/swf/player/343>



*Figure 2. Parking system malfunctions.*

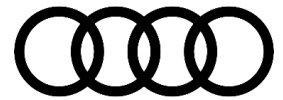
## Production Solution

Not applicable.

## Service

Misaligned parking aid sensors or various vehicle mountings can cause parking aid malfunctions. This TSB provides tips for diagnosing parking aid systems.

1. Verify that the coding within the parking aid control module, J446 (address word 0076), is valid for the equipment installed on the vehicle (i.e.: trailer hitch, tow bar, etc.).
2. Check the vehicle fault memory and proceed according to GFF.



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- If GFF identifies a problem with a specific sensor, proceed with the test plan.
- If GFF does not identify a specific sensor, check MVBs in the parking aid control module, J446 (address word 0076), starting with MVBs for oscillation.

**MVBs for internal sensor oscillation** (if applicable) (acceptable values = 0.8 to 1.5ms). If the oscillation is not within specification, proceed to step 10.

**MVBs for distance calculations** (255 = no obstruction). If an obstruction is identified but none exists, proceed to step 3.



**Tip:** Vehicles can be equipped with 4- or 8-channel parking aid systems. Refer to Elsa for vehicle-specific information.

3. Check parking sensors (Figure 3) for obvious issues:

- Mechanical damage (stone chips, scratches).
- Dirt, ice, foreign bodies, foil adhered to sensor.
- Damage to the bumpers that may indicate an accident (or paint indicating a previous incident).



**Figure 3.** Stone chips causing sensor failure.



**Tip:** Exterior damage to the vehicle, including stone chips and scratches, is not covered by Audi Warranty. When painting sensors, the special painting instructions for parking sensors in the paint repair manual must be observed.

4. Check for non-Audi Genuine Accessories which can interfere with parking aid operation, including:

- Aftermarket towing bar.
- Aftermarket lowering kit.
- Aftermarket spoiler or air deflector.
- Aftermarket bumper.

5. For 8-channel systems, check the installation of the front license plate holder for:

- Protrusion. The license plate and holder must fit on flat.



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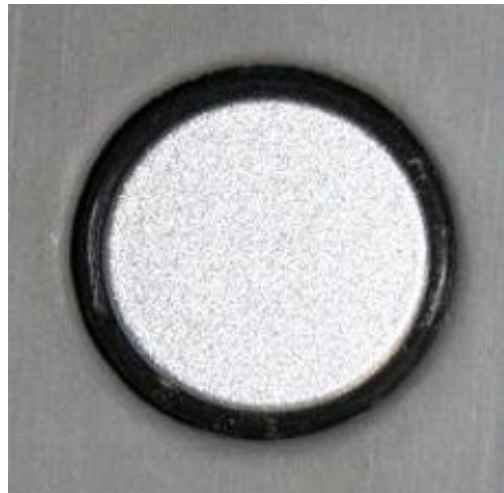
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- Bent corners. Any bent-open corners may cause false readings.
  - Correct fit. Oversized license plate holders or frames can obstruct parking aid sensors.
6. Pressure check for a tight fit and correct attachment of the parking sensors (Figure 4). If the sensor is not snug or feels loose, remove the bumper and reinstall the sensor.



**Figure 4.** A pressure check on a parking aid sensor.

7. Check that the decoupling ring is correctly seated (Figure 5, Figure 6, and Figure 7). If the ring is folded or bulging, remove the bumper and reinstall the sensor.

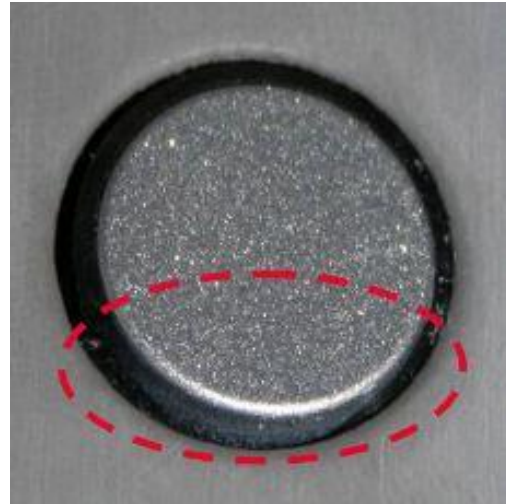


**Figure 5.** A correctly seated decoupling ring.

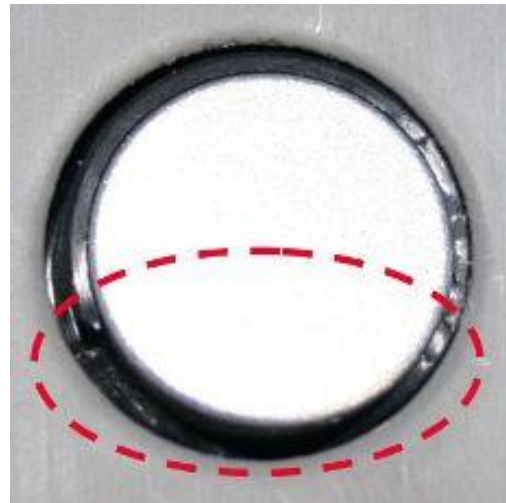


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**Figure 6.** An incorrectly seated decoupling ring (bulging).



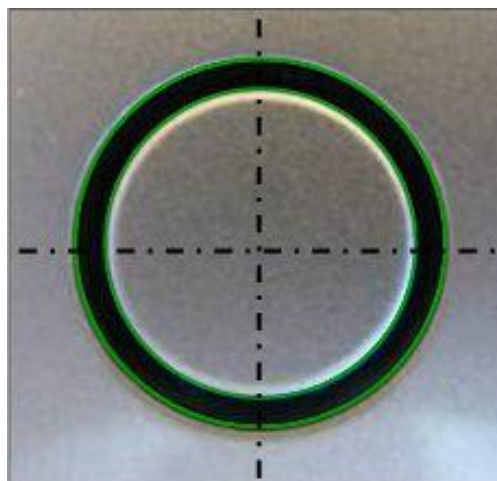
**Figure 7.** An incorrectly seated decoupling ring (folded).



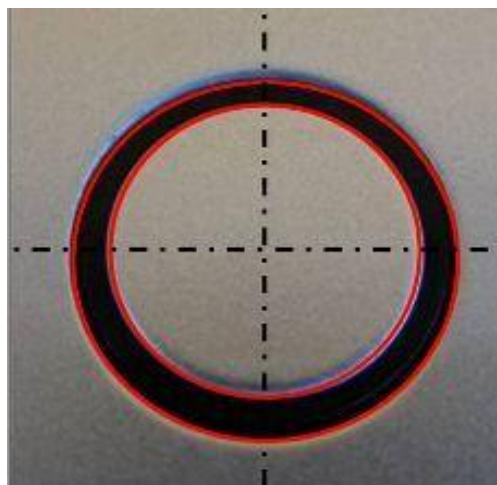
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8. Verify that the sensor is centered inside of the mounting hole (Figure 8 and Figure 9). If the sensor is mounted off-center, remove the bumper and reinstall the sensor.



**Figure 8.** A correctly centered parking aid sensor.



**Figure 9.** An off-center parking aid sensor.

9. Ensure the sensor sits flush with the bumper (Figure 10 and Figure 11). If the sensor is recessed or bulging, remove the bumper and reinstall the sensor.

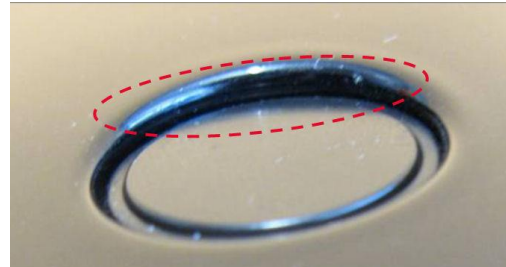


**Figure 10.** A correctly installed parking aid sensor.



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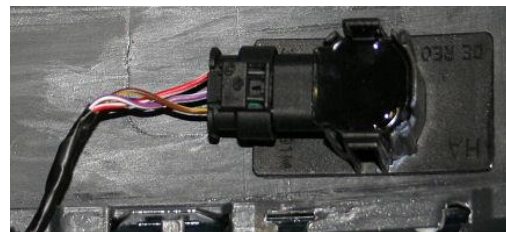
**Figure 11.** A recessed parking aid sensor.

10. Re-evaluate the concern:
  - If an issue was identified and the concern was remedied, proceed to step 15.
  - If no issues were identified and the concern cannot be duplicated, proceed to step 15.
  - If the concern still persists, continue to step 11.
11. Remove the bumper and check the connectors on the sensors, the socket box of the bumper, on the control unit for parking assistance and on the sound generator of the parking assistance for:
  - Corrosion.
  - Water ingress or water marks.
  - Bent-open pins.
  - Pushed-back pins.
  - Correct fit of plug seal.



**Tip:** If a specific sensor is identified by the diagnostic tester, proceed forward for that specific sensor only.

12. Check the cables in the bumper for damage and sufficient length (Figure 12 and Figure 13). Cables that are too short can cause damage to the harness.
  - If the cable is damaged, repair the cable using VAS Repair Kit 1978.
  - If the cable is too tight, correct the routing by moving the support clip so the cable is no longer under tension.

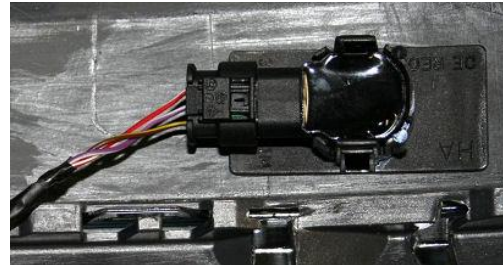


**Figure 12.** A correctly installed cable with sufficient length.



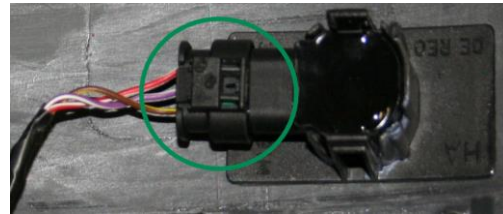
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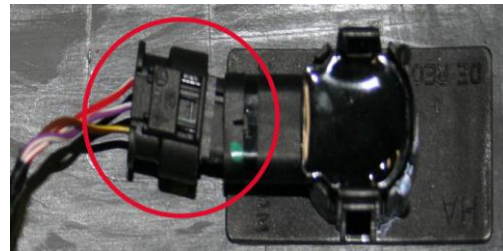


**Figure 13.** A sensor cable with insufficient length.

13. Check the connectors on the parking sensors and the socket box for correct installation (Figure 14 and Figure 15). If the connectors are not installed properly, reinstall.



**Figure 14.** A correctly installed parking aid sensor connector.



**Figure 15.** A parking aid sensor connector that is not seated correctly.

14. Re-evaluate the concern:
- If an issue was identified and the concern was remedied, proceed to step 15.
  - If the concern still persists, swap affected parking aid sensors or control modules until issue is identified, remedy the concern, then proceed to step 15.
15. Various environmental factors can cause incorrect warnings. Notify the customer that the following may affect parking aid operation:
- High plants and curbs.
  - Gravel paths, cobblestone paths, pot holes, grates, sharp bends in the road, slopes, driveways, or ramps.
  - Water on the parking sensors.
  - Ice or snow on the parking sensor or the bumper.





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- Exhaust gases of the vehicle under certain weather conditions.
- Conflicting ultrasound sources (pneumatic brakes on trucks, animal alarms, parking aid systems of other vehicles, etc.).
- Fluorescent lighting.

## Warranty

Accounting for an incorrectly fitted license plate holder or for cleaning the sensors is not permitted under warranty. For the potential remounting of parking assist sensor, replacing of the parking assist sensor bracket, or repairing system wiring:

<b>Claim Type:</b>	<ul style="list-style-type: none"> <li>• 110 up to 48 Months/50,000 Miles.</li> <li>• G10 for CPO Covered Vehicles – Verify Owner.</li> <li>• If vehicle is outside any warranty, this Technical Service Bulletin is informational only.</li> </ul>		
<b>Service Number:</b>	9175		
<b>Damage Code:</b>	0010		
<b>Labor Operations:</b>	Remove and install rear parking aid sensor	9175 XXXX	See Elsa
	Remove and install front parking aid sensor	9175 XXXX	See Elsa
	Remove and install rear bumper	6369 19XX	See Elsa
	Remove and install front bumper	6329 19XX	See Elsa
	Lane Change Assist recalibration (if necessary)	9635 XXXX	See Elsa
	Repair wiring harness	9175 4199	Max 30 TU
<b>Diagnostic Time:</b>	GFF	0150 0000	Time stated on diagnostic protocol (Max 30 TU)
	Road test prior to service procedure	No allowance	0 TU
	Road test after service procedure	No allowance	0 TU



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	Technical diagnosis at dealer's discretion (Refer to Section 2.2.1.2 and Audi Warranty Online for DADP allowance details)
<b>Claim Comment:</b>	As per TSB #2024323/5

All warranty claims submitted for payment must be in accordance with the *Audi Warranty Policies and Procedures Manual*. Claims are subject to review or audit by Audi Warranty.

## Additional Information

All parts and service references provided in this TSB (2024323) are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.

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