 <b>Tesla, Inc.</b> Service Bulletin		<h2 style="margin: 0;">Repair Forward-Facing Camera Heater Grid Solder Joint</h2>	
<b>SB-22-10-001</b> March 17, 2022			
<b>Classification</b>		<b>Section/Group</b>	<b>Mobile Service</b>
Repair Bulletin		10 - Body	Can Perform (where permitted)
<b>Model Year</b>	<b>Model</b>	<b>Country/Region</b>	<b>Build Location</b>
2015-2020	Model X	All	Fremont
<small>The model(s) and model year(s) listed are a general approximation of the affected VIN list. Refer to the VIN/Bulletin Tracker or Customer/Vehicle profile to determine applicability of this bulletin for a particular vehicle.</small>			


Repair Bulletin: This repair bulletin provides instructions on addressing a noted condition or possible customer concern regarding the operation of Tesla vehicles. These instructions should only be performed by trained professionals.

### Condition

On certain 2015-2020 Model X vehicles, the soldering of the connector tabs on the forward-facing camera(s) heater grid may not meet internal specifications, resulting in a small area of the windshield in front of the camera(s) to remain fogged in colder weather. The condition does not impact active safety features or windshield defogging and defrosting performance. The condition may cause certain Autopilot features to be limited or unavailable, which the customer is alerted to if trying to engage them.

### Correction

On customer complaint of reduced Autopilot functionality in colder weather, inspect for detached, cracked or otherwise incorrectly soldered connector tabs on the heater grid for the forward-facing cameras, and if found, repair the solder joints.

 **NOTE:** This repair is a recommended alternative to windshield replacement for this issue.

Correction Description	Correction	Time
SB-22-10-001 Not Applicable	S012210001	0.00
Repair Heater Grid Solder Joint	S022210001	0.80

	Part Number	Description
<b>Special Tools</b>	1787101-00-A	Brush Pen Tool
	1060908-00-A	Cordless, Self-igniting Soldering Iron and Heat Tool Kit (NA, APAC)
	1060908-01-A	Cordless, Self-igniting Soldering Iron and Heat Tool Kit (EMEA)

**Shop Supplies** IPA wipes

 **WARNING:** Proper personal protective equipment (PPE) is required to perform this procedure:

- Work gloves
- Safety glasses

## Procedure

1. Remove the glare shield (refer to Service Manual procedure [15052502](#)).
2. Inspect the condition of the heater grid connector tabs. If one or both tabs are attached, use a soldering iron to remove any tabs.
3. Use a brush pen tool to remove excess solder and oxidation from the silver print (x2) to make a clean surface (Figure 1).

**⚠ CAUTION:** Excessive force can damage the silver print. Only make a clean smooth surface.



**Figure 1**

4. Clean the silver print with an IPA wipe, and then allow 1 minute to dry.
5. Apply solder to both tabs of the connector.
6. Solder the tabs to the glass (Figure 2).



**Figure 2**

7. Allow the solder to cool for 15 minutes.

8. Measure the resistance over the two connector tabs (Figure 3).

**NOTE:** Resistance must be between 6 and 8  $\Omega$ . If the resistance is not in range, redo the solder repair. If the problem persists, replace the windshield (refer to Service Manual procedure [10200302](#)).



**Figure 3**

9. Install all parts that were previously removed (refer to Service Manual procedure [15052502](#)).