

Technical Service Bulletin



91 Rear/Top/Corner view camera image quality complaints (distorted image)

91 15 82 2029903/2 April 24, 2015. Supersedes Technical Service Bulletin Group 91 number 12-42 dated June 20, 2012 for reasons listed below.

| Model(s) | Year | VIN Range | Vehicle-Specific Equipment |
|----------|-------------|-----------|----------------------------------|
| All | 2008 - 2017 | All | Rear, top, or corner view camera |

Condition

| REVISION HISTORY | | |
|------------------|-----------|---|
| Revision | Date | Purpose |
| 2 | - | Revised title Revised header data (Added models and model years) |
| 1 | 6/20/2012 | Initial publication |

The customer complains about the picture quality of rearview backup camera image in the MMI screen. The complaints can be one or all of the following:

- The picture is fuzzy or distorted.
- The picture looks too bright, too dark, or opaque in certain areas of the image.
- The colors of the objects in the image are incorrect or slightly off.
- The guidelines used for parking are fuzzy, distorted, or pixelated when compared with the guidelines displayed on another vehicle's MMI.

Technical Background

Complaint 1: The picture is fuzzy or distorted.

Explanation: The wide angle backup camera lens provides a 140° curved, “fish-eye” image. The MMI software straightens this image to fit the rectangular screen. As a result, the corners of the image look less sharp than the center of the image (Figure 1). The condition is more noticeable on larger MMI screens because the image is expanded.



Figure 1. Distorted or fuzzy corners of backup camera image in MMI.

Complaint 2: The picture looks too bright, too dark, or opaque in certain areas of the image.

AND

Complaint 3: The colors of the objects in the image are incorrect or slightly off.

Explanation: In order to display the optimal representation of brightness, contrast, and color, the backup camera dynamically adjusts the image in the MMI screen in response to ambient light. As a result, the colors in the image appear to be different than the actual colors (Figure 2). Colors in the image are also affected during nighttime viewing because the camera is not equipped with an infrared filter.

The brightness of the image can be adjusted in the MMI menu (which will affect the whole screen for all MMI menus), but color and contrast cannot be changed.



Figure 2: Camera image in MMI screen (left) and actual color of objects (right).

Complaint 4: The guidelines used for parking are fuzzy, distorted, or pixelated when compared with the guidelines displayed on another vehicle's MMI.

Explanation: In vehicles *without* the Peripheral View Camera (No Top View and No Corner View), the displayed guidelines are static images that are overlaid on the camera image in the MMI at different steering angles. On larger MMI screens, the lines appear pixelated because the image is expanded (Figure 3).

In vehicles *with* Peripheral View Camera (with Top View and Corner View), the lines are dynamically generated vector graphics, which are scaled and appear sharper (Figure 3).



Figure 3. Guide lines of a vehicle without Peripheral View Camera (left) and guide lines of a vehicle with Peripheral View Camera (right).

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Production Solution

Not applicable.

Service

These are normal conditions and no repair or replacement is necessary.

Warranty

This TSB is informational only and not applicable to any Audi warranty.

Additional Information

All parts and service references provided in this TSB (2029903) are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.