



Technical Service Bulletin

91 Concerns about the GPS or satellite radio reception (repair the coaxial cable)

91 20 94 2045106/6 August 13, 2020. Supersedes Technical Service Bulletin Group 91 number 18-16 dated October 19, 2018 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A5	2018 - 2019	All	Satellite Radio or GPS
Q5	2018 -2020	All	Satellite Radio or GPS
Q7	2017 - 2019	All	Satellite Radio or GPS
A3, R8, and TT	2018 - 2021	All	Satellite Radio or GPS
A4, A4 allroad, A6, A7, and Q3	2015 - 2019	All	Satellite Radio or GPS

Condition

REVISION HISTORY		
Revision	Date	Purpose
6	-	Revised header (Added MY20/21 and A3)
5	03/22/2018	Revised <i>Warranty</i> (Updated Damage Code)
4	09/21/2018	Revised <i>Production Solution</i> (Updated information) Revised <i>Service</i> (Added new part number in instructions and updated) Revised <i>Warranty</i> (Updated Service Number and Labor Operations) Revised <i>Required Parts and Tools</i> (Added new part numbers)

Customer states:

- Satellite Radio: Message Displayed "Linking."
- Satellite Radio: Message Displayed "ANTENNA A technical problem occurred. Please contact your Audi dealer."
- GPS: Navigation Location Incorrect.



Technical Service Bulletin

Technical Background

The coaxial connection on the vehicle's main wire harness is not fully connected at the shark fin antenna. This causes a dampening effect on the signal and creates an intermittent loss of data. Due to the movement of the coaxial connector, the terminals have been damaged.

Production Solution

Improved FAKRA connector.

Service

1. Verify the customer concern:
 - Verify the customer's concern in an area with a clear view of the sky. GPS and Satellite radio signals may not be available in parking structures, areas with tall buildings, and in certain severe weather situations.
 - Perform a 5-minute road test to allow the GPS signal to refresh and lock.
2. Check DTC fault memory via Guided Fault Finding (GFF):
 - If an open circuit DTC is present with an active/static status for either the GPS antenna circuit or the satellite radio antenna circuit, then locate the source of the open circuit. This TSB only applies to a poor FAKRA connection at the shark fin antenna.



Note:

The 5F module outputs 5VDC +/- 0.5VDC, carried on the coaxial wiring, and powering the antenna circuit. An open circuit can be located by checking the coaxial wiring for this 5VDC voltage.

3. If the customer's concern is intermittent:
 - Wiggle the FAKRA connections and see if the customer's concern can be duplicated. See the applicable wiring diagram for connector locations as there may be additional connections apart from the 5F and the antenna connectors.
 - If a concern is identified with any connector other than the connector at the shark fin antenna, this TSB does not apply.



Technical Service Bulletin

4. Replace the FAKRA connection at the shark fin antenna for the applicable circuit, see instructions below.



Note:

The correct circuit can be identified by the color on the antenna connector (Figure 1). Not all antenna connectors are laid out the same:

Satellite radio: Green.

Navigation: Blue.

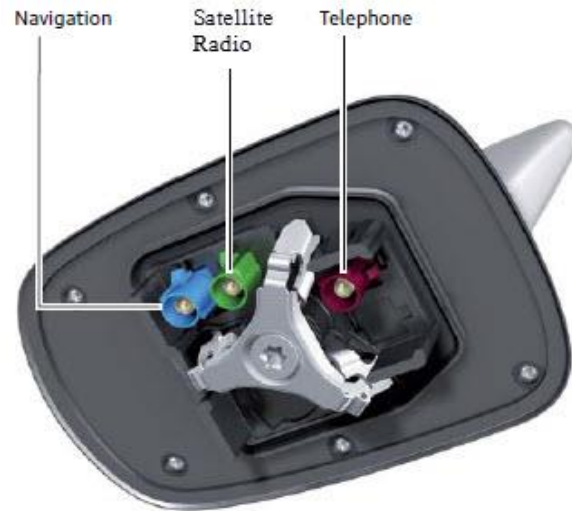


Figure 1. Identify the correct circuit by the color of the antenna connector. Blue: Navigation. Green: Satellite Radio. Connector placement on the antenna will change by vehicle options, reference the wiring diagram for your specific vehicle.

5. Follow instructions located in the repair manual to access the FAKRA connectors at the shark fin antenna. Only disconnect the FAKRA connector of the circuit associated with the customer's concern.
6. Remove a section of the vehicle's coaxial wiring for the applicable antenna circuit. Measure the length of coaxial wiring to be removed based on the Adapter Antenna Cable you are using (Figure 2). This will ensure that the removed section is the same length as the Adapter Antenna Cable (part number 000098710A or 000098650 (Q7 only)).



Figure 2. Measure the cut point on the vehicle's antenna coaxial wiring (A) based on the length of the replacement coaxial "Adapter Antenna Cable" (B). The removed length of cable from A should be equal to the length of cable B.

7. Utilizing VAS6720 (Aerial Cable Repair Set):



Technical Service Bulletin

- Identify the coaxial wiring type used in your application (RG174 or RTK031).
- Install the applicable replacement aerial connector on the vehicle side of the coaxial harness.
- For a visual example of the coaxial cable with a replacement aerial connector installed see Figure 3, item A.



Note:

Instructions on how to utilize the VAS6720 are provided in the vehicle repair manual, and with the tool.

8. Install the applicable connector housing onto the aerial connector installed in the previous step. Ensure the connector is fully seated onto the coaxial connector and the locking tab is pressed all the way down (Figure 3).

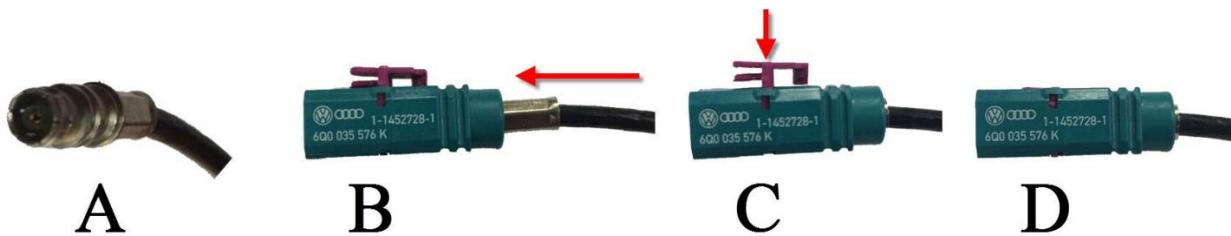


Figure 3. A: Coaxial wire with female replacement aerial connector end installed. B: Insert aerial connector end into connector housing until fully seated. C: With aerial connector fully seated in the connector housing, press down on the locking tab. D: Completed assembly.

9. Install the applicable Adapter Antenna Cable onto the shark fin antenna and connect it to the newly installed FAKRA connection from the steps 7 and 8. Wrap the new FAKRA connection with cloth tape (part number 000979950) to avoid any unwanted noises.



Technical Service Bulletin

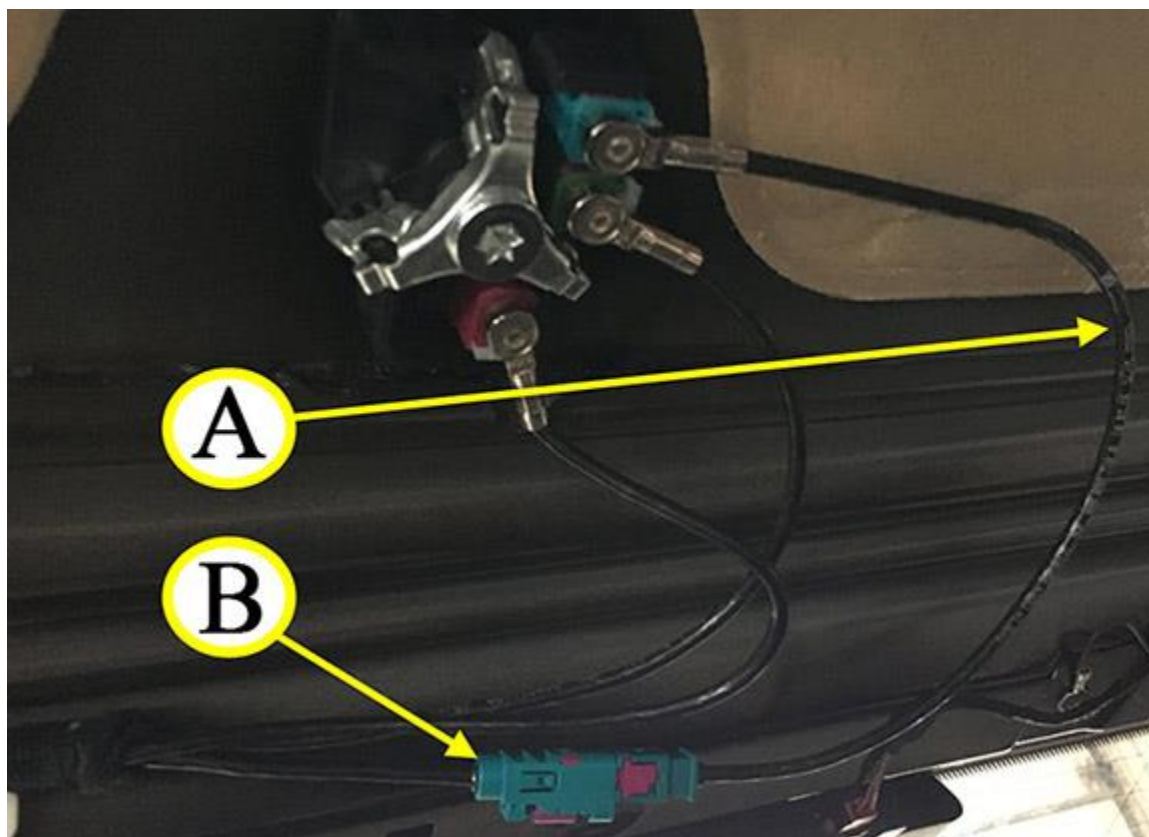


Figure 4. Install the Adapter Antenna Cable (A) onto the shark fin antenna and connect to the newly created FAKRA connection (B). Wrap a layer of cloth tape around FAKRA connection B to avoid any unwanted noises.

10. Reinstall parts that were removed to access the shark fin antenna as outlined in the repair manual.
11. Clear all DTCs and upload the GFF log to GFF Paperless.
12. Perform a road test and verify the proper functionality of the repaired antenna circuit.

Warranty

Claim Type:	<ul style="list-style-type: none">• 110 up to 48 Months/50,000 Miles.• G10 for CPO Covered Vehicles – Verify Owner.• If the vehicle is outside any warranty, this Technical Service Bulletin is informational only.
Service Number:	9128



Technical Service Bulletin

Damage Code:	0015		
Labor Operations:	All models:		
	Central wiring harness repair – 1 Cable	9709 4151	See SRT with associated operations
	A4 Sedan (2017+), A5, A5 Sportback, Q3, and TT:		
	Headliner remove + reinstall	7084 19XX	See SRT with associated operations
	A4 Sedan (2015-2016), A4 allroad (2015 - 2017), A5, A5 Sportback A6, A7, Q5, Q7, TT, and R8 (Coupe and Spyder):		
	Antenna remove + reinstall	9138 19XX	See SRT with associated operations
Diagnostic Time:	GFF – Checking and clearing fault codes included in existing labor operations	0150 0000	Time stated on the diagnostic protocol (Max 50 TU)
	Road test prior to service procedure	0121 0002	10 TU
	Road test after service procedure	0121 0004	10 TU
Claim Comment:	As per TSB #2045106/6		

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.

Required Parts and Tools

Always check with your Parts Department and/or ETKA for the latest information and parts bulletins.		
Part Number	Part Description	Quantity
All models (except Q7):		
000098710A	90° Adapter Antenna Cable	01
6Q0035576K	Connector housing for the antenna (female)	01



Technical Service Bulletin

VAS6720	Aerial Cable Repair Set	01
000979950	Cloth adhesive tape	Consumable; accounting under warranty/goodwill not permitted.
See ETKA	Fasteners, Bolts, Nuts, and Screws as needed per the Repair Manual	See ETKA/ELSA
Q7:		
000098650	0° Adapter Antenna Cable	01
6Q0035575K	Connector housing for the antenna (male)	01
VAS6720	Aerial Cable Repair Set	01
000979950	Cloth adhesive tape	Consumable; accounting under warranty/goodwill not permitted.

Only claim one of the connectors listed below depending on the coaxial line type installed in the vehicle:		
All models:		
000979910A	Aerial Female Connector – RG174 Line	01
-or-		
000979910	Aerial Female Connector – RTK031 Line	01
Q7:		
000979911A	Aerial Male Connector – RG174 Line	01
-or-		
000979911	Aerial Male Connector – RTK031 Line	01

Additional Information

All parts and service references provided in this TSB (2045106) are subject to change and/or removal.

©2020 Audi of America, Inc. All rights reserved. Information contained in this document is based on the latest information available at the time of printing and is subject to the copyright and other intellectual property rights of



Technical Service Bulletin

Audi of America, Inc., its affiliated companies and its licensors. All rights are reserved to make changes at any time without notice. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, nor may these materials be modified or reposted to other sites without the prior expressed written permission of the publisher.