

Diagnostic Sheet

FROM: Maserati TSO
TO: Maserati Network



PERSONAL SERVICE LAB

MASTERS OF CARE

Grecale Door Panel Diagnosis

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This Diagnostic Sheet serves as a guide and provides additional diagnostic info for possible door panel anomalies.

MODELS: M182 Grecale (All MY).

SUBJECT: Diagnosis of the following issues related to M182 door panels:

1. Door panel fading/discoloring
2. Damaged/broken panel
3. Noise
4. Coating detachment
5. Loose panel fixing
6. Deformed door panel
7. Malfunction of LEDs/courtesy lights/armrest switch/door opening button
8. Wrinkles
9. Defective seams




CHECKLIST 1 – Door panel fading/discoloring

Step 0) Preliminary checks	Result of check / action	
	YES	NO
Is the anomaly actually present on the door panel?	Go to step 1.	The anomaly is not present on the panel. Do not carry out any operation.
Step 1) Position checks	Result of check / action	
	YES	NO
Does the issue affect the fabric/leather of door panel?	Collect pictures of the defect. Clean the part affected by the issue with water and mild soap using a smooth cloth. Also check that the part has not been damaged or broken, in this case go to CHECKLIST 2. If the issue persists, replace the panel and mark the affected area with indelible pen.	Go to step 2.
Step 2) Position checks	Result of check / action	
	YES	NO
Does the issue affect the plastic components of the door panel?	Collect pictures of the defect. Clean the part affected by the issue with water and mild soap using a smooth cloth. Also check that the part has not been damaged or broken, in this case go to CHECKLIST 2. If the issue persists, replace the panel and mark the affected area with indelible pen.	The anomaly is not present on the panel. Do not carry out any operation.



CHECKLIST 2 – Damaged/broken panel

Step 0) Preliminary checks	Result of check / action	
	YES	NO
Is the anomaly actually present on the door panel?	Go to step 1.	The anomaly is not present on the panel. Do not carry out any operation.
Step 1) Position checks	Result of check / action	
	YES	NO
Is any fixing broken?	Collect pictures of the defect. If the breakage is clearly due to incorrect assembly, please replace the panel. In case the breakage was caused by an external impact, the replacement of the panel will not be covered by warranty.	Go to step 2.
Step 2) Position checks	Result of check / action	
	YES	NO
Is there any other damage on the panel?	Collect pictures of the defect. If the damage is due to an external cause or by incorrect use, the repair will not be covered by warranty.	The anomaly is not present on the panel. Do not carry out any operation.

CHECKLIST 3 – Noise

Step 0) Preliminary checks	Result of check / action	
	YES	NO
Is the anomaly present on the door panel?	Go to step 1.	The anomaly is not present on the panel. Do not carry out any operation.
Step 1) Position checks	Result of check / action	
	YES	NO
Is the area of the panel on which the noise is present not clearly identifiable?	Disassemble the panel from the door shell and check in the empty space between the panel and the door presence of foreign objects free to move and therefore generate noise during vehicle travel. Once checked, re-complete the assembly cycle. If the anomaly persists and it is not possible to identify the area of origin of the noise (see the following steps), replace the panel.	Go to step 2.
Step 2) Position checks	Result of check / action	
	YES	NO
The anomaly is located near the wiring harnesses	Check if there are free cables with possibility to move under the soundproofing. Block free cables with adhesive tape. If, once the cables are fixed, the anomaly persists, replace the panel and mark (with an indelible pen) on the panel the area affected by an anomaly.	Go to step 4.
Pictures--> Blocking of free cables via tape		
Step 4) Position checks	Result of check / action	
	YES	NO
The anomaly is located on cross fixing or wire clip	Check noise occur from cross fix and wire clip with missing sponge. Ripristinate with a new sponge	The anomaly is not present on the panel. Do not carry out any operation.
Pictures-->Cross fixing and wire clip with sponge		

CHECKLIST 4 – Coating detachment

Step 0) Preliminary checks	Result of check / action	
	YES	NO
Is the anomaly present on the door panel?	Go to step 1.	The anomaly is not present on the panel. Do not carry out any operation.
Step 1) Position checks	Result of check / action	
	YES	NO
Does the anomaly affect PU leather, real leather or silk part of door panel?	Check surface (Leather/PU and Silk) has not been damaged. If there are no damages replace the panel and mark (with indelible pen) the area affected by the anomaly.	Go to step 2.
Step 2) Position checks	Result of check / action	
	YES	NO
Does the anomaly affect plastic area of door panel?	Check that the plastic part has not been damaged or broken, in this case go to checklist 2.	The anomaly is not present on the panel. Do not carry out any operation.
Step 3) Position checks	Result of check / action	
	YES	NO
Does the anomaly affect the switch area?	Check that the felt under the switch is not visible. If visible disassembly and adjust felt position.	The anomaly is not present on the panel. Do not carry out any operation.
Pictures-->Felt under switch wrong position (to be repaired)		

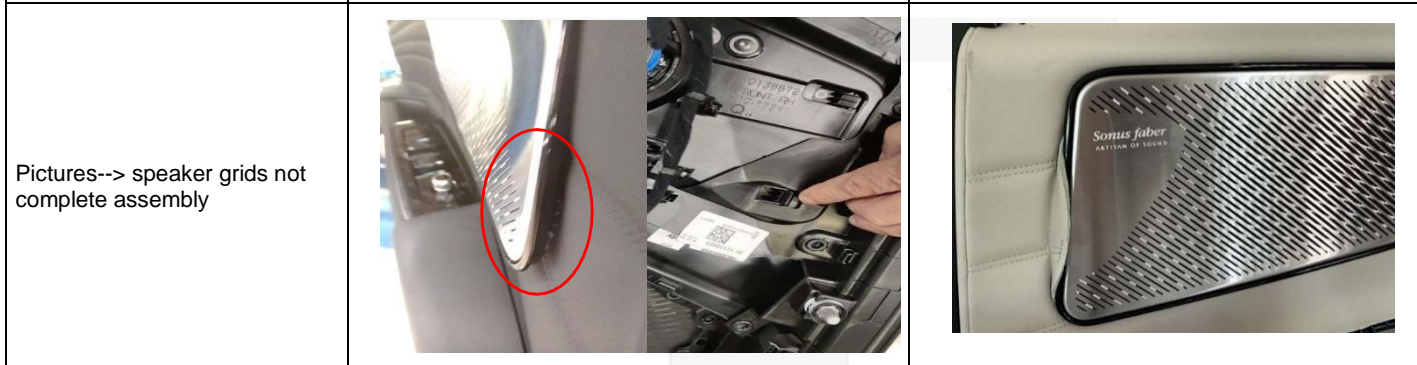
CHECKLIST 5 – Loose panel fixing




Step 0) Preliminary checks	Result of check / action	
	YES	NO
Is the anomaly present on the door panel?	Go to step 1.	The anomaly is not present on the panel. Do not carry out any operation.
Step 1) Position checks	Result of check / action	
	YES	NO
Is the anomaly present on door panel beltline?	Check if top area of the panel (weatherstrip) is correctly assembled on the door frame. If the weatherstrip is not correctly assembled repeat the assembly cycle. If, once the correct position of the weatherstrip has been checked and any cycle has been carried out, the anomaly persists, replace the panel and mark (with an indelible pen) on the panel the area affected by the anomaly.	Go to step 2.
Step 2) Position checks	Result of check / action	
	YES	NO
Is the anomaly present on door panel Edges?	Check the assembly of pins on the door frame. If the pins are not correctly assembled repeat the assembly cycle. If, after this check, the anomaly persists, replace the panel and mark (with an indelible pen) on the panel area affected by anomaly.	Go to step 3.




Step 3) Position checks	Result of check / action	
	YES	NO
Is the anomaly present on door panel handle/panel matching or sill area?	<p>Check the right tightening of the screws, if they are loose, tighten them correctly. If, once the right tightening of the screw and the eventual cycle has been checked, the anomaly persists, replace the panel and mark (with an indelible pen) on the panel the area affected by anomaly</p>	<p>Go to step 4.</p>





Step 4) Position checks	Result of check / action	
	YES	NO
Is the anomaly present in the speaker grille?	<p>If the speaker grille is not correctly assembled, apply pressure to allow right assembly of the clip or screw in correct way. If the grille has been pressed once and the anomaly persists, replace the panel and mark (with an indelible pen) on the panel the area affected by an anomaly.</p>	<p>The anomaly is not present on the panel. Do not carry out any operation.</p>




Step 5) Position checks	Result of check / action	
	YES	NO
Is the anomaly present on the door pull handle?	If the pull handle is not correctly assembled, apply pressure to allow right assembly of the clip. If the pull handle have been pressed once and the anomaly persists, replace the panel and mark (with an indelible pen) on the panel the area affected by the anomaly.	The anomaly is not present on the panel. Do not carry out any operation.
Pictures--> Pull handle not complete assembly		
Step 6) Position checks	Result of check / action	
	YES	NO
Is the anomaly present on switch bezel surface?	If there is a gap between switch bezel and the panel, adjust the bezel position. If after rework, the anomaly persists, replace the panel and mark (with an indelible pen) on the panel the area affected by an anomaly	The anomaly is not present on the panel. Do not carry out any operation.
Pictures--> gap between bezel and panel		



CHECKLIST 6 – Deformed door panel

Step 0) Preliminary checks	Result of check / action	
	YES	NO
Is the anomaly actually present on the door panel?	Go to step 1.	The anomaly is not present on the panel. Do not carry out any operation.
Step 1) Position checks	Result of check / action	
	YES	NO
Is the anomaly present on door panel beltline?	Check if top area of the panel (weatherstrip) is correctly assembled on the door frame. If the weatherstrip is not correctly assembled repeat the assembly cycle. If, once the correct position of the weatherstrip has been checked and any cycle has been carried out, the anomaly persists, replace the panel and mark (with an indelible pen) on the panel the area affected by the anomaly	Go to step 2.
Pictures--> right matching of door panel / front door beltline area		


<p>Pictures--> right matching of door panel / rear door beltline area</p>				
<p>Step 2) Position checks</p>	<p>Result of check / action</p>			
<p>The anomaly is positioned on the outer edges of the panel?</p>	<p>YES</p>		<p>NO</p>	
	<p>Check the assembly of pins on the door frame. If the pins are not correctly assembled repeat the assembly cycle. If, after this check, the anomaly persists, replace the panel and mark (with an indelible pen) on the panel area affected by anomaly.</p>		<p>The anomaly is not present on the panel. Do not perform any operation.</p>	

CHECKLIST 7 – Malfunction of LEDs/courtesy lights/armrest switch/door opening button

<p>Step 0) Preliminary checks</p>	<p>Result of check / action</p>		
<p>Is the anomaly actually present on the door panel?</p>	<p>YES</p>		<p>NO</p>
	<p>Go to step 1.</p>		<p>The anomaly is not present on the panel. Do not carry out any operation.</p>
<p>Step 1) Position checks</p> <p>The malfunction affects the handle led, pocket led?</p>	<p>Result of check / action</p>		
	<p>YES</p>		<p>NO</p>
	<p>Check connectors right clipping. If the connectors are not correctly clipped, complete the assembly. If connector is not blocked, add a felt to block. Check that the part has not been damaged or broken, in this case go to item 2 broken or damaged door panel. If the anomaly is not eliminated replace the panel and mark (with an indelible pen) on the panel the area affected by an anomaly.</p>		<p>Go to step 2.</p>
<p>Step 2) Position checks</p>	<p>Result of check / action</p>		
<p>The malfunction affects the courtesy lights (light puddle or reflector)?</p>	<p>YES</p>		<p>NO</p>
	<p>Check connectors right clipping. If the connectors are not correctly clipped, complete the assembly. If connector is not blocked, add a felt to block. Check that the lamp is not burnt out, in this case replace the lamp unit. Check that the part has not been damaged or broken, in this case go to item 3 broken or damaged door panel. If the anomaly is not eliminated replace the panel and mark (with an indelible pen) on the panel the area affected by an anomaly.</p>		<p>Go to step 3.</p>
<p>Pictures--> electrical connector examples and felt application</p>			
<p>Step 3) Position checks</p>	<p>Result of check / action</p>		
<p>The malfunction affects the armrest switch?</p>	<p>YES</p>		<p>NO</p>
	<p>Check connectors right clipping. If the connectors are not correctly clipped, complete the assembly. Check that the part has not been damaged or broken, in this case go to item 2 broken or damaged door panel. If the anomaly affect e switch blocked, disassemble and reassemble the armrest switch to be assure right matching. (Before 1 screw and the 6 clips for front and 4 clips for rear) If the anomaly is not eliminated replaced by only the switch and mark (with an indelible tip pen) the area affected by anomaly</p>		<p>Go to step 4.</p>

<p>Pictures--> Armrest switch driver and passenger</p>		
<p>Step 4) Position checks</p>	<p>Result of check / action</p>	
<p>The malfunction affects the open door Button?</p>	<p>YES</p> <p>Check connectors right clipping. If the connectors are not correctly clipped, complete the assembly. Check that the part has not been damaged or broken, in this case go to item 2 broken or damaged door panel. If the anomaly is due to unstable connector, apply felt to block the clip area. If the anomaly is not eliminated replace only the handle kit and mark (with a permanent marker) the area affected by anomaly.</p>	<p>NO</p> <p>Go to step 5.</p>
<p>Pictures--> Open Door Button not fully assembled and connector not clipped</p>		

CHECKLIST 8 – Wrinkles

<p>Step 0) Preliminary checks</p>	<p>Result of check / action</p>	
<p>Is the anomaly actually present on the door panel?</p>	<p>YES</p> <p>Go to step 1.</p>	<p>NO</p> <p>The anomaly is not present on the panel. Do not carry out any operation.</p>
<p>Step 1) Position checks</p>	<p>Result of check / action</p>	
<p>Is the surface affected by the anomaly in real leather?</p>	<p>YES</p> <p>The wrinkles is a visual feature that characterizes and differentiates the real leather from PVC. It is considered an intrinsic characteristic of real leather, which may appear above all in areas of pressure or prehensibility. Heat the affected area with a heat gun at 150 °C from 4-5 cm distance. Once the area has softened, press it with a smooth material.</p>  <p>REMARK: The operation must be carried out keeping the heat gun always in motion, because excessive concentration of heat can cause the burning of leather. If the anomaly is not eliminated replace the panel and mark (with marker indelible) the area with wrinkles.</p>	<p>NO</p> <p>Go to step 2.</p>
<p>Step 2) Preliminary checks</p>	<p>Result of check / action</p>	
<p>Are the wrinkles similar to the examples reported below?</p>	<p>YES</p> <p>The anomaly is not present on the panel. Do not carry out any operation.</p>	<p>NO</p> <p>Replace the door panel.</p>

Pictures--> Example of Natural wrinkles and Natural defects



Step 3) Preliminary checks	Result of check / action	
	YES	NO
Are the wrinkles due to normal wear	The anomaly is not present on the panel. Do not carry out any operation.	Replace the door panel.

CHECKLIST 9 – Defective seams

Step 0) Preliminary checks	Result of check / action	
	YES	NO
Is the anomaly actually present on the door panel?	Go to step 1.	The anomaly is not present on the panel. Do not carry out any operation.
Step 1) Position checks	Result of check / action	
	YES	NO
Is the anomaly positioned in area of junction between 2 pieces of leather?	Check that the sewing thread is not burned by a heat source (example cigarette). Damage is easily verifiable because a burn leads to varying the color of the thread. If the sewing thread is not damaged with at any point, mark area affected by the anomaly and replace the panel.	Go to step 2.
Step 2) Position checks	Result of check / action	
	YES	NO
Aesthetical sews is damage	If the anomaly is damaged due to customer misuse, do not replace the panel	The anomaly is not present on the panel. Do not carry out any operation.
Pictures--> examples 1 - Fraying of the thread caused by rubbing with a rough object 2 - Thread breakage caused by an object		