



# Technical Service Bulletin

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## 97 Wire harness repairs and documentation

97 22 89 2061976/3 November 17, 2022. Supersedes Technical Service Bulletin Group 97 number 21-82 dated November 22, 2021, for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
All Audi vehicles	2018 – 2024	All	Not Applicable

## Condition

REVISION HISTORY		
Revision	Date	Purpose
3	-	Revised header (Added Models and Model Years)
2	11/22/2021	Revised header (Added Models)
1	02/18/2021	Initial publication

### Customer states:

- A warning or malfunction is present.

### Workshop findings:

- A wiring issue is identified as a root cause.

## Technical Background

During service, a wiring issue is diagnosed as a root cause of failure. When reviewing warranty claims critical information describing the symptoms, findings, circuit affected and location of the damage is often unclear.

We are requesting your assistance in identifying and documenting wiring repairs. This helps identify common repairs and improve product designs.

## Production Solution

Not applicable.

## Service



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Once a wiring issue has been identified we ask for your cooperation in documenting the findings and taking photos of the damage found. Please retain the photos for at least 1 month after the claim is approved in case they are needed during warranty review.

## **For root causes relating to pins or coaxial connector ends:**

- Retain approximately 10-20 mm of the original wire where space allows.
- Repair connection using VAS1978B.

## **For root causes relating to high resistance or a short circuit in the wiring:**

- Overlays may be used for diagnosis.
- Retain the affected section of wire that was removed/faulty.
- Repair faulty sections of the wire using VAS1978B.



### **Note:**

In the technician notes please include the following details:

- Circuit affected.
- Pin identification of the main circuit affected.
- Circuit checks made including any resistance and/or voltage values of the affected circuit.
- Location of where the damaged pin or circuit is found.
- Any other relevant details to support and describe the findings.

**Example:** Flexray circuit measured .6 ohm to ground with no components connected to the circuit. Short circuit to ground present on the green FlexRay wire between J743 Dual Clutch T23/1 and J533 Data Bus on Board Diagnostic Interface T54/27. Located damaged wire section underneath the driver seat along the frame rail.

## **Photos are needed for accurate location and findings:**

- 1 perspective view – Shows the general area and provides a reference of the surrounding area (Figure 1).
- 1 original routing – Taken before the area of concern is disturbed (Figure 2).
- 1 close up – clearly focused and showing the damaged circuit (Figure 3).

Photos should:

- Have a date stamp and VIN reference.
- Be taken in focus and with sufficient light.



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## Perspective view:

Using the description in the example above, the root cause can be clearly identified in Figure 1.



*Figure 1. A perspective view showing the area along the frame rail.*



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## Routing concerns:

When a harness routing is determined to be the root cause, a photo should be taken to show how the harness was routed in its normal state (Figure 2).



**Figure 2.** G28 crank sensor harness tight (left), Q5 Wireless charging pad harness tight (right).

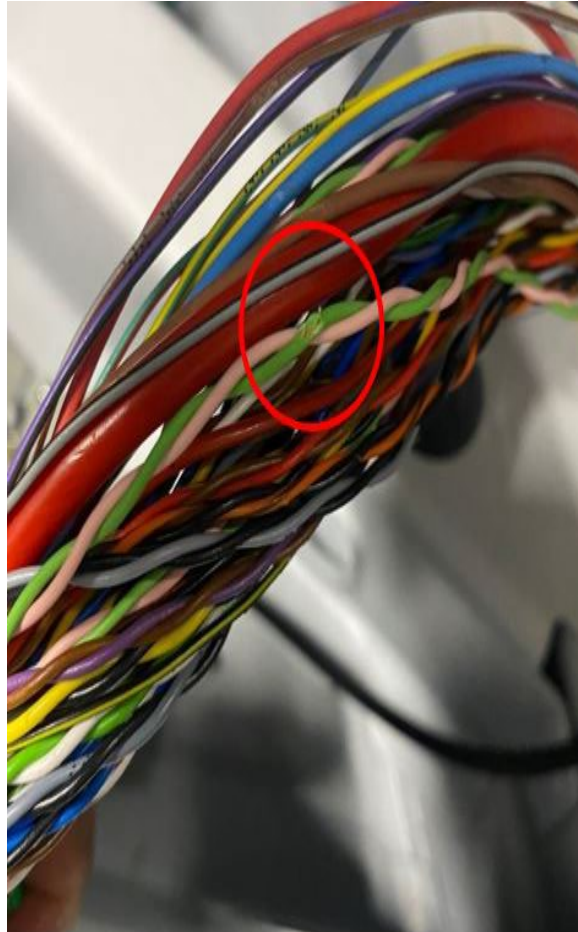


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## Close-up:

Using the description in the example above, the damage to the FlexRay wire is clearly visible in Figure 3.



*Figure 3. Close-up of the damaged wire.*

**No TAC case:** Please retain photos for at least 1 month after claim approval in case they are requested during claim review.

**TAC case present:** If a case is made before or after a wiring issue is identified, please update the TAC case with all information described above.



**Tip:** For additional information on circuit diagnosis, identifying circuits and making repairs, please visit the Audi academy website, [Accessaudi >> App links >> Academy site CRC >> videos >> Technical >> Electrical, networking and vehicle lighting](#).

More information is included in Self-Study Programs (SSP):

- 973003 – How to Read Wiring Diagrams, Symbols, Layout, and Navigation.



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- 971003 – Wiring Harness Inspection and Repair.

## Warranty

When claiming wire repairs often times PID 9709 is used as a default PID. Using the correct PID helps to differentiate which harness is affected.

The table below lists examples of PID's to help claim repairs in specific locations. Please see the damage code catalog in Elsa for a more comprehensive list, *Elsa >> damage code catalog >> Electrical >> 97 Wiring.*

PID	Description	Notes
9709	Central Wiring Harness	For main body harness only. Not for sub-harness' that are replaceable separately. Ex: door, bumper, or engine harness.
9713	Engine compartment wiring harness	Any repair made to the harness sections in the engine bay NOT connected to the main body harness. Claim notes should specify a location.
9732	Door harness	Use for any door. Claim notes should state which door.
9757	Seat harness	Use for any location. Claim notes should specify the location.
9779	Roof wiring harness	Any repairs made to harness sections in the roof. Claim notes should specify a location.
9759	Bumper harness	Use for front or rear. Claim notes should specify the location.
9781	Transmission wiring harness	Any repair made to the harness that is separate from the main body harness and connects to the transmission.

## Required Parts and Tools

Tool Number	Tool Description
VAS 1978B	Wiring harness repair set
VAS 6160/VAS 6150	VAS tester with the current version of ODIS (Windows 10)



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## Additional Information

More information on this system can be found in the following resources:

- Audi academy: [Accessaudi](#) >> [App links](#) >> [Academy site CRC](#) >> [videos](#) >> [Technical](#) >> [Electrical, networking and vehicle lighting](#).
- Elsa: [damage code catalog](#) >> [Electrical](#) >> [97 Wiring](#).
- SSP: [973003 How to Read Wiring Diagrams, Symbols, Layout, and Navigation](#).
- SSP: [971003 Wiring Harness Inspection and Repair](#).

All part and service references provided in this TSB (**2061976**) are subject to change and/or removal. Always check with your Parts Department and/or ETKA for the latest information and parts bulletins. Please check the Repair Manual for fasteners, bolts, nuts, and screws that require replacement during the repair.

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