

Technical Service Bulletin



91 MMI3G+ Audi Connect only reaches 2G service - Telephone module replacement instructions for A6 & A7

91 15 85 2039515/2 May 15, 2015. Supersedes Technical Service Bulletin Group 91 number 15-75 dated March 3, 2015 for reasons listed below.

| Model(s) | Year | VIN Range | Vehicle-Specific Equipment |
|----------|-------------|-----------|----------------------------|
| A6, A7 | 2011 - 2013 | All | Not Applicable |

Condition

| REVISION HISTORY | | |
|------------------|----------|---|
| Revision | Date | Purpose |
| 2 | - | Revised <i>Condition</i> (Updated affected areas) Revised <i>Service</i> (Completely revised "Software Updates" section) |
| 1 | 3/3/2015 | Initial publication |

The customer complains that the Audi Connect Online service in their 2012-2013 A6 or A7 vehicle only reaches 2G service when in the following metropolitan areas:

| Metropolitan Area (including surrounding areas) | Date of Service Turn-down |
|---|---------------------------|
| Indianapolis, Indiana | March 2015 |
| Louisville, Kentucky | May 2015 |
| Chicago, Illinois | June 2015 |
| Los Angeles, California | July 2015 |



Tip: This bulletin applies only to model year 2012-2013 A6 and A7 vehicles. For other vehicles, see TSB 2039476.

Technical Background

Recently, T-Mobile (the service provider for Audi Connect) has repurposed some of the GSM spectrum (3G on 2100Mhz band) to maximize 4G LTE coverage in the Indianapolis metropolitan area.

Devices that do not support 3G service on the 1900MHZ band (including MMI main units of model year 2012-2013 A6 and A7 vehicles) will only receive 2G service when the switch is completed.

The change currently only affects the markets listed above, but will affect other markets in coming years. This bulletin will be updated to include these markets as changes occur.

Production Solution

A telephone module that supports 3G service on the 1900MHZ band was installed beginning with model year 2014 vehicles.

Service

The telephone module can be replaced with an upgraded module that supports the additional 3G GSM spectrum.



Tip: The upgraded telephone module will only allow 3G to be received again in markets where T-Mobile has repurposed the GSM spectrum for 4G LTE. It will not allow Audi Connect to receive 4G LTE, which is not possible with the MMI3G+ hardware.

Before starting the repair:

- Review the *Required Parts and Tools* section of this bulletin.
- Obtain the telephone module retrofit kit listed in the *Required Parts and Tools* section of this bulletin.
- Obtain the ZUG K0814 update on SD card listed in the *Required Parts and Tools* section of this bulletin.
- Obtain the telephone driver script from ServiceNet (*ServiceNet>>AUDI>>Technician References>>Audi MMI Scripts*). The file name is **MMI3GP_UMTS_Driver_Script.zip**. Extract the three files to a separate SD card. Ensure that all three files are extracted to the root location on the SD card (do not store the files in a folder on the SD card and do not copy the zip to the SD card; files must be extracted).
- Verify that the VAS6613 ESD work surface contains three grounding straps. The repair cannot be completed without all three grounding straps, including the ESD mat.
- Watch the “91 MMI3G+ Telephone Module Replacement Instructions for A6 & A7” video at <https://audi-external.kzoplatform.com/swf/player/301> (Figure 1). (See TSB 2039206 for more information about viewing videos.)



Figure 1. QR code for viewing the video with a QR code reader on phones and tablets. Alternatively, the video can be accessed through computer internet browsers at the link provided in this bulletin.

Repair procedure:



Note:

This repair should only be performed in a clean environment due to sensitive electronics. The repair should not be performed in a workshop environment.

1. Remove the MMI main unit from the vehicle according to the instructions in the Elsa Repair Manual at:

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Electrical System>>Communication>>91 Communication>>Infotainment System>>Information Electronics Control Module 1 J794, Removing and Installing.

2. Prepare for the ESD work surface by cleaning the work area of all loose debris and then drying the area with a towel. Doing so ensures that no debris will be rolled into the mat when it is rolled up after use, which could cause long-term damage.
3. Place the ESD anti-static mat onto the surface. Ensure that all three grounding straps are securely strapped to the ESD mat.
4. Ground the ESD mat by plugging the 110V grounding strap into a wall socket or power strip (Figure 2). If a power strip is used, it must be plugged into a grounded wall outlet. (See attached user instructions for VAS6613 titled "VAS6613 ESD Workspace Guide.pdf".)

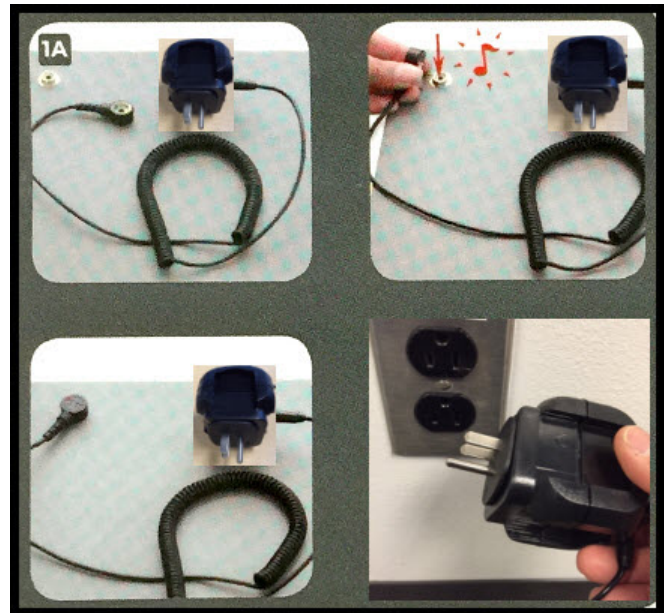


Figure 2. VAS6613 ESD work surface grounding plug.

5. Ground yourself by placing the elastic strap around your wrist. Make sure it is securely touching your skin. It cannot be loose-fitting or over your shirt cuff (Figure 3).



Figure 3. VAS6613 ESD work surface grounding wrist strap.

6. Ground the MMI main unit by placing an alligator clip on the back, ensuring that it makes contact with the metal housing of the main unit. The most secure location is at the bottom of the metal bracket (Figure 4).

A foam block can be used as a spacer under the main unit to keep the grounding strap connected (Figure 5).

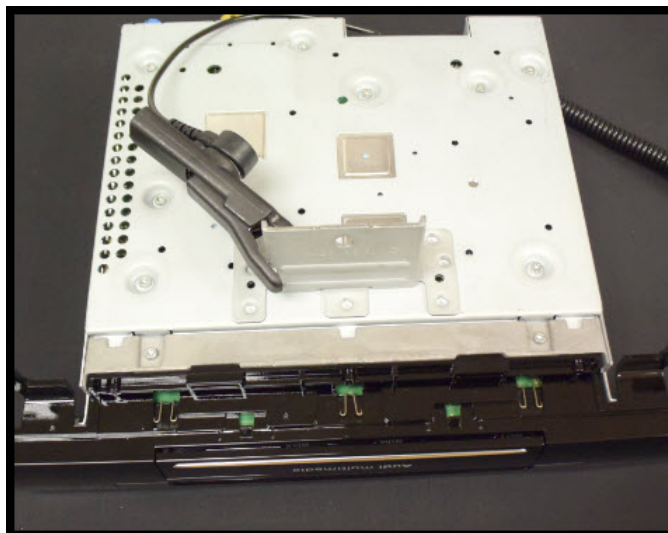


Figure 4. VAS6613 ESD work surface grounding device clip.

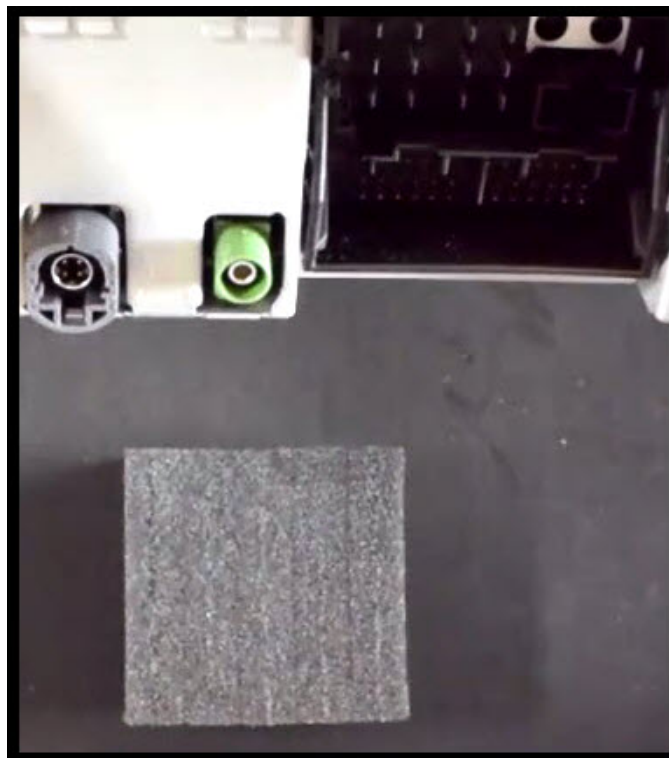


Figure 5. Foam block used as a spacer under the main unit.



Warning:

Your wrist, the ESD mat, and the main unit must remain grounded during the entire process.

7. Start by touching the screw driver to the ESD mat to discharge any static that may be built up in the tool. Next, remove the five screws that are holding the MMI top cover in place. The two screws near the faceplate (Figure 6, green arrows) are longer than the others, have thread lock on them, and may require extra effort to remove. Keep these screws separated from the others at all times.

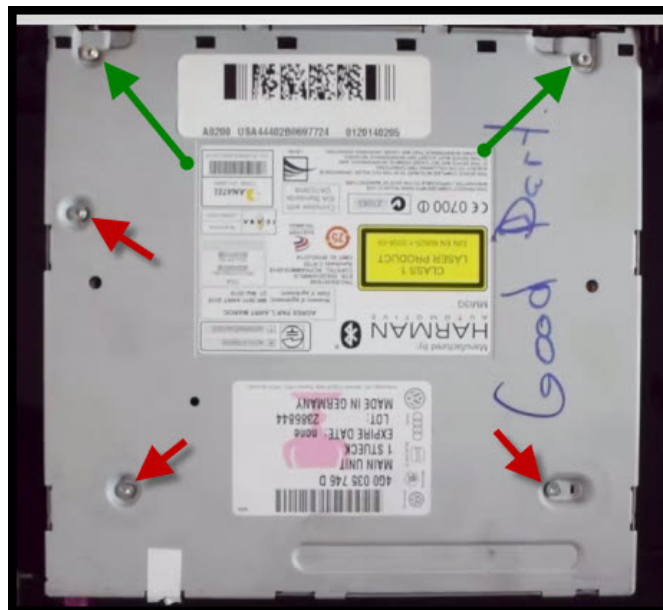


Figure 6. MMI main unit with screw locations for top cover.

8. Break the white warranty seal on the back of the main unit (Figure 7).



Figure 7. Break the white warranty seal.

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9. Using a flat head screw driver, your fingers or a plastic wedge trim tool, remove the top cover by prying it from the back of the cover at the location seen in Figure 8. If a flat head screw driver is used then touch the tool to the ESD mat to discharge the tool prior to touching the main unit.

The top cover of the main unit has four metal tabs that are slotted into the plastic front face plate (Figure 9). Slightly lift on the rear of the cover and pull back on the cover until the metal tabs are released. Lift up on the cover and pull it away from the face plate at the same time to prevent bending the top cover's metal tabs (Figure 10). If the metal tabs bend during this process, straighten them with a pair of pliers.



Note:

Removal of the top cover is only allowed once. This ensures that system components are not contaminated with metal screw filings or other debris that can occur after multiple attempts of opening the main unit.

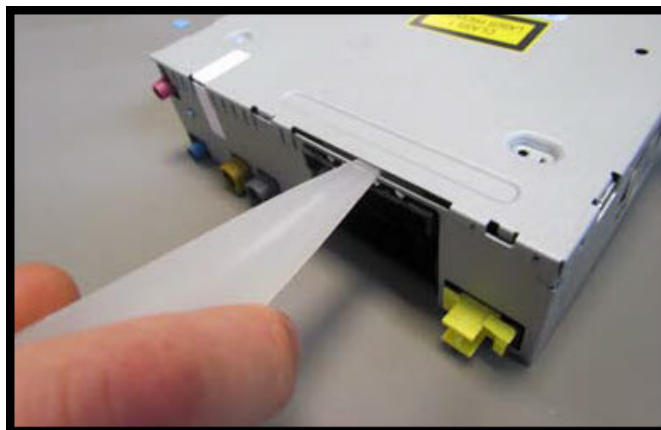
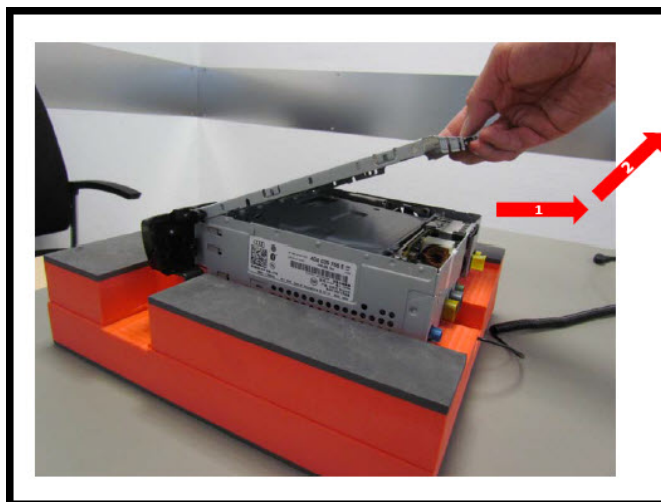


Figure 8. Pry to cover off using plastic trim wedge tool.



Figure 9. Top cover metal tabs indicated by the red arrows.





Note:

Do not flip the main unit over at this point. The CD drive, which was held in place by the top cover screws, is no longer secured. If it moves significantly, the ribbon cable can detach from the circuit board and disable the CD drive's functionality (Figure 11).

Figure 10. Pull up and back to prevent damaging the faceplate slots (Note: the orange/black holder is not required).



Figure 11. CD drive mounting points are now free.

10. On the back of the main unit, remove the retaining screw that holds the telephone module in place (Figure 12).

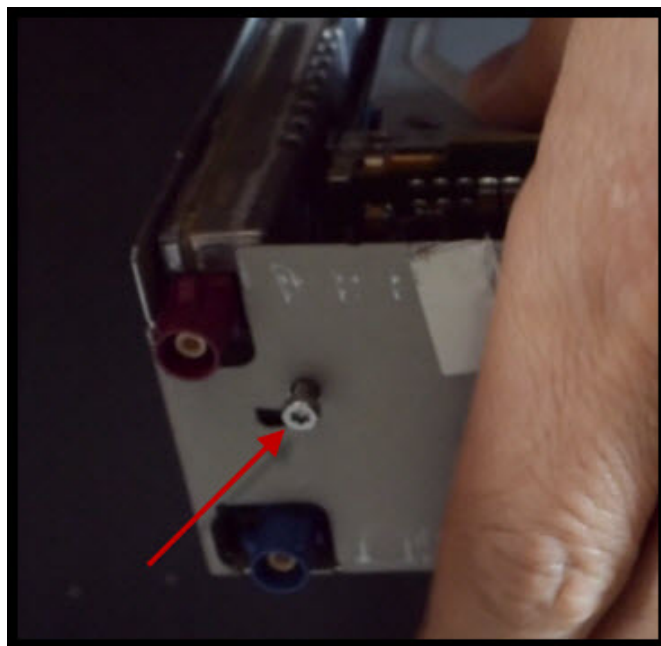


Figure 12. Telephone module retaining screw indicated by the red arrow.

11. Carefully lift up the telephone module, using both ends as points of contact when pulling up (Figure 13). The module is held in place with a computer socket-type attachment and will release when enough force is used.

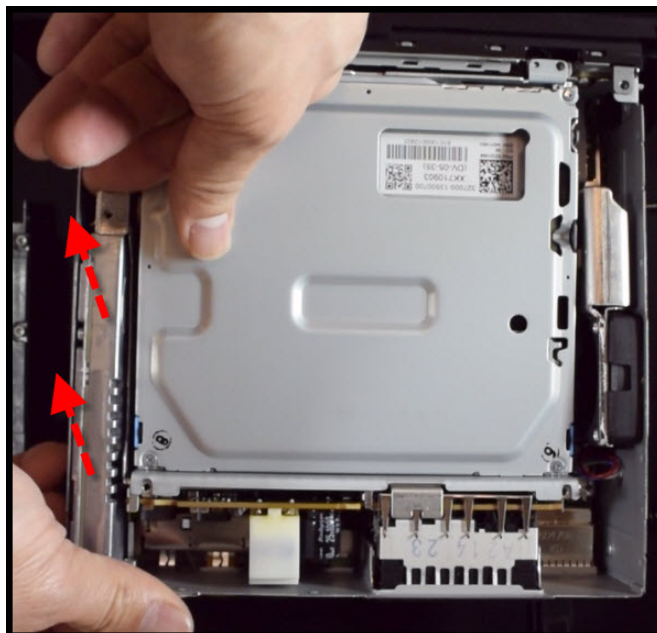


Figure 13. Lift up on both ends of the telephone module as indicated by the red arrows.

12. Before proceeding, write down the serial number of the new replacement UMTS telephone module (Figure 14).



Figure 14. Serial number of the PPIS UMTS telephone module indicated by the red arrows and red box.

13. Place the new UMTS telephone module into the socket, making sure it is level before snapping it into place. Use both ends of the telephone module when pressing it into place. Do not press down using the purple FAKRA connector (Figure 15).

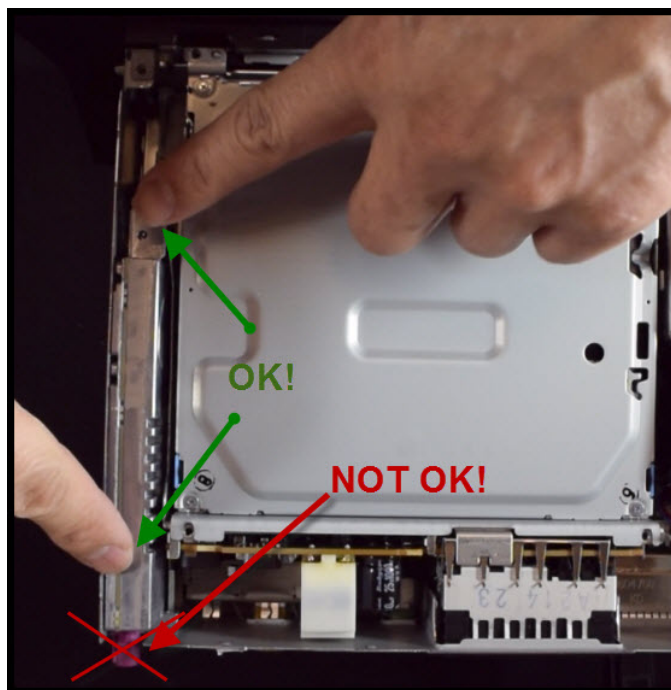


Figure 15. Do not press down using the purple FAKRA connector.

14. Re-secure the telephone module retaining screw into the back of the MMI main unit.
15. Place the main unit top cover back into the MMI main unit housing.
16. Re-secure all five top cover screws.



Note:

Ensure that each screw is in its original location. Using one of the longer screws in the wrong location can damage the MMI.

17. Place the new warranty seal from the retrofit kit next to the original warranty seal (Figure 14).

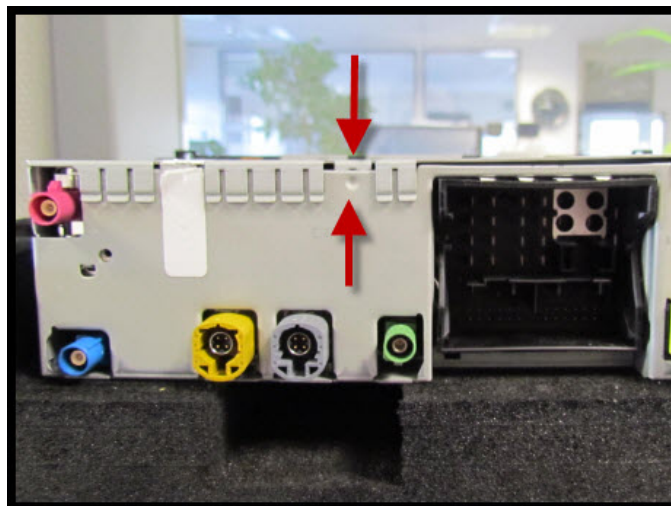


Figure 14. Place the new warranty seal over the location indicated by the red arrows.

18. Place the repair label on the top of the main unit cover. Do not cover any part number label with the repair label and do not cover the yellow laser warning (Figure 15). Fill out all fields on the repair label.

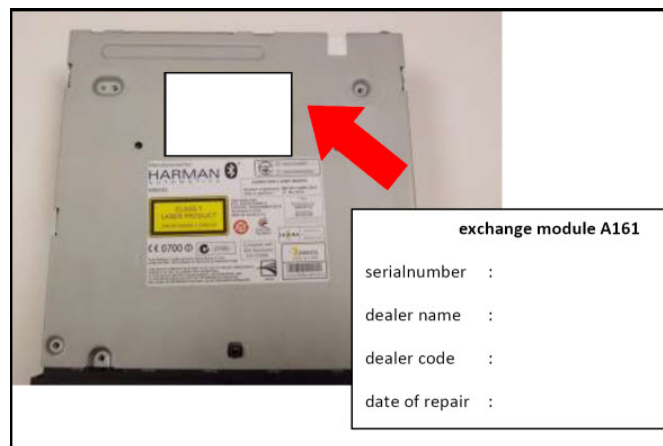


Figure 15. The white area indicates the suggested location for the repair label on the top cover of the main unit. Do not cover any existing part number labels or the laser warning.

19. Reinstall the MMI main unit in the vehicle and proceed to *Software updates*.

Software updates:

1. Obtain the telephone driver script from ServiceNet. The file name is **MMI3GP_UMTS_Driver_Script.zip**, and it is located at *ServiceNet>>AUDI>>Technician References>>Audi MMI Scripts*.
2. Copy the telephone driver script to a PC and extract the three files to the root of an SD card. (The three files are labeled "reboot", "graphics", and "copie_scr.sh").

3. Turn the vehicle ignition on and allow the MMI main unit to fully initialize. It may take up to three minutes for the main unit to fully initialize due to the hardware replacement. All options will be white in the Telephone menu of the MMI when the system has fully initialized.

4. Insert the SD card into the left SD card slot of the main unit. Once the card is inserted, the system will automatically start the update script. When the script completes, a prompt or message will show on the screen indicating that the driver update is complete.



Tip: If the message does not show after one minute, eject and reinsert the SD card back into the main unit. If the driver script is not allowed to complete, the MMI main unit will not be able to recognize any SIM card. Contact TAC if there are any issues with this step.

5. Remove the SD card and perform a three-finger reset on the MMI main unit. (See attachment “MMI_SHORTCUT_KEYS.PDF”, which explains which keys to push for the reset for each Audi model.)

6. Once the system is fully initialized, perform TSB 2028141 to update the ZUG software to K0814, using the required software update SD card listed in the *Required Parts and Tools* section of this bulletin.



Tip: If, after the ZUG software update the MMI main unit cannot recognize any SIM cards, repeat steps 1-5. If the system still does not recognize any SIM cards, contact TAC.

7. Perform a quick verification test to ensure that all functions of the MMI are operating correctly:

- Place the customer's SIM card into the SIM card slot. Ensure that 3G reception is obtained and test data downloads by connecting a device to the vehicle's Wi-Fi hotspot.
- Place an audio CD into the CD drive and check for normal playback.
- Check that Bluetooth pairing is working
- Verify that the AMI system is working
- Check AM/FM/SAT radio operation outside the shop
- Check that Navigation is receiving more four or more satellites (*Navigation>>Route* then scroll up to top, then *Select* and scroll up to top again to obtain the number of satellites being received)

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Warranty

| | | | |
|--------------------------|--|--------------|--------|
| Claim Type: | 1SP | | |
| Service Number: | 9170 | | |
| Damage Code: | 0040 | | |
| Labor Operations: | UMTS telephone module retrofit | 9170 1999 | 145 TU |
| Diagnostic Time: | GFF | 0150 0000 | 0 TU |
| | Road test prior to service procedure | No allowance | 0 TU |
| | Road test after service procedure | No allowance | 0 TU |
| | Technical diagnosis at dealer's discretion (Refer to Section 2.2.1.2 and Audi Warranty Online for DADP allowance details) | | |
| Claim Comment: | As per TSB #2039515/2 | | |

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

| Part Number | Part Description | Quantity |
|----------------|--|----------|
| 8T0 051 431 | PPIS UMTS telephone module for MMI3G+ | 1 |
| VAS6613 | ESD work surface | 1 |
| T10057 | Radio removal tools | 1 |
| T40056A | Torx T8 screwdriver | 1 |
| VAS 3409 | Trim removal wedge | 1 |
| | Blank SD card for driver script (<32GB) | 1 |
| | Foam block, block of wood, or a large book | 1 |
| 8R0 906 961 DM | A8/A6/A7 K0814 MMI UPDATE SD | 1 |

Additional Information

All parts and service references provided in this TSB (2039515) are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.